

Project: Garfield County, CO  
 Site: NPM M33 496 Pad  
 Well: BJU M33 FED 12D-33 496  
 Wellbore: Wellbore #1  
 Design: Design #1  
 Latitude: 39.653638  
 Longitude: -108.177715  
 Ground Level: 8401.0  
 RKB @ 8431.0usft (H&P #329)

**FORMATION TOP DETAILS**

TVDPath	MDPath	Formation
2430.0	2540.1	Wasatch
5430.0	5766.0	Wasatch G
5684.0	6039.1	Fort Union
7518.0	7975.2	Ohio Creek
7792.0	8249.3	TOG
7792.0	8249.3	Williams Fork
10398.0	10856.3	Cameo
11032.0	11490.5	Rollins

**REFERENCE INFORMATION**

Co-ordinate (N/E) Reference: Well BJU M33 FED 12D-33 496 - Slot BJU M33 FED 12D-33 496, True North  
 Vertical (TVD) Reference: RKB @ 8431.0usft (H&P #329)  
 Section (VS) Reference: Slot - BJU M33 FED 12D-33 496(0.0N, 0.0E)  
 Measured Depth Reference: RKB @ 8431.0usft (H&P #329)  
 Calculation Method: Minimum Curvature

**WELL DETAILS: BJU M33 FED 12D-33 496**

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14412417.90	2434860.10	39.653638	-108.177715

