



Ursa Operating Company, LLC

Rio Blanco County, Colorado

Jimmy Gulch 3G Pad

Jimmy Gulch 3G 12D-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 3G 12D-3-3-97
Company:	Ursa Operating Company, LLC	TVD Reference:	Jimmy Gulch 3G 12D-3-3-97 @ 6681.0usft (Est KB)
Project:	Rio Blanco County, Colorado	MD Reference:	Jimmy Gulch 3G 12D-3-3-97 @ 6681.0usft (Est KB)
Site:	Jimmy Gulch 3G Pad	North Reference:	True
Well:	Jimmy Gulch 3G 12D-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 3G Pad				
Site Position:		Northing:	1,189,455.95 usft	Latitude:	39.820187318
From:	Lat/Long	Easting:	2,223,396.68 usft	Longitude:	-108.265221184
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.79 °

Well	Jimmy Gulch 3G 12D-3-3-97, SHL: Lat 39.820075747 Long -108.265353026					
Well Position	+N/-S	-40.6 usft	Northing:	1,189,416.48 usft	Latitude:	39.820075747
	+E/-W	-37.0 usft	Easting:	2,223,358.40 usft	Longitude:	-108.265353026
Position Uncertainty		0.0 usft	Wellhead Elevation:	6,681.0 usft	Ground Level:	6,660.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/21/2017	9.85	65.80	51,653

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	259.45

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	
1,563.5	19.72	259.45	1,552.4	-17.6	-94.4	3.50	3.50	0.00	259.45	
7,068.6	19.72	259.45	6,734.6	-357.7	-1,920.6	0.00	0.00	0.00	0.00	
7,632.0	0.00	0.00	7,287.0	-375.3	-2,015.0	3.50	-3.50	0.00	180.00	JG 3G 12D-3-3-97 TC
13,312.0	0.00	0.00	12,967.0	-375.3	-2,015.0	0.00	0.00	0.00	0.00	

