



Ursa Operating Company, LLC

**Rockies Region
Monument Ridge
BAT 24A-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 24A-18-07-95
Project:	Rockies Region	TVD Reference:	BAT 24A-18-07-95 @ 5458.2usft (Capstar 321)
Site:	Monument Ridge	MD Reference:	BAT 24A-18-07-95 @ 5458.2usft (Capstar 321)
Well:	BAT 24A-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	Latitude:	39° 25' 53.266 N
From:	Lat/Long		Easting:	2,284,550.92 usft	Longitude:	108° 1' 59.725 W
Position Uncertainty:	0.0 usft		Slot Radius:	13-3/16 "	Grid Convergence:	-1.60 °

Well		BAT 24A-18-07-95, SHL: 39° 25' 52.154 -108° 1' 59.682				
Well Position	+N/-S	0.0 usft	Northing:	1,591,903.24 usft	Latitude:	39° 25' 52.153 N
	+E/-W	0.0 usft	Easting:	2,284,551.18 usft	Longitude:	108° 1' 59.682 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	289.58

Survey Program		Date	6/18/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
99.0	7,092.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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Well:	BAT 24A-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	
99.0	0.22	50.73	99.0	-0.1	0.1	0.1	0.22	0.22	0.00	
127.0	0.13	13.51	127.0	-0.1	0.2	0.2	0.50	-0.32	-132.93	
156.0	0.35	338.57	156.0	-0.1	0.3	0.2	0.88	0.76	-120.48	
187.0	0.92	308.34	187.0	0.2	0.5	-0.1	2.07	1.84	-97.52	
217.0	2.15	314.40	217.0	1.0	1.1	-0.6	4.13	4.10	20.20	
247.0	3.03	307.28	247.0	2.2	2.0	-1.7	3.12	2.93	-23.73	
277.0	4.13	309.04	276.9	4.0	3.1	-3.2	3.68	3.67	5.87	
307.0	5.10	307.41	306.8	6.3	4.6	-5.1	3.26	3.23	-5.43	
337.0	5.98	304.78	336.7	9.1	6.3	-7.4	3.05	2.93	-8.77	
367.0	6.58	302.64	366.5	12.3	8.1	-10.1	2.15	2.00	-7.13	
397.0	7.56	297.66	396.2	15.9	10.0	-13.3	3.85	3.27	-16.60	
427.0	8.48	295.46	426.0	20.0	11.8	-17.1	3.23	3.07	-7.33	
457.0	9.89	294.85	455.6	24.8	13.9	-21.4	4.71	4.70	-2.03	
487.0	10.85	294.67	485.1	30.2	16.1	-26.3	3.20	3.20	-0.60	
517.0	11.50	292.96	514.5	36.0	18.5	-31.6	2.43	2.17	-5.70	
547.0	12.52	286.50	543.9	42.2	20.6	-37.5	5.62	3.40	-21.53	
577.0	13.27	285.84	573.1	48.9	22.4	-43.9	2.55	2.50	-2.20	
607.0	14.19	292.56	602.2	56.0	24.8	-50.6	6.13	3.07	22.40	
637.0	14.94	293.97	631.3	63.5	27.8	-57.6	2.77	2.50	4.70	
667.0	15.47	284.47	660.2	71.4	30.3	-65.0	8.48	1.77	-31.67	
697.0	16.26	289.26	689.1	79.6	32.7	-72.8	5.10	2.63	15.97	
727.0	17.09	295.72	717.8	88.2	36.0	-80.7	6.77	2.77	21.53	
757.0	18.35	289.02	746.4	97.3	39.5	-89.2	7.98	4.20	-22.33	
787.0	19.38	291.55	774.8	107.0	42.8	-98.3	4.38	3.43	8.43	
817.0	20.43	294.19	803.0	117.1	46.8	-107.7	4.61	3.50	8.80	
847.0	21.36	292.47	831.0	127.8	51.1	-117.5	3.71	3.10	-5.73	

