



Ursa Operating Company, LLC

Rio Blanco County, Colorado

Jimmy Gulch 3K Pad

Jimmy Gulch 3K 43A-3-3-97

Wellbore #1

Plan: Design #1

Standard Planning Report

25 July, 2017



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Jimmy Gulch 3K 43A-3-3-97
Company:	Ursa Operating Company, LLC	TVD Reference:	Jimmy Gulch 3K 43A-3-3-97 @ 6733.5usft (Est KB)
Project:	Rio Blanco County, Colorado	MD Reference:	Jimmy Gulch 3K 43A-3-3-97 @ 6733.5usft (Est KB)
Site:	Jimmy Gulch 3K Pad	North Reference:	True
Well:	Jimmy Gulch 3K 43A-3-3-97	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Rio Blanco County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Jimmy Gulch 3K Pad				
Site Position:		Northing:	1,187,943.19 usft	Latitude:	39.815928222
From:	Lat/Long	Easting:	2,222,132.68 usft	Longitude:	-108.269550766
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.79 °

Well	Jimmy Gulch 3K 43A-3-3-97, SHL: Lat 39.815952327 Long -108.269511321					
Well Position	+N/-S	8.8 usft	Northing:	1,187,951.63 usft	Latitude:	39.815952327
	+E/-W	11.1 usft	Easting:	2,222,144.02 usft	Longitude:	-108.269511321
Position Uncertainty		0.0 usft	Wellhead Elevation:	6,733.5 usft	Ground Level:	6,712.5 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/21/2017	9.85	65.80	51,649

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	77.30

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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,838.3	29.34	77.30	1,802.2	46.2	204.9	3.50	3.50	0.00	77.30	
7,526.7	29.34	77.30	6,760.8	658.9	2,924.0	0.00	0.00	0.00	0.00	
8,365.0	0.00	0.00	7,563.0	705.1	3,128.9	3.50	-3.50	0.00	180.00	JG 3K 43A-3-3-97 TG
14,045.0	0.00	0.00	13,243.0	705.1	3,128.9	0.00	0.00	0.00	0.00	

