



March 14, 2014

Daryl Reed, Hydrogeologist
Montana Department of Environmental Quality
1100 North Last Chance Gulch
P.O. Box 200901
Helena, MT 59620-0901

**RE: CONTRACT NO. 400022-TO-35, BUTTE MINE FLOODING—February 2014
MONTHLY REPORT, BMFOU CONSENT DECREE 02-35-BU-SEH**

Dear Daryl:

Enclosed is the February 2014 monthly report for Contract No. 400022-TO-35, Butte Mine Flooding CD Monitoring. This report is in partial fulfillment of the terms contained in the Butte Mine Flooding Operable Unit Consent Decree-02-35-BU-SEH. The enclosed report briefly discusses the major activities undertaken during the month and presents data from monitoring activities.

The Berkeley Pit water level was surveyed by Common Sense Engineering and Surveying on March 3, 2014 and was at an elevation of 5,315.51 feet.

Figures referenced in the report are contained on the enclosed compact disc in a PDF file format. If you have questions about the project, or the enclosed report, do not hesitate to contact me. Electronic copies of the report (text only) and water-level data have been sent to the involved parties, per Appendix C of the Consent Decree.

Sincerely,

Ted Duaime
Hydrogeologist

TD: pd
Enclosures

xc: Nikia Greene, EPA
Tad Dale, MR
Steve Walsh, MR
Cord Harris, Atlantic Richfield Co.
Lindy Hanson, Atlantic Richfield Co.
Lorri Birkenbuel, Atlantic Richfield Co.
Jenni Harris, Atlantic Richfield Co.
Dave McCarthy, Copper Env.
CTEC
Fritz Daily
Files

Karen LaClair, TREC
Jim Jonas, Copper Env.
Jon Sesso, BSB Courthouse
Tom Malloy, BSB Courthouse (elec. only)
Frank Shields, BSB Metro Sewer (elec. only)
Dan Powers, BSB Health Department
Justin Ringsack, BSB (elec. only)
Dave Schultz, BSB Public Works (elec. only)
Frank Ponikvar, Pit Watch (elec. only)



MBMG Butte Mine Flooding Monthly Report
BMFOU Consent Decree 02-35-BU-SEH
Remedial Action–Monitoring Program
Contract No. 400022-TO-35
February 2014

The Montana Bureau of Mines and Geology (MBMG) continued to perform monitoring and sampling activities for the Butte Mine Flooding Operable Unit, per the conditions of the 2002 Consent Decree as outlined in the Remedial Action Monitoring Program. Normal monthly activities include the monitoring of surface-water flows in the Horseshoe Bend (HSB) drainage, water-quality sampling of HSB, water-level monitoring, and report preparation. The Berkeley Pit in-fill model was updated with the date projections moved forward by 1.3 months. Currently, the date for the water-level at the Anselmo Mine to reach the Critical Water Level is May 2023. Montana Resources assisted with access improvements and repairs at several locations within the mine site. They also plowed the access roads to the Granite Mountain and Pilot Butte mines to aid monitoring.

Horseshoe Bend Monitoring

Data on surface-water flow were collected at two locations within the HSB drainage area, the HSB Falls seep and the total drainage flow just upstream of the water treatment plant. The last site is referred to as the HSB (weir) drainage. Throughout the month, periodic visits were made to these sites to check staff gauges and clean the iron buildup from the HSB Falls transducer. In an attempt to mitigate the iron fouling, the transducer is being changed out each month and brought back to the lab for complete cleaning. This appears to be producing more consistent data. A non-contact radar monitoring system was installed in October 2011 to address the iron problems at HSB weir. The system was recalibrated during October 2013 to ensure it was operating correctly.

The average flow rates for the month from the HSB sites are shown in Table 1, while a summary of average, maximum, minimum, and total flow for the HSB drainage site is attached at the end of the report (attachment 1). Graphs showing the daily average flow rates and cumulative flow rates are also attached (attachment 2). Flow rates have declined substantially at the HSB Falls site during the past year to levels well below those seen previously. Flows at other non-monitored locations appear to have increased.

Montana Resources continues to use a portion of the HSB water for the leach pads, which periodically reduces flow in this system. The first major diversion occurred on September 20, 2012; changes in water handling are noticeable on this month's graph (attachment 2).

Monitoring Site	Monthly Avg. Flow (gpm)	Change from Previous Month (gpm)
HSB Falls	71	NA
HSB Drainage	2,645	-573

Table 1. Monthly Average Flow Rates and Change from Previous Month for the Horseshoe Bend Sites.

East Camp Alluvial System Monitoring

The East Camp alluvial groundwater monitoring system consists of the LP- and MR97-series wells located within the active mine area, plus selected AMC, GS, AMW, and BMF05-series wells. All of the wells associated with the four latter groups are located outside and to the south of the active mine area, with the exception of wells AMC-5 and AMC-15, which are within the active mine area. Table 2

summarizes the water-level changes for these alluvial wells and shows the maximum water-level increase and decrease for each group. The large water-level variations seen recently in well LP-15 are the result of dewatering activities undertaken by Montana Resources to lower water levels in the alluvial system. A new graph showing responses to pumping in well LP-15, and water levels for wells LP-15 and LP-16 is attached. Current and previous pumping influences are shown on the graph. Pressure transducers have been installed in wells LP-12, LP-13, and LP-16 to better monitor water-level fluctuations related to dewatering activities.

Well Series (No. Wells)	No. Wells Water Level Increased	No. Wells Water Level Decreased	Max. Water-Level Increase	Max. Water-Level Decrease
LP (14)	11	3	0.67	-1.66
MR97 (4)	4	0	0.41	-
AMC (7)	1	5	0.03	-0.23
GS (6)	0	6	—	-0.23
AMW (2)	0	2	—	-0.21
BMF05 (4)	1	3	0.06	-0.25

Table 2. East Camp Alluvial Well Water-Level Changes.

