



Ursa Operating Company, LLC

**Rockies Region
Monument Ridge
BAT 33C-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 33C-18-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BAT 33C-18-07-95 @ 5461.2ft (EST KB)
Project:	Rockies Region	MD Reference:	BAT 33C-18-07-95 @ 5461.2ft (EST KB)
Site:	Monument Ridge	North Reference:	True
Well:	BAT 33C-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 33C-18-07-95, SHL LAT: 39.431359880 LONG: -108.033253300					
Well Position	+N/-S	-37.5 ft	Northing:	1,591,978.37 ft	Latitude:	39° 25' 52.895 N
	+E/-W	1.0 ft	Easting:	2,284,550.92 ft	Longitude:	108° 1' 59.712 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	318.75

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	
997.4	27.91	318.75	966.2	143.1	-125.5	3.50	3.50	0.00	318.75	
3,880.2	27.91	318.75	3,513.8	1,157.6	-1,015.2	0.00	0.00	0.00	0.00	
4,677.6	0.00	0.00	4,280.0	1,300.8	-1,140.7	3.50	-3.50	0.00	180.00	33C-18-07-95 TGT
6,870.6	0.00	0.00	6,473.0	1,300.8	-1,140.7	0.00	0.00	0.00	0.00	33C-18-07-95 BHL

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well BAT 33C-18-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BAT 33C-18-07-95 @ 5461.2ft (EST KB)
Project:	Rockies Region	MD Reference:	BAT 33C-18-07-95 @ 5461.2ft (EST KB)
Site:	Monument Ridge	North Reference:	True
Well:	BAT 33C-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	318.75	299.9	2.3	-2.0	3.1	3.50	3.50	0.00
400.0	7.00	318.75	399.5	9.2	-8.0	12.2	3.50	3.50	0.00
500.0	10.50	318.75	498.3	20.6	-18.1	27.4	3.50	3.50	0.00
600.0	14.00	318.75	596.0	36.6	-32.1	48.6	3.50	3.50	0.00
700.0	17.50	318.75	692.3	57.0	-50.0	75.8	3.50	3.50	0.00
800.0	21.00	318.75	786.7	81.7	-71.7	108.7	3.50	3.50	0.00
900.0	24.50	318.75	878.9	110.8	-97.2	147.4	3.50	3.50	0.00
997.4	27.91	318.75	966.2	143.1	-125.5	190.4	3.50	3.50	0.00
Start 2882.8 hold at 997.4 MD									
1,000.0	27.91	318.75	968.5	144.1	-126.3	191.6	0.00	0.00	0.00
1,100.0	27.91	318.75	1,056.9	179.3	-157.2	238.4	0.00	0.00	0.00
1,200.0	27.91	318.75	1,145.3	214.4	-188.1	285.2	0.00	0.00	0.00
1,300.0	27.91	318.75	1,233.6	249.6	-218.9	332.0	0.00	0.00	0.00
1,400.0	27.91	318.75	1,322.0	284.8	-249.8	378.8	0.00	0.00	0.00
1,500.0	27.91	318.75	1,410.4	320.0	-280.6	425.6	0.00	0.00	0.00
1,600.0	27.91	318.75	1,498.8	355.2	-311.5	472.4	0.00	0.00	0.00
1,700.0	27.91	318.75	1,587.1	390.4	-342.4	519.3	0.00	0.00	0.00
1,800.0	27.91	318.75	1,675.5	425.6	-373.2	566.1	0.00	0.00	0.00
1,900.0	27.91	318.75	1,763.9	460.8	-404.1	612.9	0.00	0.00	0.00
2,000.0	27.91	318.75	1,852.2	496.0	-434.9	659.7	0.00	0.00	0.00
2,100.0	27.91	318.75	1,940.6	531.2	-465.8	706.5	0.00	0.00	0.00
2,200.0	27.91	318.75	2,029.0	566.3	-496.7	753.3	0.00	0.00	0.00
2,300.0	27.91	318.75	2,117.3	601.5	-527.5	800.1	0.00	0.00	0.00
2,400.0	27.91	318.75	2,205.7	636.7	-558.4	846.9	0.00	0.00	0.00
2,500.0	27.91	318.75	2,294.1	671.9	-589.2	893.7	0.00	0.00	0.00
2,600.0	27.91	318.75	2,382.5	707.1	-620.1	940.5	0.00	0.00	0.00
2,700.0	27.91	318.75	2,470.8	742.3	-651.0	987.3	0.00	0.00	0.00
2,800.0	27.91	318.75	2,559.2	777.5	-681.8	1,034.1	0.00	0.00	0.00
2,900.0	27.91	318.75	2,647.6	812.7	-712.7	1,080.9	0.00	0.00	0.00
3,000.0	27.91	318.75	2,735.9	847.9	-743.5	1,127.7	0.00	0.00	0.00
3,100.0	27.91	318.75	2,824.3	883.1	-774.4	1,174.5	0.00	0.00	0.00
3,200.0	27.91	318.75	2,912.7	918.2	-805.3	1,221.3	0.00	0.00	0.00
3,300.0	27.91	318.75	3,001.1	953.4	-836.1	1,268.1	0.00	0.00	0.00
3,400.0	27.91	318.75	3,089.4	988.6	-867.0	1,314.9	0.00	0.00	0.00
3,500.0	27.91	318.75	3,177.8	1,023.8	-897.9	1,361.7	0.00	0.00	0.00
3,600.0	27.91	318.75	3,266.2	1,059.0	-928.7	1,408.5	0.00	0.00	0.00
3,621.3	27.91	318.75	3,285.0	1,066.5	-935.3	1,418.5	0.00	0.00	0.00
WF									
3,700.0	27.91	318.75	3,354.5	1,094.2	-959.6	1,455.4	0.00	0.00	0.00
3,800.0	27.91	318.75	3,442.9	1,129.4	-990.4	1,502.2	0.00	0.00	0.00
3,880.2	27.91	318.75	3,513.8	1,157.6	-1,015.2	1,539.7	0.00	0.00	0.00
Start Drop -3.50									
3,900.0	27.22	318.75	3,531.3	1,164.5	-1,021.2	1,548.9	3.50	-3.50	0.00
4,000.0	23.72	318.75	3,621.6	1,196.8	-1,049.6	1,591.8	3.50	-3.50	0.00
4,100.0	20.22	318.75	3,714.3	1,224.9	-1,074.2	1,629.2	3.50	-3.50	0.00
4,200.0	16.72	318.75	3,809.2	1,248.8	-1,095.1	1,660.9	3.50	-3.50	0.00
4,300.0	13.22	318.75	3,905.8	1,268.2	-1,112.1	1,686.7	3.50	-3.50	0.00
4,400.0	9.72	318.75	4,003.7	1,283.1	-1,125.2	1,706.6	3.50	-3.50	0.00
4,500.0	6.22	318.75	4,102.8	1,293.5	-1,134.4	1,720.5	3.50	-3.50	0.00
4,600.0	2.72	318.75	4,202.4	1,299.4	-1,139.5	1,728.2	3.50	-3.50	0.00

