



Ursa Operating Company, LLC

**Rockies Region
Monument Ridge
BAT 24D 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 24D 18-07-95
Project:	Rockies Region	TVD Reference:	BAT 24D 18-07-95 @ 5458.2usft (Capstar 321)
Site:	Monument Ridge	MD Reference:	BAT 24D 18-07-95 @ 5458.2usft (Capstar 321)
Well:	BAT 24D 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:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	39° 25' 53.266 N
		Longitude:	108° 1' 59.725 W
		Grid Convergence:	-1.60 °

Well		BAT 24D 18-07-95, SHL: 39° 25' 51.857 -108° 1' 59.671				
Well Position	+N-S	0.0 usft	Northing:	1,591,873.26 usft	Latitude:	39° 25' 51.857 N
	+E-W	0.0 usft	Easting:	2,284,551.18 usft	Longitude:	108° 1' 59.671 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	269.50

Survey Program	Date	6/18/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
130.0	6,942.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

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Well:	BAT 24D 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	0.22	342.97	130.0	0.1	0.2	-0.1	0.17	0.17	0.00	
158.0	0.29	308.46	158.0	0.1	0.3	-0.1	0.59	0.25	-123.25	
187.0	0.79	261.58	187.0	0.4	0.4	-0.4	2.17	1.72	-161.66	
217.0	1.89	263.91	217.0	1.1	0.3	-1.1	3.67	3.67	7.77	
247.0	2.72	267.86	247.0	2.3	0.2	-2.3	2.82	2.77	13.17	
277.0	3.82	269.84	276.9	4.0	0.2	-4.0	3.69	3.67	6.60	
307.0	4.97	271.86	306.8	6.3	0.2	-6.3	3.87	3.83	6.73	
337.0	5.76	273.36	336.7	9.1	0.3	-9.1	2.67	2.63	5.00	
367.0	6.64	275.42	366.5	12.3	0.6	-12.3	3.03	2.93	6.87	
397.0	7.43	272.78	396.3	16.0	0.8	-16.0	2.84	2.63	-8.80	
427.0	8.26	272.76	426.0	20.1	1.0	-20.1	2.77	2.77	-0.07	
487.0	10.33	268.65	485.2	29.8	1.1	-29.8	3.62	3.45	-6.85	
517.0	11.29	268.17	514.7	35.4	1.0	-35.4	3.21	3.20	-1.60	
547.0	12.30	268.43	544.1	41.5	0.8	-41.5	3.37	3.37	0.87	
577.0	13.27	267.95	573.3	48.2	0.6	-48.2	3.25	3.23	-1.60	
607.0	14.46	268.52	602.4	55.3	0.3	-55.4	3.99	3.97	1.90	
637.0	15.56	268.65	631.4	63.1	0.2	-63.1	3.67	3.67	0.43	
667.0	16.48	268.35	660.2	71.4	-0.1	-71.4	3.08	3.07	-1.00	
697.0	17.31	269.36	689.0	80.1	-0.2	-80.1	2.93	2.77	3.37	
727.0	18.41	269.18	717.5	89.3	-0.4	-89.3	3.67	3.67	-0.60	
757.0	19.56	268.43	745.9	99.1	-0.6	-99.1	3.92	3.83	-2.50	
