

Project: Garfield County, CO  
 Site: BJU M33 496 Pad  
 Well: BJU M33 FED 22D-32 496  
 Wellbore: Wellbore #1  
 Design: Design #4  
 Latitude: 39.653645  
 Longitude: -108.177713  
 Ground Level: 8401.0  
 RKB @ 8431.0usft (H&P #329)

**FORMATION TOP DETAILS**

TVDPPath	MDPath	Formation
2295.0	2434.9	Wasatch
5303.0	5743.6	Wasatch G
5578.0	6046.1	Fort Union
7421.0	8018.8	Ohio Creek
7894.0	8291.8	TOG
7699.0	8296.8	Williams Fork
10247.0	10845.7	Cameo
10893.0	11491.9	Rollins

**REFERENCE INFORMATION**

Co-ordinate (N/E) Reference: Well BJU M33 FED 22D-32 496 - Slot 22D-32, True North  
 Vertical (TVD) Reference: RKB @ 8431.0usft (H&P #329)  
 Section (VS) Reference: Slot - 22D-32/0.0N, 0.0E  
 Measured Depth Reference: RKB @ 8431.0usft (H&P #329)  
 Calculation Method: Minimum Curvature

**WELL DETAILS: BJU M33 FED 22D-32 496**

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14412420.30	8401.0 2434860.70	39.653645	-108.177713 22D-32