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Site:	Jimmy Gulch 3K Pad	North Reference:	True
Well:	Jimmy Gulch 3K 43A-3-3-97	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	0.00
0.1	0.00	0.00	0.1	0.0	0.0	0.0	0.00	0.00	0.00	0.00
SHL 39.815952327, -108.269511321										
100.0	0.00	0.00	100.0	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	0.0	0.00	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	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	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	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	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	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	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	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Start Build 3.50										
1,100.0	3.50	77.30	1,099.9	0.7	3.0	3.1	3.50	3.50	0.00	0.00
1,200.0	7.00	77.30	1,199.5	2.7	11.9	12.2	3.50	3.50	0.00	0.00
1,300.0	10.50	77.30	1,298.3	6.0	26.7	27.4	3.50	3.50	0.00	0.00
1,377.3	13.21	77.30	1,374.0	9.5	42.2	43.3	3.50	3.50	0.00	0.00
Green River Fm - Mahogany Bench										
1,400.0	14.00	77.30	1,396.0	10.7	47.4	48.6	3.50	3.50	0.00	0.00
1,436.1	15.26	77.30	1,431.0	12.7	56.3	57.8	3.50	3.50	0.00	0.00
Dissolution Surface										
1,500.0	17.50	77.30	1,492.3	16.7	73.9	75.8	3.50	3.50	0.00	0.00
1,600.0	21.00	77.30	1,586.7	23.9	106.1	108.7	3.50	3.50	0.00	0.00
1,700.0	24.50	77.30	1,678.9	32.4	143.8	147.4	3.50	3.50	0.00	0.00
1,800.0	28.00	77.30	1,768.5	42.1	186.9	191.6	3.50	3.50	0.00	0.00
1,838.3	29.34	77.30	1,802.2	46.2	204.9	210.0	3.50	3.50	0.00	0.00
Start 5688.4 hold at 1838.3 MD										
1,900.0	29.34	77.30	1,855.9	52.8	234.3	240.2	0.00	0.00	0.00	0.00
2,000.0	29.34	77.30	1,943.1	63.6	282.2	289.2	0.00	0.00	0.00	0.00
2,100.0	29.34	77.30	2,030.3	74.4	330.0	338.2	0.00	0.00	0.00	0.00
2,200.0	29.34	77.30	2,117.4	85.1	377.8	387.2	0.00	0.00	0.00	0.00
2,300.0	29.34	77.30	2,204.6	95.9	425.6	436.2	0.00	0.00	0.00	0.00
2,400.0	29.34	77.30	2,291.8	106.7	473.4	485.2	0.00	0.00	0.00	0.00
2,500.0	29.34	77.30	2,379.0	117.4	521.2	534.2	0.00	0.00	0.00	0.00
2,600.0	29.34	77.30	2,466.1	128.2	569.0	583.2	0.00	0.00	0.00	0.00
2,700.0	29.34	77.30	2,553.3	139.0	616.8	632.2	0.00	0.00	0.00	0.00
2,711.1	29.34	77.30	2,563.0	140.2	622.1	637.7	0.00	0.00	0.00	0.00
Green River Fm - Garden Gulch Mbr										
2,800.0	29.34	77.30	2,640.5	149.8	664.6	681.2	0.00	0.00	0.00	0.00
2,900.0	29.34	77.30	2,727.6	160.5	712.4	730.2	0.00	0.00	0.00	0.00
2,968.1	29.34	77.30	2,787.0	167.9	744.9	763.6	0.00	0.00	0.00	0.00
Wasatch Fm										
3,000.0	29.34	77.30	2,814.8	171.3	760.2	779.2	0.00	0.00	0.00	0.00
3,100.0	29.34	77.30	2,902.0	182.1	808.0	828.2	0.00	0.00	0.00	0.00
3,200.0	29.34	77.30	2,989.2	192.8	855.8	877.2	0.00	0.00	0.00	0.00
3,300.0	29.34	77.30	3,076.3	203.6	903.6	926.2	0.00	0.00	0.00	0.00
3,400.0	29.34	77.30	3,163.5	214.4	951.4	975.2	0.00	0.00	0.00	0.00
3,500.0	29.34	77.30	3,250.7	225.2	999.2	1,024.2	0.00	0.00	0.00	0.00
3,600.0	29.34	77.30	3,337.8	235.9	1,047.0	1,073.2	0.00	0.00	0.00	0.00
3,700.0	29.34	77.30	3,425.0	246.7	1,094.8	1,122.2	0.00	0.00	0.00	0.00
3,800.0	29.34	77.30	3,512.2	257.5	1,142.6	1,171.2	0.00	0.00	0.00	0.00