Wells LP-7 and LP-8, which have been dry for a number of years, currently have water levels within the screened intervals, possibly a result of water-level increases from the expansion of MR leaching operations. Well AMC-10 has been dry since its installation.

Hydrographs for wells LP-1-LP-2, LP-4-LP-7-LP-8, LP-9-LP-10, and LP-14-LP-15-LP-16, showing the long-term trends in these wells, are attached. These wells are reflective of the general alluvial system within the active mine area, which shows greater variability, the result of historic and current mine operations and seasonal trends. Water levels in basin alluvial wells (wells outside the active mine area) decreased at a majority of sites this month in response to seasonal conditions.

A total of 20 alluvial wells within the East Camp system are equipped with pressure transducers to record water-level changes every hour. These detailed records provide information on the daily and seasonal changes that occur within the regional groundwater system. Copies of the monthly and long-term hydrographs for each of these sites are attached. Hydrographs based upon newly installed transducers for wells LP-12, LP-13, and LP-16 are also attached. Influences from dewatering activities are noticeable on these graphs.

The influence of irrigation wells near sites BMF05-3 and BMF05-4 during the summer and fall months is apparent on the hydrographs for these two wells. Figure 1 shows daily average water levels for wells LP-14, AMC-8, and BMF05-3. An increasing water-level trend is noticeable in wells LP-14 and AMC-8, while well BMF05-3 shows a more seasonal trend, with little net change in water level. Water levels have steadily declined in wells LP-14 and AMC-8 for the past year. Well LP-14 is located on the southern edge of the mine property, well AMC-8 is just south of LP-14 outside the mine area, and well BMF05-3 is farther south in the basin. Well BMF05-3 is outside the area of influence of current or historic mining activity, while the other two wells have shown periodic influences from these activities.

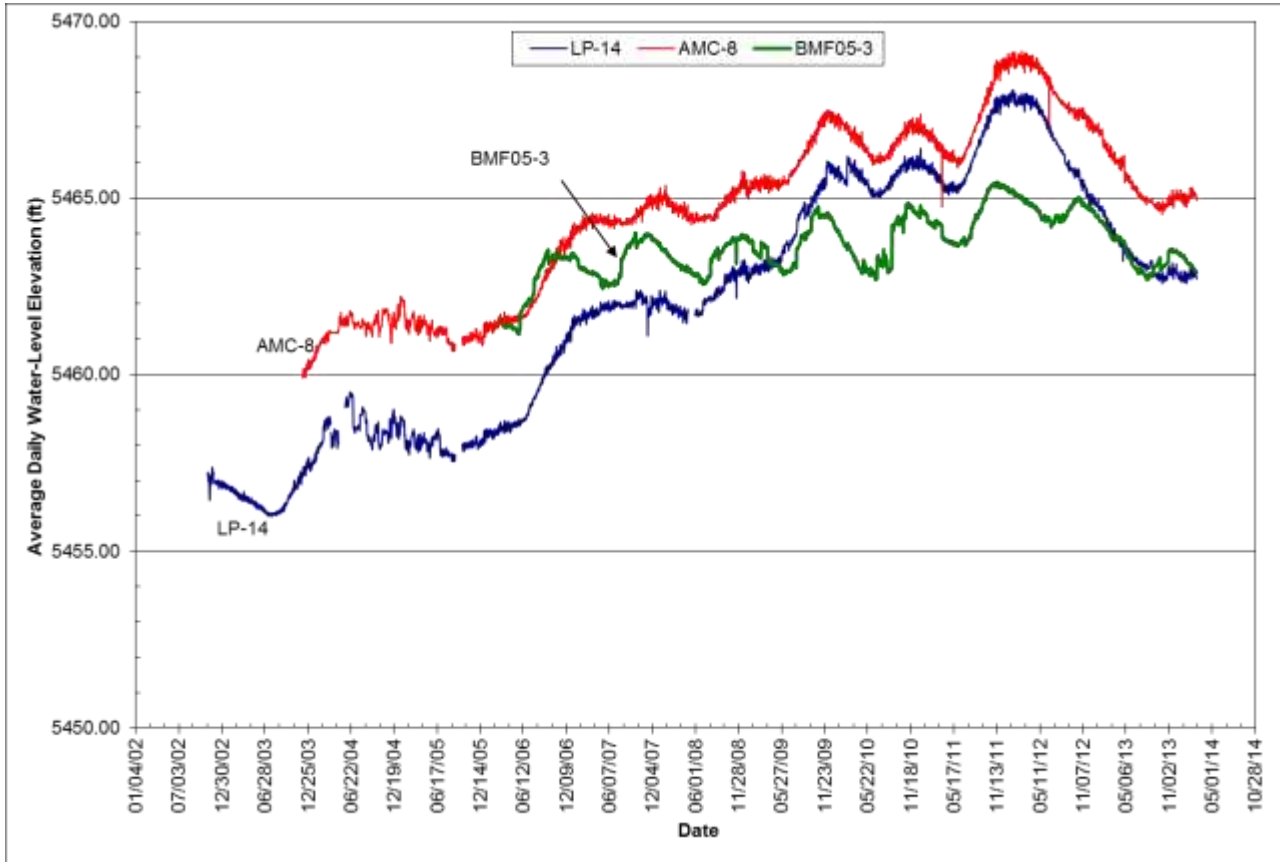


Figure 1. Hydrograph showing water-level elevations for alluvial wells LP-14, AMC-8, and BMF05-3.

