



Ursa Operating Company, LLC

**Rockies Region
Monument Ridge
BAT 34A-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 34A-18-07-95
Company:	Ursa Operating Company, LLC	TVD Reference:	BAT 34A-18-07-95 @ 5461.2ft (EST KB)
Project:	Rockies Region	MD Reference:	BAT 34A-18-07-95 @ 5461.2ft (EST KB)
Site:	Monument Ridge	North Reference:	True
Well:	BAT 34A-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 34A-18-07-95, SHL LAT: 39.431395900 LONG: -108.033175000					
Well Position	+N/-S	-24.4 ft	Northing:	1,591,990.86 ft	Latitude:	39° 25' 53.025 N
	+E/-W	23.2 ft	Easting:	2,284,573.39 ft	Longitude:	108° 1' 59.430 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) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	301.57

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	
815.9	21.56	301.57	801.5	60.0	-97.6	3.50	3.50	0.00	301.57	
3,886.7	21.56	301.57	3,657.5	650.7	-1,058.8	0.00	0.00	0.00	0.00	
4,502.6	0.00	0.00	4,259.0	710.7	-1,156.4	3.50	-3.50	0.00	180.00	34A-18-07-95 TGT
6,695.6	0.00	0.00	6,452.0	710.7	-1,156.4	0.00	0.00	0.00	0.00	34A-18-07-95 BHL

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Project:	Rockies Region	MD Reference:	BAT 34A-18-07-95 @ 5461.2ft (EST KB)
Site:	Monument Ridge	North Reference:	True
Well:	BAT 34A-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	301.57	299.9	1.6	-2.6	3.1	3.50	3.50	0.00
400.0	7.00	301.57	399.5	6.4	-10.4	12.2	3.50	3.50	0.00
500.0	10.50	301.57	498.3	14.4	-23.4	27.4	3.50	3.50	0.00
600.0	14.00	301.57	596.0	25.5	-41.4	48.6	3.50	3.50	0.00
700.0	17.50	301.57	692.3	39.7	-64.5	75.8	3.50	3.50	0.00
800.0	21.00	301.57	786.7	56.9	-92.6	108.7	3.50	3.50	0.00
815.9	21.56	301.57	801.5	60.0	-97.6	114.5	3.50	3.50	0.00
Start 3070.8 hold at 815.9 MD									
900.0	21.56	301.57	879.7	76.1	-123.9	145.4	0.00	0.00	0.00
1,000.0	21.56	301.57	972.7	95.4	-155.2	182.1	0.00	0.00	0.00
1,100.0	21.56	301.57	1,065.7	114.6	-186.5	218.9	0.00	0.00	0.00
1,200.0	21.56	301.57	1,158.7	133.8	-217.8	255.6	0.00	0.00	0.00
1,300.0	21.56	301.57	1,251.7	153.1	-249.1	292.4	0.00	0.00	0.00
1,400.0	21.56	301.57	1,344.7	172.3	-280.4	329.1	0.00	0.00	0.00
1,500.0	21.56	301.57	1,437.7	191.6	-311.7	365.9	0.00	0.00	0.00
1,600.0	21.56	301.57	1,530.7	210.8	-343.0	402.6	0.00	0.00	0.00
1,700.0	21.56	301.57	1,623.7	230.0	-374.3	439.3	0.00	0.00	0.00
1,800.0	21.56	301.57	1,716.7	249.3	-405.6	476.1	0.00	0.00	0.00
1,900.0	21.56	301.57	1,809.7	268.5	-436.9	512.8	0.00	0.00	0.00
2,000.0	21.56	301.57	1,902.8	287.8	-468.2	549.6	0.00	0.00	0.00
2,100.0	21.56	301.57	1,995.8	307.0	-499.5	586.3	0.00	0.00	0.00
2,200.0	21.56	301.57	2,088.8	326.2	-530.8	623.0	0.00	0.00	0.00
2,300.0	21.56	301.57	2,181.8	345.5	-562.1	659.8	0.00	0.00	0.00
2,400.0	21.56	301.57	2,274.8	364.7	-593.4	696.5	0.00	0.00	0.00
2,500.0	21.56	301.57	2,367.8	383.9	-624.7	733.3	0.00	0.00	0.00
2,600.0	21.56	301.57	2,460.8	403.2	-656.0	770.0	0.00	0.00	0.00
2,700.0	21.56	301.57	2,553.8	422.4	-687.3	806.8	0.00	0.00	0.00
2,800.0	21.56	301.57	2,646.8	441.7	-718.6	843.5	0.00	0.00	0.00
2,900.0	21.56	301.57	2,739.8	460.9	-749.9	880.2	0.00	0.00	0.00
3,000.0	21.56	301.57	2,832.8	480.1	-781.2	917.0	0.00	0.00	0.00
3,100.0	21.56	301.57	2,925.8	499.4	-812.5	953.7	0.00	0.00	0.00
3,200.0	21.56	301.57	3,018.8	518.6	-843.8	990.5	0.00	0.00	0.00
3,300.0	21.56	301.57	3,111.8	537.9	-875.1	1,027.2	0.00	0.00	0.00
3,400.0	21.56	301.57	3,204.8	557.1	-906.4	1,064.0	0.00	0.00	0.00
3,463.6	21.56	301.57	3,264.0	569.3	-926.4	1,087.3	0.00	0.00	0.00
WF									
3,500.0	21.56	301.57	3,297.8	576.3	-937.7	1,100.7	0.00	0.00	0.00
3,600.0	21.56	301.57	3,390.8	595.6	-969.1	1,137.4	0.00	0.00	0.00
3,700.0	21.56	301.57	3,483.8	614.8	-1,000.4	1,174.2	0.00	0.00	0.00
3,800.0	21.56	301.57	3,576.8	634.0	-1,031.7	1,210.9	0.00	0.00	0.00
3,886.7	21.56	301.57	3,657.5	650.7	-1,058.8	1,242.8	0.00	0.00	0.00
Start Drop -3.50									
3,900.0	21.09	301.57	3,669.9	653.3	-1,062.9	1,247.6	3.50	-3.50	0.00
4,000.0	17.59	301.57	3,764.2	670.6	-1,091.1	1,280.7	3.50	-3.50	0.00
4,100.0	14.09	301.57	3,860.4	684.9	-1,114.4	1,308.0	3.50	-3.50	0.00
4,200.0	10.59	301.57	3,958.1	696.1	-1,132.6	1,329.4	3.50	-3.50	0.00
4,300.0	7.09	301.57	4,056.9	704.1	-1,145.7	1,344.8	3.50	-3.50	0.00
4,400.0	3.59	301.57	4,156.4	709.0	-1,153.6	1,354.1	3.50	-3.50	0.00
4,502.6	0.00	0.00	4,259.0	710.7	-1,156.4	1,357.3	3.50	-3.50	0.00

