



Ursa Operating Company, LLC

Rockies Region

Monument Ridge

BAT 24C-18-07-95

Wellbore #1

Design: Actual

End of Well Report

18 June, 2015



Company:	Ursa Operating Company, LLC	Local Co-ordinate Reference:	Well BAT 24C-18-07-95
Project:	Rockies Region	TVD Reference:	BAT 24C-18-07-95 @ 5458.2usft (Capstar 321)
Site:	Monument Ridge	MD Reference:	BAT 24C-18-07-95 @ 5458.2usft (Capstar 321)
Well:	BAT 24C-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	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			
Site Position:		Northing:		1,592,015.87 usft	
From:	Lat/Long	Easting:		2,284,550.92 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
				Latitude: 39° 25' 53.266 N	
				Longitude: 108° 1' 59.725 W	
				Grid Convergence: -1.60 °	

Well		BAT 24C-18-07-95, SHL: 39° 25' 51.956 -108° 1' 59.675				
Well Position	+N/-S	0.0 usft	Northing:	1,591,883.25 usft	Latitude:	39° 25' 51.956 N
	+E/-W	0.0 usft	Easting:	2,284,551.18 usft	Longitude:	108° 1' 59.675 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	5,458.2 usft	Ground Level:	5,441.2 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/23/2015	9.86	65.57	51,826