787.0	20.57	269.84	774.1	109.4	-0.7	-109.4	3.73	3.37	4.70	
817.0	21.43	270.40	802.1	120.1	-0.7	-120.1	2.94	2.87	1.87	
847.0	22.32	269.62	829.9	131.3	-0.7	-131.3	3.12	2.97	-2.60	
877.0	23.38	269.88	857.5	142.9	-0.7	-142.9	3.55	3.53	0.87	
907.0	24.00	271.22	885.0	155.0	-0.6	-155.0	2.74	2.07	4.47	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
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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)	
937.0	25.05	271.03	912.3	167.4	-0.4	-167.4	3.51	3.50	-0.63	
967.0	25.93	269.93	939.4	180.3	-0.3	-180.3	3.33	2.93	-3.67	
997.0	26.50	270.50	966.3	193.6	-0.2	-193.6	2.08	1.90	1.90	
1,027.0	27.77	269.71	993.0	207.3	-0.2	-207.3	4.40	4.23	-2.63	
1,057.0	28.87	269.80	1,019.4	221.5	-0.3	-221.5	3.67	3.67	0.30	
1,087.0	29.93	269.53	1,045.5	236.2	-0.3	-236.2	3.56	3.53	-0.90	
1,117.0	30.85	269.71	1,071.4	251.4	-0.4	-251.4	3.08	3.07	0.60	
1,147.0	31.95	269.44	1,097.0	267.0	-0.6	-267.0	3.70	3.67	-0.90	
1,177.0	32.94	269.77	1,122.3	283.1	-0.7	-283.1	3.35	3.30	1.10	
1,207.0	33.40	269.23	1,147.5	299.5	-0.8	-299.6	1.82	1.53	-1.80	
1,237.0	34.28	269.14	1,172.4	316.3	-1.0	-316.3	2.94	2.93	-0.30	
1,267.0	34.37	269.36	1,197.2	333.2	-1.3	-333.2	0.51	0.30	0.73	
1,297.0	34.50	269.66	1,221.9	350.1	-1.4	-350.1	0.71	0.43	1.00	
1,327.0	34.54	269.75	1,246.6	367.1	-1.5	-367.1	0.22	0.13	0.30	
1,357.0	34.45	269.18	1,271.3	384.1	-1.7	-384.1	1.12	-0.30	-1.90	
1,387.0	34.44	269.59	1,296.1	401.1	-1.8	-401.1	0.77	-0.03	1.37	
1,417.0	34.63	269.80	1,320.8	418.1	-1.9	-418.1	0.75	0.63	0.70	
1,447.0	34.58	269.75	1,345.5	435.1	-2.0	-435.1	0.19	-0.17	-0.17	
1,477.0	34.50	269.14	1,370.2	452.1	-2.2	-452.1	1.18	-0.27	-2.03	
1,507.0	34.67	269.05	1,394.9	469.2	-2.4	-469.2	0.59	0.57	-0.30	
1,537.0	34.89	269.27	1,419.5	486.3	-2.7	-486.3	0.84	0.73	0.73	
1,567.0	34.76	268.96	1,444.2	503.4	-3.0	-503.4	0.73	-0.43	-1.03	
1,597.0	35.38	269.01	1,468.7	520.7	-3.3	-520.6	2.07	2.07	0.17	
1,627.0	35.82	269.44	1,493.1	538.1	-3.5	-538.1	1.69	1.47	1.43	
1,657.0	35.93	269.42	1,517.4	555.7	-3.7	-555.7	0.37	0.37	-0.07	
1,687.0	35.10	268.66	1,541.8	573.1	-4.0	-573.1	3.13	-2.77	-2.53	
1,717.0	34.26	268.71	1,566.5	590.2	-4.3	-590.2	2.80	-2.80	0.17	

