



Ursa Operating Company, LLC

Rockies Region

Monument Ridge B

Monument Ridge B 23C-08-07-95

Wellbore #1

Design: Production

End of Well Report

04 January, 2016



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Monument Ridge B 23C-08-07-95
Project:	Rockies Region	TVD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Site:	Monument Ridge B	MD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Well:	Monument Ridge B 23C-08-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Production	Database:	EDM 5000.1 Single User Db

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 B						
Site Position:		Northing:		1,596,716.56	usft	Latitude:		39° 26' 40.501 N
From:	Lat/Long	Easting:		2,287,433.43	usft	Longitude:		108° 1' 24.665 W
Position Uncertainty:	0.0 usft	Slot Radius:		13-3/16	"	Grid Convergence:		-1.59 °

Well		Monument Ridge B 23C-08-07-95, SHL: 39.447709308 -108.01235602				
Well Position	+N-S	0.0 usft	Northing:	1,597,767.21 usft	Latitude:	39° 26' 51.753 N
	+E-W	0.0 usft	Easting:	2,290,615.95 usft	Longitude:	108° 0' 44.482 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,718.8 usft	Ground Level:	5,701.8 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/17/2015	9.78	65.57	51,778

Design		Production			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:		Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
		0.0	0.0	0.0	284.87

Survey Program		Date	1/4/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
139.0	8,045.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Monument Ridge B 23C-08-07-95
Project:	Rockies Region	TVD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Site:	Monument Ridge B	MD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Well:	Monument Ridge B 23C-08-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Production	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
139.0	1.27	201.29	139.0	0.2	-1.4	-0.6	0.91	0.91	0.00	
170.0	1.63	207.04	170.0	0.3	-2.1	-0.9	1.25	1.16	18.55	
200.0	1.76	214.83	200.0	0.6	-2.9	-1.3	0.88	0.43	25.97	
231.0	1.66	219.66	231.0	0.9	-3.6	-1.9	0.57	-0.32	15.58	
262.0	1.45	240.05	261.9	1.4	-4.2	-2.5	1.90	-0.68	65.77	
292.0	1.10	272.35	291.9	1.9	-4.4	-3.1	2.62	-1.17	107.67	
323.0	1.40	298.39	322.9	2.6	-4.2	-3.8	2.05	0.97	84.00	
353.0	1.85	293.45	352.9	3.4	-3.8	-4.5	1.57	1.50	-16.47	
383.0	2.50	272.05	382.9	4.5	-3.6	-5.6	3.43	2.17	-71.33	
414.0	3.21	287.43	413.9	6.1	-3.3	-7.1	3.35	2.29	49.61	
445.0	4.00	289.84	444.8	8.0	-2.7	-9.0	2.59	2.55	7.77	
476.0	4.75	287.91	475.7	10.4	-1.9	-11.2	2.47	2.42	-6.23	
506.0	5.63	290.33	505.6	13.1	-1.0	-13.8	3.02	2.93	8.07	
537.0	6.77	289.27	536.4	16.4	0.1	-16.9	3.70	3.68	-3.42	
567.0	7.82	292.74	566.2	20.2	1.5	-20.5	3.79	3.50	11.57	
598.0	9.05	292.96	596.8	24.7	3.2	-24.7	3.97	3.97	0.71	
629.0	10.08	294.35	627.4	29.8	5.3	-29.4	3.40	3.32	4.48	
659.0	11.12	292.35	656.9	35.2	7.5	-34.5	3.68	3.47	-6.67	
689.0	12.52	292.74	686.2	41.3	9.9	-40.1	4.67	4.67	1.30	
719.0	13.80	291.91	715.4	48.1	12.5	-46.5	4.31	4.27	-2.77	
749.0	14.72	291.25	744.5	55.4	15.2	-53.3	3.11	3.07	-2.20	
793.0	16.82	287.34	786.9	67.4	19.1	-64.6	5.35	4.77	-8.89	
835.0	18.28	283.08	826.9	80.0	22.4	-76.8	4.63	3.48	-10.14	
878.0	19.82	282.90	867.6	94.0	25.5	-90.5	3.58	3.58	-0.42	
921.0	21.62	283.43	907.8	109.2	29.0	-105.3	4.21	4.19	1.23	
964.0	23.20	284.35	947.5	125.6	33.0	-121.2	3.76	3.67	2.14	