The GS-series wells are three pairs of nested wells, a shallow and a deep well, within the alluvial aquifer. Figure 2 is a hydrograph showing the water levels for wells GS-41S and GS-41D. The water-level changes shown on this graph are similar to those for the other two groups of nested wells; rises in water levels from spring snowmelt and summer precipitation followed by water-level declines in the fall and winter.

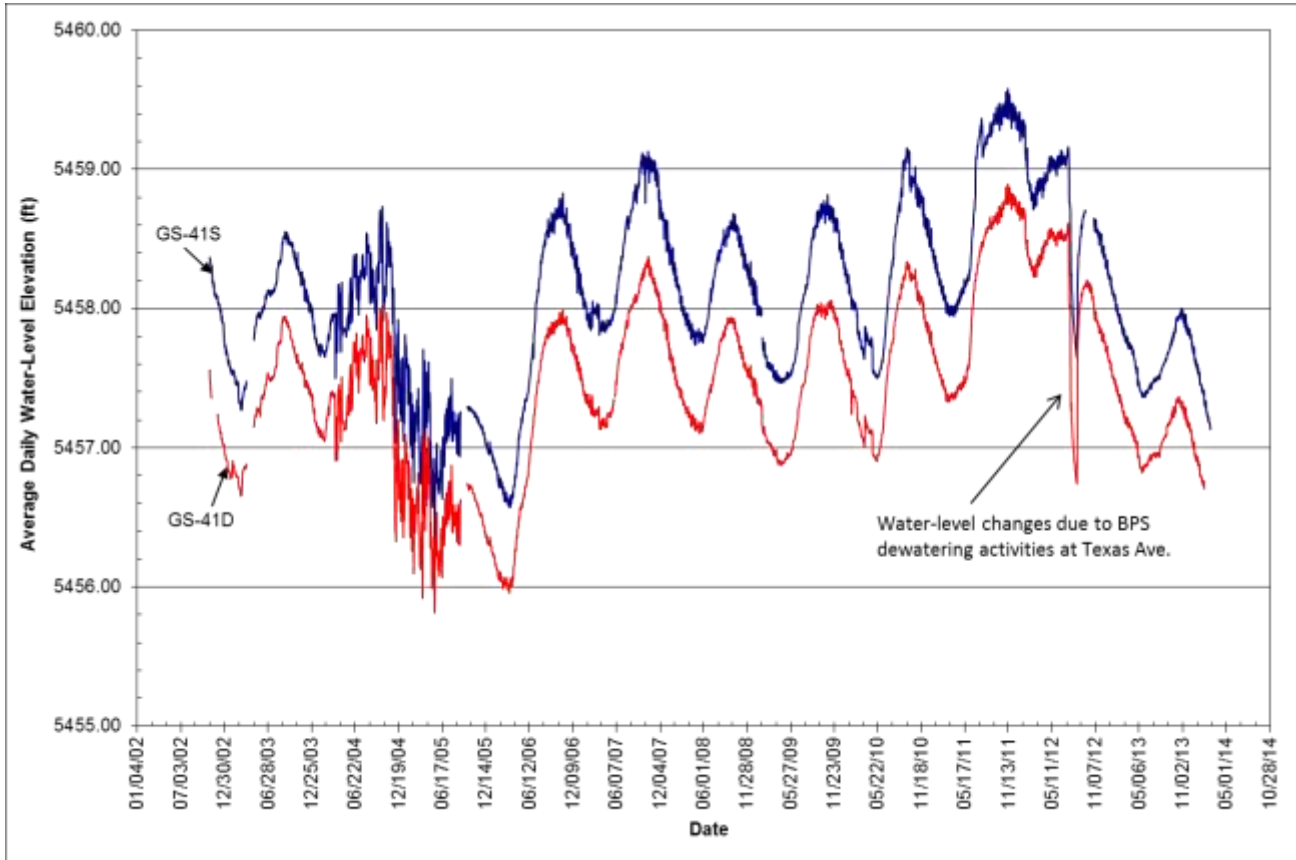


Figure 2. Hydrograph showing water-level elevations for alluvial wells GS-41S and GS-41D.

East Camp Mine and Bedrock System

The East Camp bedrock system consists of 6 underground mines, 13 bedrock wells within the active mine area, and 3 bedrock wells outside the active mine area. The latter wells are located at Hebgen, Parrot, and Belmont parks. The Berkeley Pit is also considered part of the East Camp bedrock monitoring system.

The 1994 Record of Decision (ROD) and 2002 Consent Decree (CD) established the maximum level that water in the East Camp bedrock system is allowed to rise to, and is based upon a number of compliance points within that system. The compliance points are bedrock wells A, C, D-1, D-2, G, J, and Belmont well #2, plus the following mine shafts: Anselmo, Steward, Pilot Butte, Granite Mountain, Lexington, Kelley, and Continental Pit, or its monitoring well located at the Sarsfield Shaft. Under the conditions contained in the CD, the water level in the bedrock system cannot exceed the Critical Water Level (CWL) of 5,410 ft elevation at any of the compliance points, ensuring that the water level in the Berkeley Pit remains the lowest point within the East Camp bedrock system. Table 3 contains the most recent monthly water levels for selected compliance points and the Berkeley Pit, and the depth below the CWL.

Compliance Point	Monthly Water Level (ft)	Depth Below CWL (ft)
Anselmo Mine	5,337.59	72.41
Granite Mountain Mine	5,329.49	80.51
Pilot Butte Mine	5,339.79	70.21
Kelley Mine	5,326.32	83.68
Belmont Well #2	5,327.33	82.67
Well A	5,329.33	80.67
Well C	5,325.30	84.70
Well G	5,335.51	74.49
Berkeley Pit	5,315.51	94.49

Table 3. Selected Compliance Points Monthly Water-Level Elevation and Depth Below Critical Water Level (CWL).