**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

**Azimuths to True North**  
 Magnetic North: 9.48°

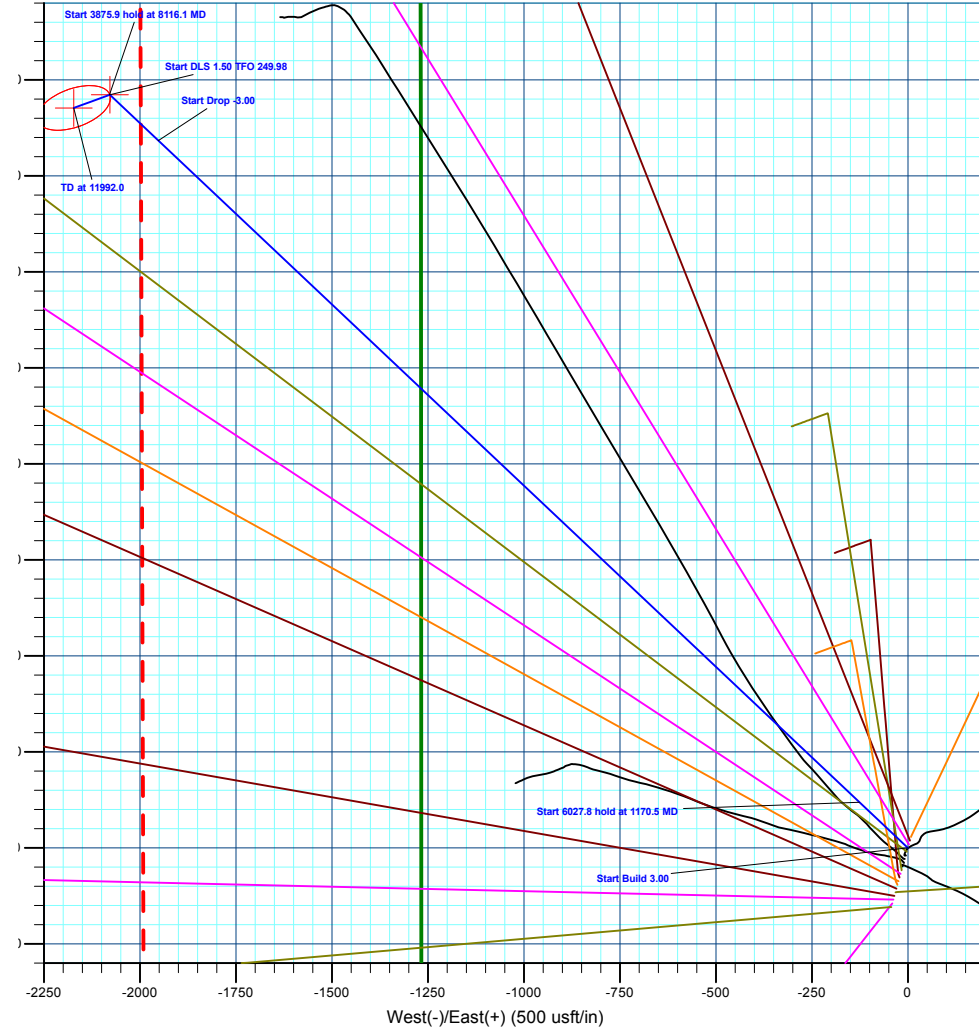
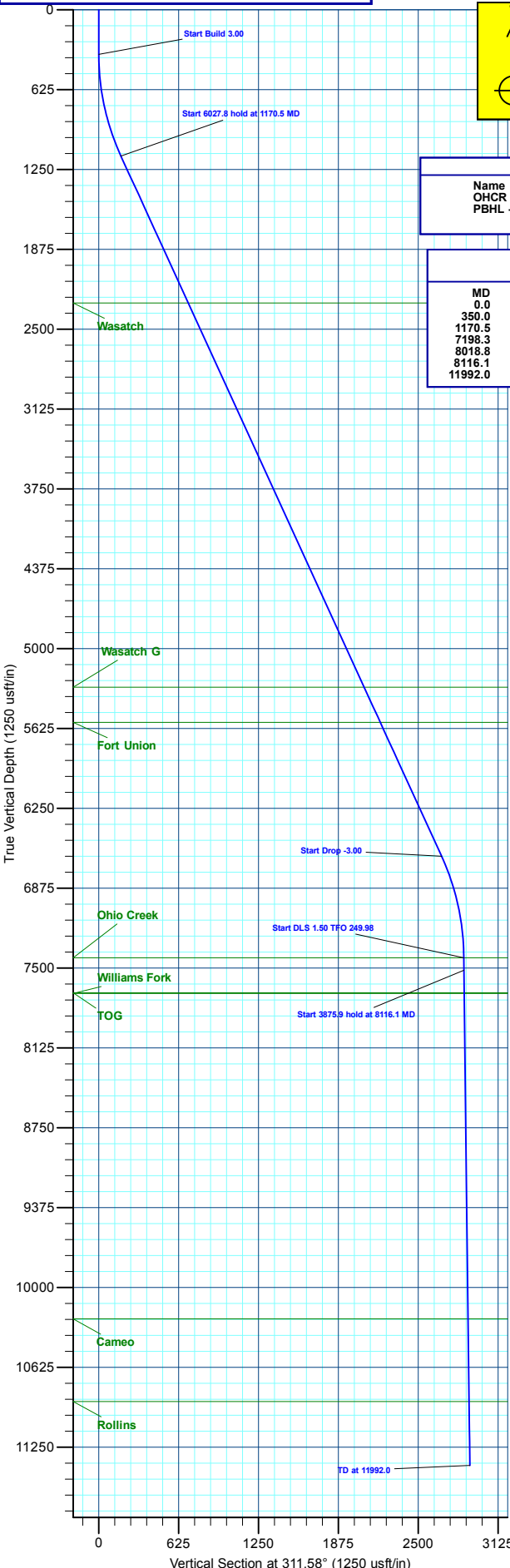
**Magnetic Field**  
 Strength: 51268.7nT  
 Dip Angle: 65.82°  
 Date: 12/10/2019  
 Model: HDGM\_FILE

**DESIGN TARGET DETAILS**

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - 22D-32	7421.0	1961.6	-2078.2	14414315.58	2432721.83	39.659028	-108.185091
PBHL - 22D-32	11393.0	1927.4	-2172.2	14414278.40	2432629.00	39.658934	-108.185425

**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	
350.0	0.00	0.00	350.0	0.0	0.0	0.00	0.00	0.0	Start Build 3.00
1170.5	24.61	313.35	1145.5	119.1	-126.2	3.00	313.35	173.5	Start 6027.8 hold at 1170.5 MD
7198.3	24.61	313.35	6625.5	1842.5	-1952.0	0.00	0.00	2682.9	Start Drop -3.00
8018.8	0.00	0.00	7421.0	1961.6	-2078.2	3.00	180.00	2856.4	Start Drop 1.50 TFO 249.98
8116.1	1.46	249.98	7518.3	1961.2	-2079.4	1.50	249.98	2857.0	Start 3875.9 hold at 8116.1 MD
11992.0	1.46	249.98	11393.0	1927.4	-2172.2	0.00	0.00	2904.0	TD at 11992.0