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1,747.0	34.32	268.43	1,591.3	607.1	-4.8	-607.1	0.56	0.20	-0.93	
1,777.0	34.72	268.74	1,616.0	624.1	-5.2	-624.1	1.46	1.33	1.03	
1,807.0	35.02	268.70	1,640.6	641.2	-5.6	-641.2	1.00	1.00	-0.13	
1,837.0	34.95	268.99	1,665.2	658.4	-5.9	-658.4	0.60	-0.23	0.97	
1,867.0	35.20	268.70	1,689.8	675.7	-6.3	-675.7	1.00	0.83	-0.97	
1,974.0	35.11	268.70	1,777.2	737.3	-7.7	-737.2	0.08	-0.08	0.00	
2,060.0	34.85	266.68	1,847.7	786.6	-9.6	-786.5	1.38	-0.30	-2.35	
2,145.0	34.98	267.78	1,917.4	835.2	-12.0	-835.1	0.76	0.15	1.29	
2,231.0	33.97	269.09	1,988.3	883.8	-13.3	-883.8	1.46	-1.17	1.52	
2,316.0	35.07	270.02	2,058.3	932.0	-13.7	-931.9	1.43	1.29	1.09	
2,401.0	34.38	269.41	2,128.2	980.4	-13.9	-980.3	0.91	-0.81	-0.72	
2,487.0	34.50	268.96	2,199.1	1,029.1	-14.6	-1,029.0	0.33	0.14	-0.52	
2,572.0	34.85	271.20	2,269.0	1,077.4	-14.6	-1,077.3	1.55	0.41	2.64	
2,658.0	33.97	271.20	2,340.0	1,126.0	-13.5	-1,125.9	1.02	-1.02	0.00	
2,743.0	34.85	270.54	2,410.1	1,174.0	-12.8	-1,173.9	1.12	1.04	-0.78	
2,829.0	33.83	270.21	2,481.1	1,222.5	-12.5	-1,222.4	1.21	-1.19	-0.38	
2,914.0	34.43	269.30	2,551.5	1,270.2	-12.7	-1,270.1	0.93	0.71	-1.07	
3,000.0	35.16	270.59	2,622.1	1,319.3	-12.7	-1,319.2	1.21	0.85	1.50	
3,085.0	34.33	270.98	2,691.9	1,367.7	-12.1	-1,367.6	1.01	-0.98	0.46	
3,170.0	34.89	270.68	2,761.9	1,416.0	-11.4	-1,415.9	0.69	0.66	-0.35	
3,256.0	34.63	271.20	2,832.6	1,465.0	-10.6	-1,464.9	0.46	-0.30	0.60	
3,341.0	33.93	271.91	2,902.8	1,512.8	-9.3	-1,512.8	0.95	-0.82	0.84	
3,427.0	34.07	270.84	2,974.1	1,560.9	-8.1	-1,560.9	0.71	0.16	-1.24	
3,512.0	35.46	270.58	3,043.9	1,609.3	-7.5	-1,609.3	1.64	1.64	-0.31	
3,597.0	34.06	269.49	3,113.7	1,657.8	-7.5	-1,657.8	1.80	-1.65	-1.28	
3,683.0	34.54	269.53	3,184.8	1,706.3	-7.9	-1,706.3	0.56	0.56	0.05	
3,768.0	32.65	269.14	3,255.6	1,753.3	-8.5	-1,753.3	2.24	-2.22	-0.46	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