For the past several years, the compliance point with the highest water level has varied between the Anselmo Mine, the Pilot Butte Mine, and bedrock well G. This would be expected, as these sites are the farthest monitoring points on the west, north, and east sides of the East Camp bedrock system. Currently, the water level is highest in the Pilot Butte Mine, with the water level 70.21 ft below the CWL.

Copies of water-level data and graphs from selected sites are attached. Table 4 summarizes the water-level changes for the past month within the East Camp bedrock system, along with the maximum changes within each group of monitoring sites.

Monitoring Sites (No. Mines/Wells)	No. Sites Water Level Increased	No. Sites Water Level Decreased	Max. Water-Level Increase	Max. Water-Level Decrease
Mine Shafts (6)	6	0	0.60	—
Bedrock Wells within Active Mine Area (13)**	11	1	0.63	-0.03
Bedrock Wells outside Active Mine Area (3)	0	3	—	-4.90

**Includes Belmont Well #2; well DDH-1 plugged, no water level obtained.

Table 4. East Camp Bedrock Water-Level Changes.

Within the East Camp bedrock system, a total of 10 wells are equipped with pressure transducers that record hourly water-level changes. Copies of the monthly and long-term hydrographs for each site are included with this report. Figure 3 is a hydrograph showing a comparison of daily average water-level elevations for wells A, C, and G. Water levels continue an upward trend, reflecting groundwater recovery from historic dewatering associated with past mining practices.

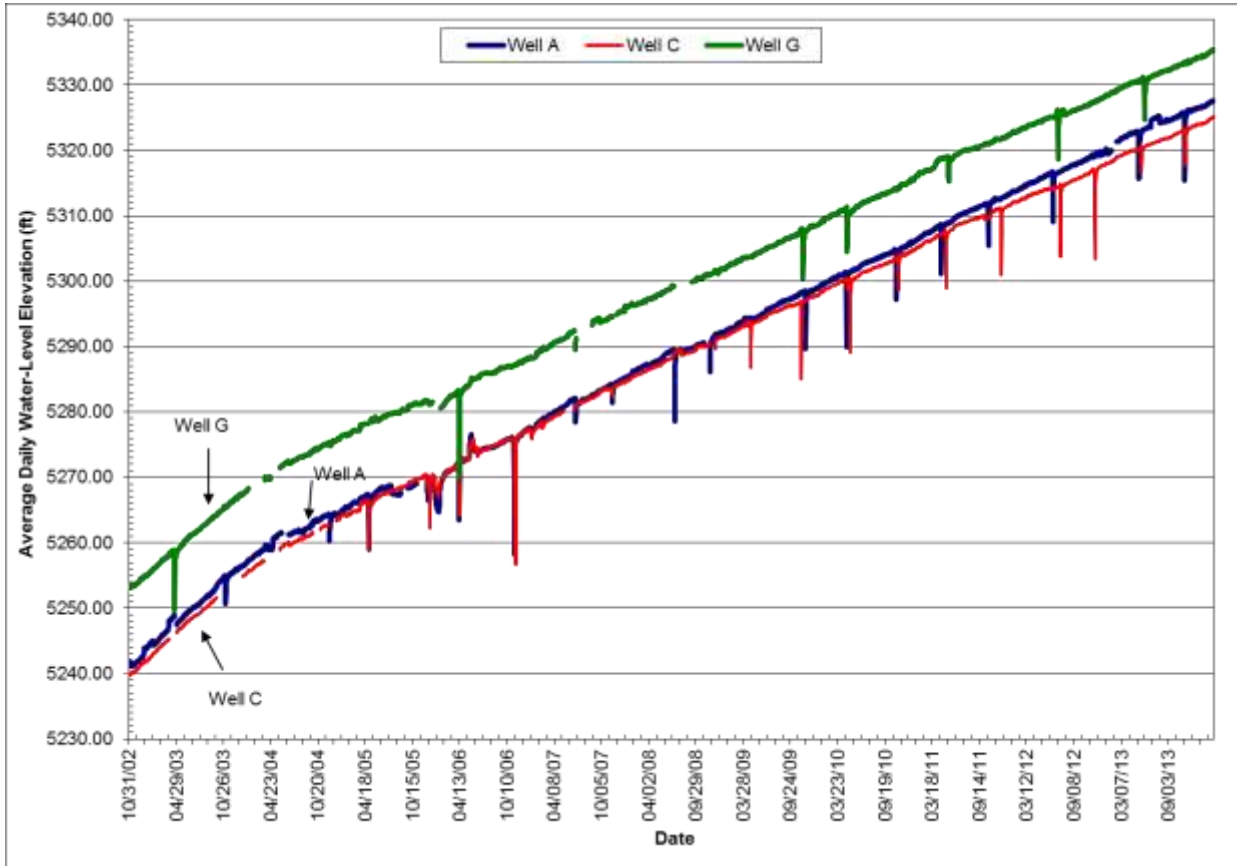


Figure 3. Hydrograph showing water-level elevations for bedrock wells A, C, and G.

West Camp System

The West Camp monitoring system consists of three underground mines: Emma, Ophir, Travona, and six monitoring wells. Table 5 summarizes the water-level changes for the past month within the West Camp bedrock system, along with the maximum changes within each group of monitoring sites.

Monitoring Sites (No. Mines/Wells)	No. Sites Water Level Increased	No. Sites Water Level Decreased	Max. Water-Level Increase	Max. Water-Level Decrease
Mine Shafts (3)	0	3	—	-3.01
Bedrock Wells (6)	0	6	—	-3.15

Table 5. West Camp Bedrock Water-Level Changes.

The ROD and CD established a CWL for the West Camp bedrock system of 5,435 ft, to be maintained at well BMF96-1D; the current water level is about 5 ft below the West Camp’s compliance point. Water levels in the West Camp underground mine system are controlled by pumping groundwater

from well WCP-1, which is completed in the Travona Mine 800-level workings (approx. 500 ft below ground surface). Over 19.3 acre ft of water was pumped this past month.

