



Ursa Operating Company, LLC

**Rockies Region
Monument Ridge
BAT 41B-19-07-95**

Wellbore #1

Plan: Design #1

Standard Planning Report

11 July, 2013



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well BAT 41B-19-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BAT 41B-19-07-95 @ 5461.2ft (Original Well Elev)
Project:	Rockies Region	MD Reference:	BAT 41B-19-07-95 @ 5461.2ft (Original Well Elev)
Site:	Monument Ridge	North Reference:	True
Well:	BAT 41B-19-07-95	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 41B-19-07-95, SHL 39.431222710, -108.033248400					
Well Position	+N/-S	-87.4 ft	Northing:	1,591,928.38 ft	Latitude:	39° 25' 52.402 N
	+E/-W	2.4 ft	Easting:	2,284,550.91 ft	Longitude:	108° 1' 59.694 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	7/11/2013	10.06	65.64	52,046

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	165.80

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	
541.3	11.95	165.80	538.8	-34.4	8.7	3.50	3.50	0.00	165.80	
3,971.9	11.95	165.80	3,895.2	-722.8	182.9	0.00	0.00	0.00	0.00	
4,313.2	0.00	0.00	4,234.0	-757.1	191.6	3.50	-3.50	0.00	180.00	BAT 41B-19-07-95 TC
6,506.2	0.00	0.00	6,427.0	-757.1	191.6	0.00	0.00	0.00	0.00	BAT 41B-19-07-95 TC

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well BAT 41B-19-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BAT 41B-19-07-95 @ 5461.2ft (Original Well Elev)
Project:	Rockies Region	MD Reference:	BAT 41B-19-07-95 @ 5461.2ft (Original Well Elev)
Site:	Monument Ridge	North Reference:	True
Well:	BAT 41B-19-07-95	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	165.80	299.9	-3.0	0.7	3.1	3.50	3.50	0.00
400.0	7.00	165.80	399.5	-11.8	3.0	12.2	3.50	3.50	0.00
500.0	10.50	165.80	498.3	-26.6	6.7	27.4	3.50	3.50	0.00
541.3	11.95	165.80	538.8	-34.4	8.7	35.5	3.50	3.50	0.00
Start 3430.6 hold at 541.3 MD									
600.0	11.95	165.80	596.3	-46.1	11.7	47.6	0.00	0.00	0.00
700.0	11.95	165.80	694.1	-66.2	16.8	68.3	0.00	0.00	0.00
800.0	11.95	165.80	791.9	-86.3	21.8	89.0	0.00	0.00	0.00
900.0	11.95	165.80	889.8	-106.3	26.9	109.7	0.00	0.00	0.00
1,000.0	11.95	165.80	987.6	-126.4	32.0	130.4	0.00	0.00	0.00
1,100.0	11.95	165.80	1,085.4	-146.5	37.1	151.1	0.00	0.00	0.00
1,200.0	11.95	165.80	1,183.3	-166.5	42.2	171.8	0.00	0.00	0.00
1,300.0	11.95	165.80	1,281.1	-186.6	47.2	192.5	0.00	0.00	0.00
1,400.0	11.95	165.80	1,378.9	-206.7	52.3	213.2	0.00	0.00	0.00
1,500.0	11.95	165.80	1,476.8	-226.7	57.4	233.9	0.00	0.00	0.00
1,600.0	11.95	165.80	1,574.6	-246.8	62.5	254.6	0.00	0.00	0.00
1,700.0	11.95	165.80	1,672.4	-266.9	67.5	275.3	0.00	0.00	0.00
1,800.0	11.95	165.80	1,770.3	-286.9	72.6	296.0	0.00	0.00	0.00
1,900.0	11.95	165.80	1,868.1	-307.0	77.7	316.7	0.00	0.00	0.00
2,000.0	11.95	165.80	1,965.9	-327.1	82.8	337.4	0.00	0.00	0.00
2,100.0	11.95	165.80	2,063.8	-347.1	87.9	358.1	0.00	0.00	0.00
2,200.0	11.95	165.80	2,161.6	-367.2	92.9	378.8	0.00	0.00	0.00
2,300.0	11.95	165.80	2,259.4	-387.3	98.0	399.5	0.00	0.00	0.00
2,400.0	11.95	165.80	2,357.3	-407.3	103.1	420.2	0.00	0.00	0.00
2,500.0	11.95	165.80	2,455.1	-427.4	108.2	440.9	0.00	0.00	0.00
2,600.0	11.95	165.80	2,552.9	-447.5	113.3	461.6	0.00	0.00	0.00
2,700.0	11.95	165.80	2,650.8	-467.5	118.3	482.3	0.00	0.00	0.00
2,800.0	11.95	165.80	2,748.6	-487.6	123.4	503.0	0.00	0.00	0.00
2,900.0	11.95	165.80	2,846.5	-507.7	128.5	523.7	0.00	0.00	0.00
3,000.0	11.95	165.80	2,944.3	-527.7	133.6	544.4	0.00	0.00	0.00
3,100.0	11.95	165.80	3,042.1	-547.8	138.6	565.1	0.00	0.00	0.00
3,200.0	11.95	165.80	3,140.0	-567.9	143.7	585.8	0.00	0.00	0.00
3,300.0	11.95	165.80	3,237.8	-587.9	148.8	606.5	0.00	0.00	0.00
3,301.2	11.95	165.80	3,239.0	-588.2	148.9	606.7	0.00	0.00	0.00
WF									
3,400.0	11.95	165.80	3,335.6	-608.0	153.9	627.2	0.00	0.00	0.00
3,500.0	11.95	165.80	3,433.5	-628.1	159.0	647.9	0.00	0.00	0.00
3,600.0	11.95	165.80	3,531.3	-648.1	164.0	668.6	0.00	0.00	0.00
3,700.0	11.95	165.80	3,629.1	-668.2	169.1	689.3	0.00	0.00	0.00
3,800.0	11.95	165.80	3,727.0	-688.3	174.2	710.0	0.00	0.00	0.00
3,900.0	11.95	165.80	3,824.8	-708.3	179.3	730.7	0.00	0.00	0.00
3,971.9	11.95	165.80	3,895.2	-722.8	182.9	745.5	0.00	0.00	0.00
Start Drop -3.50									
4,000.0	10.96	165.80	3,922.7	-728.2	184.3	751.1	3.50	-3.50	0.00
4,100.0	7.46	165.80	4,021.4	-743.7	188.2	767.1	3.50	-3.50	0.00
4,200.0	3.96	165.80	4,120.9	-753.3	190.7	777.1	3.50	-3.50	0.00
4,300.0	0.46	165.80	4,220.8	-757.1	191.6	780.9	3.50	-3.50	0.00
4,313.2	0.00	0.00	4,234.0	-757.1	191.6	781.0	3.50	-3.50	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well BAT 41B-19-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BAT 41B-19-07-95 @ 5461.2ft (Original Well Elev)
Project:	Rockies Region	MD Reference:	BAT 41B-19-07-95 @ 5461.2ft (Original Well Elev)
Site:	Monument Ridge	North Reference:	True
Well:	BAT 41B-19-07-95	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)
Start 2193.0 hold at 4313.2 MD - Top of Gas									
4,400.0	0.00	0.00	4,320.8	-757.1	191.6	781.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,420.8	-757.1	191.6	781.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,520.8	-757.1	191.6	781.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,620.8	-757.1	191.6	781.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,720.8	-757.1	191.6	781.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,820.8	-757.1	191.6	781.0	0.00	0.00	0.00
5,000.0	0.00	0.00	4,920.8	-757.1	191.6	781.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,020.8	-757.1	191.6	781.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,120.8	-757.1	191.6	781.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,220.8	-757.1	191.6	781.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,320.8	-757.1	191.6	781.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,420.8	-757.1	191.6	781.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,520.8	-757.1	191.6	781.0	0.00	0.00	0.00
5,685.2	0.00	0.00	5,606.0	-757.1	191.6	781.0	0.00	0.00	0.00
Cameo									
5,700.0	0.00	0.00	5,620.8	-757.1	191.6	781.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,720.8	-757.1	191.6	781.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,820.8	-757.1	191.6	781.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,920.8	-757.1	191.6	781.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,020.8	-757.1	191.6	781.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,120.8	-757.1	191.6	781.0	0.00	0.00	0.00
6,206.2	0.00	0.00	6,127.0	-757.1	191.6	781.0	0.00	0.00	0.00
Rollins									
6,300.0	0.00	0.00	6,220.8	-757.1	191.6	781.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,320.8	-757.1	191.6	781.0	0.00	0.00	0.00
6,506.2	0.00	0.00	6,427.0	-757.1	191.6	781.0	0.00	0.00	0.00
TD at 6506.2									