**Plan: Design #4 (BJU M33 FED 22D-32 496/Wellbore #1)**

**Created By: Will Jircik Date: 16:33, November 18 2022**



## **Caerus Oil & Gas**

**Garfield County, CO**

**BJU M33 496 Pad**

**BJU M33 FED 22D-32 496 - Slot 22D-32**

**Wellbore #1**

**Plan: Design #4**

## **KLX Well Planning Report**

**18 November, 2022**



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M33 FED 22D-32 496 - Slot 22D-32
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8431.0usft (H&P #329)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8431.0usft (H&P #329)
<b>Site:</b>	BJU M33 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M33 FED 22D-32 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #4		

<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 M33 496 Pad				
<b>Site Position:</b>		<b>Northing:</b>	14,415,354.00 usft	<b>Latitude:</b>	39.660635
<b>From:</b>	Map	<b>Easting:</b>	2,447,010.80 usft	<b>Longitude:</b>	-108.134267
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	1.83 °

<b>Well</b>	BJU M33 FED 22D-32 496 - Slot 22D-32					
<b>Well Position</b>	<b>+N/-S</b>	-2,544.2 usft	<b>Northing:</b>	14,412,420.30 usft	<b>Latitude:</b>	39.653645
	<b>+E/-W</b>	-12,237.6 usft	<b>Easting:</b>	2,434,860.70 usft	<b>Longitude:</b>	-108.177713
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	8,401.0 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>
	HDGM_FILE	12/10/2019	9.48	65.82	51,258.70000000

<b>Design</b>	Design #4			
<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	311.58

<b>Plan Sections</b>										
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	
350.0	0.00	0.00	350.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,170.5	24.61	313.35	1,145.5	119.1	-126.2	3.00	3.00	0.00	313.35	
7,198.3	24.61	313.35	6,625.5	1,842.5	-1,952.0	0.00	0.00	0.00	0.00	
8,018.8	0.00	0.00	7,421.0	1,961.6	-2,078.2	3.00	-3.00	0.00	180.00	OHCR - 22D-32
8,116.1	1.46	249.98	7,518.3	1,961.2	-2,079.4	1.50	1.50	-113.04	249.98	
11,992.0	1.46	249.98	11,393.0	1,927.4	-2,172.2	0.00	0.00	0.00	0.00	PBHL - 22D-32

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M33 FED 22D-32 496 - Slot 22D-32
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8431.0usft (H&P #329)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8431.0usft (H&P #329)
<b>Site:</b>	BJU M33 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M33 FED 22D-32 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #4		