**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°

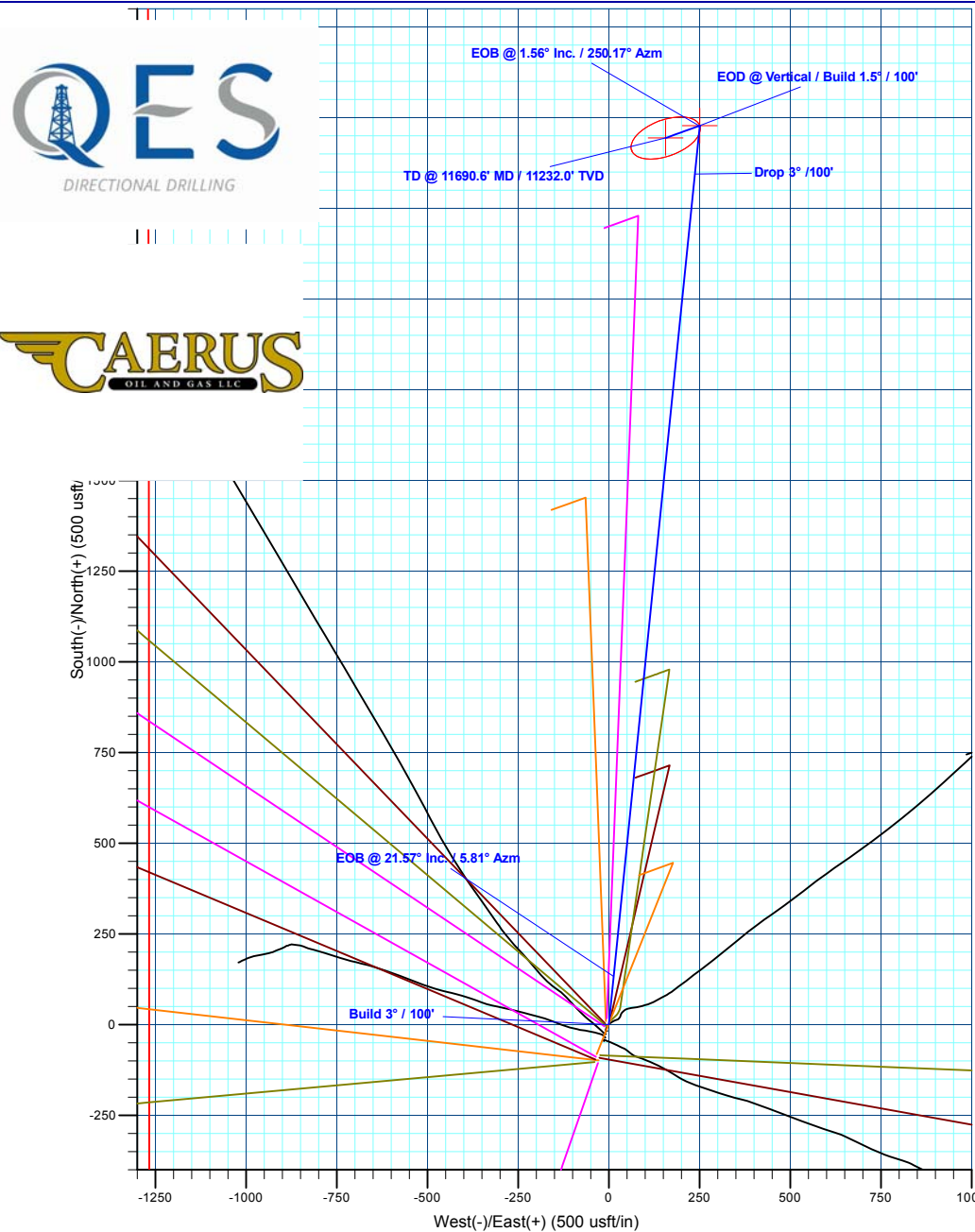
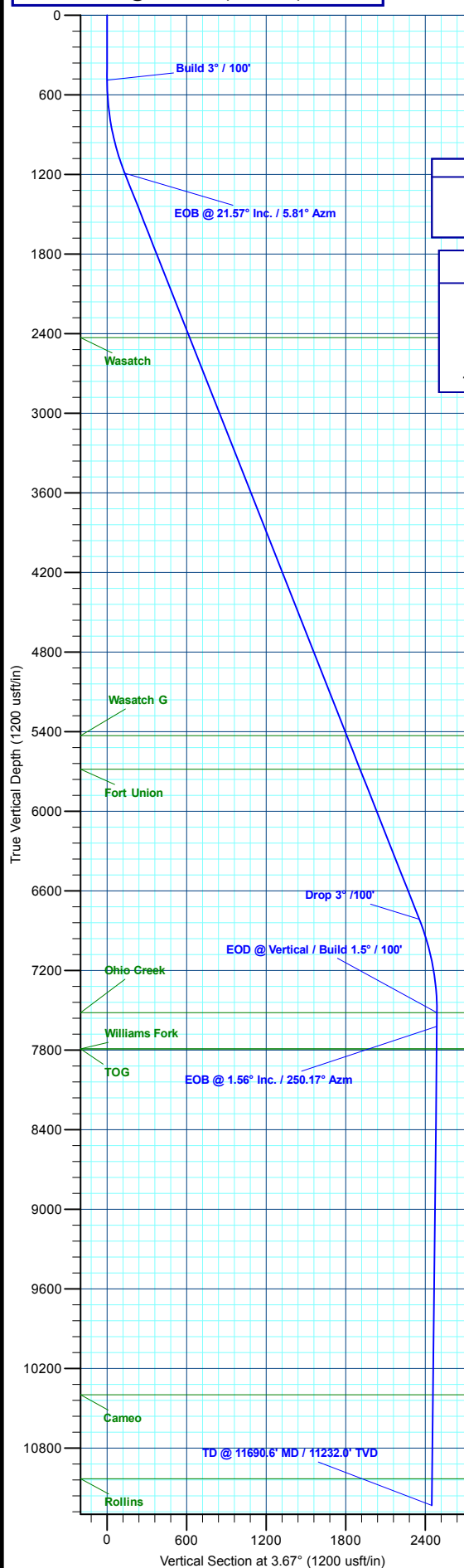
Magnetic Field  
 Strength: 51258.7nT  
 Dip Angle: 65.82°  
 Date: 12/10/2019  
 Model: HDGM\_FILE

**DESIGN TARGET DETAILS**

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
OHCR - BJU M33 FED 12D-33 496	7518.0	2478.0	250.8	14414902.58	2435032.85	39.660439	-108.176825
PBHL - BJU M33 FED 12D-33 496	11232.0	2444.1	156.8	14414865.70	2434940.00	39.660346	-108.177158