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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)	
3,900.0	29.34	77.30	3,599.4	268.2	1,190.4	1,220.2	0.00	0.00	0.00	
4,000.0	29.34	77.30	3,686.5	279.0	1,238.2	1,269.2	0.00	0.00	0.00	
4,100.0	29.34	77.30	3,773.7	289.8	1,286.0	1,318.2	0.00	0.00	0.00	
4,200.0	29.34	77.30	3,860.9	300.6	1,333.8	1,367.2	0.00	0.00	0.00	
4,300.0	29.34	77.30	3,948.0	311.3	1,381.6	1,416.2	0.00	0.00	0.00	
4,359.6	29.34	77.30	4,000.0	317.7	1,410.1	1,445.4	0.00	0.00	0.00	
Surface Casing										
4,400.0	29.34	77.30	4,035.2	322.1	1,429.4	1,465.2	0.00	0.00	0.00	
4,500.0	29.34	77.30	4,122.4	332.9	1,477.2	1,514.2	0.00	0.00	0.00	
4,600.0	29.34	77.30	4,209.6	343.6	1,525.0	1,563.2	0.00	0.00	0.00	
4,700.0	29.34	77.30	4,296.7	354.4	1,572.8	1,612.2	0.00	0.00	0.00	
4,800.0	29.34	77.30	4,383.9	365.2	1,620.6	1,661.2	0.00	0.00	0.00	
4,900.0	29.34	77.30	4,471.1	376.0	1,668.4	1,710.2	0.00	0.00	0.00	
5,000.0	29.34	77.30	4,558.3	386.7	1,716.2	1,759.2	0.00	0.00	0.00	
5,100.0	29.34	77.30	4,645.4	397.5	1,764.0	1,808.2	0.00	0.00	0.00	
5,200.0	29.34	77.30	4,732.6	408.3	1,811.8	1,857.2	0.00	0.00	0.00	
5,300.0	29.34	77.30	4,819.8	419.0	1,859.6	1,906.2	0.00	0.00	0.00	
5,400.0	29.34	77.30	4,906.9	429.8	1,907.4	1,955.2	0.00	0.00	0.00	
5,500.0	29.34	77.30	4,994.1	440.6	1,955.2	2,004.2	0.00	0.00	0.00	
5,600.0	29.34	77.30	5,081.3	451.4	2,003.0	2,053.2	0.00	0.00	0.00	
5,700.0	29.34	77.30	5,168.5	462.1	2,050.8	2,102.2	0.00	0.00	0.00	
5,768.3	29.34	77.30	5,228.0	469.5	2,083.5	2,135.7	0.00	0.00	0.00	
Ft Union										
5,800.0	29.34	77.30	5,255.6	472.9	2,098.6	2,151.3	0.00	0.00	0.00	
5,900.0	29.34	77.30	5,342.8	483.7	2,146.4	2,200.3	0.00	0.00	0.00	
6,000.0	29.34	77.30	5,430.0	494.4	2,194.2	2,249.3	0.00	0.00	0.00	
6,100.0	29.34	77.30	5,517.1	505.2	2,242.0	2,298.3	0.00	0.00	0.00	
6,200.0	29.34	77.30	5,604.3	516.0	2,289.8	2,347.3	0.00	0.00	0.00	
6,300.0	29.34	77.30	5,691.5	526.8	2,337.6	2,396.3	0.00	0.00	0.00	
6,400.0	29.34	77.30	5,778.7	537.5	2,385.4	2,445.3	0.00	0.00	0.00	
6,500.0	29.34	77.30	5,865.8	548.3	2,433.2	2,494.3	0.00	0.00	0.00	
6,600.0	29.34	77.30	5,953.0	559.1	2,481.0	2,543.3	0.00	0.00	0.00	
6,700.0	29.34	77.30	6,040.2	569.8	2,528.8	2,592.3	0.00	0.00	0.00	
6,800.0	29.34	77.30	6,127.3	580.6	2,576.6	2,641.3	0.00	0.00	0.00	
6,900.0	29.34	77.30	6,214.5	591.4	2,624.5	2,690.3	0.00	0.00	0.00	
7,000.0	29.34	77.30	6,301.7	602.2	2,672.3	2,739.3	0.00	0.00	0.00	
7,100.0	29.34	77.30	6,388.9	612.9	2,720.1	2,788.3	0.00	0.00	0.00	
7,200.0	29.34	77.30	6,476.0	623.7	2,767.9	2,837.3	0.00	0.00	0.00	
7,300.0	29.34	77.30	6,563.2	634.5	2,815.7	2,886.3	0.00	0.00	0.00	
7,400.0	29.34	77.30	6,650.4	645.2	2,863.5	2,935.3	0.00	0.00	0.00	
7,500.0	29.34	77.30	6,737.5	656.0	2,911.3	2,984.3	0.00	0.00	0.00	
7,526.7	29.34	77.30	6,760.8	658.9	2,924.0	2,997.4	0.00	0.00	0.00	
Start Drop -3.50										
7,600.0	26.78	77.30	6,825.5	666.5	2,957.7	3,031.8	3.50	-3.50	0.00	
7,700.0	23.28	77.30	6,916.1	675.8	2,998.9	3,074.1	3.50	-3.50	0.00	
7,800.0	19.78	77.30	7,009.1	683.8	3,034.7	3,110.8	3.50	-3.50	0.00	
7,900.0	16.28	77.30	7,104.2	690.6	3,064.9	3,141.7	3.50	-3.50	0.00	
8,000.0	12.78	77.30	7,201.0	696.1	3,089.4	3,166.8	3.50	-3.50	0.00	
8,100.0	9.28	77.30	7,299.1	700.4	3,108.0	3,185.9	3.50	-3.50	0.00	
8,200.0	5.78	77.30	7,398.2	703.2	3,120.8	3,199.0	3.50	-3.50	0.00	
8,300.0	2.28	77.30	7,498.0	704.8	3,127.6	3,206.1	3.50	-3.50	0.00	

