



Ursa Operating Company, LLC

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

Wellbore #1

Plan: Design #1

Standard Planning Report

02 July, 2013



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

Project	Rockies Region		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 33B-18-07-95, SHL LAT: 39.431394180 LONG: -108.033254600					
Well Position	+N/-S	-25.0 ft	Northing:	1,591,990.86 ft	Latitude:	39° 25' 53.019 N
	+E/-W	0.7 ft	Easting:	2,284,550.90 ft	Longitude:	108° 1' 59.717 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	5,461.2 ft	Ground Level:	5,441.2 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	7/1/2013	10.07	65.64	52,049

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	324.20

Plan Sections										
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	
1,100.2	31.51	324.20	1,055.6	195.8	-141.2	3.50	3.50	0.00	324.20	
3,892.9	31.51	324.20	3,436.4	1,379.5	-994.9	0.00	0.00	0.00	0.00	
4,793.1	0.00	0.00	4,292.0	1,575.3	-1,136.1	3.50	-3.50	0.00	180.00	33B-18-07-95 TGT
6,986.1	0.00	0.00	6,485.0	1,575.3	-1,136.1	0.00	0.00	0.00	0.00	33B-18-07-95 BHL

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well BAT 33B-18-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BAT 33B-18-07-95 @ 5461.2ft (EST KB)
Project:	Rockies Region	MD Reference:	BAT 33B-18-07-95 @ 5461.2ft (EST KB)
Site:	Monument Ridge	North Reference:	True
Well:	BAT 33B-18-07-95	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
Start Build 3.50									
300.0	3.50	324.20	299.9	2.5	-1.8	3.1	3.50	3.50	0.00
400.0	7.00	324.20	399.5	9.9	-7.1	12.2	3.50	3.50	0.00
500.0	10.50	324.20	498.3	22.2	-16.0	27.4	3.50	3.50	0.00
600.0	14.00	324.20	596.0	39.4	-28.4	48.6	3.50	3.50	0.00
700.0	17.50	324.20	692.3	61.5	-44.3	75.8	3.50	3.50	0.00
800.0	21.00	324.20	786.7	88.2	-63.6	108.7	3.50	3.50	0.00
900.0	24.50	324.20	878.9	119.5	-86.2	147.4	3.50	3.50	0.00
1,000.0	28.00	324.20	968.5	155.4	-112.1	191.6	3.50	3.50	0.00
1,100.2	31.51	324.20	1,055.6	195.8	-141.2	241.4	3.50	3.50	0.00
Start 2792.6 hold at 1100.2 MD									
1,200.0	31.51	324.20	1,140.6	238.0	-171.7	293.5	0.00	0.00	0.00
1,300.0	31.51	324.20	1,225.9	280.4	-202.2	345.8	0.00	0.00	0.00
1,400.0	31.51	324.20	1,311.1	322.8	-232.8	398.0	0.00	0.00	0.00
1,500.0	31.51	324.20	1,396.4	365.2	-263.4	450.3	0.00	0.00	0.00
1,600.0	31.51	324.20	1,481.6	407.6	-294.0	502.5	0.00	0.00	0.00
1,700.0	31.51	324.20	1,566.9	450.0	-324.5	554.8	0.00	0.00	0.00
1,800.0	31.51	324.20	1,652.1	492.4	-355.1	607.1	0.00	0.00	0.00
1,900.0	31.51	324.20	1,737.4	534.8	-385.7	659.3	0.00	0.00	0.00
2,000.0	31.51	324.20	1,822.6	577.2	-416.2	711.6	0.00	0.00	0.00
2,100.0	31.51	324.20	1,907.9	619.5	-446.8	763.9	0.00	0.00	0.00
2,200.0	31.51	324.20	1,993.2	661.9	-477.4	816.1	0.00	0.00	0.00
2,300.0	31.51	324.20	2,078.4	704.3	-508.0	868.4	0.00	0.00	0.00
2,400.0	31.51	324.20	2,163.7	746.7	-538.5	920.6	0.00	0.00	0.00
2,500.0	31.51	324.20	2,248.9	789.1	-569.1	972.9	0.00	0.00	0.00
2,600.0	31.51	324.20	2,334.2	831.5	-599.7	1,025.2	0.00	0.00	0.00
2,700.0	31.51	324.20	2,419.4	873.9	-630.2	1,077.4	0.00	0.00	0.00
2,800.0	31.51	324.20	2,504.7	916.3	-660.8	1,129.7	0.00	0.00	0.00
2,900.0	31.51	324.20	2,590.0	958.7	-691.4	1,182.0	0.00	0.00	0.00
3,000.0	31.51	324.20	2,675.2	1,001.0	-722.0	1,234.2	0.00	0.00	0.00
3,100.0	31.51	324.20	2,760.5	1,043.4	-752.5	1,286.5	0.00	0.00	0.00
3,200.0	31.51	324.20	2,845.7	1,085.8	-783.1	1,338.7	0.00	0.00	0.00
3,300.0	31.51	324.20	2,931.0	1,128.2	-813.7	1,391.0	0.00	0.00	0.00
3,400.0	31.51	324.20	3,016.2	1,170.6	-844.2	1,443.3	0.00	0.00	0.00
3,500.0	31.51	324.20	3,101.5	1,213.0	-874.8	1,495.5	0.00	0.00	0.00
3,600.0	31.51	324.20	3,186.7	1,255.4	-905.4	1,547.8	0.00	0.00	0.00
3,700.0	31.51	324.20	3,272.0	1,297.8	-935.9	1,600.1	0.00	0.00	0.00
3,729.3	31.51	324.20	3,297.0	1,310.2	-944.9	1,615.4	0.00	0.00	0.00
WF									
3,800.0	31.51	324.20	3,357.3	1,340.2	-966.5	1,652.3	0.00	0.00	0.00
3,892.9	31.51	324.20	3,436.4	1,379.5	-994.9	1,700.9	0.00	0.00	0.00
Start Drop -3.50									
3,900.0	31.26	324.20	3,442.5	1,382.5	-997.1	1,704.6	3.50	-3.50	0.00
4,000.0	27.76	324.20	3,529.5	1,422.5	-1,025.9	1,753.8	3.50	-3.50	0.00
4,100.0	24.26	324.20	3,619.4	1,458.0	-1,051.5	1,797.7	3.50	-3.50	0.00
4,200.0	20.76	324.20	3,711.8	1,489.1	-1,073.9	1,835.9	3.50	-3.50	0.00
4,300.0	17.26	324.20	3,806.3	1,515.5	-1,093.0	1,868.5	3.50	-3.50	0.00
4,400.0	13.76	324.20	3,902.6	1,537.2	-1,108.6	1,895.2	3.50	-3.50	0.00
4,500.0	10.26	324.20	4,000.4	1,554.1	-1,120.8	1,916.1	3.50	-3.50	0.00
4,600.0	6.76	324.20	4,099.3	1,566.1	-1,129.4	1,930.8	3.50	-3.50	0.00
4,700.0	3.26	324.20	4,198.9	1,573.1	-1,134.5	1,939.6	3.50	-3.50	0.00