Design		Actual			
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	276.18

Survey Program		Date	6/18/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
130.0	6,956.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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Well:	BAT 24C-18-07-95	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	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	
130.0	0.53	69.01	130.0	-0.5	0.2	0.6	0.41	0.41	0.00	
158.0	0.40	25.59	158.0	-0.7	0.3	0.7	1.30	-0.46	-155.07	
187.0	0.44	320.99	187.0	-0.6	0.5	0.7	1.55	0.14	-222.76	
217.0	1.10	296.74	217.0	-0.3	0.7	0.4	2.41	2.20	-80.83	
247.0	1.86	289.45	247.0	0.5	1.0	-0.3	2.60	2.53	-24.30	
277.0	2.72	285.13	277.0	1.6	1.4	-1.5	2.92	2.87	-14.40	
307.0	3.72	281.15	306.9	3.3	1.8	-3.1	3.41	3.33	-13.27	
337.0	4.83	280.52	336.8	5.5	2.2	-5.3	3.70	3.70	-2.10	
367.0	5.82	279.40	366.7	8.3	2.7	-8.1	3.32	3.30	-3.73	
397.0	6.68	277.93	396.5	11.6	3.1	-11.3	2.92	2.87	-4.90	
427.0	7.60	277.84	426.3	15.3	3.7	-15.0	3.07	3.07	-0.30	
457.0	8.66	278.85	456.0	19.5	4.3	-19.2	3.57	3.53	3.37	
487.0	9.80	279.38	485.6	24.3	5.0	-23.9	3.81	3.80	1.77	
517.0	10.67	277.51	515.1	29.7	5.8	-29.2	3.10	2.90	-6.23	
547.0	11.73	275.95	544.5	35.5	6.5	-35.0	3.67	3.53	-5.20	
577.0	12.74	275.77	573.9	41.9	7.1	-41.3	3.37	3.37	-0.60	
607.0	13.84	276.04	603.1	48.8	7.9	-48.2	3.67	3.67	0.90	
637.0	14.81	273.40	632.1	56.2	8.5	-55.6	3.90	3.23	-8.80	
667.0	15.98	274.39	661.1	64.1	9.0	-63.5	4.00	3.90	3.30	
697.0	17.05	273.62	689.8	72.7	9.6	-72.0	3.64	3.57	-2.57	
727.0	18.10	274.85	718.4	81.7	10.3	-81.1	3.71	3.50	4.10	
757.0	19.03	274.54	746.9	91.3	11.1	-90.6	3.12	3.10	-1.03	
787.0	19.90	274.82	775.1	101.2	11.9	-100.6	2.92	2.90	0.93	
817.0	20.92	277.62	803.3	111.7	13.0	-110.9	4.71	3.40	9.33	
847.0	21.93	275.73	831.2	122.7	14.3	-121.8	4.08	3.37	-6.30	
877.0	23.20	276.34	858.9	134.2	15.5	-133.3	4.30	4.23	2.03	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Actual	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)	
907.0	23.99	277.79	886.4	146.2	17.0	-145.2	3.27	2.63	4.83	
937.0	25.00	279.33	913.7	158.6	18.8	-157.5	3.98	3.37	5.13	
967.0	26.15	275.69	940.7	171.5	20.5	-170.3	6.49	3.83	-12.13	
997.0	27.60	276.26	967.5	185.1	21.9	-183.8	4.91	4.83	1.90	
1,027.0	28.92	278.37	993.9	199.3	23.7	-197.9	5.52	4.40	7.03	
1,057.0	29.62	278.23	1,020.1	214.0	25.9	-212.4	2.34	2.33	-0.47	
1,087.0	30.72	277.66	1,046.0	229.0	27.9	-227.3	3.79	3.67	-1.90	
1,117.0	31.77	277.71	1,071.7	244.6	30.0	-242.8	3.50	3.50	0.17	
1,147.0	32.65	276.90	1,097.1	260.6	32.0	-258.6	3.27	2.93	-2.70	
1,177.0	33.71	276.87	1,122.2	277.0	34.0	-274.9	3.53	3.53	-0.10	
1,207.0	34.27	276.17	1,147.0	293.8	35.9	-291.6	2.28	1.87	-2.33	
1,237.0	34.50	276.43	1,171.8	310.7	37.8	-308.4	0.91	0.77	0.87	
1,267.0	34.80	276.16	1,196.5	327.8	39.6	-325.4	1.12	1.00	-0.90	
1,297.0	35.02	275.55	1,221.1	344.9	41.4	-342.5	1.38	0.73	-2.03	
1,327.0	35.38	276.34	1,245.6	362.2	43.2	-359.7	1.93	1.20	2.63	
1,357.0	35.42	276.87	1,270.0	379.6	45.2	-376.9	1.03	0.13	1.77	
1,387.0	35.51	276.08	1,294.5	397.0	47.2	-394.2	1.56	0.30	-2.63	
1,417.0	35.68	275.95	1,318.9	414.5	49.0	-411.6	0.62	0.57	-0.43	
1,447.0	35.77	275.95	1,343.2	432.0	50.8	-429.0	0.30	0.30	0.00	
1,477.0	35.42	275.95	1,367.6	449.4	52.6	-446.4	1.17	-1.17	0.00	
1,507.0	35.11	275.64	1,392.1	466.8	54.4	-463.6	1.19	-1.03	-1.03	
1,537.0	35.51	275.95	1,416.6	484.1	56.1	-480.9	1.46	1.33	1.03	
1,567.0	35.29	275.73	1,441.1	501.5	57.9	-498.1	0.85	-0.73	-0.73	
1,597.0	35.68	275.55	1,465.5	518.9	59.6	-515.5	1.35	1.30	-0.60	
1,627.0	35.21	275.18	1,489.9	536.3	61.2	-532.8	1.72	-1.57	-1.23	
1,657.0	35.08	274.49	1,514.5	553.6	62.7	-550.0	1.39	-0.43	-2.30	
1,687.0	34.41	274.81	1,539.1	570.7	64.1	-567.0	2.31	-2.23	1.07	