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
<b>Start Build 3.00</b>									
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	1.50	313.35	400.0	0.4	-0.5	0.7	3.00	3.00	0.00
500.0	4.50	313.35	499.8	4.0	-4.3	5.9	3.00	3.00	0.00
600.0	7.50	313.35	599.3	11.2	-11.9	16.3	3.00	3.00	0.00
700.0	10.50	313.35	698.0	22.0	-23.3	32.0	3.00	3.00	0.00
800.0	13.50	313.35	795.8	36.2	-38.4	52.7	3.00	3.00	0.00
900.0	16.50	313.35	892.4	54.0	-57.2	78.6	3.00	3.00	0.00
1,000.0	19.50	313.35	987.5	75.2	-79.7	109.5	3.00	3.00	0.00
1,100.0	22.50	313.35	1,080.9	99.8	-105.7	145.3	3.00	3.00	0.00
<b>Start 6027.8 hold at 1170.5 MD</b>									
1,170.5	24.61	313.35	1,145.5	119.1	-126.2	173.5	3.00	3.00	0.00
1,200.0	24.61	313.35	1,172.3	127.6	-135.1	185.8	0.00	0.00	0.00
1,300.0	24.61	313.35	1,263.2	156.2	-165.4	227.4	0.00	0.00	0.00
1,400.0	24.61	313.35	1,354.1	184.7	-195.7	269.0	0.00	0.00	0.00
1,500.0	24.61	313.35	1,445.1	213.3	-226.0	310.6	0.00	0.00	0.00
1,600.0	24.61	313.35	1,536.0	241.9	-256.3	352.3	0.00	0.00	0.00
1,700.0	24.61	313.35	1,626.9	270.5	-286.6	393.9	0.00	0.00	0.00
1,800.0	24.61	313.35	1,717.8	299.1	-316.9	435.5	0.00	0.00	0.00
1,900.0	24.61	313.35	1,808.7	327.7	-347.2	477.2	0.00	0.00	0.00
2,000.0	24.61	313.35	1,899.6	356.3	-377.5	518.8	0.00	0.00	0.00
2,100.0	24.61	313.35	1,990.5	384.9	-407.8	560.4	0.00	0.00	0.00
2,200.0	24.61	313.35	2,081.4	413.5	-438.0	602.1	0.00	0.00	0.00
2,300.0	24.61	313.35	2,172.4	442.1	-468.3	643.7	0.00	0.00	0.00
2,400.0	24.61	313.35	2,263.3	470.6	-498.6	685.3	0.00	0.00	0.00
<b>Wasatch</b>									
2,434.9	24.61	313.35	2,295.0	480.6	-509.2	699.9	0.00	0.00	0.00
2,500.0	24.61	313.35	2,354.2	499.2	-528.9	727.0	0.00	0.00	0.00
2,600.0	24.61	313.35	2,445.1	527.8	-559.2	768.6	0.00	0.00	0.00
2,700.0	24.61	313.35	2,536.0	556.4	-589.5	810.2	0.00	0.00	0.00
2,800.0	24.61	313.35	2,626.9	585.0	-619.8	851.9	0.00	0.00	0.00
2,900.0	24.61	313.35	2,717.8	613.6	-650.1	893.5	0.00	0.00	0.00
3,000.0	24.61	313.35	2,808.7	642.2	-680.4	935.1	0.00	0.00	0.00
3,100.0	24.61	313.35	2,899.7	670.8	-710.7	976.8	0.00	0.00	0.00
3,200.0	24.61	313.35	2,990.6	699.4	-740.9	1,018.4	0.00	0.00	0.00
3,300.0	24.61	313.35	3,081.5	728.0	-771.2	1,060.0	0.00	0.00	0.00
3,400.0	24.61	313.35	3,172.4	756.5	-801.5	1,101.7	0.00	0.00	0.00
3,500.0	24.61	313.35	3,263.3	785.1	-831.8	1,143.3	0.00	0.00	0.00
3,600.0	24.61	313.35	3,354.2	813.7	-862.1	1,184.9	0.00	0.00	0.00
3,700.0	24.61	313.35	3,445.1	842.3	-892.4	1,226.5	0.00	0.00	0.00
3,800.0	24.61	313.35	3,536.0	870.9	-922.7	1,268.2	0.00	0.00	0.00
3,900.0	24.61	313.35	3,627.0	899.5	-953.0	1,309.8	0.00	0.00	0.00
4,000.0	24.61	313.35	3,717.9	928.1	-983.3	1,351.4	0.00	0.00	0.00
4,100.0	24.61	313.35	3,808.8	956.7	-1,013.5	1,393.1	0.00	0.00	0.00
4,200.0	24.61	313.35	3,899.7	985.3	-1,043.8	1,434.7	0.00	0.00	0.00
4,300.0	24.61	313.35	3,990.6	1,013.9	-1,074.1	1,476.3	0.00	0.00	0.00
4,400.0	24.61	313.35	4,081.5	1,042.4	-1,104.4	1,518.0	0.00	0.00	0.00
4,500.0	24.61	313.35	4,172.4	1,071.0	-1,134.7	1,559.6	0.00	0.00	0.00
4,600.0	24.61	313.35	4,263.3	1,099.6	-1,165.0	1,601.2	0.00	0.00	0.00

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<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8431.0usft (H&P #329)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8431.0usft (H&P #329)
<b>Site:</b>	BJU M33 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M33 FED 22D-32 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #4		