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Monument Ridge B 23C-08-07-95
Project:	Rockies Region	TVD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Site:	Monument Ridge B	MD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Well:	Monument Ridge B 23C-08-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Production	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
1,006.0	24.79	284.61	985.9	142.7	37.2	-137.8	3.79	3.79	0.62	
1,049.0	26.41	283.56	1,024.7	161.3	41.7	-155.8	3.91	3.77	-2.44	
1,092.0	27.82	283.65	1,062.9	180.9	46.4	-174.8	3.28	3.28	0.21	
1,134.0	29.62	284.39	1,099.8	201.1	51.2	-194.4	4.37	4.29	1.76	
1,177.0	30.81	283.74	1,136.9	222.7	56.5	-215.4	2.87	2.77	-1.51	
1,220.0	32.78	284.04	1,173.5	245.3	61.9	-237.4	4.60	4.58	0.70	
1,262.0	34.19	283.08	1,208.5	268.5	67.4	-259.9	3.59	3.36	-2.29	
1,305.0	36.12	283.65	1,243.7	293.3	73.1	-284.0	4.55	4.49	1.33	
1,348.0	37.35	282.94	1,278.1	319.0	79.0	-309.0	3.03	2.86	-1.65	
1,390.0	38.98	284.66	1,311.1	344.9	85.2	-334.2	4.63	3.88	4.10	
1,433.0	40.56	285.71	1,344.2	372.4	92.4	-360.8	3.99	3.67	2.44	
1,476.0	41.97	285.19	1,376.5	400.8	100.0	-388.1	3.37	3.28	-1.21	
1,518.0	41.79	284.61	1,407.8	428.8	107.2	-415.2	1.02	-0.43	-1.38	
1,561.0	41.70	284.70	1,439.9	457.4	114.4	-442.9	0.25	-0.21	0.21	
1,604.0	41.84	285.14	1,471.9	486.1	121.8	-470.6	0.76	0.33	1.02	
1,647.0	42.01	284.97	1,503.9	514.8	129.3	-498.3	0.48	0.40	-0.40	
1,689.0	41.74	284.23	1,535.2	542.9	136.3	-525.5	1.34	-0.64	-1.76	
1,732.0	42.23	283.65	1,567.2	571.6	143.3	-553.4	1.45	1.14	-1.35	
1,775.0	42.67	284.48	1,598.9	600.6	150.3	-581.5	1.66	1.02	1.93	
1,817.0	42.74	284.36	1,629.8	629.1	157.4	-609.1	0.26	0.17	-0.29	
1,860.0	42.93	284.61	1,661.3	658.4	164.7	-637.4	0.59	0.44	0.58	
1,890.0	42.89	284.57	1,683.3	678.8	169.9	-657.2	0.16	-0.13	-0.13	
2,000.0	42.98	284.57	1,763.8	753.7	188.7	-729.7	0.08	0.08	0.00	
2,086.0	41.35	283.69	1,827.5	811.4	202.8	-785.7	2.02	-1.90	-1.02	
2,171.0	40.43	284.17	1,891.8	867.1	216.2	-839.7	1.14	-1.08	0.56	
2,257.0	40.31	285.74	1,957.3	922.8	230.6	-893.5	1.19	-0.14	1.83	
2,342.0	41.23	285.00	2,021.7	978.3	245.3	-947.0	1.22	1.08	-0.87	