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Site:	Jimmy Gulch 3G Pad	North Reference:	True
Well:	Jimmy Gulch 3G 12D-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	
0.1	0.00	0.00	0.1	0.0	0.0	0.0	0.00	0.00	0.00	
SHL 39.820075747, -108.265353026										
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	
Start Build 3.50										
1,098.1	3.43	259.45	1,098.0	-0.5	-2.9	2.9	3.50	3.50	0.00	
Green River Fm - Mahogany Bench										
1,100.0	3.50	259.45	1,099.9	-0.6	-3.0	3.1	3.50	3.50	0.00	
1,155.2	5.43	259.45	1,155.0	-1.3	-7.2	7.4	3.50	3.50	0.00	
Dissolution Surface										
1,200.0	7.00	259.45	1,199.5	-2.2	-12.0	12.2	3.50	3.50	0.00	
1,300.0	10.50	259.45	1,298.3	-5.0	-26.9	27.4	3.50	3.50	0.00	
1,400.0	14.00	259.45	1,396.0	-8.9	-47.8	48.6	3.50	3.50	0.00	
1,500.0	17.50	259.45	1,492.3	-13.9	-74.5	75.8	3.50	3.50	0.00	
1,563.5	19.72	259.45	1,552.4	-17.6	-94.4	96.0	3.50	3.50	0.00	
Start 5505.1 hold at 1563.5 MD										
1,600.0	19.72	259.45	1,586.8	-19.8	-106.5	108.3	0.00	0.00	0.00	
1,700.0	19.72	259.45	1,680.9	-26.0	-139.7	142.1	0.00	0.00	0.00	
1,800.0	19.72	259.45	1,775.1	-32.2	-172.9	175.8	0.00	0.00	0.00	
1,900.0	19.72	259.45	1,869.2	-38.4	-206.0	209.6	0.00	0.00	0.00	
2,000.0	19.72	259.45	1,963.3	-44.6	-239.2	243.3	0.00	0.00	0.00	
2,100.0	19.72	259.45	2,057.5	-50.7	-272.4	277.1	0.00	0.00	0.00	
2,200.0	19.72	259.45	2,151.6	-56.9	-305.6	310.8	0.00	0.00	0.00	
2,300.0	19.72	259.45	2,245.7	-63.1	-338.7	344.6	0.00	0.00	0.00	
2,343.8	19.72	259.45	2,287.0	-65.8	-353.3	359.3	0.00	0.00	0.00	
Green River Fm - Garden Gulch Mbr										
2,400.0	19.72	259.45	2,339.9	-69.3	-371.9	378.3	0.00	0.00	0.00	
2,500.0	19.72	259.45	2,434.0	-75.5	-405.1	412.0	0.00	0.00	0.00	
2,581.8	19.72	259.45	2,511.0	-80.5	-432.2	439.6	0.00	0.00	0.00	
Wasatch Fm										
2,600.0	19.72	259.45	2,528.1	-81.6	-438.2	445.8	0.00	0.00	0.00	
2,700.0	19.72	259.45	2,622.3	-87.8	-471.4	479.5	0.00	0.00	0.00	
2,800.0	19.72	259.45	2,716.4	-94.0	-504.6	513.3	0.00	0.00	0.00	
2,900.0	19.72	259.45	2,810.5	-100.2	-537.8	547.0	0.00	0.00	0.00	
3,000.0	19.72	259.45	2,904.7	-106.3	-570.9	580.8	0.00	0.00	0.00	
3,100.0	19.72	259.45	2,998.8	-112.5	-604.1	614.5	0.00	0.00	0.00	
3,200.0	19.72	259.45	3,093.0	-118.7	-637.3	648.2	0.00	0.00	0.00	
3,300.0	19.72	259.45	3,187.1	-124.9	-670.5	682.0	0.00	0.00	0.00	
3,400.0	19.72	259.45	3,281.2	-131.1	-703.6	715.7	0.00	0.00	0.00	
3,500.0	19.72	259.45	3,375.4	-137.2	-736.8	749.5	0.00	0.00	0.00	
3,600.0	19.72	259.45	3,469.5	-143.4	-770.0	783.2	0.00	0.00	0.00	
3,700.0	19.72	259.45	3,563.6	-149.6	-803.2	817.0	0.00	0.00	0.00	
3,800.0	19.72	259.45	3,657.8	-155.8	-836.3	850.7	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	19.72	259.45	3,751.9	-162.0	-869.5	884.5	0.00	0.00	0.00	
4,000.0	19.72	259.45	3,846.0	-168.1	-902.7	918.2	0.00	0.00	0.00	
4,100.0	19.72	259.45	3,940.2	-174.3	-935.8	951.9	0.00	0.00	0.00	
4,163.6	19.72	259.45	4,000.0	-178.2	-956.9	973.4	0.00	0.00	0.00	
Surface Casing										
4,200.0	19.72	259.45	4,034.3	-180.5	-969.0	985.7	0.00	0.00	0.00	