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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)	
877.0	22.41	292.69	858.9	139.0	55.3	-127.8	3.51	3.50	0.73	
907.0	23.16	289.31	886.5	150.6	59.5	-138.7	5.03	2.50	-11.27	
937.0	24.35	289.62	914.0	162.7	63.5	-150.1	3.99	3.97	1.03	
967.0	25.36	281.18	941.2	175.2	66.9	-162.2	12.28	3.37	-28.13	
997.0	26.50	288.65	968.2	188.3	70.2	-174.9	11.52	3.80	24.90	
1,027.0	27.51	290.14	994.9	201.9	74.8	-187.7	4.05	3.37	4.97	
1,057.0	28.21	288.17	1,021.5	215.9	79.4	-200.9	3.85	2.33	-6.57	
1,087.0	29.14	285.92	1,047.8	230.3	83.6	-214.7	4.75	3.10	-7.50	
1,117.0	30.15	287.24	1,073.9	245.1	87.8	-228.9	4.01	3.37	4.40	
1,147.0	31.11	287.55	1,099.7	260.4	92.4	-243.5	3.24	3.20	1.03	
1,177.0	31.84	286.55	1,125.3	276.0	97.0	-258.5	2.99	2.43	-3.33	
1,207.0	32.65	286.89	1,150.6	292.0	101.6	-273.8	2.77	2.70	1.13	
1,237.0	33.75	286.77	1,175.7	308.4	106.3	-289.5	3.67	3.67	-0.40	
1,267.0	35.11	287.02	1,200.5	325.4	111.3	-305.8	4.56	4.53	0.83	
1,297.0	36.12	286.63	1,224.9	342.8	116.3	-322.5	3.45	3.37	-1.30	
1,327.0	36.74	286.48	1,249.0	360.6	121.4	-339.6	2.09	2.07	-0.50	
1,357.0	36.96	287.21	1,273.0	378.6	126.6	-356.8	1.63	0.73	2.43	
1,387.0	36.87	286.98	1,297.0	396.6	131.9	-374.0	0.55	-0.30	-0.77	
1,417.0	36.92	287.97	1,321.0	414.6	137.3	-391.2	1.99	0.17	3.30	
1,447.0	36.83	288.97	1,345.0	432.6	143.0	-408.3	2.02	-0.30	3.33	
1,477.0	36.21	289.53	1,369.1	450.4	148.9	-425.1	2.35	-2.07	1.87	
1,507.0	35.67	290.27	1,393.4	468.0	154.9	-441.7	2.31	-1.80	2.47	
1,537.0	36.17	290.49	1,417.7	485.6	161.0	-458.2	1.72	1.67	0.73	
1,567.0	37.09	290.58	1,441.7	503.5	167.3	-474.9	3.07	3.07	0.30	
1,597.0	37.44	290.63	1,465.6	521.7	173.7	-491.9	1.17	1.17	0.17	
1,627.0	37.42	290.31	1,489.4	539.9	180.1	-509.0	0.65	-0.07	-1.07	
1,657.0	37.53	290.76	1,513.3	558.2	186.5	-526.1	0.98	0.37	1.50	

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Design:	Actual	Database:	EDM 5000.1 Single User Db

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1,687.0	37.64	290.64	1,537.0	576.5	192.9	-543.2	0.44	0.37	-0.40	
1,717.0	37.55	290.14	1,560.8	594.8	199.3	-560.4	1.06	-0.30	-1.67	
1,747.0	37.79	289.48	1,584.5	613.1	205.5	-577.6	1.56	0.80	-2.20	
1,777.0	38.17	290.14	1,608.2	631.6	211.8	-595.0	1.85	1.27	2.20	
1,807.0	38.01	289.88	1,631.8	650.1	218.1	-612.4	0.76	-0.53	-0.87	
1,837.0	38.36	290.71	1,655.4	668.6	224.6	-629.8	2.07	1.17	2.77	
1,932.0	38.10	290.36	1,730.0	727.4	245.2	-684.8	0.36	-0.27	-0.37	
2,017.0	37.92	289.84	1,797.0	779.7	263.2	-734.0	0.43	-0.21	-0.61	
2,103.0	37.66	288.28	1,864.9	832.4	280.4	-783.8	1.15	-0.30	-1.81	
2,188.0	37.10	287.59	1,932.5	884.0	296.3	-832.9	0.82	-0.66	-0.81	
2,273.0	36.23	286.68	2,000.7	934.7	311.2	-881.4	1.21	-1.02	-1.07	
2,359.0	36.17	288.91	2,070.1	985.5	326.7	-929.7	1.53	-0.07	2.59	
2,444.0	36.89	289.15	2,138.4	1,036.1	343.2	-977.6	0.86	0.85	0.28	
2,530.0	36.56	291.46	2,207.3	1,087.5	361.1	-1,025.8	1.65	-0.38	2.69	
2,615.0	36.21	291.07	2,275.7	1,137.9	379.4	-1,072.8	0.49	-0.41	-0.46	
2,701.0	37.13	292.38	2,344.7	1,189.2	398.4	-1,120.5	1.40	1.07	1.52	
2,786.0	36.91	291.94	2,412.6	1,240.3	417.7	-1,167.9	0.41	-0.26	-0.52	
2,871.0	36.78	292.87	2,480.6	1,291.2	437.1	-1,215.0	0.67	-0.15	1.09	
2,957.0	36.96	291.46	2,549.4	1,342.8	456.6	-1,262.8	1.01	0.21	-1.64	
3,042.0	36.78	290.23	2,617.4	1,393.8	474.7	-1,310.5	0.89	-0.21	-1.45	
3,128.0	37.18	290.41	2,686.1	1,445.5	492.7	-1,359.0	0.48	0.47	0.21	
3,213.0	36.74	290.23	2,754.0	1,496.6	510.4	-1,406.9	0.53	-0.52	-0.21	
3,299.0	36.47	290.36	2,823.1	1,547.9	528.2	-1,455.0	0.33	-0.31	0.15	
3,384.0	36.17	289.97	2,891.6	1,598.2	545.6	-1,502.3	0.45	-0.35	-0.46	
3,470.0	35.86	287.77	2,961.1	1,648.8	561.9	-1,550.1	1.55	-0.36	-2.56	
3,555.0	35.73	289.57	3,030.1	1,698.5	577.9	-1,597.2	1.25	-0.15	2.12	
3,641.0	34.91	290.57	3,100.2	1,748.2	594.9	-1,643.9	1.17	-0.95	1.16	

