



# **Ursa Operating Company, LLC**

**Rockies Region  
Monument Ridge  
BAT 33A-18-07-95**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**02 July, 2013**



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Site Monument Ridge
<b>Company:</b>	Ursa Operating Company, LLC	<b>TVD Reference:</b>	BAT 33A-18-07-95 @ 5461.2ft (EST KB)
<b>Project:</b>	Rockies Region	<b>MD Reference:</b>	BAT 33A-18-07-95 @ 5461.2ft (EST KB)
<b>Site:</b>	Monument Ridge	<b>North Reference:</b>	True
<b>Well:</b>	BAT 33A-18-07-95	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	Rockies Region		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

Site		Monument Ridge			
Site Position:		Northing:	1,592,015.87 ft	Latitude:	39° 25' 53.266 N
From:	Lat/Long	Easting:	2,284,550.92 ft	Longitude:	108° 1' 59.725 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	-1.60 °

Well	BAT 33A-18-07-95, SHL LAT 39.431462770 LONG -108.033257000					
Well Position	+N/-S	0.0 ft	Northing:	1,592,015.86 ft	Latitude:	39° 25' 53.266 N
	+E/-W	0.0 ft	Easting:	2,284,550.92 ft	Longitude:	108° 1' 59.725 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	5,461.2 ft	Ground Level:	5,441.2 ft

<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>
	IGRF200510	7/1/2013	10.07	65.64	52,049

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	328.43

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	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	0.00	0.00	0.00	0.00	
1,210.0	35.35	328.43	1,147.2	257.2	-158.0	3.50	3.50	0.00	328.43	
3,924.1	35.35	328.43	3,360.8	1,595.1	-980.2	0.00	0.00	0.00	0.00	
4,934.2	0.00	0.00	4,308.0	1,852.2	-1,138.2	3.50	-3.50	0.00	180.00	33A-18-07-95 TGT
7,127.2	0.00	0.00	6,501.0	1,852.2	-1,138.2	0.00	0.00	0.00	0.00	33A-18-07-95 BHL