Three monitoring wells in the West Camp are equipped with pressure transducers that record water-level changes every hour: BMF96-1D, BMF96-1S, and BMF96-4. Wells BMF96-1D and BMF96-1S are located near each other, with well BMF96-1D completed in the same mine workings as WCP-1, while well BMF96-1S is completed in the shallow, weathered bedrock. Figure 4 is a hydrograph showing water levels for these two sites for March 2007 through February 2014. The water-level variations seen in well BMF96-1D, and several of the mine shafts since mid-2007, are the direct result of pumping rate changes relating to Butte Priority Soils (BPS) tasks (Parrot Tailings aquifer test, Metro Storm Drain isolation tests, and BTL upgrades).

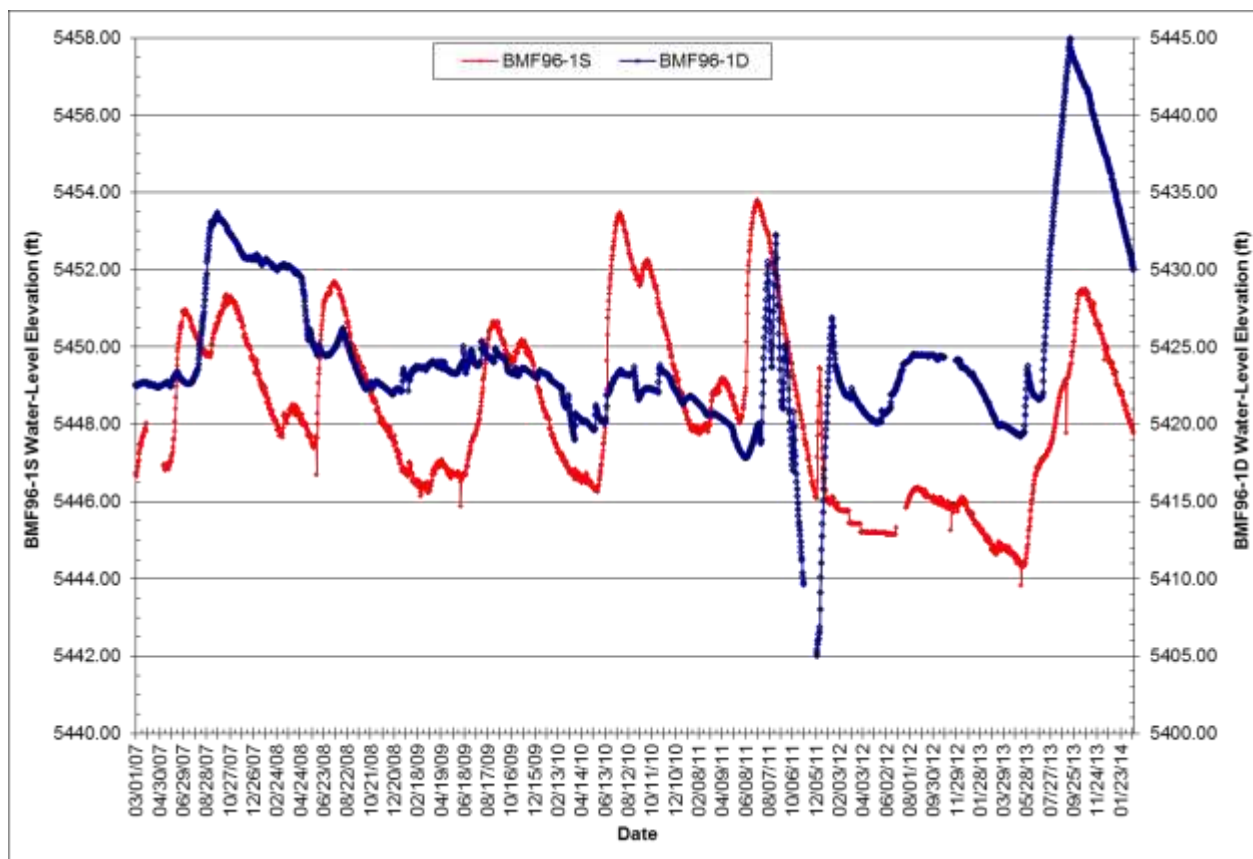


Figure 4. Hydrograph showing water-level elevations for West Camp wells BMF96-1S and BMF96-1D.

Additional water-level monitoring was undertaken to monitor water-level changes within the mine workings and surrounding alluvial/weathered bedrock systems as a result of ongoing BPS activities. Transducers were installed in selected mine shafts and monitoring wells to document water-level changes resulting from those activities. Pumping in the West Camp system was temporarily suspended on July 19, 2011, resulting in water-level increases throughout the mine system. Pumping started and stopped throughout the following months as required for construction activities. Figure 5 shows water levels for the Ophir Mine, Travona Mine, and bedrock well BMF96-1D for June 2011–February 2014.