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	24.61	313.35	4,354.3	1,128.2	-1,195.3	1,642.9	0.00	0.00	0.00	
4,800.0	24.61	313.35	4,445.2	1,156.8	-1,225.6	1,684.5	0.00	0.00	0.00	
4,900.0	24.61	313.35	4,536.1	1,185.4	-1,255.9	1,726.1	0.00	0.00	0.00	
5,000.0	24.61	313.35	4,627.0	1,214.0	-1,286.2	1,767.8	0.00	0.00	0.00	
5,100.0	24.61	313.35	4,717.9	1,242.6	-1,316.4	1,809.4	0.00	0.00	0.00	
5,200.0	24.61	313.35	4,808.8	1,271.2	-1,346.7	1,851.0	0.00	0.00	0.00	
5,300.0	24.61	313.35	4,899.7	1,299.8	-1,377.0	1,892.7	0.00	0.00	0.00	
5,400.0	24.61	313.35	4,990.7	1,328.3	-1,407.3	1,934.3	0.00	0.00	0.00	
5,500.0	24.61	313.35	5,081.6	1,356.9	-1,437.6	1,975.9	0.00	0.00	0.00	
5,600.0	24.61	313.35	5,172.5	1,385.5	-1,467.9	2,017.6	0.00	0.00	0.00	
5,700.0	24.61	313.35	5,263.4	1,414.1	-1,498.2	2,059.2	0.00	0.00	0.00	
<b>Wasatch G</b>										
5,743.6	24.61	313.35	5,303.0	1,426.6	-1,511.4	2,077.3	0.00	0.00	0.00	
5,800.0	24.61	313.35	5,354.3	1,442.7	-1,528.5	2,100.8	0.00	0.00	0.00	
5,900.0	24.61	313.35	5,445.2	1,471.3	-1,558.8	2,142.5	0.00	0.00	0.00	
6,000.0	24.61	313.35	5,536.1	1,499.9	-1,589.1	2,184.1	0.00	0.00	0.00	
<b>Fort Union</b>										
6,046.1	24.61	313.35	5,578.0	1,513.1	-1,603.0	2,203.3	0.00	0.00	0.00	
6,100.0	24.61	313.35	5,627.0	1,528.5	-1,619.3	2,225.7	0.00	0.00	0.00	
6,200.0	24.61	313.35	5,718.0	1,557.1	-1,649.6	2,267.3	0.00	0.00	0.00	
6,300.0	24.61	313.35	5,808.9	1,585.7	-1,679.9	2,309.0	0.00	0.00	0.00	
6,400.0	24.61	313.35	5,899.8	1,614.2	-1,710.2	2,350.6	0.00	0.00	0.00	
6,500.0	24.61	313.35	5,990.7	1,642.8	-1,740.5	2,392.2	0.00	0.00	0.00	
6,600.0	24.61	313.35	6,081.6	1,671.4	-1,770.8	2,433.9	0.00	0.00	0.00	
6,700.0	24.61	313.35	6,172.5	1,700.0	-1,801.1	2,475.5	0.00	0.00	0.00	
6,800.0	24.61	313.35	6,263.4	1,728.6	-1,831.4	2,517.1	0.00	0.00	0.00	
6,900.0	24.61	313.35	6,354.3	1,757.2	-1,861.7	2,558.8	0.00	0.00	0.00	
7,000.0	24.61	313.35	6,445.3	1,785.8	-1,891.9	2,600.4	0.00	0.00	0.00	
7,100.0	24.61	313.35	6,536.2	1,814.4	-1,922.2	2,642.0	0.00	0.00	0.00	
<b>Start Drop -3.00</b>										
7,198.3	24.61	313.35	6,625.5	1,842.5	-1,952.0	2,682.9	0.00	0.00	0.00	
7,200.0	24.56	313.35	6,627.1	1,843.0	-1,952.5	2,683.7	3.00	-3.00	0.00	
7,300.0	21.56	313.35	6,719.1	1,869.9	-1,981.0	2,722.8	3.00	-3.00	0.00	
7,400.0	18.56	313.35	6,813.0	1,893.4	-2,006.0	2,757.1	3.00	-3.00	0.00	
7,500.0	15.56	313.35	6,908.6	1,913.5	-2,027.3	2,786.4	3.00	-3.00	0.00	
7,600.0	12.56	313.35	7,005.6	1,930.2	-2,045.0	2,810.7	3.00	-3.00	0.00	
7,700.0	9.56	313.35	7,103.7	1,943.4	-2,058.9	2,829.9	3.00	-3.00	0.00	
7,800.0	6.56	313.35	7,202.7	1,953.0	-2,069.1	2,843.9	3.00	-3.00	0.00	
7,900.0	3.56	313.35	7,302.3	1,959.1	-2,075.5	2,852.7	3.00	-3.00	0.00	
8,000.0	0.56	313.35	7,402.2	1,961.5	-2,078.1	2,856.3	3.00	-3.00	0.00	
<b>Start DLS 1.50 TFO 249.98 - Ohio Creek</b>										
8,018.8	0.00	0.00	7,421.0	1,961.6	-2,078.2	2,856.4	3.00	-3.00	0.00	
8,100.0	1.22	249.98	7,502.2	1,961.3	-2,079.0	2,856.8	1.50	1.50	0.00	
<b>Start 3875.9 hold at 8116.1 MD</b>										
8,116.1	1.46	249.98	7,518.3	1,961.2	-2,079.4	2,857.0	1.50	1.50	0.00	
8,200.0	1.46	249.98	7,602.2	1,960.4	-2,081.4	2,858.0	0.00	0.00	0.00	
<b>TOG</b>										
8,291.8	1.46	249.98	7,694.0	1,959.6	-2,083.6	2,859.1	0.00	0.00	0.00	
<b>Williams Fork</b>										
8,296.8	1.46	249.98	7,699.0	1,959.6	-2,083.7	2,859.2	0.00	0.00	0.00	
8,300.0	1.46	249.98	7,702.2	1,959.6	-2,083.8	2,859.2	0.00	0.00	0.00	
8,400.0	1.46	249.98	7,802.1	1,958.7	-2,086.2	2,860.4	0.00	0.00	0.00	
8,500.0	1.46	249.98	7,902.1	1,957.8	-2,088.6	2,861.7	0.00	0.00	0.00	