4,300.0	19.72	259.45	4,128.4	-186.7	-1,002.2	1,019.4	0.00	0.00	0.00	
4,400.0	19.72	259.45	4,222.6	-192.9	-1,035.4	1,053.2	0.00	0.00	0.00	
4,500.0	19.72	259.45	4,316.7	-199.0	-1,068.5	1,086.9	0.00	0.00	0.00	
4,600.0	19.72	259.45	4,410.8	-205.2	-1,101.7	1,120.7	0.00	0.00	0.00	
4,700.0	19.72	259.45	4,505.0	-211.4	-1,134.9	1,154.4	0.00	0.00	0.00	
4,800.0	19.72	259.45	4,599.1	-217.6	-1,168.1	1,188.2	0.00	0.00	0.00	
4,900.0	19.72	259.45	4,693.2	-223.7	-1,201.2	1,221.9	0.00	0.00	0.00	
5,000.0	19.72	259.45	4,787.4	-229.9	-1,234.4	1,255.6	0.00	0.00	0.00	
5,100.0	19.72	259.45	4,881.5	-236.1	-1,267.6	1,289.4	0.00	0.00	0.00	
5,174.9	19.72	259.45	4,952.0	-240.7	-1,292.4	1,314.7	0.00	0.00	0.00	
Ft Union										
5,200.0	19.72	259.45	4,975.6	-242.3	-1,300.8	1,323.1	0.00	0.00	0.00	
5,300.0	19.72	259.45	5,069.8	-248.5	-1,333.9	1,356.9	0.00	0.00	0.00	
5,400.0	19.72	259.45	5,163.9	-254.6	-1,367.1	1,390.6	0.00	0.00	0.00	
5,500.0	19.72	259.45	5,258.1	-260.8	-1,400.3	1,424.4	0.00	0.00	0.00	
5,600.0	19.72	259.45	5,352.2	-267.0	-1,433.4	1,458.1	0.00	0.00	0.00	
5,700.0	19.72	259.45	5,446.3	-273.2	-1,466.6	1,491.8	0.00	0.00	0.00	
5,800.0	19.72	259.45	5,540.5	-279.4	-1,499.8	1,525.6	0.00	0.00	0.00	
5,900.0	19.72	259.45	5,634.6	-285.5	-1,533.0	1,559.3	0.00	0.00	0.00	
6,000.0	19.72	259.45	5,728.7	-291.7	-1,566.1	1,593.1	0.00	0.00	0.00	
6,100.0	19.72	259.45	5,822.9	-297.9	-1,599.3	1,626.8	0.00	0.00	0.00	
6,200.0	19.72	259.45	5,917.0	-304.1	-1,632.5	1,660.6	0.00	0.00	0.00	
6,300.0	19.72	259.45	6,011.1	-310.3	-1,665.7	1,694.3	0.00	0.00	0.00	
6,400.0	19.72	259.45	6,105.3	-316.4	-1,698.8	1,728.1	0.00	0.00	0.00	
6,500.0	19.72	259.45	6,199.4	-322.6	-1,732.0	1,761.8	0.00	0.00	0.00	
6,600.0	19.72	259.45	6,293.5	-328.8	-1,765.2	1,795.5	0.00	0.00	0.00	
6,700.0	19.72	259.45	6,387.7	-335.0	-1,798.4	1,829.3	0.00	0.00	0.00	
6,800.0	19.72	259.45	6,481.8	-341.1	-1,831.5	1,863.0	0.00	0.00	0.00	
6,900.0	19.72	259.45	6,575.9	-347.3	-1,864.7	1,896.8	0.00	0.00	0.00	
7,000.0	19.72	259.45	6,670.1	-353.5	-1,897.9	1,930.5	0.00	0.00	0.00	
7,068.6	19.72	259.45	6,734.6	-357.7	-1,920.6	1,953.6	0.00	0.00	0.00	
Start Drop -3.50										
7,100.0	18.62	259.45	6,764.3	-359.6	-1,930.8	1,964.0	3.50	-3.50	0.00	
7,200.0	15.12	259.45	6,860.0	-364.9	-1,959.3	1,993.0	3.50	-3.50	0.00	
7,300.0	11.62	259.45	6,957.3	-369.2	-1,982.0	2,016.1	3.50	-3.50	0.00	
7,400.0	8.12	259.45	7,055.8	-372.3	-1,998.9	2,033.3	3.50	-3.50	0.00	
7,500.0	4.62	259.45	7,155.1	-374.3	-2,009.8	2,044.3	3.50	-3.50	0.00	
7,600.0	1.12	259.45	7,255.0	-375.3	-2,014.7	2,049.4	3.50	-3.50	0.00	
7,626.0	0.21	259.45	7,281.0	-375.3	-2,015.0	2,049.7	3.50	-3.50	0.00	
Ohio Creek										
7,632.0	0.00	0.00	7,287.0	-375.3	-2,015.0	2,049.7	3.50	-3.50	0.00	
Start 5680.0 hold at 7632.0 MD - Back to Vertical - Top of Gas - JG 3G 12D-3-3-97 TGT										
7,700.0	0.00	0.00	7,355.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
7,792.0	0.00	0.00	7,447.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
Williams Fork										