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

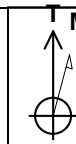
Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,677.6	0.00	0.00	4,280.0	1,300.8	-1,140.7	1,730.1	3.50	-3.50	0.00
Start 2193.0 hold at 4677.6 MD - Top of Gas									
4,700.0	0.00	0.00	4,302.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
4,800.0	0.00	0.00	4,402.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
4,900.0	0.00	0.00	4,502.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
5,000.0	0.00	0.00	4,602.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
5,100.0	0.00	0.00	4,702.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
5,200.0	0.00	0.00	4,802.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
5,300.0	0.00	0.00	4,902.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
5,400.0	0.00	0.00	5,002.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
5,500.0	0.00	0.00	5,102.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
5,600.0	0.00	0.00	5,202.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
5,700.0	0.00	0.00	5,302.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
5,800.0	0.00	0.00	5,402.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
5,900.0	0.00	0.00	5,502.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
6,000.0	0.00	0.00	5,602.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
6,049.6	0.00	0.00	5,652.0	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
Cameo									
6,100.0	0.00	0.00	5,702.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
6,200.0	0.00	0.00	5,802.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
6,300.0	0.00	0.00	5,902.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
6,400.0	0.00	0.00	6,002.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
6,500.0	0.00	0.00	6,102.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
6,570.6	0.00	0.00	6,173.0	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
Rollins									
6,600.0	0.00	0.00	6,202.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
6,700.0	0.00	0.00	6,302.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
6,800.0	0.00	0.00	6,402.4	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
6,870.6	0.00	0.00	6,473.0	1,300.8	-1,140.7	1,730.1	0.00	0.00	0.00
TD at 6870.6									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,621.3	3,285.0	WF		0.00		
4,677.6	4,280.0	Top of Gas		0.00		
6,049.6	5,652.0	Cameo		0.00		
6,570.6	6,173.0	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
997.4	966.2	143.1	-125.5	Start 2882.8 hold at 997.4 MD
3,880.2	3,513.8	1,157.6	-1,015.2	Start Drop -3.50
4,677.6	4,280.0	1,300.8	-1,140.7	Start 2193.0 hold at 4677.6 MD
6,870.6	6,473.0	1,300.8	-1,140.7	TD at 6870.6



Well Name: BAT 33C-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 1591978.37 2284550.92 39° 25' 52.895 N 108° 1' 59.712 W
EST KB BAT 33C-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 33C-18-07-95
Design #1
11:07, July 02 2013

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
33C-18-07-95 TGT	4280.0	1300.8	-1140.7	1593310.42	2283446.92	39° 26' 5.752 N	108° 2' 14.251 W	Point
33C-18-07-95 BHL	6473.0	1300.8	-1140.7	1593310.42	2283446.92	39° 26' 5.752 N	108° 2' 14.251 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	997.4	27.91	318.75	966.2	143.1	-125.5	3.50	318.75	190.4	
4	3880.2	27.91	318.75	3513.8	1157.6	-1015.2	0.00	0.00	1539.7	
5	4677.6	0.00	0.00	4280.0	1300.8	-1140.7	3.50	180.00	1730.1	33C-18-07-95 TGT
6	6870.6	0.00	0.00	6473.0	1300.8	-1140.7	0.00	0.00	1730.1	33C-18-07-95 BHL

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	Start Build 3.50
966.2	997.4	Start 2882.8 hold at 997.4 MD
3513.8	3880.2	Start Drop -3.50
4280.0	4677.6	Start 2193.0 hold at 4677.6 MD
6473.0	6870.6	TD at 6870.6

FORMATION TOP DETAILS

TVDPathMDPath	Formation
3285.0 3621.3	WF
4280.0 4677.6	Top of Gas
5652.0 6049.6	Cameo
6173.0 6570.6	Rollins