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

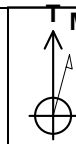
Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,793.1	0.00	0.00	4,292.0	1,575.3	-1,136.1	1,942.2	3.50	-3.50	0.00
Start 2193.0 hold at 4793.1 MD - Top of Gas									
4,800.0	0.00	0.00	4,298.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
4,900.0	0.00	0.00	4,398.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
5,000.0	0.00	0.00	4,498.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
5,100.0	0.00	0.00	4,598.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
5,200.0	0.00	0.00	4,698.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
5,300.0	0.00	0.00	4,798.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
5,400.0	0.00	0.00	4,898.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
5,500.0	0.00	0.00	4,998.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,098.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
5,700.0	0.00	0.00	5,198.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,298.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
5,900.0	0.00	0.00	5,398.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,498.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
6,100.0	0.00	0.00	5,598.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
6,165.1	0.00	0.00	5,664.0	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
Cameo									
6,200.0	0.00	0.00	5,698.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
6,300.0	0.00	0.00	5,798.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
6,400.0	0.00	0.00	5,898.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
6,500.0	0.00	0.00	5,998.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,098.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
6,686.1	0.00	0.00	6,185.0	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
Rollins									
6,700.0	0.00	0.00	6,198.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,298.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
6,900.0	0.00	0.00	6,398.9	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
6,986.1	0.00	0.00	6,485.0	1,575.3	-1,136.1	1,942.2	0.00	0.00	0.00
TD at 6986.1									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,729.3	3,297.0	WF		0.00		
4,793.1	4,292.0	Top of Gas		0.00		
6,165.1	5,664.0	Cameo		0.00		
6,686.1	6,185.0	Rollins		0.00		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
200.0	200.0	0.0	0.0	Start Build 3.50
1,100.2	1,055.6	195.8	-141.2	Start 2792.6 hold at 1100.2 MD
3,892.9	3,436.4	1,379.5	-994.9	Start Drop -3.50
4,793.1	4,292.0	1,575.3	-1,136.1	Start 2193.0 hold at 4793.1 MD
6,986.1	6,485.0	1,575.3	-1,136.1	TD at 6986.1



Well Name: BAT 33B-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 1591990.86 2284550.90 39° 25' 53.019 N 108° 1' 59.717 W
EST KB BAT 33B-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 33B-18-07-95
Design #1
11:02, July 02 2013

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
33B-18-07-95 TGT	4292.0	1575.3	-1136.1	1593597.21	2283459.17	39° 26' 8.588 N	108° 2' 14.197 W	Point
33B-18-07-95 BHL	6485.0	1575.3	-1136.1	1593597.21	2283459.17	39° 26' 8.588 N	108° 2' 14.197 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	1100.2	31.51	324.20	1055.6	195.8	-141.2	3.50	324.20	241.4	
4	3892.9	31.51	324.20	3436.4	1379.5	-994.9	0.00	0.00	1700.9	
5	4793.1	0.00	0.00	4292.0	1575.3	-1136.1	3.50	180.00	1942.2	33B-18-07-95 TGT
6	6986.1	0.00	0.00	6485.0	1575.3	-1136.1	0.00	0.00	1942.2	33B-18-07-95 BHL

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	Start Build 3.50
1055.6	1100.2	Start 2792.6 hold at 1100.2 MD
3436.4	3892.9	Start Drop -3.50
4292.0	4793.1	Start 2193.0 hold at 4793.1 MD
6485.0	6986.1	TD at 6986.1

FORMATION TOP DETAILS

TVDPathMDPath	Formation
3297.0 3729.3	WF
4292.0 4793.1	Top of Gas
5664.0 6165.1	Cameo
6185.0 6686.1	Rollins