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Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
1,717.0	33.60	274.87	1,564.0	587.4	65.5	-583.8	2.70	-2.70	0.20	
1,747.0	33.62	275.29	1,589.0	604.0	66.9	-600.3	0.78	0.07	1.40	
1,777.0	33.70	274.77	1,613.9	620.7	68.4	-616.9	1.00	0.27	-1.73	
1,807.0	33.76	274.71	1,638.9	637.3	69.8	-633.5	0.23	0.20	-0.20	
1,837.0	33.93	275.07	1,663.8	654.0	71.2	-650.1	0.88	0.57	1.20	
1,937.0	34.15	275.99	1,746.7	710.0	76.6	-705.8	0.56	0.22	0.92	
2,022.0	33.84	274.94	1,817.1	757.5	81.1	-753.1	0.78	-0.36	-1.24	
2,108.0	34.26	277.10	1,888.4	805.6	86.2	-801.0	1.49	0.49	2.51	
2,193.0	35.38	277.53	1,958.2	854.2	92.4	-849.2	1.35	1.32	0.51	
2,278.0	34.45	276.12	2,027.9	902.8	98.1	-897.5	1.45	-1.09	-1.66	
2,364.0	34.19	276.12	2,098.9	951.3	103.3	-945.7	0.30	-0.30	0.00	
2,449.0	34.80	276.21	2,169.0	999.4	108.5	-993.5	0.72	0.72	0.11	
2,535.0	34.67	275.77	2,239.6	1,048.4	113.6	-1,042.3	0.33	-0.15	-0.51	
2,620.0	35.42	277.71	2,309.2	1,097.2	119.3	-1,090.7	1.58	0.88	2.28	
2,706.0	35.12	276.98	2,379.4	1,146.9	125.7	-1,140.0	0.60	-0.35	-0.85	
2,791.0	34.76	276.74	2,449.1	1,195.6	131.5	-1,188.3	0.45	-0.42	-0.28	
2,876.0	34.58	276.30	2,519.0	1,243.9	137.0	-1,236.4	0.36	-0.21	-0.52	
2,962.0	33.97	275.82	2,590.1	1,292.3	142.1	-1,284.5	0.78	-0.71	-0.56	
3,047.0	35.55	277.40	2,659.9	1,340.8	147.7	-1,332.6	2.14	1.86	1.86	
3,133.0	35.31	277.77	2,730.0	1,390.6	154.3	-1,382.1	0.37	-0.28	0.43	
3,218.0	34.98	277.49	2,799.5	1,439.6	160.8	-1,430.6	0.43	-0.39	-0.33	
3,303.0	34.45	276.21	2,869.4	1,488.0	166.6	-1,478.6	1.06	-0.62	-1.51	
3,389.0	35.42	276.42	2,939.9	1,537.2	172.0	-1,527.6	1.14	1.13	0.24	
3,474.0	35.02	277.22	3,009.3	1,586.2	177.8	-1,576.2	0.72	-0.47	0.94	
3,560.0	34.02	277.76	3,080.2	1,634.9	184.1	-1,624.6	1.22	-1.16	0.63	
3,645.0	35.55	276.61	3,150.0	1,683.4	190.2	-1,672.7	1.96	1.80	-1.35	
3,731.0	34.80	276.61	3,220.3	1,733.0	195.9	-1,721.9	0.87	-0.87	0.00	