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Planned Survey										
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8,359.0	0.21	77.30	7,557.0	705.1	3,128.9	3,207.3	3.50	-3.50	0.00	
Ohio Creek										
8,365.0	0.00	0.00	7,563.0	705.1	3,128.9	3,207.4	3.50	-3.50	0.00	
Start 5680.0 hold at 8365.0 MD - Back to Vertical - Top of Gas - JG 3K 43A-3-3-97 TGT										
8,400.0	0.00	0.00	7,598.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
8,500.0	0.00	0.00	7,698.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
8,525.0	0.00	0.00	7,723.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
Williams Fork										
8,600.0	0.00	0.00	7,798.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
8,700.0	0.00	0.00	7,898.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
8,800.0	0.00	0.00	7,998.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,098.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,198.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
9,100.0	0.00	0.00	8,298.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
9,200.0	0.00	0.00	8,398.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
9,300.0	0.00	0.00	8,498.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
9,400.0	0.00	0.00	8,598.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
9,500.0	0.00	0.00	8,698.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
9,600.0	0.00	0.00	8,798.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
9,700.0	0.00	0.00	8,898.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
9,800.0	0.00	0.00	8,998.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,098.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
10,000.0	0.00	0.00	9,198.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
10,100.0	0.00	0.00	9,298.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
10,200.0	0.00	0.00	9,398.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
10,300.0	0.00	0.00	9,498.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
10,400.0	0.00	0.00	9,598.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
10,500.0	0.00	0.00	9,698.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
10,600.0	0.00	0.00	9,798.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
10,700.0	0.00	0.00	9,898.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
10,800.0	0.00	0.00	9,998.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
10,900.0	0.00	0.00	10,098.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
11,000.0	0.00	0.00	10,198.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
11,100.0	0.00	0.00	10,298.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
11,200.0	0.00	0.00	10,398.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
11,300.0	0.00	0.00	10,498.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
11,400.0	0.00	0.00	10,598.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
11,500.0	0.00	0.00	10,698.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
11,600.0	0.00	0.00	10,798.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
11,700.0	0.00	0.00	10,898.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
11,800.0	0.00	0.00	10,998.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
11,900.0	0.00	0.00	11,098.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
11,995.0	0.00	0.00	11,193.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
Cameo										
12,000.0	0.00	0.00	11,198.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
12,100.0	0.00	0.00	11,298.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
12,200.0	0.00	0.00	11,398.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
12,300.0	0.00	0.00	11,498.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
12,400.0	0.00	0.00	11,598.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
12,495.0	0.00	0.00	11,693.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
Rollins										

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Jimmy Gulch 3K 43A-3-3-97
Company:	Ursa Operating Company, LLC	TVD Reference:	Jimmy Gulch 3K 43A-3-3-97 @ 6733.5usft (Est KB)
Project:	Rio Blanco County, Colorado	MD Reference:	Jimmy Gulch 3K 43A-3-3-97 @ 6733.5usft (Est KB)
Site:	Jimmy Gulch 3K Pad	North Reference:	True
Well:	Jimmy Gulch 3K 43A-3-3-97	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)	
12,500.0	0.00	0.00	11,698.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
12,600.0	0.00	0.00	11,798.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
12,662.0	0.00	0.00	11,860.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
Cozzette Fm										
12,700.0	0.00	0.00	11,898.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
12,800.0	0.00	0.00	11,998.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
12,900.0	0.00	0.00	12,098.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
13,000.0	0.00	0.00	12,198.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
13,019.0	0.00	0.00	12,217.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
Corcoran										
13,100.0	0.00	0.00	12,298.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
13,200.0	0.00	0.00	12,398.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
13,300.0	0.00	0.00	12,498.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
13,400.0	0.00	0.00	12,598.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
13,500.0	0.00	0.00	12,698.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
13,600.0	0.00	0.00	12,798.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
13,700.0	0.00	0.00	12,898.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
13,800.0	0.00	0.00	12,998.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
13,900.0	0.00	0.00	13,098.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
14,000.0	0.00	0.00	13,198.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
14,045.0	0.00	0.00	13,243.0	705.1	3,128.9	3,207.4	0.00	0.00	0.00	
TD at 14045.0 - BHL 39.8178873, -108.2583727										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
JG 3K 43A-3-3-97 TGT	0.00	0.00	7,563.0	705.1	3,128.9	1,188,558.63	2,225,293.37	39.817887300	-108.258372700	
- hit/miss target										
- Shape										
- plan hits target center										
- Rectangle (sides W100.0 H40.0 D5,680.0)										