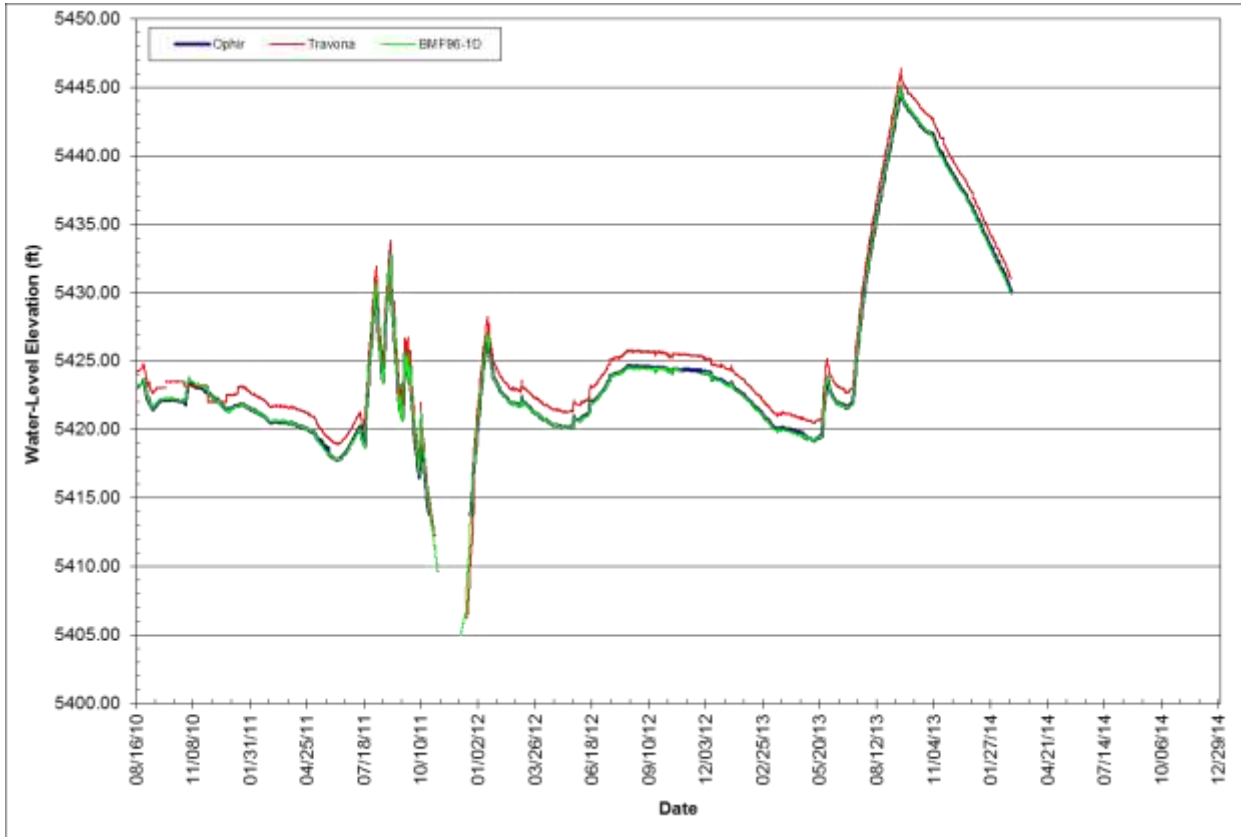


Figure 5. Water-level comparisons for the West Camp underground system.

Pumping was temporarily suspended in the West Camp on July 8, 2013 to allow water levels to rise as part of a review/evaluation of the West Camp CWL. More frequent water-level monitoring was implemented to ensure water levels in the shallow alluvial system did not increase in relation to the rising water in the mine system. Water levels had no appreciable rise in the shallow system as a result of the test (fig. 6). Water-level increases in the shallow alluvial system were related to infiltration from late summer precipitation events. Groundwater pumping was re-started on September 17, 2013.



Figure 6. Water-level comparisons for shallow alluvial West Camp groundwater monitoring sites.

