



Ursa Operating Company, LLC

**Rockies Region
Monument Ridge
BAT 14C-17-07-95**

Wellbore #1

Plan: Design #1

Standard Planning Report

02 July, 2013



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well BAT 14C-17-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BAT 14C-17-07-95 @ 5461.2ft (Original Well Elev)
Project:	Rockies Region	MD Reference:	BAT 14C-17-07-95 @ 5461.2ft (Original Well Elev)
Site:	Monument Ridge	North Reference:	True
Well:	BAT 14C-17-07-95	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 14C-17-07-95, SHL LAT: 39.431327310 LONG: -108.033172500					
Well Position	+N/-S	-49.3 ft	Northing:	1,591,965.87 ft	Latitude:	39° 25' 52.778 N
	+E/-W	23.9 ft	Easting:	2,284,573.40 ft	Longitude:	108° 1' 59.421 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	7/2/2013	10.07	65.64	52,049

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	84.45

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	
872.5	23.54	84.45	853.8	13.2	135.6	3.50	3.50	0.00	84.45	
3,941.3	23.54	84.45	3,667.2	131.7	1,355.4	0.00	0.00	0.00	0.00	
4,613.9	0.00	0.00	4,321.0	144.9	1,491.0	3.50	-3.50	0.00	180.00	14C-17-07-95 TGT
6,806.9	0.00	0.00	6,514.0	144.9	1,491.0	0.00	0.00	0.00	0.00	14C-17-07-95 BHL

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Project:	Rockies Region	MD Reference:	BAT 14C-17-07-95 @ 5461.2ft (Original Well Elev)
Site:	Monument Ridge	North Reference:	True
Well:	BAT 14C-17-07-95	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	84.45	299.9	0.3	3.0	3.1	3.50	3.50	0.00
400.0	7.00	84.45	399.5	1.2	12.1	12.2	3.50	3.50	0.00
500.0	10.50	84.45	498.3	2.7	27.3	27.4	3.50	3.50	0.00
600.0	14.00	84.45	596.0	4.7	48.4	48.6	3.50	3.50	0.00
700.0	17.50	84.45	692.3	7.3	75.4	75.8	3.50	3.50	0.00
800.0	21.00	84.45	786.7	10.5	108.2	108.7	3.50	3.50	0.00
872.5	23.54	84.45	853.8	13.2	135.6	136.2	3.50	3.50	0.00
Start 3068.8 hold at 872.5 MD									
900.0	23.54	84.45	879.0	14.2	146.5	147.2	0.00	0.00	0.00
1,000.0	23.54	84.45	970.6	18.1	186.2	187.1	0.00	0.00	0.00
1,100.0	23.54	84.45	1,062.3	22.0	226.0	227.1	0.00	0.00	0.00
1,200.0	23.54	84.45	1,154.0	25.8	265.7	267.0	0.00	0.00	0.00
1,300.0	23.54	84.45	1,245.7	29.7	305.5	306.9	0.00	0.00	0.00
1,400.0	23.54	84.45	1,337.4	33.6	345.2	346.9	0.00	0.00	0.00
1,500.0	23.54	84.45	1,429.0	37.4	385.0	386.8	0.00	0.00	0.00
1,600.0	23.54	84.45	1,520.7	41.3	424.7	426.7	0.00	0.00	0.00
1,700.0	23.54	84.45	1,612.4	45.1	464.5	466.7	0.00	0.00	0.00
1,800.0	23.54	84.45	1,704.1	49.0	504.2	506.6	0.00	0.00	0.00
1,900.0	23.54	84.45	1,795.7	52.9	544.0	546.5	0.00	0.00	0.00
2,000.0	23.54	84.45	1,887.4	56.7	583.7	586.5	0.00	0.00	0.00
2,100.0	23.54	84.45	1,979.1	60.6	623.5	626.4	0.00	0.00	0.00
2,200.0	23.54	84.45	2,070.8	64.5	663.2	666.4	0.00	0.00	0.00
2,300.0	23.54	84.45	2,162.5	68.3	703.0	706.3	0.00	0.00	0.00
2,400.0	23.54	84.45	2,254.1	72.2	742.7	746.2	0.00	0.00	0.00
2,500.0	23.54	84.45	2,345.8	76.0	782.5	786.2	0.00	0.00	0.00
2,600.0	23.54	84.45	2,437.5	79.9	822.2	826.1	0.00	0.00	0.00
2,700.0	23.54	84.45	2,529.2	83.8	862.0	866.0	0.00	0.00	0.00
2,800.0	23.54	84.45	2,620.9	87.6	901.7	906.0	0.00	0.00	0.00
2,900.0	23.54	84.45	2,712.5	91.5	941.5	945.9	0.00	0.00	0.00
3,000.0	23.54	84.45	2,804.2	95.4	981.2	985.8	0.00	0.00	0.00
3,100.0	23.54	84.45	2,895.9	99.2	1,021.0	1,025.8	0.00	0.00	0.00
3,200.0	23.54	84.45	2,987.6	103.1	1,060.7	1,065.7	0.00	0.00	0.00
3,300.0	23.54	84.45	3,079.3	107.0	1,100.5	1,105.6	0.00	0.00	0.00
3,400.0	23.54	84.45	3,170.9	110.8	1,140.2	1,145.6	0.00	0.00	0.00
3,500.0	23.54	84.45	3,262.6	114.7	1,180.0	1,185.5	0.00	0.00	0.00
3,569.1	23.54	84.45	3,326.0	117.3	1,207.4	1,213.1	0.00	0.00	0.00
WF									
3,600.0	23.54	84.45	3,354.3	118.5	1,219.7	1,225.5	0.00	0.00	0.00
3,700.0	23.54	84.45	3,446.0	122.4	1,259.5	1,265.4	0.00	0.00	0.00
3,800.0	23.54	84.45	3,537.7	126.3	1,299.2	1,305.3	0.00	0.00	0.00
3,900.0	23.54	84.45	3,629.3	130.1	1,339.0	1,345.3	0.00	0.00	0.00
3,941.3	23.54	84.45	3,667.2	131.7	1,355.4	1,361.8	0.00	0.00	0.00
Start Drop -3.50									
4,000.0	21.49	84.45	3,721.4	133.9	1,377.7	1,384.2	3.50	-3.50	0.00
4,100.0	17.99	84.45	3,815.5	137.2	1,411.3	1,418.0	3.50	-3.50	0.00
4,200.0	14.49	84.45	3,911.5	139.9	1,439.2	1,445.9	3.50	-3.50	0.00
4,300.0	10.99	84.45	4,009.1	142.0	1,461.1	1,468.0	3.50	-3.50	0.00
4,400.0	7.49	84.45	4,107.7	143.6	1,477.1	1,484.0	3.50	-3.50	0.00