**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	
490.0	0.00	0.00	490.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
1209.0	21.57	5.78	1192.1	133.1	13.5	3.00	5.78	133.7	EOB @ 21.57° Inc. / 5.81° Azm
1209.0	21.57	5.78	1192.1	133.1	13.5	3.00	5.78	133.7	Drop 3° / 100'
7256.2	0.00	0.00	6815.9	2345.0	237.3	0.00	0.00	2355.3	EOD @ Vertical / Build 1.5° / 100'
7975.2	0.00	0.00	7518.0	2478.0	250.8	3.00	180.00	2489.0	EOD @ Vertical / Build 1.5° / 100'
8079.4	1.56	250.14	7622.2	2477.5	249.5	1.50	250.14	2488.4	EOB @ 1.56° Inc. / 250.17° Azm
11690.6	1.56	250.14	11232.0	2444.1	156.8	0.00	0.00	2449.1	TD @ 11690.6' MD / 11232.0' TVD



**Plan: Design #1 (BJU M33 FED 12D-33 496/Wellbore #1)**

Created By: Will Jircik Date: 11:47, December 16 2019



## **Caerus Oil & Gas**

**Garfield County, CO**

**NPM M33 496 Pad**

**BJU M33 FED 12D-33 496 - Slot BJU M33 FED 12D-33 496**

**Wellbore #1**

**Plan: Design #1**

## **QES Well Planning Report**

**16 December, 2019**



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M33 FED 12D-33 496 - Slot BJU M33 FED 12D-33 496
<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>	NPM M33 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M33 FED 12D-33 496	<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>	NPM 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 12D-33 496 - Slot BJU M33 FED 12D-33 496					
<b>Well Position</b>	<b>+N/-S</b>	-2,546.6 usft	<b>Northing:</b>	14,412,417.90 usft	<b>Latitude:</b>	39.653638
	<b>+E/-W</b>	-12,238.3 usft	<b>Easting:</b>	2,434,860.10 usft	<b>Longitude:</b>	-108.177715
<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 #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	3.67

<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		
490.0	0.00	0.00	490.0	0.0	0.0	0.00	0.00	0.00	0.00		
1,209.0	21.57	5.78	1,192.1	133.1	13.5	3.00	3.00	0.00	5.78		
7,256.2	21.57	5.78	6,815.9	2,345.0	237.3	0.00	0.00	0.00	0.00		
7,975.2	0.00	0.00	7,518.0	2,478.0	250.8	3.00	-3.00	0.00	180.00	OHCR - BJU M33 F	
8,079.4	1.56	250.14	7,622.2	2,477.5	249.5	1.50	1.50	-105.45	250.14		
11,690.6	1.56	250.14	11,232.0	2,444.1	156.8	0.00	0.00	0.00	0.00	PBHL - BJU M33 FI	