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Monument Ridge B 23C-08-07-95
Project:	Rockies Region	TVD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Site:	Monument Ridge B	MD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Well:	Monument Ridge B 23C-08-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Production	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
2,428.0	41.13	284.13	2,086.4	1,034.9	259.5	-1,001.8	0.68	-0.12	-1.01	
2,513.0	41.62	284.97	2,150.2	1,091.1	273.6	-1,056.2	0.87	0.58	0.99	
2,598.0	41.58	285.03	2,213.8	1,147.5	288.2	-1,110.7	0.07	-0.05	0.07	
2,684.0	41.70	284.88	2,278.0	1,204.6	303.0	-1,165.9	0.18	0.14	-0.17	
2,769.0	41.18	284.35	2,341.8	1,260.9	317.2	-1,220.4	0.74	-0.61	-0.62	
2,855.0	40.20	284.53	2,407.0	1,317.0	331.2	-1,274.7	1.15	-1.14	0.21	
2,940.0	40.25	284.66	2,471.9	1,371.9	345.0	-1,327.8	0.11	0.06	0.15	
3,025.0	40.78	283.78	2,536.5	1,427.1	358.6	-1,381.3	0.92	0.62	-1.04	
3,111.0	41.18	284.61	2,601.4	1,483.5	372.4	-1,436.0	0.79	0.47	0.97	
3,196.0	41.32	284.99	2,665.3	1,539.5	386.7	-1,490.2	0.34	0.16	0.45	
3,281.0	41.88	285.14	2,728.9	1,595.9	401.4	-1,544.7	0.67	0.66	0.18	
3,367.0	41.81	284.46	2,793.0	1,653.3	416.0	-1,600.1	0.53	-0.08	-0.79	
3,452.0	41.59	284.81	2,856.4	1,709.9	430.3	-1,654.8	0.38	-0.26	0.41	
3,538.0	40.53	284.73	2,921.3	1,766.3	444.7	-1,709.5	1.23	-1.23	-0.09	
3,623.0	41.35	285.98	2,985.5	1,822.0	459.5	-1,763.2	1.36	0.96	1.47	
3,708.0	40.17	285.49	3,049.9	1,877.5	474.5	-1,816.6	1.44	-1.39	-0.58	
3,794.0	40.98	285.39	3,115.2	1,933.5	489.4	-1,870.5	0.94	0.94	-0.12	
3,879.0	41.09	284.39	3,179.3	1,989.3	503.8	-1,924.4	0.78	0.13	-1.18	
3,964.0	40.30	285.01	3,243.7	2,044.7	517.8	-1,978.0	1.04	-0.93	0.73	
4,049.0	40.03	284.09	3,308.7	2,099.5	531.6	-2,031.1	0.77	-0.32	-1.08	
4,135.0	40.96	283.69	3,374.1	2,155.3	545.0	-2,085.3	1.12	1.08	-0.47	
4,220.0	39.77	283.74	3,438.9	2,210.4	558.0	-2,138.8	1.40	-1.40	0.06	
4,305.0	39.86	283.65	3,504.1	2,264.8	570.9	-2,191.7	0.13	0.11	-0.11	
4,391.0	39.86	284.98	3,570.2	2,319.9	584.6	-2,245.1	0.99	0.00	1.55	
4,476.0	39.81	284.39	3,635.4	2,374.4	598.4	-2,297.8	0.45	-0.06	-0.69	
4,561.0	39.42	283.87	3,700.9	2,428.6	611.6	-2,350.3	0.60	-0.46	-0.61	
4,647.0	39.33	284.75	3,767.4	2,483.1	625.1	-2,403.2	0.66	-0.10	1.02	

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Monument Ridge B 23C-08-07-95
Project:	Rockies Region	TVD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Site:	Monument Ridge B	MD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Well:	Monument Ridge B 23C-08-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Production	Database:	EDM 5000.1 Single User Db