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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)	
7,800.0	0.00	0.00	7,455.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,555.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,655.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
8,100.0	0.00	0.00	7,755.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
8,200.0	0.00	0.00	7,855.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
8,300.0	0.00	0.00	7,955.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,055.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,155.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,255.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,355.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,455.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,555.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,655.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
9,100.0	0.00	0.00	8,755.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
9,200.0	0.00	0.00	8,855.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
9,300.0	0.00	0.00	8,955.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,055.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,155.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,255.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,355.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,455.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,555.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
10,000.0	0.00	0.00	9,655.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
10,100.0	0.00	0.00	9,755.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
10,200.0	0.00	0.00	9,855.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
10,300.0	0.00	0.00	9,955.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
10,400.0	0.00	0.00	10,055.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
10,500.0	0.00	0.00	10,155.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
10,600.0	0.00	0.00	10,255.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
10,700.0	0.00	0.00	10,355.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
10,800.0	0.00	0.00	10,455.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
10,900.0	0.00	0.00	10,555.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
11,000.0	0.00	0.00	10,655.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
11,100.0	0.00	0.00	10,755.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
11,200.0	0.00	0.00	10,855.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
11,262.0	0.00	0.00	10,917.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
Cameo										
11,300.0	0.00	0.00	10,955.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
11,400.0	0.00	0.00	11,055.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
11,500.0	0.00	0.00	11,155.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
11,600.0	0.00	0.00	11,255.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
11,700.0	0.00	0.00	11,355.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
11,762.0	0.00	0.00	11,417.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
Rollins										
11,800.0	0.00	0.00	11,455.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
11,900.0	0.00	0.00	11,555.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
11,929.0	0.00	0.00	11,584.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
Cozette Fm										
12,000.0	0.00	0.00	11,655.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
12,100.0	0.00	0.00	11,755.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
12,200.0	0.00	0.00	11,855.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	
12,286.0	0.00	0.00	11,941.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Jimmy Gulch 3G 12D-3-3-97
Company:	Ursa Operating Company, LLC	TVD Reference:	Jimmy Gulch 3G 12D-3-3-97 @ 6681.0usft (Est KB)
Project:	Rio Blanco County, Colorado	MD Reference:	Jimmy Gulch 3G 12D-3-3-97 @ 6681.0usft (Est KB)
Site:	Jimmy Gulch 3G Pad	North Reference:	True
Well:	Jimmy Gulch 3G 12D-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)
Corcoran									
12,300.0	0.00	0.00	11,955.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
12,400.0	0.00	0.00	12,055.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
12,500.0	0.00	0.00	12,155.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
12,600.0	0.00	0.00	12,255.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
12,700.0	0.00	0.00	12,355.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
12,800.0	0.00	0.00	12,455.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
12,900.0	0.00	0.00	12,555.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
13,000.0	0.00	0.00	12,655.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
13,100.0	0.00	0.00	12,755.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
13,200.0	0.00	0.00	12,855.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
13,300.0	0.00	0.00	12,955.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
13,312.0	0.00	0.00	12,967.0	-375.3	-2,015.0	2,049.7	0.00	0.00	0.00
TD at 13312.0 - BHL 39.8190452, -108.2725264									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
JG 3G 12D-3-3-97 TGT	0.00	0.00	7,287.0	-375.3	-2,015.0	1,189,104.18	2,221,332.69	39.819045200	-108.272526400
- hit/miss target									
- Shape									
- plan hits target center									
- Rectangle (sides W100.0 H40.0 D5,680.0)									