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M33 FED 12D-33 496 - Slot BJU M33 FED 12D-33 496
<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>	NPM M33 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M33 FED 12D-33 496	<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
<b>Build 3° / 100'</b>									
490.0	0.00	0.00	490.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.30	5.78	500.0	0.0	0.0	0.0	3.00	3.00	0.00
600.0	3.30	5.78	599.9	3.2	0.3	3.2	3.00	3.00	0.00
700.0	6.30	5.78	699.6	11.5	1.2	11.5	3.00	3.00	0.00
800.0	9.30	5.78	798.6	25.0	2.5	25.1	3.00	3.00	0.00
900.0	12.30	5.78	896.9	43.6	4.4	43.8	3.00	3.00	0.00
1,000.0	15.30	5.78	994.0	67.3	6.8	67.6	3.00	3.00	0.00
1,100.0	18.30	5.78	1,089.7	96.1	9.7	96.5	3.00	3.00	0.00
<b>EOB @ 21.57° Inc. / 5.81° Azm</b>									
1,209.0	21.57	5.78	1,192.1	133.1	13.5	133.7	3.00	3.00	0.00
1,300.0	21.57	5.78	1,276.8	166.4	16.8	167.1	0.00	0.00	0.00
1,400.0	21.57	5.78	1,369.8	202.9	20.5	203.8	0.00	0.00	0.00
1,500.0	21.57	5.78	1,462.8	239.5	24.2	240.6	0.00	0.00	0.00
1,600.0	21.57	5.78	1,555.8	276.1	27.9	277.3	0.00	0.00	0.00
1,700.0	21.57	5.78	1,648.8	312.7	31.6	314.0	0.00	0.00	0.00
1,800.0	21.57	5.78	1,741.7	349.2	35.3	350.8	0.00	0.00	0.00
1,900.0	21.57	5.78	1,834.7	385.8	39.0	387.5	0.00	0.00	0.00
2,000.0	21.57	5.78	1,927.7	422.4	42.7	424.3	0.00	0.00	0.00
2,100.0	21.57	5.78	2,020.7	459.0	46.5	461.0	0.00	0.00	0.00
2,200.0	21.57	5.78	2,113.7	495.5	50.2	497.7	0.00	0.00	0.00
2,300.0	21.57	5.78	2,206.7	532.1	53.9	534.5	0.00	0.00	0.00
2,400.0	21.57	5.78	2,299.7	568.7	57.6	571.2	0.00	0.00	0.00
2,500.0	21.57	5.78	2,392.7	605.3	61.3	608.0	0.00	0.00	0.00
<b>Wasatch</b>									
2,540.1	21.57	5.78	2,430.0	619.9	62.7	622.7	0.00	0.00	0.00
2,600.0	21.57	5.78	2,485.7	641.9	65.0	644.7	0.00	0.00	0.00
2,700.0	21.57	5.78	2,578.7	678.4	68.7	681.4	0.00	0.00	0.00
2,800.0	21.57	5.78	2,671.7	715.0	72.4	718.2	0.00	0.00	0.00
2,900.0	21.57	5.78	2,764.7	751.6	76.1	754.9	0.00	0.00	0.00
3,000.0	21.57	5.78	2,857.7	788.2	79.8	791.7	0.00	0.00	0.00
3,100.0	21.57	5.78	2,950.7	824.7	83.5	828.4	0.00	0.00	0.00
3,200.0	21.57	5.78	3,043.7	861.3	87.2	865.1	0.00	0.00	0.00
3,300.0	21.57	5.78	3,136.7	897.9	90.9	901.9	0.00	0.00	0.00
3,400.0	21.57	5.78	3,229.7	934.5	94.6	938.6	0.00	0.00	0.00
3,500.0	21.57	5.78	3,322.7	971.0	98.3	975.3	0.00	0.00	0.00
3,600.0	21.57	5.78	3,415.7	1,007.6	102.0	1,012.1	0.00	0.00	0.00
3,700.0	21.57	5.78	3,508.7	1,044.2	105.7	1,048.8	0.00	0.00	0.00
3,800.0	21.57	5.78	3,601.7	1,080.8	109.4	1,085.6	0.00	0.00	0.00
3,900.0	21.57	5.78	3,694.7	1,117.4	113.1	1,122.3	0.00	0.00	0.00
4,000.0	21.57	5.78	3,787.7	1,153.9	116.8	1,159.0	0.00	0.00	0.00
4,100.0	21.57	5.78	3,880.7	1,190.5	120.5	1,195.8	0.00	0.00	0.00
4,200.0	21.57	5.78	3,973.7	1,227.1	124.2	1,232.5	0.00	0.00	0.00
4,300.0	21.57	5.78	4,066.7	1,263.7	127.9	1,269.3	0.00	0.00	0.00
4,400.0	21.57	5.78	4,159.7	1,300.2	131.6	1,306.0	0.00	0.00	0.00
4,500.0	21.57	5.78	4,252.7	1,336.8	135.3	1,342.7	0.00	0.00	0.00
4,600.0	21.57	5.78	4,345.7	1,373.4	139.0	1,379.5	0.00	0.00	0.00
4,700.0	21.57	5.78	4,438.7	1,410.0	142.7	1,416.2	0.00	0.00	0.00