Formations

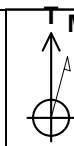
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,301.2	3,239.0	WF		0.00	
4,313.2	4,234.0	Top of Gas		0.00	
5,685.2	5,606.0	Cameo		0.00	
6,206.2	6,127.0	Rollins		0.00	

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
541.3	538.8	-34.4	8.7	Start 3430.6 hold at 541.3 MD
3,971.9	3,895.2	-722.8	182.9	Start Drop -3.50
4,313.2	4,234.0	-757.1	191.6	Start 2193.0 hold at 4313.2 MD
6,506.2	6,427.0	-757.1	191.6	TD at 6506.2



Well Name: BAT 41B-19-07-95
 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 1591928.38 2284550.91 39° 25' 52.402 N 108° 1' 59.694 W
 Original Well Elev BAT 41B-19-07-95 @ 5461.2ft (Original Well Elev)



Azimuths to True North
 Magnetic North: 10.06°
 Magnetic Field
 Strength: 52046.2snT
 Dip Angle: 65.64°
 Date: 7/11/2013
 Model: IGRF200510

Monument Ridge
 BAT 41B-19-07-95
 Design #1
 10:27, July 11 2013

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BAT 41B-19-07-95 TGT	4234.0	-757.1	191.6	1591166.21	2284721.35	39° 25' 44.918 N	108° 1' 57.252 W	Point
BAT 41B-19-07-95 TD	6427.0	-757.1	191.6	1591166.21	2284721.35	39° 25' 44.918 N	108° 1' 57.252 W	Point

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	Start Build 3.50
538.8	541.3	Start 3430.6 hold at 541.3 MD
3895.2	3971.9	Start Drop -3.50
4234.0	4313.2	Start 2193.0 hold at 4313.2 MD
6427.0	6506.2	TD at 6506.2

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	541.3	11.95	165.80	538.8	-34.4	8.7	3.50	165.80	35.5	
4	3971.9	11.95	165.80	3895.2	-722.8	182.9	0.00	0.00	745.5	
5	4313.2	0.00	0.00	4234.0	-757.1	191.6	3.50	180.00	781.0	BAT 41B-19-07-95 TGT
6	6506.2	0.00	0.00	6427.0	-757.1	191.6	0.00	0.00	781.0	BAT 41B-19-07-95 TD