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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)	
3,854.0	33.49	269.23	3,327.7	1,800.2	-9.1	-1,800.2	0.98	0.98	0.10	
3,939.0	34.54	269.01	3,398.1	1,847.8	-9.9	-1,847.8	1.24	1.24	-0.26	
4,025.0	35.11	268.48	3,468.7	1,896.9	-10.9	-1,896.9	0.75	0.66	-0.62	
4,110.0	34.01	266.94	3,538.7	1,945.1	-12.8	-1,945.0	1.65	-1.29	-1.81	
4,195.0	32.81	268.53	3,609.7	1,991.8	-14.7	-1,991.8	1.75	-1.41	1.87	
4,281.0	31.86	268.21	3,682.3	2,037.8	-16.0	-2,037.8	1.12	-1.10	-0.37	
4,366.0	30.28	267.69	3,755.1	2,081.7	-17.6	-2,081.6	1.89	-1.86	-0.61	
4,452.0	27.63	268.44	3,830.4	2,123.3	-19.0	-2,123.2	3.11	-3.08	0.87	
4,537.0	25.93	267.25	3,906.3	2,161.6	-20.4	-2,161.5	2.10	-2.00	-1.40	
4,622.0	23.95	269.93	3,983.3	2,197.4	-21.3	-2,197.3	2.68	-2.33	3.15	
4,708.0	21.98	273.00	4,062.5	2,230.9	-20.5	-2,230.8	2.68	-2.29	3.57	
4,793.0	21.40	271.91	4,141.5	2,262.3	-19.2	-2,262.2	0.83	-0.68	-1.28	
4,879.0	19.86	270.72	4,222.0	2,292.6	-18.5	-2,292.5	1.86	-1.79	-1.38	
4,964.0	19.25	270.32	4,302.1	2,321.0	-18.2	-2,321.0	0.73	-0.72	-0.47	
5,049.0	17.14	269.93	4,382.8	2,347.6	-18.1	-2,347.5	2.49	-2.48	-0.46	
5,135.0	14.63	267.73	4,465.5	2,371.1	-18.6	-2,371.0	3.00	-2.92	-2.56	
5,220.0	11.82	271.33	4,548.3	2,390.5	-18.8	-2,390.5	3.44	-3.31	4.24	
5,306.0	9.14	274.06	4,632.8	2,406.1	-18.1	-2,406.1	3.17	-3.12	3.17	
5,391.0	6.81	273.27	4,717.0	2,417.9	-17.4	-2,417.8	2.74	-2.74	-0.93	
5,476.0	3.12	272.04	4,801.7	2,425.2	-17.0	-2,425.2	4.34	-4.34	-1.45	
5,562.0	0.70	309.00	4,887.6	2,428.0	-16.6	-2,427.9	3.02	-2.81	42.98	
5,647.0	0.70	47.39	4,972.6	2,428.0	-15.9	-2,428.0	1.25	0.00	115.75	
5,733.0	0.62	53.23	5,058.6	2,427.2	-15.3	-2,427.2	0.12	-0.09	6.79	
5,818.0	0.31	191.00	5,143.6	2,426.9	-15.2	-2,426.9	1.03	-0.36	162.08	
5,904.0	0.97	209.55	5,229.6	2,427.3	-16.1	-2,427.3	0.79	0.77	21.57	
5,989.0	1.48	208.44	5,314.6	2,428.2	-17.7	-2,428.2	0.60	0.60	-1.31	
6,074.0	1.76	211.09	5,399.5	2,429.4	-19.7	-2,429.4	0.34	0.33	3.12	