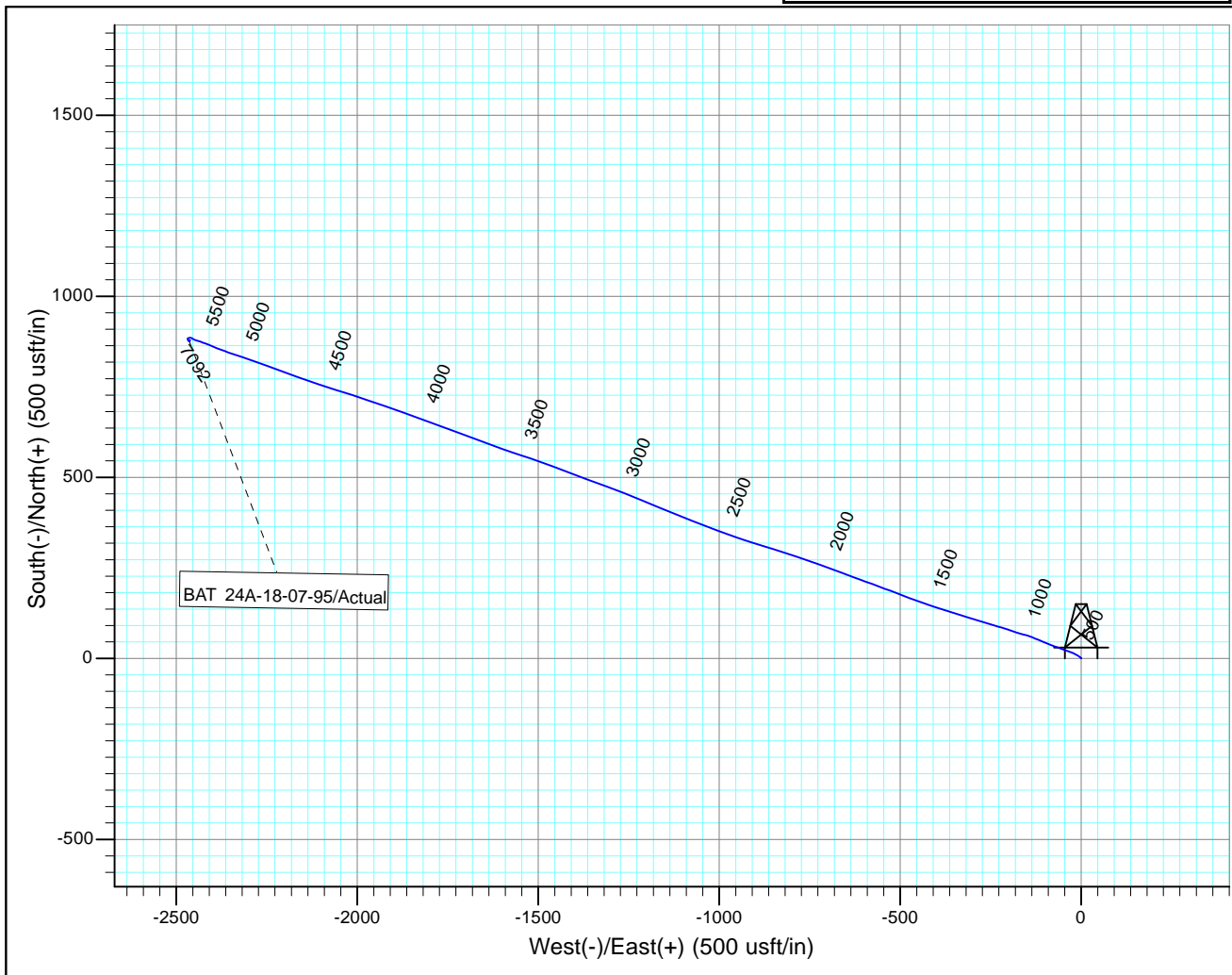
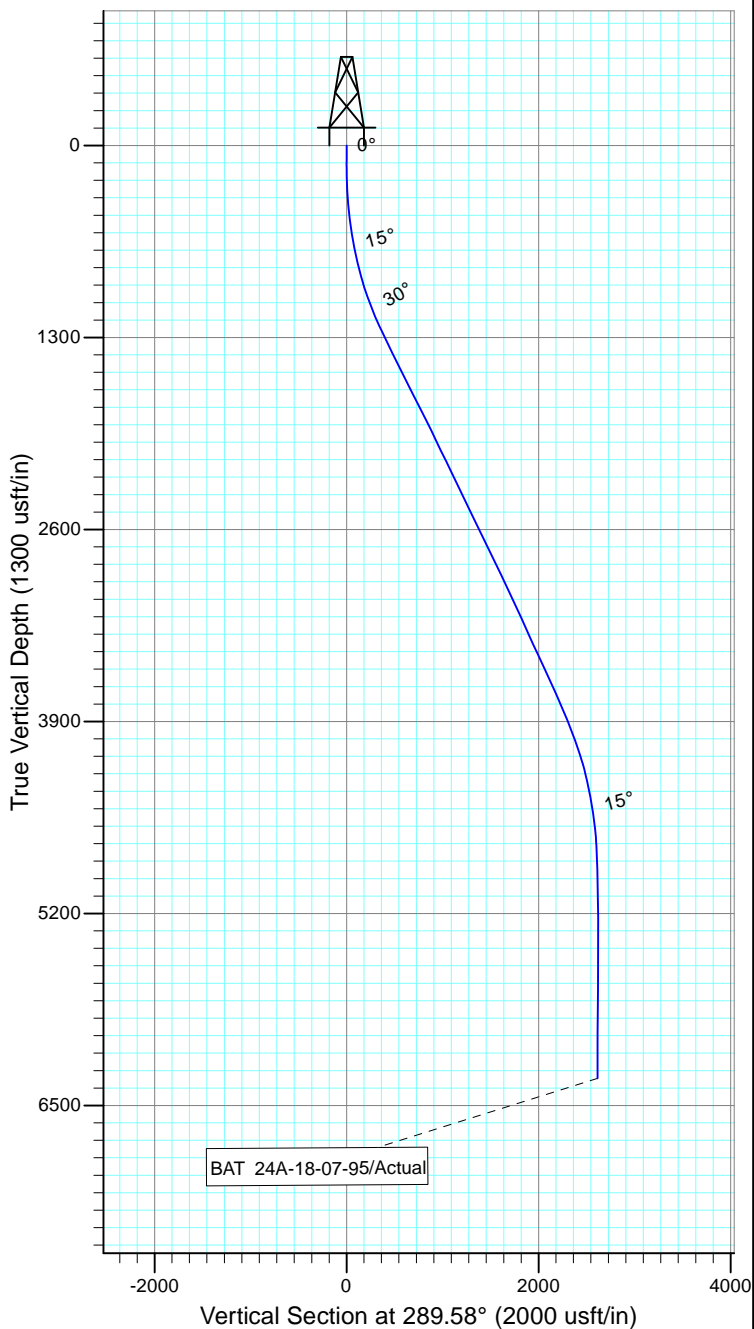
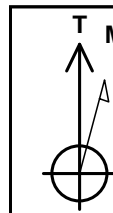
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Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	
3,726.0	35.70	290.20	3,169.6	1,797.3	612.0	-1,689.9	0.96	0.93	-0.44	
3,811.0	34.89	290.45	3,239.0	1,846.4	629.1	-1,736.0	0.97	-0.95	0.29	
3,897.0	34.63	289.66	3,309.6	1,895.5	645.9	-1,782.0	0.60	-0.30	-0.92	
3,982.0	36.21	290.63	3,378.9	1,944.7	662.9	-1,828.3	1.97	1.86	1.14	
4,068.0	35.68	289.70	3,448.5	1,995.2	680.3	-1,875.7	0.88	-0.62	-1.08	
4,153.0	36.21	289.09	3,517.3	2,045.1	696.8	-1,922.7	0.75	0.62	-0.72	
4,238.0	35.42	288.47	3,586.3	2,094.8	712.9	-1,969.8	1.02	-0.93	-0.73	
4,324.0	34.01	287.73	3,657.0	2,143.8	728.1	-2,016.4	1.71	-1.64	-0.86	
4,409.0	33.40	287.15	3,727.7	2,190.9	742.2	-2,061.4	0.81	-0.72	-0.68	
4,495.0	32.92	288.39	3,799.7	2,237.9	756.6	-2,106.2	0.97	-0.56	1.44	
4,580.0	32.96	289.84	3,871.0	2,284.1	771.7	-2,149.8	0.93	0.05	1.71	
4,666.0	31.95	290.14	3,943.6	2,330.3	787.5	-2,193.2	1.19	-1.17	0.35	