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<b>Project:</b>	Garfield County, CO	<b>MD Reference:</b>	RKB @ 8431.0usft (H&P #329)
<b>Site:</b>	NPM M33 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M33 FED 12D-33 496	<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	21.57	5.78	4,531.7	1,446.5	146.4	1,452.9	0.00	0.00	0.00
4,900.0	21.57	5.78	4,624.7	1,483.1	150.1	1,489.7	0.00	0.00	0.00
5,000.0	21.57	5.78	4,717.7	1,519.7	153.8	1,526.4	0.00	0.00	0.00
5,100.0	21.57	5.78	4,810.6	1,556.3	157.5	1,563.2	0.00	0.00	0.00
5,200.0	21.57	5.78	4,903.6	1,592.9	161.2	1,599.9	0.00	0.00	0.00
5,300.0	21.57	5.78	4,996.6	1,629.4	164.9	1,636.6	0.00	0.00	0.00
5,400.0	21.57	5.78	5,089.6	1,666.0	168.6	1,673.4	0.00	0.00	0.00
5,500.0	21.57	5.78	5,182.6	1,702.6	172.3	1,710.1	0.00	0.00	0.00
5,600.0	21.57	5.78	5,275.6	1,739.2	176.0	1,746.9	0.00	0.00	0.00
5,700.0	21.57	5.78	5,368.6	1,775.7	179.7	1,783.6	0.00	0.00	0.00
<b>Wasatch G</b>									
5,766.0	21.57	5.78	5,430.0	1,799.9	182.2	1,807.8	0.00	0.00	0.00
5,800.0	21.57	5.78	5,461.6	1,812.3	183.4	1,820.3	0.00	0.00	0.00
5,900.0	21.57	5.78	5,554.6	1,848.9	187.1	1,857.1	0.00	0.00	0.00
6,000.0	21.57	5.78	5,647.6	1,885.5	190.8	1,893.8	0.00	0.00	0.00
<b>Fort Union</b>									
6,039.1	21.57	5.78	5,684.0	1,899.8	192.3	1,908.2	0.00	0.00	0.00
6,100.0	21.57	5.78	5,740.6	1,922.0	194.5	1,930.6	0.00	0.00	0.00
6,200.0	21.57	5.78	5,833.6	1,958.6	198.2	1,967.3	0.00	0.00	0.00
6,300.0	21.57	5.78	5,926.6	1,995.2	201.9	2,004.0	0.00	0.00	0.00
6,400.0	21.57	5.78	6,019.6	2,031.8	205.6	2,040.8	0.00	0.00	0.00
6,500.0	21.57	5.78	6,112.6	2,068.3	209.3	2,077.5	0.00	0.00	0.00
6,600.0	21.57	5.78	6,205.6	2,104.9	213.0	2,114.2	0.00	0.00	0.00
6,700.0	21.57	5.78	6,298.6	2,141.5	216.7	2,151.0	0.00	0.00	0.00
6,800.0	21.57	5.78	6,391.6	2,178.1	220.4	2,187.7	0.00	0.00	0.00
6,900.0	21.57	5.78	6,484.6	2,214.7	224.1	2,224.5	0.00	0.00	0.00
7,000.0	21.57	5.78	6,577.6	2,251.2	227.8	2,261.2	0.00	0.00	0.00
7,100.0	21.57	5.78	6,670.6	2,287.8	231.5	2,297.9	0.00	0.00	0.00
7,200.0	21.57	5.78	6,763.6	2,324.4	235.2	2,334.7	0.00	0.00	0.00
<b>Drop 3° /100'</b>									
7,256.2	21.57	5.78	6,815.9	2,345.0	237.3	2,355.3	0.00	0.00	0.00
7,300.0	20.26	5.78	6,856.8	2,360.5	238.9	2,371.0	3.00	-3.00	0.00
7,400.0	17.26	5.78	6,951.4	2,392.5	242.1	2,403.1	3.00	-3.00	0.00
7,500.0	14.26	5.78	7,047.7	2,419.5	244.9	2,430.2	3.00	-3.00	0.00
7,600.0	11.26	5.78	7,145.2	2,441.5	247.1	2,452.3	3.00	-3.00	0.00