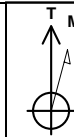
Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,098.1	1,098.0	Green River Fm - Mahogany Bench		0.00		
1,155.2	1,155.0	Dissolution Surface		0.00		
2,343.8	2,287.0	Green River Fm - Garden Gulch Mbr		0.00		
2,581.8	2,511.0	Wasatch Fm		0.00		
5,174.9	4,952.0	Ft Union		0.00		
7,626.0	7,281.0	Ohio Creek		0.00		
7,632.0	7,287.0	Top of Gas		0.00		
7,792.0	7,447.0	Williams Fork		0.00		
11,262.0	10,917.0	Cameo		0.00		
11,762.0	11,417.0	Rollins		0.00		
11,929.0	11,584.0	Cozzette Fm		0.00		
12,286.0	11,941.0	Corcoran		0.00		

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Jimmy Gulch 3G 12D-3-3-97
Company:	Ursa Operating Company, LLC	TVD Reference:	Jimmy Gulch 3G 12D-3-3-97 @ 6681.0usft (Est KB)
Project:	Rio Blanco County, Colorado	MD Reference:	Jimmy Gulch 3G 12D-3-3-97 @ 6681.0usft (Est KB)
Site:	Jimmy Gulch 3G Pad	North Reference:	True
Well:	Jimmy Gulch 3G 12D-3-3-97	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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 39.820075747, -108.265353026
1,000.0	1,000.0	0.0	0.0	Start Build 3.50
1,563.5	1,552.4	-17.6	-94.4	Start 5505.1 hold at 1563.5 MD
4,163.6	4,000.0	-178.2	-956.9	Surface Casing
7,068.6	6,734.6	-357.7	-1,920.6	Start Drop -3.50
7,632.0	7,287.0	-375.3	-2,015.0	Start 5680.0 hold at 7632.0 MD
7,632.0	7,287.0	-375.3	-2,015.0	Back to Vertical
13,312.0	12,967.0	-375.3	-2,015.0	TD at 13312.0
13,312.0	12,967.0	-375.3	-2,015.0	BHL 39.8190452, -108.2725264



Well Name: Jimmy Gulch 3G 12D-3-3-97
 Surface Location: Jimmy Gulch 3G Pad
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 6660.0
 +N/-S 0.0 +E/-W 0.0 Northing 1189416.49 Easting 2223358.40 Latitude 39.820075747 Longitude -108.265353026
 Est KB Jimmy Gulch 3G 12D-3-3-97 @ 6681.0usft (Est KB)



Azimuths to True North
 Magnetic North: 9.85°
 Magnetic Field
 Strength: 51652.6snT
 Dip Angle: 65.80°
 Date: 7/21/2017
 Model: IGRF2015

Jimmy Gulch 3G Pad
 Jimmy Gulch 3G 12D-3-3-97
 Design #1
 21:11, July 25 2017

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
JG 3G 12D-3-3-97 TGT	7287.0	-375.3	-2015.0	1189104.18	2221332.69	39.819045200	-108.272526400	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	1563.5	19.72	259.45	1552.4	-17.6	-94.4	3.50	259.45	96.0	
4	7068.6	19.72	259.45	6734.6	-357.7	-1920.6	0.00	0.00	1953.6	
5	7632.0	0.00	0.00	7287.0	-375.3	-2015.0	3.50	180.00	2049.7	JG 3G 12D-3-3-97 TGT
6	13312.0	0.00	0.00	12967.0	-375.3	-2015.0	0.00	0.00	2049.7	

ANNOTATIONS

TVD	MD	Annotation
0.1	0.1	SHL 39.820075747, -108.265353026
1000.0	1000.0	Start Build 3.50
1552.4	1563.5	Start 5505.1 hold at 1563.5 MD
4000.0	4163.6	Surface Casing
6734.6	7068.6	Start Drop -3.50
7287.0	7632.0	Start 5680.0 hold at 7632.0 MD
7287.0	7632.0	Back to Vertical
12967.0	13312.0	TD at 13312.0
12967.0	13312.0	BHL 39.8190452, -108.2725264

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
1098.0	1098.1	Mahogany Bench	0.00	
1155.0	1155.2	Dissolution Surface	0.00	
2287.0	2343.8	Garden Gulch Mbr	0.00	
2511.0	2581.8	Wasatch Fm	0.00	
4952.0	5174.9	Ft Union	0.00	
7281.0	7626.0	Ohio Creek	0.00	
7287.0	7632.0	Top of Gas	0.00	
7447.0	7792.0	Williams Fork	0.00	
10917.0	11262.0	Cameo	0.00	
11417.0	11762.0	Rollins	0.00	
11584.0	11929.0	Cozzette Fm	0.00	
11941.0	12286.0	Corcoran	0.00	