Outer Camp Systems

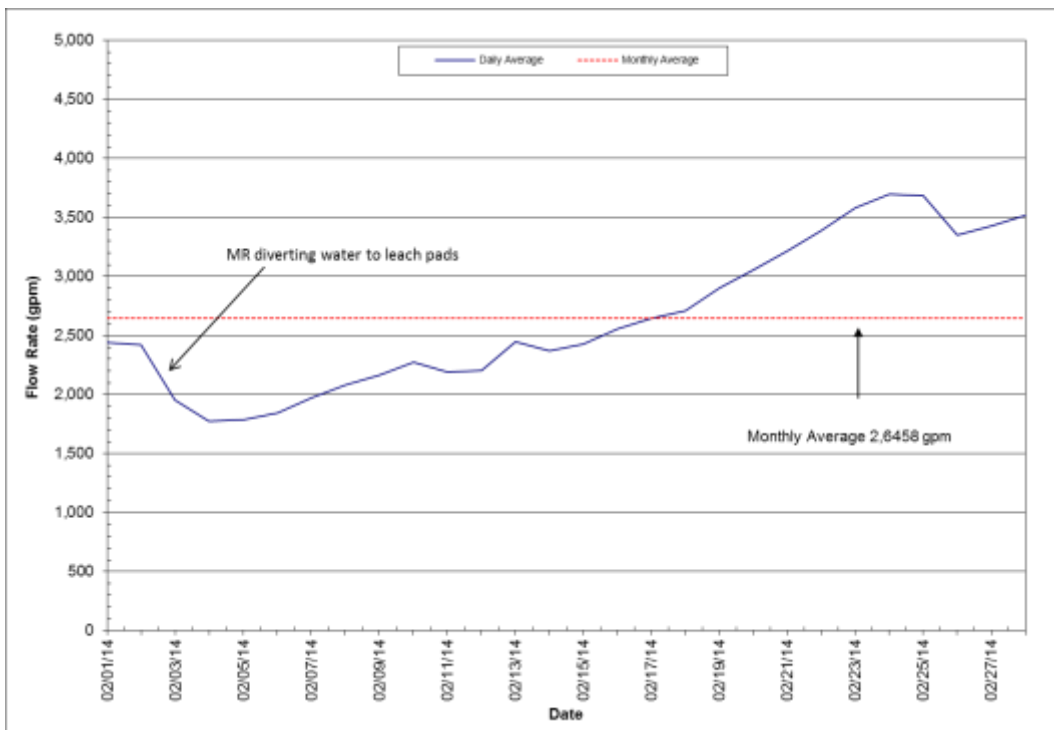
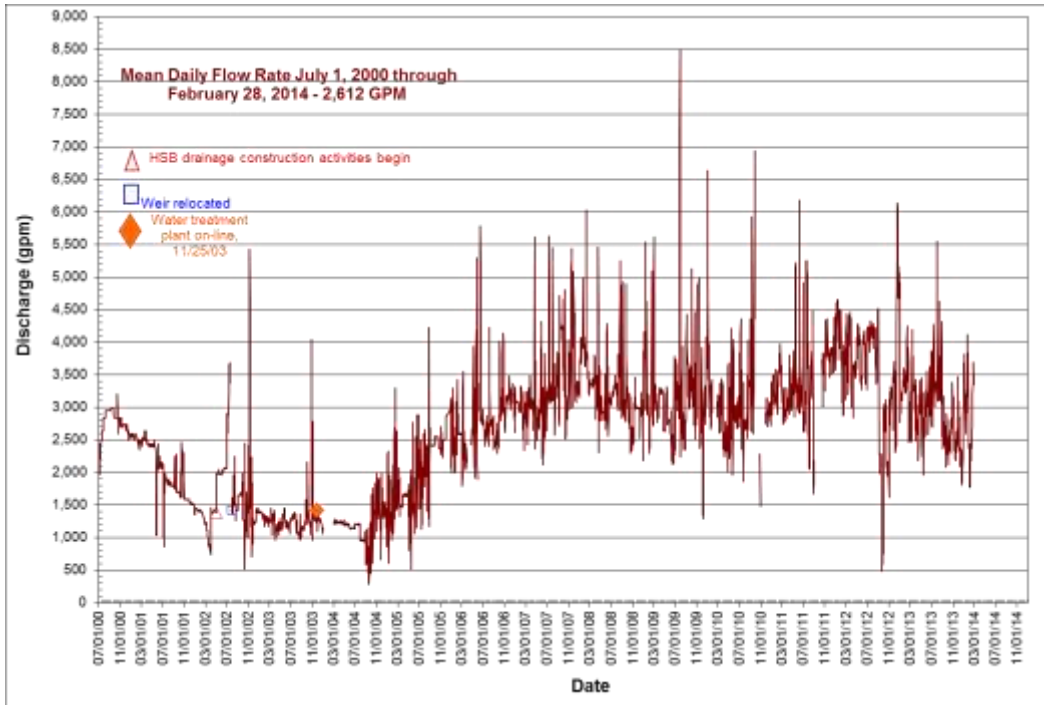
The Outer Camp monitoring system consists of two underground mines and a bedrock well in the vicinity of each mine. Water levels decreased at three of the four sites during February. The Outer Camp has no CWL or compliance monitoring points. Water levels in this area are assumed to be at or near pre-mining levels. Continuous water levels are monitored in the Tech well by a water-level transducer.

In addition to the four groundwater-monitoring sites, a seep (spring), referred to as the Green Lake Seep, is monitored for the quantity of water flowing from it. The flow from this site was measured at 12 gpm.

Water-Quality Sampling

The monthly water sample was collected from the HSB drainage. Copies of results through January 2014 are attached.

Attachment 2- Horseshoe Bend Drainage Flow Graphs



February 2014 Horseshoe Bend Flow Rate.