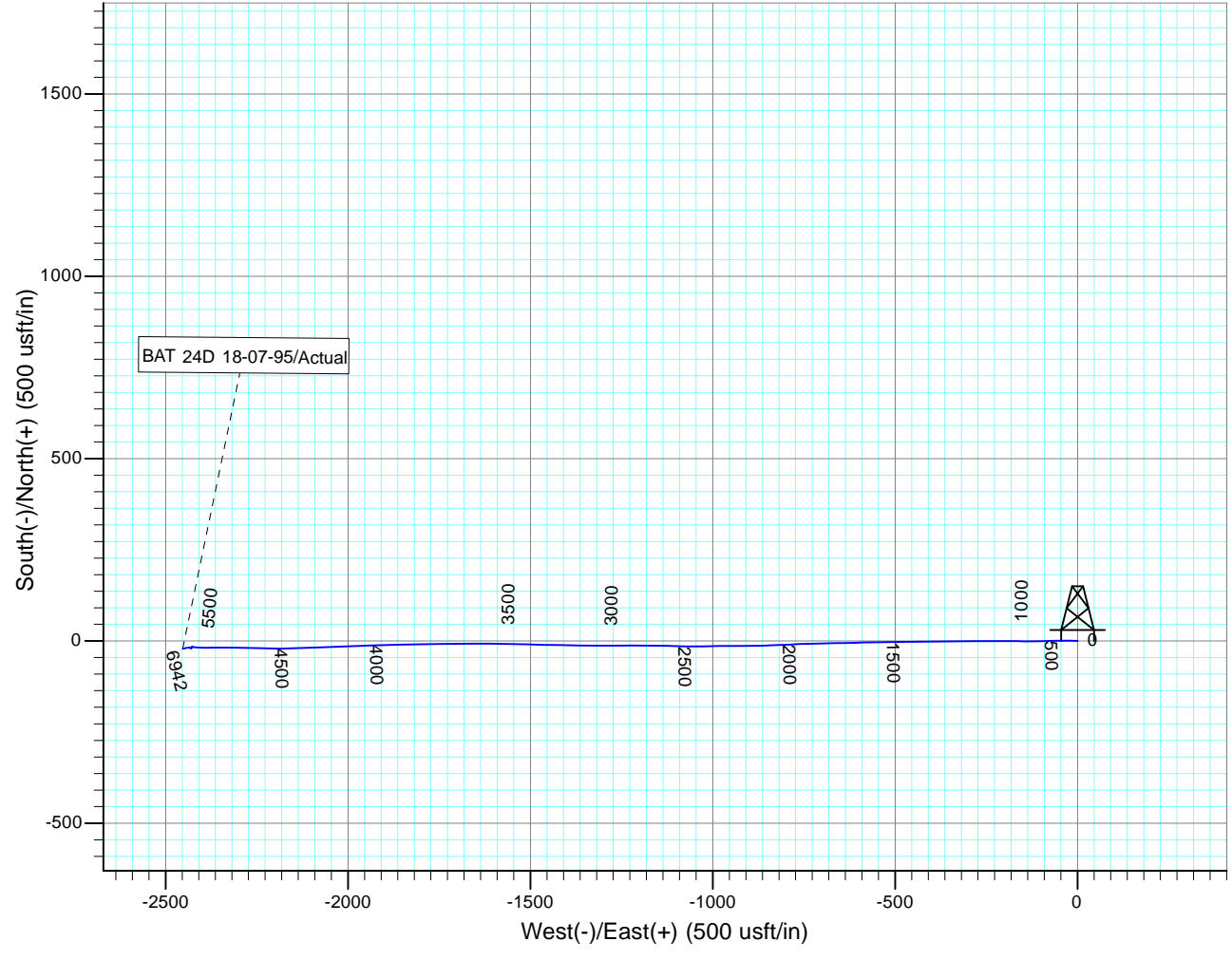
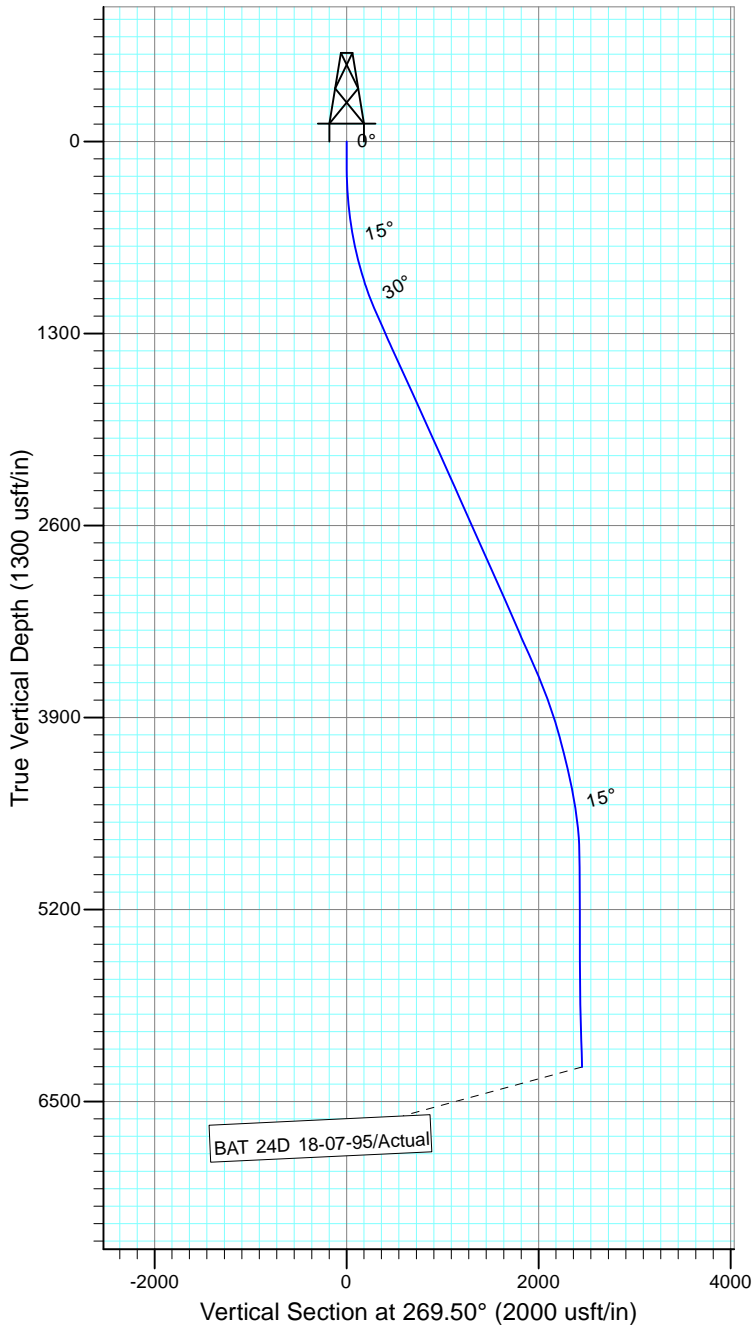
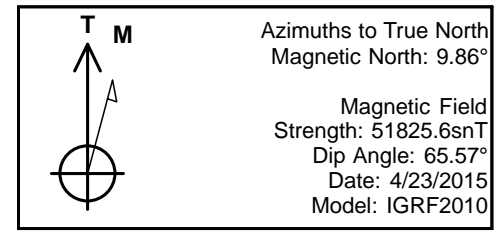
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6,160.0	0.79	254.20	5,485.5	2,430.7	-21.0	-2,430.6	1.51	-1.13	50.13	
6,245.0	1.41	333.82	5,570.5	2,431.7	-20.3	-2,431.6	1.75	0.73	93.67	
6,331.0	1.01	315.15	5,656.5	2,432.7	-18.8	-2,432.6	0.65	-0.47	-21.71	
6,416.0	0.92	288.96	5,741.5	2,433.9	-18.0	-2,433.8	0.52	-0.11	-30.81	
6,501.0	1.27	261.18	5,826.5	2,435.4	-17.9	-2,435.4	0.74	0.41	-32.68	
6,587.0	1.80	265.27	5,912.4	2,437.7	-18.2	-2,437.7	0.63	0.62	4.76	
6,672.0	2.15	259.82	5,997.4	2,440.6	-18.6	-2,440.6	0.47	0.41	-6.41	
6,758.0	2.72	256.00	6,083.3	2,444.2	-19.4	-2,444.1	0.69	0.66	-4.44	
6,843.0	2.81	256.44	6,168.2	2,448.2	-20.3	-2,448.1	0.11	0.11	0.52	
6,885.0	2.81	255.47	6,210.1	2,450.2	-20.8	-2,450.1	0.11	0.00	-2.31	
6,942.0	2.81	255.47	6,267.1	2,452.9	-21.5	-2,452.8	0.00	0.00	0.00	

Checked By: _____ Approved By: _____ Date: _____



Project: Rockies Region
 Site: Monument Ridge
 Well: BAT 24D 18-07-95
 Wellbore: Wellbore #1
 Design: Actual



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

Created By: *Matthew Linton* Date: 11:50, June 18 2015

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