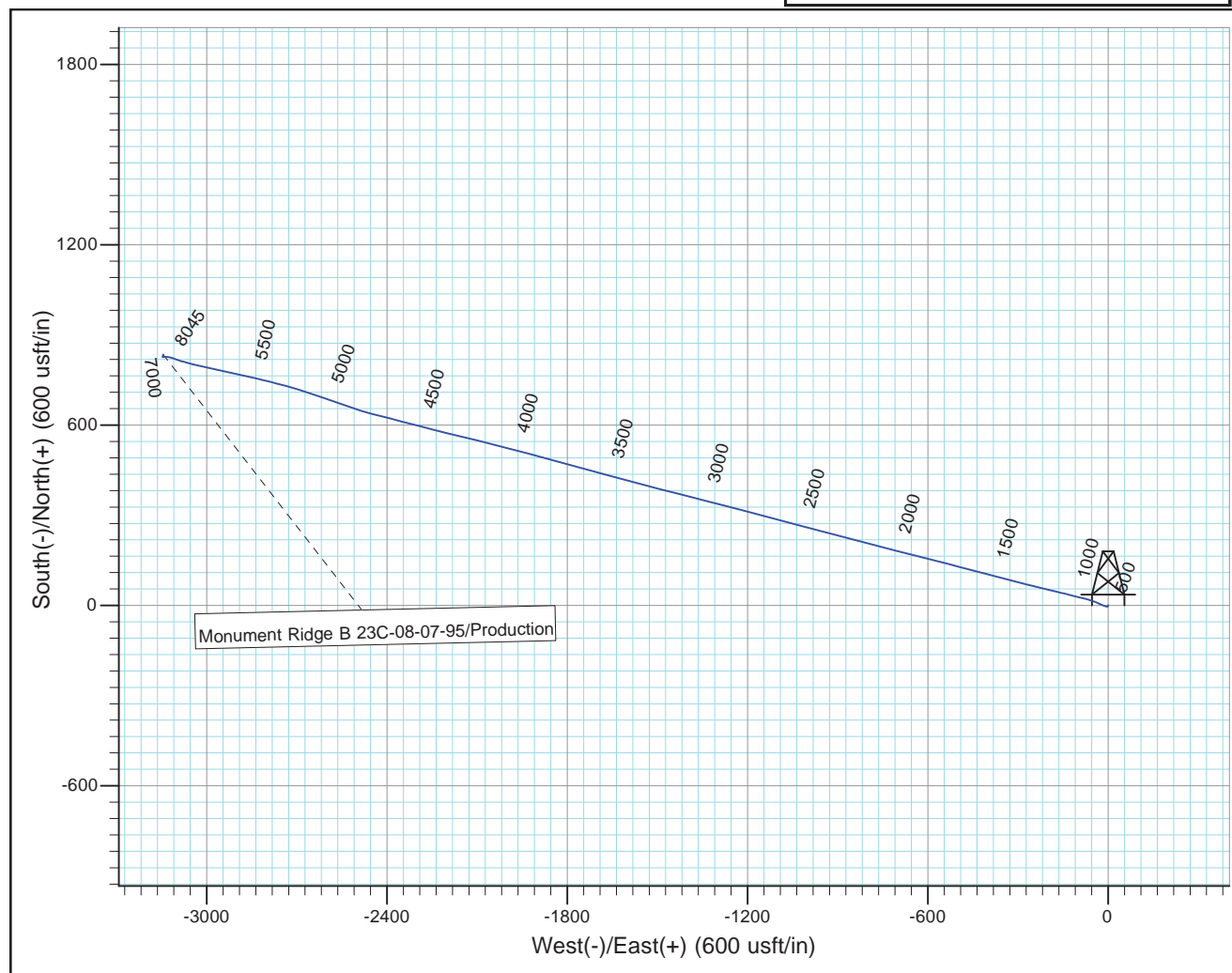
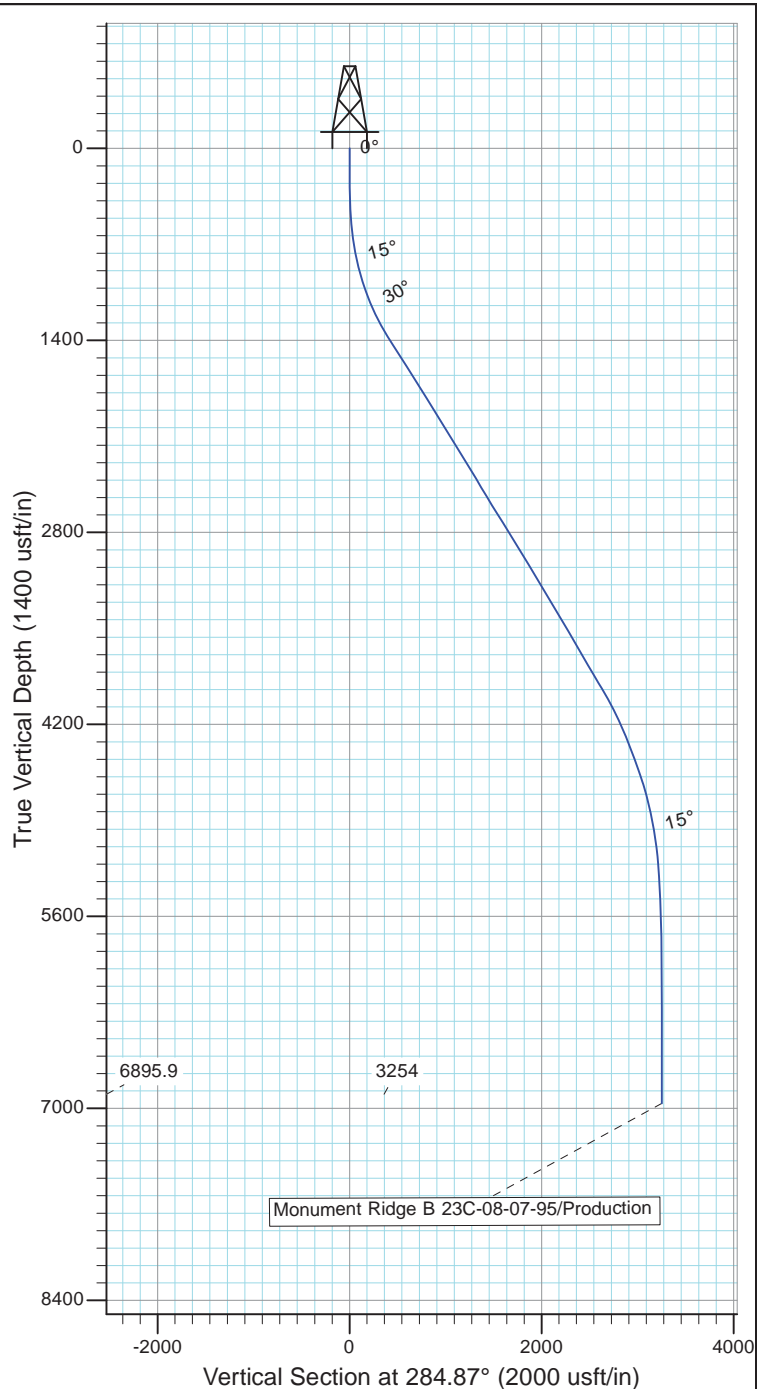
Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
4,733.0	40.30	284.83	3,833.4	2,538.2	639.1	-2,456.4	1.13	1.13	0.09	
4,818.0	40.83	288.74	3,898.0	2,593.4	655.1	-2,509.3	3.06	0.62	4.60	
4,904.0	39.89	289.14	3,963.6	2,648.9	673.2	-2,562.0	1.13	-1.09	0.47	
4,989.0	38.01	288.79	4,029.7	2,702.2	690.5	-2,612.5	2.23	-2.21	-0.41	
5,075.0	36.08	288.92	4,098.3	2,753.9	707.3	-2,661.6	2.25	-2.24	0.15	
5,160.0	33.79	285.86	4,168.0	2,802.5	721.9	-2,708.0	3.39	-2.69	-3.60	
5,245.0	31.77	285.27	4,239.4	2,848.5	734.2	-2,752.3	2.41	-2.38	-0.69	
5,331.0	28.83	284.17	4,313.7	2,891.9	745.3	-2,794.3	3.48	-3.42	-1.28	
5,416.0	27.91	283.03	4,388.5	2,932.3	754.8	-2,833.5	1.26	-1.08	-1.34	
5,502.0	28.52	282.99	4,464.3	2,972.9	763.9	-2,873.1	0.71	0.71	-0.05	
5,587.0	26.32	282.33	4,539.7	3,012.1	772.5	-2,911.3	2.61	-2.59	-0.78	
5,672.0	25.22	281.32	4,616.3	3,049.0	780.1	-2,947.5	1.39	-1.29	-1.19	