7,700.0	8.26	5.78	7,243.7	2,458.3	248.8	2,469.2	3.00	-3.00	0.00
7,800.0	5.26	5.78	7,343.0	2,470.0	250.0	2,481.0	3.00	-3.00	0.00
7,900.0	2.26	5.78	7,442.8	2,476.5	250.6	2,487.5	3.00	-3.00	0.00
<b>EOD @ Vertical / Build 1.5° / 100' - Ohio Creek</b>									
7,975.2	0.00	0.00	7,518.0	2,478.0	250.8	2,489.0	3.00	-3.00	0.00
8,000.0	0.37	250.14	7,542.8	2,478.0	250.7	2,489.0	1.50	1.50	0.00
<b>EOB @ 1.56° Inc. / 250.17° Azm</b>									
8,079.4	1.56	250.14	7,622.2	2,477.5	249.5	2,488.4	1.50	1.50	0.00
8,100.0	1.56	250.14	7,642.8	2,477.3	248.9	2,488.2	0.00	0.00	0.00
8,200.0	1.56	250.14	7,742.7	2,476.4	246.4	2,487.1	0.00	0.00	0.00
<b>Williams Fork - TOG</b>									
8,249.3	1.56	250.14	7,792.0	2,476.0	245.1	2,486.6	0.00	0.00	0.00
8,300.0	1.56	250.14	7,842.7	2,475.5	243.8	2,486.0	0.00	0.00	0.00
8,400.0	1.56	250.14	7,942.7	2,474.6	241.2	2,484.9	0.00	0.00	0.00
8,500.0	1.56	250.14	8,042.6	2,473.6	238.7	2,483.8	0.00	0.00	0.00
8,600.0	1.56	250.14	8,142.6	2,472.7	236.1	2,482.8	0.00	0.00	0.00
8,700.0	1.56	250.14	8,242.5	2,471.8	233.5	2,481.7	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 12D-33 496 - Slot BJU M33 FED 12D-33 496
<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>	NPM M33 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M33 FED 12D-33 496	<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)	
8,800.0	1.56	250.14	8,342.5	2,470.9	231.0	2,480.6	0.00	0.00	0.00	
8,900.0	1.56	250.14	8,442.5	2,469.9	228.4	2,479.5	0.00	0.00	0.00	
9,000.0	1.56	250.14	8,542.4	2,469.0	225.8	2,478.4	0.00	0.00	0.00	
9,100.0	1.56	250.14	8,642.4	2,468.1	223.3	2,477.3	0.00	0.00	0.00	
9,200.0	1.56	250.14	8,742.4	2,467.2	220.7	2,476.2	0.00	0.00	0.00	
9,300.0	1.56	250.14	8,842.3	2,466.2	218.2	2,475.1	0.00	0.00	0.00	
9,400.0	1.56	250.14	8,942.3	2,465.3	215.6	2,474.0	0.00	0.00	0.00	
9,500.0	1.56	250.14	9,042.2	2,464.4	213.0	2,473.0	0.00	0.00	0.00	
9,600.0	1.56	250.14	9,142.2	2,463.4	210.5	2,471.9	0.00	0.00	0.00	
9,700.0	1.56	250.14	9,242.2	2,462.5	207.9	2,470.8	0.00	0.00	0.00	
9,800.0	1.56	250.14	9,342.1	2,461.6	205.3	2,469.7	0.00	0.00	0.00	
9,900.0	1.56	250.14	9,442.1	2,460.7	202.8	2,468.6	0.00	0.00	0.00	
10,000.0	1.56	250.14	9,542.1	2,459.7	200.2	2,467.5	0.00	0.00	0.00	
10,100.0	1.56	250.14	9,642.0	2,458.8	197.6	2,466.4	0.00	0.00	0.00	
10,200.0	1.56	250.14	9,742.0	2,457.9	195.1	2,465.3	0.00	0.00	0.00	
10,300.0	1.56	250.14	9,841.9	2,457.0	192.5	2,464.2	0.00	0.00	0.00	
10,400.0	1.56	250.14	9,941.9	2,456.0	189.9	2,463.2	0.00	0.00	0.00	