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Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
3,816.0	33.75	276.30	3,290.5	1,780.8	201.3	-1,769.5	1.25	-1.24	-0.36	
3,902.0	34.85	277.71	3,361.6	1,829.3	207.2	-1,817.5	1.58	1.28	1.64	
3,987.0	36.56	277.66	3,430.6	1,878.9	213.8	-1,866.7	2.01	2.01	-0.06	
4,072.0	35.29	276.43	3,499.4	1,928.7	220.0	-1,916.2	1.72	-1.49	-1.45	
4,158.0	34.01	275.60	3,570.1	1,977.6	225.1	-1,964.8	1.59	-1.49	-0.97	
4,243.0	32.48	274.98	3,641.2	2,024.2	229.4	-2,011.2	1.84	-1.80	-0.73	
4,328.0	31.77	275.42	3,713.2	2,069.4	233.5	-2,056.2	0.88	-0.84	0.52	
4,414.0	30.03	275.29	3,787.0	2,113.6	237.6	-2,100.2	2.02	-2.02	-0.15	
4,499.0	28.43	274.72	3,861.2	2,155.1	241.2	-2,141.6	1.91	-1.88	-0.67	
4,585.0	26.19	276.12	3,937.6	2,194.5	244.9	-2,180.8	2.71	-2.60	1.63	
4,670.0	25.31	276.08	4,014.2	2,231.5	248.9	-2,217.5	1.04	-1.04	-0.05	
4,755.0	23.62	275.30	4,091.5	2,266.6	252.4	-2,252.6	2.02	-1.99	-0.92	
4,841.0	21.64	279.23	4,170.9	2,299.7	256.5	-2,285.4	2.90	-2.30	4.57	
4,926.0	20.08	278.19	4,250.3	2,330.0	261.1	-2,315.3	1.89	-1.84	-1.22	
5,012.0	17.67	276.39	4,331.7	2,357.8	264.6	-2,342.9	2.88	-2.80	-2.09	
5,097.0	14.50	278.41	4,413.4	2,381.3	267.6	-2,366.2	3.79	-3.73	2.38	
5,182.0	10.81	281.18	4,496.3	2,399.9	270.7	-2,384.6	4.40	-4.34	3.26	
5,268.0	7.44	280.79	4,581.2	2,413.5	273.3	-2,398.0	3.92	-3.92	-0.45	
5,353.0	4.44	269.05	4,665.7	2,422.2	274.3	-2,406.7	3.79	-3.53	-13.81	
5,439.0	4.00	262.37	4,751.5	2,428.4	273.9	-2,413.0	0.77	-0.51	-7.77	
5,524.0	2.36	271.06	4,836.4	2,433.1	273.5	-2,417.7	2.01	-1.93	10.22	
5,609.0	0.79	6.52	4,921.3	2,434.8	274.1	-2,419.3	3.01	-1.85	112.31	
5,695.0	0.75	9.73	5,007.3	2,434.8	275.3	-2,419.2	0.07	-0.05	3.73	
5,780.0	0.53	305.79	5,092.3	2,435.1	276.0	-2,419.4	0.83	-0.26	-75.22	
5,866.0	0.74	294.01	5,178.3	2,435.9	276.5	-2,420.2	0.29	0.24	-13.70	
5,951.0	0.88	256.79	5,263.3	2,437.1	276.6	-2,421.4	0.63	0.16	-43.79	
6,037.0	1.22	246.88	5,349.3	2,438.5	276.1	-2,422.9	0.45	0.40	-11.52	