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Site:	Monument Ridge	North Reference:	True
Well:	BAT 34A-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)	
Start 2193.0 hold at 4502.6 MD - Top of Gas										
4,600.0	0.00	0.00	4,356.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
4,700.0	0.00	0.00	4,456.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
4,800.0	0.00	0.00	4,556.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
4,900.0	0.00	0.00	4,656.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
5,000.0	0.00	0.00	4,756.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
5,100.0	0.00	0.00	4,856.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
5,200.0	0.00	0.00	4,956.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
5,300.0	0.00	0.00	5,056.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
5,400.0	0.00	0.00	5,156.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,256.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,356.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,456.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,556.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
5,874.6	0.00	0.00	5,631.0	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
Cameo										
5,900.0	0.00	0.00	5,656.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
6,000.0	0.00	0.00	5,756.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
6,100.0	0.00	0.00	5,856.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
6,200.0	0.00	0.00	5,956.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,056.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
6,395.6	0.00	0.00	6,152.0	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
Rollins										
6,400.0	0.00	0.00	6,156.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,256.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,356.4	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
6,695.6	0.00	0.00	6,452.0	710.7	-1,156.4	1,357.3	0.00	0.00	0.00	
TD at 6695.6										

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,463.6	3,264.0	WF		0.00		
4,502.6	4,259.0	Top of Gas		0.00		
5,874.6	5,631.0	Cameo		0.00		
6,395.6	6,152.0	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	
815.9	801.5	60.0	-97.6	Start 3070.8 hold at 815.9 MD	
3,886.7	3,657.5	650.7	-1,058.8	Start Drop -3.50	
4,502.6	4,259.0	710.7	-1,156.4	Start 2193.0 hold at 4502.6 MD	
6,695.6	6,452.0	710.7	-1,156.4	TD at 6695.6	



Well Name: BAT 34A-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 2284573.39 39° 25' 53.025 N 108° 1' 59.430 W
 EST KB BAT 34A-18-07-95 @ 5461.2ft (EST KB)

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

Monument Ridge
 BAT 34A-18-07-95
 Design #1
 17:56, July 02 2013

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
34A-18-07-95 TGT	4259.0	710.7	-1156.4	1592733.52	2283437.30	39° 26' 0.049 N	108° 2' 14.168 W	Point
34A-18-07-95 BHL	6452.0	710.7	-1156.4	1592733.52	2283437.30	39° 26' 0.049 N	108° 2' 14.168 W	Point

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	Start Build 3.50
801.5	815.9	Start 3070.8 hold at 815.9 MD
3657.5	3886.7	Start Drop -3.50
4259.0	4502.6	Start 2193.0 hold at 4502.6 MD
6452.0	6695.6	TD at 6695.6

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	815.9	21.56	301.57	801.5	60.0	-97.6	3.50	301.57	114.5	
4	3886.7	21.56	301.57	3657.5	650.7	-1058.8	0.00	0.00	1242.8	
5	4502.6	0.00	0.00	4259.0	710.7	-1156.4	3.50	180.00	1357.3	34A-18-07-95 TGT
6	6695.6	0.00	0.00	6452.0	710.7	-1156.4	0.00	0.00	1357.3	34A-18-07-95 BHL

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3264.0	3463.6	WF
4259.0	4502.6	Top of Gas
5631.0	5874.6	Cameo
6152.0	6395.6	Rollins