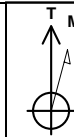
Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Jimmy Gulch 3K 43A-3-3-97
Company:	Ursa Operating Company, LLC	TVD Reference:	Jimmy Gulch 3K 43A-3-3-97 @ 6733.5usft (Est KB)
Project:	Rio Blanco County, Colorado	MD Reference:	Jimmy Gulch 3K 43A-3-3-97 @ 6733.5usft (Est KB)
Site:	Jimmy Gulch 3K Pad	North Reference:	True
Well:	Jimmy Gulch 3K 43A-3-3-97	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,377.3	1,374.0	Green River Fm - Mahogany Bench		0.00		
1,436.1	1,431.0	Dissolution Surface		0.00		
2,711.1	2,563.0	Green River Fm - Garden Gulch Mbr		0.00		
2,968.1	2,787.0	Wasatch Fm		0.00		
5,768.3	5,228.0	Ft Union		0.00		
8,359.0	7,557.0	Ohio Creek		0.00		
8,365.0	7,563.0	Top of Gas		0.00		
8,525.0	7,723.0	Williams Fork		0.00		
11,995.0	11,193.0	Cameo		0.00		
12,495.0	11,693.0	Rollins		0.00		
12,662.0	11,860.0	Cozzette Fm		0.00		
13,019.0	12,217.0	Corcoran		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
0.1	0.1	0.0	0.0	SHL 39.815952327, -108.269511321	
1,000.0	1,000.0	0.0	0.0	Start Build 3.50	
1,838.3	1,802.2	46.2	204.9	Start 5688.4 hold at 1838.3 MD	
4,359.6	4,000.0	317.7	1,410.1	Surface Casing	
7,526.7	6,760.8	658.9	2,924.0	Start Drop -3.50	
8,365.0	7,563.0	705.1	3,128.9	Start 5680.0 hold at 8365.0 MD	
8,365.0	7,563.0	705.1	3,128.9	Back to Vertical	
14,045.0	13,243.0	705.1	3,128.9	TD at 14045.0	
14,045.0	13,243.0	705.1	3,128.9	BHL 39.8178873, -108.2583727	



Well Name: Jimmy Gulch 3K 43A-3-3-97
 Surface Location: Jimmy Gulch 3K Pad
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 6712.5
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1187951.63 2222144.03 39.815952327 -108.269511321
 Est KB Jimmy Gulch 3K 43A-3-3-97 @ 6733.5usft (Est KB)



Azimuths to True North
 Magnetic North: 9.85°
 Magnetic Field
 Strength: 51649.4snT
 Dip Angle: 65.80°
 Date: 7/21/2017
 Model: IGRF2015

Jimmy Gulch 3K Pad
 Jimmy Gulch 3K 43A-3-3-97
 Design #1
 20:20, July 25 2017

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
JG 3K 43A-3-3-97 TGT	7563.0	705.1	3128.9	1188558.63	2225293.37	39.817887300	-108.258372700	Rectangle (Sides: L40.0 W100.0)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1838.3	29.34	77.30	1802.2	46.2	204.9	3.50	77.30	210.0	
4	7526.7	29.34	77.30	6760.8	658.9	2924.0	0.00	0.00	2997.4	
5	8365.0	0.00	0.00	7563.0	705.1	3128.9	3.50	180.00	3207.4	JG 3K 43A-3-3-97 TGT
6	14045.0	0.00	0.00	13243.0	705.1	3128.9	0.00	0.00	3207.4	

ANNOTATIONS

TVD	MD	Annotation
0.1	0.1	SHL 39.815952327, -108.269511321
1000.0	1000.0	Start Build 3.50
1802.2	1838.3	Start 5688.4 hold at 1838.3 MD
4000.0	4359.6	Surface Casing
6760.8	7526.7	Start Drop -3.50
7563.0	8365.0	Start 5680.0 hold at 8365.0 MD
7563.0	8365.0	Back to Vertical
13243.0	14045.0	TD at 14045.0
13243.0	14045.0	BHL 39.8178873, -108.2583727

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
1374.0	1377.3	Mahogany Bench	0.00	
1431.0	1436.1	Dissolution Surface	0.00	
2563.0	2711.1	Garden Gulch Mbr	0.00	
2787.0	2968.1	Wasatch Fm	0.00	
5228.0	5768.3	Ft Union	0.00	
7557.0	8359.0	Ohio Creek	0.00	
7563.0	8365.0	Top of Gas	0.00	
7723.0	8525.0	Williams Fork	0.00	
11193.0	11995.0	Cameo	0.00	
11693.0	12495.0	Rollins	0.00	
11860.0	12662.0	Cozzette Fm	0.00	
12217.0	13019.0	Corcoran	0.00	