4,751.0	30.00	290.58	4,016.4	2,374.0	802.7	-2,234.2	2.31	-2.29	0.52	
4,836.0	26.85	289.48	4,091.2	2,414.5	816.6	-2,272.2	3.76	-3.71	-1.29	
4,922.0	24.13	287.77	4,168.8	2,451.5	828.4	-2,307.3	3.28	-3.16	-1.99	
5,007.0	20.96	289.22	4,247.3	2,484.1	838.7	-2,338.2	3.79	-3.73	1.71	
5,093.0	18.72	290.23	4,328.2	2,513.2	848.6	-2,365.7	2.63	-2.60	1.17	
5,178.0	16.57	291.86	4,409.2	2,539.0	857.8	-2,389.7	2.60	-2.53	1.92	
5,263.0	13.35	292.16	4,491.3	2,560.9	866.0	-2,410.1	3.79	-3.79	0.35	
5,349.0	10.59	289.48	4,575.4	2,578.7	872.4	-2,426.7	3.27	-3.21	-3.12	
5,434.0	7.91	287.81	4,659.3	2,592.4	876.8	-2,439.6	3.17	-3.15	-1.96	
5,519.0	5.14	288.74	4,743.7	2,602.1	879.8	-2,448.8	3.26	-3.26	1.09	
5,605.0	2.46	310.23	4,829.6	2,607.6	882.2	-2,453.9	3.48	-3.12	24.99	
5,690.0	1.85	299.46	4,914.5	2,610.7	884.1	-2,456.5	0.86	-0.72	-12.67	
5,775.0	1.89	287.42	4,999.4	2,613.4	885.2	-2,459.0	0.46	0.05	-14.16	
5,861.0	1.89	268.79	5,085.4	2,616.2	885.6	-2,461.8	0.71	0.00	-21.66	
5,946.0	1.76	253.36	5,170.4	2,618.6	885.2	-2,464.4	0.60	-0.15	-18.15	