10,500.0	1.56	250.14	10,041.9	2,455.1	187.4	2,462.1	0.00	0.00	0.00	
10,600.0	1.56	250.14	10,141.8	2,454.2	184.8	2,461.0	0.00	0.00	0.00	
10,700.0	1.56	250.14	10,241.8	2,453.3	182.2	2,459.9	0.00	0.00	0.00	
10,800.0	1.56	250.14	10,341.8	2,452.3	179.7	2,458.8	0.00	0.00	0.00	
<b>Cameo</b>										
10,856.3	1.56	250.14	10,398.0	2,451.8	178.2	2,458.2	0.00	0.00	0.00	
10,900.0	1.56	250.14	10,441.7	2,451.4	177.1	2,457.7	0.00	0.00	0.00	
11,000.0	1.56	250.14	10,541.7	2,450.5	174.5	2,456.6	0.00	0.00	0.00	
11,100.0	1.56	250.14	10,641.6	2,449.5	172.0	2,455.5	0.00	0.00	0.00	
11,200.0	1.56	250.14	10,741.6	2,448.6	169.4	2,454.4	0.00	0.00	0.00	
11,300.0	1.56	250.14	10,841.6	2,447.7	166.9	2,453.4	0.00	0.00	0.00	
11,400.0	1.56	250.14	10,941.5	2,446.8	164.3	2,452.3	0.00	0.00	0.00	
<b>Rollins</b>										
11,490.5	1.56	250.14	11,032.0	2,445.9	162.0	2,451.3	0.00	0.00	0.00	
11,500.0	1.56	250.14	11,041.5	2,445.8	161.7	2,451.2	0.00	0.00	0.00	
11,600.0	1.56	250.14	11,141.5	2,444.9	159.2	2,450.1	0.00	0.00	0.00	
<b>TD @ 11690.6' MD / 11232.0' TVD</b>										
11,690.6	1.56	250.14	11,232.0	2,444.1	156.8	2,449.1	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
OHCR - BJU M33 FEI - hit/miss target - Shape - plan hits target center - Point	0.00	0.00	7,518.0	2,478.0	250.8	14,414,902.58	2,435,032.85	39.660439	-108.176825	
PBHL - BJU M33 FED - plan hits target center - Ellipse (radii L100.0 W50.0 on 250.00 azi)	0.00	0.00	11,232.0	2,444.1	156.8	14,414,865.70	2,434,940.00	39.660346	-108.177158	

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BJU M33 FED 12D-33 496 - Slot BJU M33 FED 12D-33 496
<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>	NPM M33 496 Pad	<b>North Reference:</b>	True
<b>Well:</b>	BJU M33 FED 12D-33 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,540.1	2,430.0	Wasatch				
5,766.0	5,430.0	Wasatch G				
6,039.1	5,684.0	Fort Union				
7,975.2	7,518.0	Ohio Creek				
8,249.3	7,792.0	Williams Fork				
8,249.3	7,792.0	TOG				
10,856.3	10,398.0	Cameo				
11,490.5	11,032.0	Rollins				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
490.0	490.0	0.0	0.0	Build 3° / 100'	
1,209.0	1,192.1	133.1	13.5	EOB @ 21.57° Inc. / 5.81° Azm	
7,256.2	6,815.9	2,345.0	237.3	Drop 3° / 100'	
7,975.2	7,518.0	2,478.0	250.8	EOD @ Vertical / Build 1.5° / 100'	
8,079.4	7,622.2	2,477.5	249.5	EOB @ 1.56° Inc. / 250.17° Azm	
11,690.6	11,232.0	2,444.1	156.8	TD @ 11690.6' MD / 11232.0' TVD	