

Ursa Operating Company, LLC

Rockies Region

Speakman A

BAT 13C-24-07-96

Wellbore #1

Plan: Design #1

Standard Planning Report

15 June, 2013



Payzone Directional

Planning Report



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well BAT 13C-24-07-96
Company:	Ursa Operating Company, LLC	TVD Reference:	BAT 13C-24-07-96 @ 5197.9ft (Original Well Elev)
Project:	Rockies Region	MD Reference:	BAT 13C-24-07-96 @ 5197.9ft (Original Well Elev)
Site:	Speakman A	North Reference:	True
Well:	BAT 13C-24-07-96	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		Speakman A			
Site Position:		Northing:	484,154.15 m	Latitude:	39° 25' 15.663 N
From:	Lat/Long	Easting:	693,950.13 m	Longitude:	108° 3' 38.016 W
Position Uncertainty:	0.0 ft	Slot Radius:	in	Grid Convergence:	-1.61 °

Well	BAT 13C-24-07-96, SHL LAT: 39.420916655 LONG: -108.060440163					
Well Position	+N/-S	-36.8 ft	Northing:	484,142.66 m	Latitude:	39° 25' 15.300 N
	+E/-W	33.9 ft	Easting:	693,960.14 m	Longitude:	108° 3' 37.585 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	5,197.9 ft	Ground Level:	5,182.5 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/13/2013	10.08	65.63	52,047

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	261.87

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	
951.7	26.31	261.87	925.6	-24.0	-167.9	3.50	3.50	0.00	261.87	
3,205.0	26.31	261.87	2,945.4	-165.2	-1,156.5	0.00	0.00	0.00	0.00	
3,956.7	0.00	0.00	3,671.0	-189.2	-1,324.4	3.50	-3.50	0.00	180.00	BAT 13C-24-07-96 T
6,061.7	0.00	0.00	5,776.0	-189.2	-1,324.4	0.00	0.00	0.00	0.00	BAT 13C-24-07-96 B

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Project:	Rockies Region	MD Reference:	BAT 13C-24-07-96 @ 5197.9ft (Original Well Elev)
Site:	Speakman A	North Reference:	True
Well:	BAT 13C-24-07-96	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	261.87	299.9	-0.4	-3.0	3.1	3.50	3.50	0.00
400.0	7.00	261.87	399.5	-1.7	-12.1	12.2	3.50	3.50	0.00
500.0	10.50	261.87	498.3	-3.9	-27.1	27.4	3.50	3.50	0.00
600.0	14.00	261.87	596.0	-6.9	-48.1	48.6	3.50	3.50	0.00
700.0	17.50	261.87	692.3	-10.7	-75.0	75.8	3.50	3.50	0.00
800.0	21.00	261.87	786.7	-15.4	-107.6	108.7	3.50	3.50	0.00
900.0	24.50	261.87	878.9	-20.8	-145.9	147.4	3.50	3.50	0.00
951.7	26.31	261.87	925.6	-24.0	-167.9	169.6	3.50	3.50	0.00
Start 2253.3 hold at 951.7 MD									
1,000.0	26.31	261.87	968.9	-27.0	-189.1	191.0	0.00	0.00	0.00
1,100.0	26.31	261.87	1,058.5	-33.3	-232.9	235.3	0.00	0.00	0.00
1,200.0	26.31	261.87	1,148.1	-39.5	-276.8	279.6	0.00	0.00	0.00
1,300.0	26.31	261.87	1,237.8	-45.8	-320.7	323.9	0.00	0.00	0.00
1,400.0	26.31	261.87	1,327.4	-52.1	-364.6	368.3	0.00	0.00	0.00
1,500.0	26.31	261.87	1,417.1	-58.3	-408.4	412.6	0.00	0.00	0.00
1,600.0	26.31	261.87	1,506.7	-64.6	-452.3	456.9	0.00	0.00	0.00
1,700.0	26.31	261.87	1,596.3	-70.9	-496.2	501.2	0.00	0.00	0.00
1,800.0	26.31	261.87	1,686.0	-77.2	-540.1	545.6	0.00	0.00	0.00
1,900.0	26.31	261.87	1,775.6	-83.4	-583.9	589.9	0.00	0.00	0.00
2,000.0	26.31	261.87	1,865.3	-89.7	-627.8	634.2	0.00	0.00	0.00
2,100.0	26.31	261.87	1,954.9	-96.0	-671.7	678.5	0.00	0.00	0.00
2,200.0	26.31	261.87	2,044.6	-102.2	-715.6	722.8	0.00	0.00	0.00
2,300.0	26.31	261.87	2,134.2	-108.5	-759.5	767.2	0.00	0.00	0.00
2,400.0	26.31	261.87	2,223.8	-114.8	-803.3	811.5	0.00	0.00	0.00
2,500.0	26.31	261.87	2,313.5	-121.0	-847.2	855.8	0.00	0.00	0.00
2,600.0	26.31	261.87	2,403.1	-127.3	-891.1	900.1	0.00	0.00	0.00
2,700.0	26.31	261.87	2,492.8	-133.6	-935.0	944.4	0.00	0.00	0.00
2,792.9	26.31	261.87	2,576.0	-139.4	-975.7	985.6	0.00	0.00	0.00
WF									
2,800.0	26.31	261.87	2,582.4	-139.8	-978.8	988.8	0.00	0.00	0.00
2,900.0	26.31	261.87	2,672.0	-146.1	-1,022.7	1,033.1	0.00	0.00	0.00
3,000.0	26.31	261.87	2,761.7	-152.4	-1,066.6	1,077.4	0.00	0.00	0.00
3,100.0	26.31	261.87	2,851.3	-158.6	-1,110.5	1,121.7	0.00	0.00	0.00
3,205.0	26.31	261.87	2,945.4	-165.2	-1,156.5	1,168.3	0.00	0.00	0.00
Start Drop -3.50									
3,300.0	22.98	261.87	3,031.8	-170.8	-1,195.7	1,207.9	3.50	-3.50	0.00
3,400.0	19.48	261.87	3,125.0	-175.9	-1,231.6	1,244.1	3.50	-3.50	0.00
3,500.0	15.98	261.87	3,220.2	-180.2	-1,261.7	1,274.5	3.50	-3.50	0.00
3,600.0	12.48	261.87	3,317.1	-183.7	-1,286.1	1,299.1	3.50	-3.50	0.00
3,700.0	8.98	261.87	3,415.4	-186.4	-1,304.5	1,317.8	3.50	-3.50	0.00
3,800.0	5.48	261.87	3,514.6	-188.1	-1,317.0	1,330.3	3.50	-3.50	0.00
3,900.0	1.98	261.87	3,614.3	-189.1	-1,323.4	1,336.9	3.50	-3.50	0.00
3,956.7	0.00	0.00	3,671.0	-189.2	-1,324.4	1,337.8	3.50	-3.50	0.00
Start 2105.0 hold at 3956.7 MD - Top of Perf									
4,000.0	0.00	0.00	3,714.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
4,100.0	0.00	0.00	3,814.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
4,200.0	0.00	0.00	3,914.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00