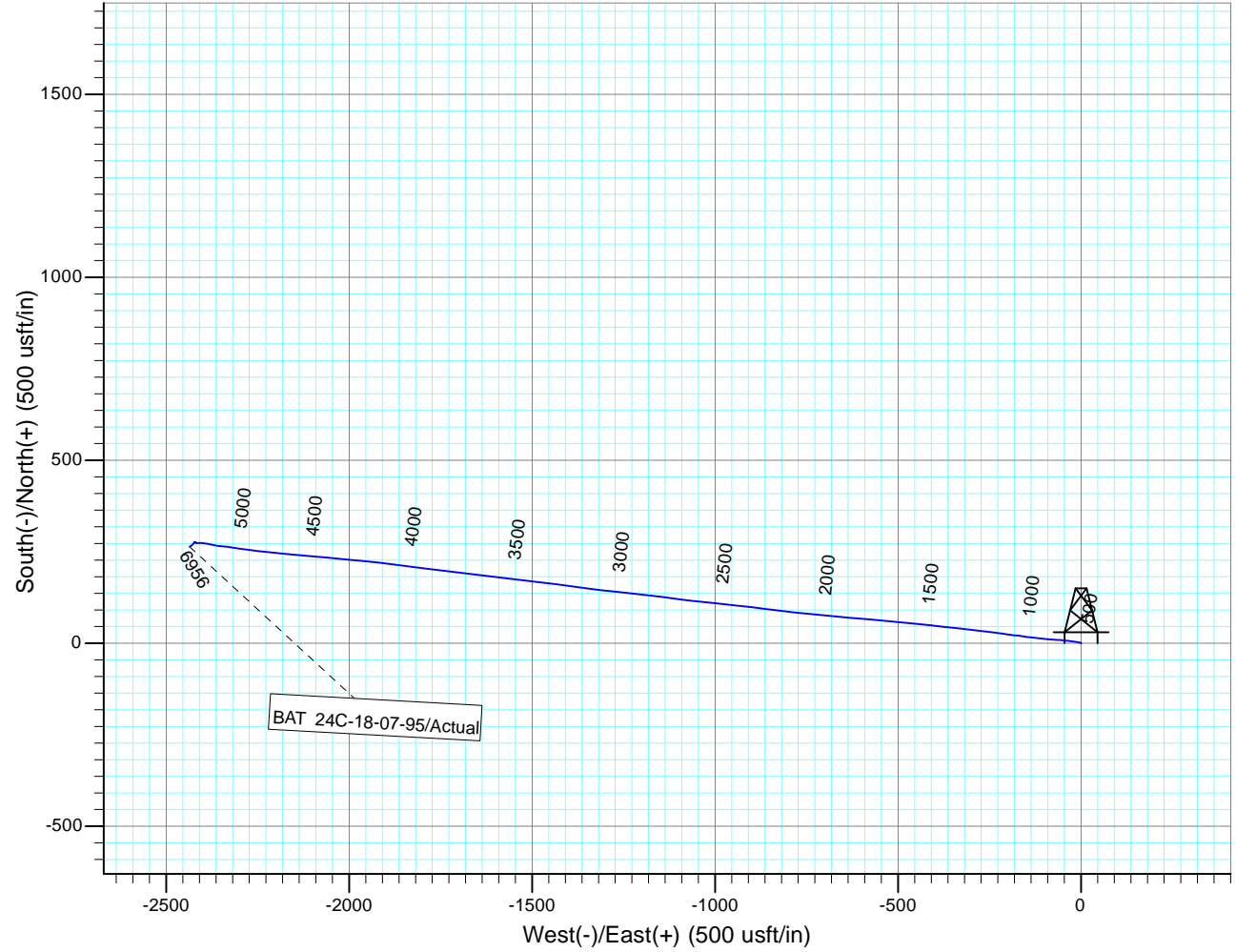
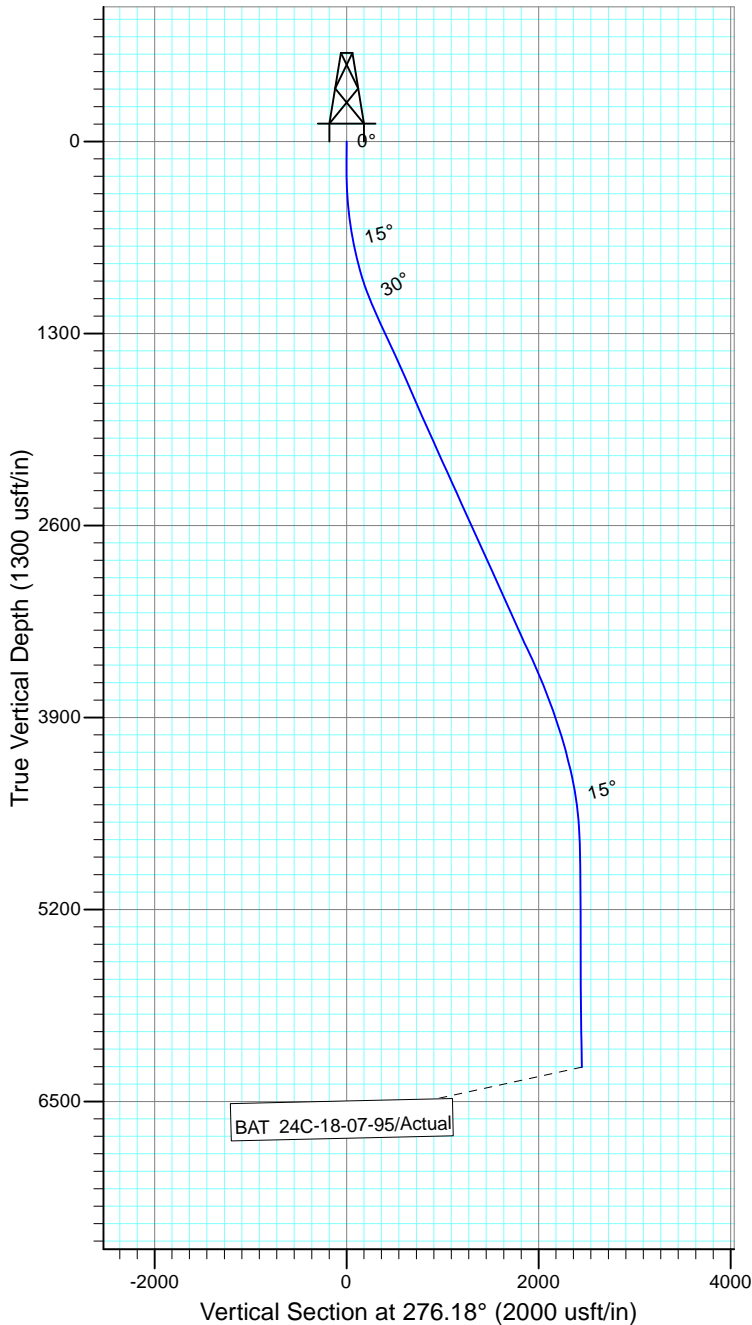
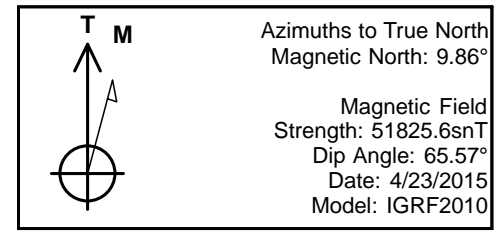
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6,122.0	0.44	114.14	5,434.3	2,439.0	275.6	-2,423.4	1.83	-0.92	-156.16	
6,208.0	0.49	116.53	5,520.3	2,438.3	275.3	-2,422.8	0.06	0.06	2.78	
6,293.0	0.26	188.72	5,605.3	2,438.0	274.9	-2,422.5	0.56	-0.27	84.93	
6,378.0	0.66	224.40	5,690.3	2,438.3	274.4	-2,422.8	0.56	0.47	41.98	
6,464.0	1.19	229.81	5,776.3	2,439.2	273.5	-2,423.9	0.62	0.62	6.29	
6,549.0	1.80	227.74	5,861.2	2,440.7	272.0	-2,425.5	0.72	0.72	-2.44	
6,635.0	1.77	219.83	5,947.2	2,442.4	270.1	-2,427.4	0.29	-0.03	-9.20	
6,720.0	2.09	228.37	6,032.1	2,444.1	268.0	-2,429.4	0.51	0.38	10.05	
6,805.0	1.93	239.12	6,117.1	2,446.3	266.3	-2,431.8	0.48	-0.19	12.65	
6,891.0	1.67	239.34	6,203.0	2,448.5	264.9	-2,434.1	0.30	-0.30	0.26	
6,899.0	1.72	238.14	6,211.0	2,448.6	264.8	-2,434.3	0.77	0.62	-15.00	
6,956.0	1.72	238.14	6,268.0	2,450.0	263.9	-2,435.7	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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Project: Rockies Region
 Site: Monument Ridge
 Well: BAT 24C-18-07-95
 Wellbore: Wellbore #1
 Design: Actual



Design: Actual (BAT 24C-18-07-95/Wellbore #1)

Created By: *Matthew Linton*

Date: 11:38, June 18 2015

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