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<b>Site:</b>	Monument Ridge	<b>North Reference:</b>	True
<b>Well:</b>	BAT 33A-18-07-95	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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	3.50	328.43	299.9	2.6	-1.6	3.1	3.50	3.50	0.00
400.0	7.00	328.43	399.5	10.4	-6.4	12.2	3.50	3.50	0.00
500.0	10.50	328.43	498.3	23.3	-14.4	27.4	3.50	3.50	0.00
600.0	14.00	328.43	596.0	41.4	-25.5	48.6	3.50	3.50	0.00
700.0	17.50	328.43	692.3	64.5	-39.7	75.8	3.50	3.50	0.00
800.0	21.00	328.43	786.7	92.6	-56.9	108.7	3.50	3.50	0.00
900.0	24.50	328.43	878.9	125.6	-77.2	147.4	3.50	3.50	0.00
1,000.0	28.00	328.43	968.5	163.2	-100.3	191.6	3.50	3.50	0.00
1,100.0	31.50	328.43	1,055.3	205.5	-126.3	241.2	3.50	3.50	0.00
1,200.0	35.00	328.43	1,139.0	252.2	-155.0	296.1	3.50	3.50	0.00
1,210.0	35.35	328.43	1,147.2	257.2	-158.0	301.8	3.50	3.50	0.00
1,300.0	35.35	328.43	1,220.5	301.5	-185.3	353.9	0.00	0.00	0.00
1,400.0	35.35	328.43	1,302.1	350.8	-215.6	411.7	0.00	0.00	0.00
1,500.0	35.35	328.43	1,383.7	400.1	-245.9	469.6	0.00	0.00	0.00
1,600.0	35.35	328.43	1,465.2	449.4	-276.2	527.5	0.00	0.00	0.00
1,700.0	35.35	328.43	1,546.8	498.7	-306.5	585.3	0.00	0.00	0.00
1,800.0	35.35	328.43	1,628.3	548.0	-336.7	643.2	0.00	0.00	0.00
1,900.0	35.35	328.43	1,709.9	597.3	-367.0	701.0	0.00	0.00	0.00
2,000.0	35.35	328.43	1,791.5	646.6	-397.3	758.9	0.00	0.00	0.00
2,100.0	35.35	328.43	1,873.0	695.9	-427.6	816.8	0.00	0.00	0.00
2,200.0	35.35	328.43	1,954.6	745.2	-457.9	874.6	0.00	0.00	0.00
2,300.0	35.35	328.43	2,036.2	794.5	-488.2	932.5	0.00	0.00	0.00
2,400.0	35.35	328.43	2,117.7	843.7	-518.5	990.3	0.00	0.00	0.00
2,500.0	35.35	328.43	2,199.3	893.0	-548.8	1,048.2	0.00	0.00	0.00
2,600.0	35.35	328.43	2,280.8	942.3	-579.1	1,106.1	0.00	0.00	0.00
2,700.0	35.35	328.43	2,362.4	991.6	-609.4	1,163.9	0.00	0.00	0.00
2,800.0	35.35	328.43	2,444.0	1,040.9	-639.7	1,221.8	0.00	0.00	0.00
2,900.0	35.35	328.43	2,525.5	1,090.2	-670.0	1,279.6	0.00	0.00	0.00
3,000.0	35.35	328.43	2,607.1	1,139.5	-700.3	1,337.5	0.00	0.00	0.00
3,100.0	35.35	328.43	2,688.6	1,188.8	-730.5	1,395.3	0.00	0.00	0.00
3,200.0	35.35	328.43	2,770.2	1,238.1	-760.8	1,453.2	0.00	0.00	0.00
3,300.0	35.35	328.43	2,851.8	1,287.4	-791.1	1,511.1	0.00	0.00	0.00
3,400.0	35.35	328.43	2,933.3	1,336.7	-821.4	1,568.9	0.00	0.00	0.00
3,500.0	35.35	328.43	3,014.9	1,386.0	-851.7	1,626.8	0.00	0.00	0.00
3,600.0	35.35	328.43	3,096.5	1,435.3	-882.0	1,684.6	0.00	0.00	0.00
3,700.0	35.35	328.43	3,178.0	1,484.6	-912.3	1,742.5	0.00	0.00	0.00
3,800.0	35.35	328.43	3,259.6	1,533.9	-942.6	1,800.4	0.00	0.00	0.00
3,865.5	35.35	328.43	3,313.0	1,566.2	-962.4	1,838.3	0.00	0.00	0.00
WF									
3,900.0	35.35	328.43	3,341.1	1,583.2	-972.9	1,858.2	0.00	0.00	0.00
3,924.1	35.35	328.43	3,360.8	1,595.1	-980.2	1,872.2	0.00	0.00	0.00
4,000.0	32.70	328.43	3,423.7	1,631.2	-1,002.4	1,914.6	3.50	-3.50	0.00
4,100.0	29.20	328.43	3,509.5	1,675.0	-1,029.3	1,966.0	3.50	-3.50	0.00
4,200.0	25.70	328.43	3,598.2	1,714.3	-1,053.5	2,012.1	3.50	-3.50	0.00
4,300.0	22.20	328.43	3,689.6	1,748.9	-1,074.7	2,052.7	3.50	-3.50	0.00
4,400.0	18.70	328.43	3,783.2	1,778.6	-1,093.0	2,087.6	3.50	-3.50	0.00
4,500.0	15.20	328.43	3,878.9	1,803.5	-1,108.3	2,116.8	3.50	-3.50	0.00
4,600.0	11.70	328.43	3,976.1	1,823.3	-1,120.4	2,140.0	3.50	-3.50	0.00
4,700.0	8.20	328.43	4,074.6	1,838.0	-1,129.5	2,157.3	3.50	-3.50	0.00
4,800.0	4.70	328.43	4,174.0	1,847.6	-1,135.4	2,168.5	3.50	-3.50	0.00
4,900.0	1.20	328.43	4,273.8	1,851.9	-1,138.0	2,173.7	3.50	-3.50	0.00