Payzone Directional

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Project:	Rockies Region	MD Reference:	BAT 13C-24-07-96 @ 5197.9ft (Original Well Elev)
Site:	Speakman A	North Reference:	True
Well:	BAT 13C-24-07-96	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)
4,300.0	0.00	0.00	4,014.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
4,400.0	0.00	0.00	4,114.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
4,500.0	0.00	0.00	4,214.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
4,600.0	0.00	0.00	4,314.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
4,700.0	0.00	0.00	4,414.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
4,800.0	0.00	0.00	4,514.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
4,900.0	0.00	0.00	4,614.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
5,000.0	0.00	0.00	4,714.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
5,100.0	0.00	0.00	4,814.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
5,200.0	0.00	0.00	4,914.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
5,240.7	0.00	0.00	4,955.0	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
Cameo									
5,300.0	0.00	0.00	5,014.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
5,400.0	0.00	0.00	5,114.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
5,500.0	0.00	0.00	5,214.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
5,600.0	0.00	0.00	5,314.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
5,700.0	0.00	0.00	5,414.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
5,761.7	0.00	0.00	5,476.0	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
Rollins									
5,800.0	0.00	0.00	5,514.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
5,900.0	0.00	0.00	5,614.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,714.3	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
6,061.7	0.00	0.00	5,776.0	-189.2	-1,324.4	1,337.8	0.00	0.00	0.00
TD at 6061.7									

Formations

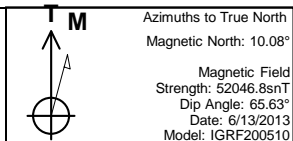
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,792.9	2,576.0	WF		0.00	
3,956.7	3,671.0	Top of Perf		0.00	
5,240.7	4,955.0	Cameo		0.00	
5,761.7	5,476.0	Rollins		0.00	

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
951.7	925.6	-24.0	-167.9	Start 2253.3 hold at 951.7 MD
3,205.0	2,945.4	-165.2	-1,156.5	Start Drop -3.50
3,956.7	3,671.0	-189.2	-1,324.4	Start 2105.0 hold at 3956.7 MD
6,061.7	5,776.0	-189.2	-1,324.4	TD at 6061.7



Well Name: BAT 13C-24-07-96
Surface Location: Speakman A
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 5182.5
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 484142.66 693960.14 39° 25' 15.300 N 108° 3' 37.585 W
Original Well Elev BAT 13C-24-07-96 @ 5197.9ft (Original Well Elev)



Speakman A
BAT 13C-24-07-96
Design #1
18:50, June 15 2013

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BAT 13C-24-07-96 TGT	3671.0	-189.2	-1324.4	484096.39	693555.00	39° 25' 13.429 N	108° 3' 54.462 W	Point
BAT 13C-24-07-96 BHL	5776.0	-189.2	-1324.4	484096.39	693555.00	39° 25' 13.429 N	108° 3' 54.462 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	951.7	26.31	261.87	925.6	-24.0	-167.9	3.50	261.87	169.6	
4	3205.0	26.31	261.87	2945.4	-165.2	-1156.5	0.00	0.00	1168.3	
5	3956.7	0.00	0.00	3671.0	-189.2	-1324.4	3.50	180.00	1337.8	BAT 13C-24-07-96 TGT
6	6061.7	0.00	0.00	5776.0	-189.2	-1324.4	0.00	0.00	1337.8	BAT 13C-24-07-96 BHL

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	Start Build 3.50
925.6	951.7	Start 2253.3 hold at 951.7 MD
2945.4	3205.0	Start Drop -3.50
3671.0	3956.7	Start 2105.0 hold at 3956.7 MD
5776.0	6061.7	TD at 6061.7

FORMATION TOP DETAILS

TVDPathMDPath	Formation
2576.0 2792.9	WF
3671.0 3956.7	Top of Perf
4955.0 5240.7	Cameo
5476.0 5761.7	Rollins