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Site:	Monument Ridge	North Reference:	True
Well:	BAT 14C-17-07-95	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)
4,500.0	3.99	84.45	4,207.2	144.5	1,487.0	1,494.0	3.50	-3.50	0.00
4,600.0	0.49	84.45	4,307.1	144.9	1,490.9	1,497.9	3.50	-3.50	0.00
4,613.9	0.00	0.00	4,321.0	144.9	1,491.0	1,498.0	3.50	-3.50	0.00
Start 2193.0 hold at 4613.9 MD - Top of Gas									
4,700.0	0.00	0.00	4,407.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,507.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,607.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
5,000.0	0.00	0.00	4,707.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
5,100.0	0.00	0.00	4,807.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
5,200.0	0.00	0.00	4,907.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,007.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,107.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,207.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,307.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,407.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,507.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,607.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
5,985.9	0.00	0.00	5,693.0	144.9	1,491.0	1,498.0	0.00	0.00	0.00
Cameo									
6,000.0	0.00	0.00	5,707.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
6,100.0	0.00	0.00	5,807.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
6,200.0	0.00	0.00	5,907.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,007.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,107.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,207.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
6,506.9	0.00	0.00	6,214.0	144.9	1,491.0	1,498.0	0.00	0.00	0.00
Rollins									
6,600.0	0.00	0.00	6,307.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,407.1	144.9	1,491.0	1,498.0	0.00	0.00	0.00
6,806.9	0.00	0.00	6,514.0	144.9	1,491.0	1,498.0	0.00	0.00	0.00
TD at 6806.9									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,569.1	3,326.0	WF		0.00	
4,613.9	4,321.0	Top of Gas		0.00	
5,985.9	5,693.0	Cameo		0.00	
6,506.9	6,214.0	Rollins		0.00	

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Project:	Rockies Region	MD Reference:	BAT 14C-17-07-95 @ 5461.2ft (Original Well Elev)
Site:	Monument Ridge	North Reference:	True
Well:	BAT 14C-17-07-95	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	Start Build 3.50
872.5	853.8	13.2	135.6	Start 3068.8 hold at 872.5 MD
3,941.3	3,667.2	131.7	1,355.4	Start Drop -3.50
4,613.9	4,321.0	144.9	1,491.0	Start 2193.0 hold at 4613.9 MD
6,806.9	6,514.0	144.9	1,491.0	TD at 6806.9



Well Name: BAT 14C-17-07-95
 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 1591965.87 2284573.40 39° 25' 52.778 N 108° 1' 59.421 W
 Original Well Elev BAT 14C-17-07-95 @ 5461.2ft (Original Well Elev)

M
 Azimuths to True North
 Magnetic North: 10.07°
 Magnetic Field
 Strength: 52048.7snT
 Dip Angle: 65.64°
 Date: 7/2/2013
 Model: IGRF200510

Monument Ridge
 BAT 14C-17-07-95
 Design #1
 17:15, July 02 2013

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
14C-17-07-95 TGT	4321.0	144.9	1491.0	1592069.15	2286067.82	39° 25' 54.210 N	108° 1' 40.418 W	Point
14C-17-07-95 BHL	6514.0	144.9	1491.0	1592069.15	2286067.82	39° 25' 54.210 N	108° 1' 40.418 W	Point

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	Start Build 3.50
853.8	872.5	Start 3068.8 hold at 872.5 MD
3667.2	3941.3	Start Drop -3.50
4321.0	4613.9	Start 2193.0 hold at 4613.9 MD
6514.0	6806.9	TD at 6806.9

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	872.5	23.54	84.45	853.8	13.2	135.6	3.50	84.45	136.2	
4	3941.3	23.54	84.45	3667.2	131.7	1355.4	0.00	0.00	1361.8	
5	4613.9	0.00	0.00	4321.0	144.9	1491.0	3.50	180.00	1498.0	14C-17-07-95 TGT
6	6806.9	0.00	0.00	6514.0	144.9	1491.0	0.00	0.00	1498.0	14C-17-07-95 BHL

FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation
3326.0	3569.1	WF
4321.0	4613.9	Top of Gas
5693.0	5985.9	Cameo
6214.0	6506.9	Rollins