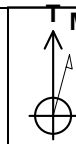
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<b>Site:</b>	Monument Ridge	<b>North Reference:</b>	True
<b>Well:</b>	BAT 33A-18-07-95	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,934.2	0.00	0.00	4,308.0	1,852.2	-1,138.2	2,174.0	3.50	-3.50	0.00	
Top of Gas										
5,000.0	0.00	0.00	4,373.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
5,100.0	0.00	0.00	4,473.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
5,200.0	0.00	0.00	4,573.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
5,300.0	0.00	0.00	4,673.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
5,400.0	0.00	0.00	4,773.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
5,500.0	0.00	0.00	4,873.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
5,600.0	0.00	0.00	4,973.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,073.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,173.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,273.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
6,000.0	0.00	0.00	5,373.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
6,100.0	0.00	0.00	5,473.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
6,200.0	0.00	0.00	5,573.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
6,300.0	0.00	0.00	5,673.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
6,306.2	0.00	0.00	5,680.0	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
Cameo										
6,400.0	0.00	0.00	5,773.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
6,500.0	0.00	0.00	5,873.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
6,600.0	0.00	0.00	5,973.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,073.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,173.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
6,827.2	0.00	0.00	6,201.0	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
Rollins										
6,900.0	0.00	0.00	6,273.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
7,000.0	0.00	0.00	6,373.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
7,100.0	0.00	0.00	6,473.8	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	
7,127.2	0.00	0.00	6,501.0	1,852.2	-1,138.2	2,174.0	0.00	0.00	0.00	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,865.5	3,313.0	WF		0.00		
4,934.2	4,308.0	Top of Gas		0.00		
6,306.2	5,680.0	Cameo		0.00		
6,827.2	6,201.0	Rollins		0.00		



Well Name: BAT 33A-18-07-95  
Surface Location: Monument Ridge  
North American Datum 1983 , US State Plane 1983, Colorado Central Zone  
Ground Elevation: 5441.2  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1592015.86 2284550.92 39° 25' 53.266 N 108° 1' 59.725 W  
EST KB BAT 33A-18-07-95 @ 5461.2ft (EST KB)



Azimuths to True North  
Magnetic North: 10.07°  
Magnetic Field  
Strength: 52049.0nT  
Dip Angle: 65.64°  
Date: 7/1/2013  
Model: IGRF200510

Monument Ridge  
BAT 33A-18-07-95  
Design #1  
10:48, July 02 2013

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
33A-18-07-95 TGT	4308.0	1852.2	-1138.2	1593899.12	2283464.78	39° 26' 11.573 N	108° 2' 14.233 W	Point
33A-18-07-95 BHL	6501.0	1852.2	-1138.2	1593899.12	2283464.78	39° 26' 11.573 N	108° 2' 14.233 W	Point

#### 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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1210.0	35.35	328.43	1147.2	257.2	-158.0	3.50	328.43	301.8	
4	3924.1	35.35	328.43	3360.8	1595.1	-980.2	0.00	0.00	1872.2	
5	4934.2	0.00	0.00	4308.0	1852.2	-1138.2	3.50	180.00	2174.0	33A-18-07-95 TGT
6	7127.2	0.00	0.00	6501.0	1852.2	-1138.2	0.00	0.00	2174.0	33A-18-07-95 BHL

#### ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	Start Build 3.50
1147.2	1210.0	Start 2714.1 hold at 1210.0 MD
3360.8	3924.1	Start Drop -3.50
4308.0	4934.2	Start 2193.0 hold at 4934.2 MD
6501.0	7127.2	TD at 7127.2

#### FORMATION TOP DETAILS

TVDPathMDPath	Formation
3313.0 3865.5	WF
4308.0 4934.2	Top of Gas
5680.0 6306.2	Cameo
6201.0 6827.2	Rollins