5,758.0	21.93	283.38	4,695.1	3,083.3	787.4	-2,981.1	3.94	-3.83	2.40	
5,843.0	19.56	283.25	4,774.6	3,113.4	794.3	-3,010.4	2.79	-2.79	-0.15	
5,929.0	16.04	281.71	4,856.4	3,139.7	800.0	-3,036.0	4.13	-4.09	-1.79	
6,014.0	14.33	285.19	4,938.5	3,161.9	805.2	-3,057.7	2.28	-2.01	4.09	
6,099.0	12.66	285.71	5,021.1	3,181.7	810.5	-3,076.8	1.97	-1.96	0.61	
6,185.0	9.84	288.39	5,105.4	3,198.5	815.3	-3,092.8	3.33	-3.28	3.12	
6,270.0	7.78	288.79	5,189.4	3,211.5	819.5	-3,105.2	2.42	-2.42	0.47	
6,355.0	5.32	293.80	5,273.9	3,221.1	822.9	-3,114.2	2.97	-2.89	5.89	
6,441.0	4.00	285.67	5,359.6	3,228.1	825.3	-3,120.8	1.71	-1.53	-9.45	
6,526.0	3.34	276.09	5,444.4	3,233.5	826.4	-3,126.1	1.06	-0.78	-11.27	
6,612.0	2.94	273.94	5,530.3	3,238.1	826.8	-3,130.8	0.48	-0.47	-2.50	
6,697.0	2.29	272.05	5,615.2	3,241.9	827.0	-3,134.7	0.77	-0.76	-2.22	
6,783.0	2.15	266.90	5,701.1	3,245.1	827.0	-3,138.0	0.28	-0.16	-5.99	
6,868.0	1.89	269.98	5,786.1	3,248.0	826.9	-3,141.0	0.33	-0.31	3.62	
6,953.0	1.32	269.19	5,871.0	3,250.3	826.9	-3,143.4	0.67	-0.67	-0.93	

Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well Monument Ridge B 23C-08-07-95
Project:	Rockies Region	TVD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Site:	Monument Ridge B	MD Reference:	Monument Ridge B 23C-08-07-95 @ 5718.8usft (PLAN
Well:	Monument Ridge B 23C-08-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Production	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
7,039.0	0.74	251.61	5,957.0	3,251.7	826.7	-3,144.9	0.76	-0.67	-20.44	
7,124.0	0.79	242.95	6,042.0	3,252.6	826.3	-3,145.9	0.15	0.06	-10.19	
7,209.0	1.05	217.33	6,127.0	3,253.3	825.4	-3,146.9	0.57	0.31	-30.14	
7,295.0	0.83	18.35	6,213.0	3,253.6	825.4	-3,147.2	2.16	-0.26	187.23	
7,380.0	1.49	26.74	6,298.0	3,253.3	826.9	-3,146.5	0.80	0.78	9.87	
7,466.0	1.41	18.04	6,384.0	3,253.1	828.9	-3,145.7	0.27	-0.09	-10.12	
7,551.0	0.83	357.96	6,468.9	3,253.2	830.5	-3,145.4	0.81	-0.68	-23.62	
7,637.0	0.70	353.43	6,554.9	3,253.6	831.7	-3,145.5	0.17	-0.15	-5.27	
7,722.0	0.70	17.38	6,639.9	3,253.7	832.7	-3,145.4	0.34	0.00	28.18	
7,807.0	0.75	35.80	6,724.9	3,253.5	833.6	-3,144.9	0.28	0.06	21.67	
7,893.0	0.40	2.62	6,810.9	3,253.4	834.4	-3,144.5	0.55	-0.41	-38.58	
7,978.0	0.22	303.69	6,895.9	3,253.6	834.8	-3,144.7	0.40	-0.21	-69.33	
Projection to Bit										
8,045.0	0.22	303.69	6,962.9	3,253.8	834.9	-3,144.9	0.00	0.00	0.00	

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
7,978.0	6,895.9	834.8	-3,144.7	Projection to Bit	

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------



Design: Production (Monument Ridge B 23C-08-07-95/Wellbore #1)

Created By: Matthew Linton

Date: 11:33, January 04 20

THIS SURVEY IS CORRECT TO THE BEST OF
 MY KNOWLEDGE AND IS SUPPORTED
 BY ACTUAL FIELD DATA