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6,032.0	2.02	257.54	5,256.3	2,620.9	884.5	-2,467.2	0.34	0.30	4.86	
6,117.0	0.83	234.38	5,341.3	2,622.5	883.8	-2,469.1	1.53	-1.40	-27.25	
6,203.0	1.51	142.08	5,427.3	2,621.9	882.5	-2,468.9	2.04	0.79	-107.33	
6,288.0	1.32	161.08	5,512.2	2,620.4	880.7	-2,467.9	0.59	-0.22	22.35	
6,373.0	1.41	178.87	5,597.2	2,619.4	878.7	-2,467.6	0.51	0.11	20.93	
6,459.0	1.01	148.24	5,683.2	2,618.4	877.0	-2,467.2	0.87	-0.47	-35.62	
6,544.0	1.58	93.80	5,768.2	2,616.7	876.3	-2,465.6	1.52	0.67	-64.05	
6,630.0	1.54	50.51	5,854.2	2,615.0	877.0	-2,463.5	1.34	-0.05	-50.34	
6,715.0	0.57	47.57	5,939.1	2,614.2	878.0	-2,462.3	1.14	-1.14	-3.46	
6,801.0	0.22	245.67	6,025.1	2,614.1	878.2	-2,462.2	0.91	-0.41	-188.26	
6,886.0	0.48	222.38	6,110.1	2,614.4	877.9	-2,462.6	0.34	0.31	-27.40	
6,971.0	0.70	240.86	6,195.1	2,614.8	877.4	-2,463.3	0.34	0.26	21.74	
7,035.0	0.57	236.00	6,259.1	2,615.3	877.0	-2,463.9	0.22	-0.20	-7.59	
7,092.0	0.57	236.00	6,316.1	2,615.6	876.7	-2,464.3	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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Design: Actual (BAT 24A-18-07-95/Wellbore #1)

Created By: *Matthew Linton*

Date: 11:26, June 18 2015

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