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M33 FED 22D-32 496 - Slot 22D-32
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8431.0usft (H&P #329)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8431.0usft (H&P #329)
<b>Site:</b>	BJU M33 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M33 FED 22D-32 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #4		

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)	
8,600.0	1.46	249.98	8,002.1	1,957.0	-2,091.0	2,862.9	0.00	0.00	0.00	
8,700.0	1.46	249.98	8,102.0	1,956.1	-2,093.4	2,864.1	0.00	0.00	0.00	
8,800.0	1.46	249.98	8,202.0	1,955.2	-2,095.8	2,865.3	0.00	0.00	0.00	
8,900.0	1.46	249.98	8,302.0	1,954.3	-2,098.1	2,866.5	0.00	0.00	0.00	
9,000.0	1.46	249.98	8,401.9	1,953.5	-2,100.5	2,867.7	0.00	0.00	0.00	
9,100.0	1.46	249.98	8,501.9	1,952.6	-2,102.9	2,868.9	0.00	0.00	0.00	
9,200.0	1.46	249.98	8,601.9	1,951.7	-2,105.3	2,870.1	0.00	0.00	0.00	
9,300.0	1.46	249.98	8,701.8	1,950.8	-2,107.7	2,871.3	0.00	0.00	0.00	
9,400.0	1.46	249.98	8,801.8	1,950.0	-2,110.1	2,872.6	0.00	0.00	0.00	
9,500.0	1.46	249.98	8,901.8	1,949.1	-2,112.5	2,873.8	0.00	0.00	0.00	
9,600.0	1.46	249.98	9,001.7	1,948.2	-2,114.9	2,875.0	0.00	0.00	0.00	
9,700.0	1.46	249.98	9,101.7	1,947.4	-2,117.3	2,876.2	0.00	0.00	0.00	
9,800.0	1.46	249.98	9,201.7	1,946.5	-2,119.7	2,877.4	0.00	0.00	0.00	
9,900.0	1.46	249.98	9,301.6	1,945.6	-2,122.1	2,878.6	0.00	0.00	0.00	
10,000.0	1.46	249.98	9,401.6	1,944.7	-2,124.5	2,879.8	0.00	0.00	0.00	
10,100.0	1.46	249.98	9,501.6	1,943.9	-2,126.9	2,881.0	0.00	0.00	0.00	
10,200.0	1.46	249.98	9,601.5	1,943.0	-2,129.3	2,882.3	0.00	0.00	0.00	
10,300.0	1.46	249.98	9,701.5	1,942.1	-2,131.7	2,883.5	0.00	0.00	0.00	
10,400.0	1.46	249.98	9,801.5	1,941.2	-2,134.1	2,884.7	0.00	0.00	0.00	
10,500.0	1.46	249.98	9,901.4	1,940.4	-2,136.4	2,885.9	0.00	0.00	0.00	
10,600.0	1.46	249.98	10,001.4	1,939.5	-2,138.8	2,887.1	0.00	0.00	0.00	
10,700.0	1.46	249.98	10,101.4	1,938.6	-2,141.2	2,888.3	0.00	0.00	0.00	
10,800.0	1.46	249.98	10,201.3	1,937.8	-2,143.6	2,889.5	0.00	0.00	0.00	
<b>Cameo</b>										
10,845.7	1.46	249.98	10,247.0	1,937.4	-2,144.7	2,890.1	0.00	0.00	0.00	
10,900.0	1.46	249.98	10,301.3	1,936.9	-2,146.0	2,890.7	0.00	0.00	0.00	
11,000.0	1.46	249.98	10,401.3	1,936.0	-2,148.4	2,891.9	0.00	0.00	0.00	
11,100.0	1.46	249.98	10,501.3	1,935.1	-2,150.8	2,893.2	0.00	0.00	0.00	
11,200.0	1.46	249.98	10,601.2	1,934.3	-2,153.2	2,894.4	0.00	0.00	0.00	
11,300.0	1.46	249.98	10,701.2	1,933.4	-2,155.6	2,895.6	0.00	0.00	0.00	
11,400.0	1.46	249.98	10,801.2	1,932.5	-2,158.0	2,896.8	0.00	0.00	0.00	
<b>Rollins</b>										
11,491.9	1.46	249.98	10,893.0	1,931.7	-2,160.2	2,897.9	0.00	0.00	0.00	
11,500.0	1.46	249.98	10,901.1	1,931.7	-2,160.4	2,898.0	0.00	0.00	0.00	
11,600.0	1.46	249.98	11,001.1	1,930.8	-2,162.8	2,899.2	0.00	0.00	0.00	
11,700.0	1.46	249.98	11,101.1	1,929.9	-2,165.2	2,900.4	0.00	0.00	0.00	
11,800.0	1.46	249.98	11,201.0	1,929.0	-2,167.6	2,901.6	0.00	0.00	0.00	
11,900.0	1.46	249.98	11,301.0	1,928.2	-2,170.0	2,902.9	0.00	0.00	0.00	
<b>TD at 11992.0</b>										
11,992.0	1.46	249.98	11,393.0	1,927.4	-2,172.2	2,904.0	0.00	0.00	0.00	

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M33 FED 22D-32 496 - Slot 22D-32
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	RKB @ 8431.0usft (H&P #329)
<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8431.0usft (H&P #329)
<b>Site:</b>	BJU M33 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M33 FED 22D-32 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #4		

**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 - 22D-32 - plan hits target center - Point	0.00	0.00	7,421.0	1,961.6	-2,078.2	14,414,315.58	2,432,721.83	39.659028	-108.185092
PBHL - 22D-32 - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	11,393.0	1,927.4	-2,172.2	14,414,278.40	2,432,629.00	39.658934	-108.185425

**Formations**

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,434.9	2,295.0	Wasatch			
5,743.6	5,303.0	Wasatch G			
6,046.1	5,578.0	Fort Union			
8,018.8	7,421.0	Ohio Creek			
8,291.8	7,694.0	TOG			
8,296.8	7,699.0	Williams Fork			
10,845.7	10,247.0	Cameo			
11,491.9	10,893.0	Rollins			

**Plan Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
350.0	350.0	0.0	0.0	Start Build 3.00
1,170.5	1,145.5	119.1	-126.2	Start 6027.8 hold at 1170.5 MD
7,198.3	6,625.5	1,842.5	-1,952.0	Start Drop -3.00
8,018.8	7,421.0	1,961.6	-2,078.2	Start DLS 1.50 TFO 249.98
8,116.1	7,518.3	1,961.2	-2,079.4	Start 3875.9 hold at 8116.1 MD
11,992.0	11,393.0	1,927.4	-2,172.2	TD at 11992.0