**Montana Bureau of Mines and Geology
Horseshoe Bend Drainage
Water Quality Data**

03/12/14
Horseshoe Bend Drainage
M#:125744

Collector/ Lab Analyzer	PHYSICAL PARAMETERS							DISSOLVED CONCENTRATION										DISSOLVED CONCENTRATION							
	FIELD			LAB																					
	Date (mm/dd/yy)	Time (HRS)	Discharge (gpm)	pH	SC (uMHOS)	Temp (C)	Eh (MV)	pH	SC (uMHOS)	Hardness (mg/l)	Alkalinity (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Fe (mg/l)	Mn (mg/l)	SiO ₂ (mg/l)	HCO ₃ (mg/l)	CO ₃ (mg/l)	Cl (mg/l)	SO ₄ (mg/l)	NO ₂ -N (mg/l)	NO ₃ -N (mg/l)	F (mg/l)
MBMG	07/19/11	15:22	5,428	3.74	6,880	19.1	607	2.27	7,430	2,738	0.0	420	410	76	7.8	473	132	84.1	0.0	0.0	14.2	9,421	<0.25	<0.25	24.48
MBMG	08/15/11	15:12	5,573	3.04	6,820	18.9	596	2.14	6,820	2,838	0.0	445	419	78	7.8	504	130	79.7	0.0	0.0	14.1	6,619	<0.05	<0.05	26.18
MBMG	09/15/11	15:42	--	3.23	6,280	15.4	600	3.13	6,230	2,592	0.0	440	363	68	9.3	410	121	74.5	0.0	0.0	14.0	5,855	<0.05	<0.05	22.40
MBMG	10/17/11	14:38	4,037	3.08	6,125	10.4	596	3.02	5,930	2,508	0.0	402	366	71	8.8	418	119	74.8	0.0	0.0	13.7	5,726	<0.05	<0.05	21.40
MBMG	11/16/11	14:40	3,684	3.14	6,070	5.7	582	3.14	5,350	2,525	0.0	445	344	69	11.6	366	131	81.8	0.0	0.0	14.0	5,624	<0.02	0.28	20.77
MBMG	12/20/11	15:20	4,158	2.90	5,860	5.7	601	3.00	5,530	2,505	0.0	436	344	84	7.6	338	125	74.6	0.0	0.0	13.6	5,310	<0.02	0.28	18.20
MBMG	01/19/12	14:58	5,575	2.99	5,845	7.5	583	3.00	5,710	2,460	0.0	426	339	74	4.3	414	119	75.3	0.0	0.0	13.3	5,406	<0.02	0.31	19.04
MBMG	02/17/12	15:31	3,293	3.12	5,550	7.7	593	3.05	5,520	2,370	0.0	436	311	78	9.5	637	123	73.1	0.0	0.0	14.5	5,057	<0.05	<0.05	17.04
MBMG	03/15/12	11:34	6,350	3.05	5,965	8.9	580	2.79	5,690	2,546	0.0	414	367	88	9.3	937	126	77.8	0.0	0.0	13.8	5,518	<0.05	0.33	20.26
MBMG	04/16/12	12:30	3,570	3.55	5,680	11.4	542	2.89	5,820	2,472	0.0	442	332	78	9.7	349	124	74.1	0.0	0.0	13.4	5,251	<0.05	0.32	18.52
MBMG	05/16/12	15:15	4,160					3.17	6,630	2,999	0.0	435	465	66	7.4	526	156	79.4	0.0	0.0	13.5	7,529	<0.05	0.32	28.35
MBMG	06/25/12	15:25	5,870	3.59	6,900	19.5	555	3.24	6,590	2,806	0.0	431	420	70	7.2	479	142	80.4	0.0	0.0	13.5	7,239	<0.05	<0.05	25.93
Total Recoverable	06/25/12	15:25	5,870	3.59	6,900	19.5	555	3.24	6,590	2,844		426	432	73	6.6	520	140								
MBMG	07/24/12	12:10	3,975	3.29	6,345	16.3	596	2.98	6,110	2,591	0.0	421	374	76	8.3	404	128	78.2	0.0	0.0	13.1	6,380	<0.05	0.32	21.72
MBMG	08/24/12	15:20	5,721	3.58	5,940	15.5	543	2.81	5,960	2,506	0.0	436	344	85	10.2	370	118	75.5	0.0	0.0	12.9	5,707	<0.05	0.32	18.07
MBMG	09/24/12	15:45	885	3.29	7,140	15.3	593	2.53	6,320	3,094	0.0	435	488	73	9.3	398	136	77.6	0.0	0.0	13.6	8,000	<0.05	<0.05	28.63
MBMG	10/17/12	15:50	2,200	3.06	8,470	7.9	597	2.36	7,140	3,701	0.0	419	645	70	6.9	628	157	82.2	0.0	0.0	14.3	10,903	<0.05	0.37	39.65
MBMG	11/16/12	14:53	3,296	3.22	8,485	9.5	550	2.94	8,070	3,695	0.0	413	647	68	5.1	659	156	85.6	0.0	0.0	13.5	10,626	<0.05	<0.05	37.21
MBMG	12/04/12	12:00	3,515	3.25	9,010	5.1	377	2.98	8,540	3,711	0.0	424	644	62	4.4	641	160	89.5	0.0	0.0	17.4	13,453	<0.05	<0.05	48.61
Total Recoverable	12/04/12	12:00	3,515	3.25	9,010	5.1	377			3,763		427	655	62	4.7	741	159								
MBMG	01/16/13	14:30	3,400	3.35	7,400	7.4	537	3.08	7,350	3,044	0.0	421	484	68	6.3	513	138	83.9	0.0	0.0	14.2	9,817	<0.05	<0.05	34.47
MBMG	02/14/13	14:40	3,515	3.49	7,890	9.1	548	3.23	7,690	3,224	0.0	402	540	67	6.7	583	149	85.1	0.0	0.0	14.6	10,709	<0.05	<0.05	36.67
MBMG	03/18/13	14:50	3,295	3.24	7,160	6.8	578	2.28	8,160	2,808	0.0	410	433	68	7.1	386	115	76.1	0.0	0.0	14.7	9,496	<0.05	<0.05	32.62
MBMG	04/23/13	14:55	3,035	3.22	7,190	10.1	577	2.31	9,910	3,141	0.0	407	516	77	8.1	477	146	73.7	0.0	0.0	14.5	9,847	<0.05	<0.05	35.54
MBMG	05/16/13	13:50	2,158	3.62	7,565	16.4	593	2.38	9,540	3,049	0.0	395	501	71	9.3	502	144	78.7	0.0	0.0	15.4	11,203	0.30	<0.05	38.28
MBMG	06/19/13	14:20	2,885	3.15	7,085	16.9	599	2.48	7,830	2,959	0.0	416	467	61	8.3	412	113	77.6	0.0	0.0	14.1	9,471	<0.05	<0.05	32.49
MBMG	07/16/13	13:25	2,690	3.23	7,375	18.3	577	2.27	9,500	3,214	0.0	439	515	74	8.0	486	125	78.0	0.0	0.0	13.9	9,190	<0.05	0.27	33.24
MBMG	08/29/13	10:30	3,100	3.59	7,310	15.7	573	2.45	7,820	2,943	0.0	432	453	75	9.5	471	126	80.1	0.0	0.0	14.0	6,609	<0.05	0.27	30.84
MBMG	09/24/13	8:55	2,505	3.47	6,880	11.6	599	2.54	8,070	2,751	0.0	452	394	74	10.4	413	128	74.8	0.0	0.0	14.6	6,313	<0.05	0.27	28.98
MBMG	10/14/13	11:40	2,640	3.37	6,900	10.5	582	2.41	8,780	2,873	0.0	430	437	72	8.8	386	135	82.3	0.0	0.0	15.5	6,319	<0.05	0.33	28.72
MBMG	11/15/13	14:30	2,285	3.62	6,350	8.2	554	2.60	8,030	2,691	0.0	431	392	78	9.3	345	108	74.3	0.0	0.0	15.6	7,691	<0.05	0.31	20.57
MBMG	12/15/13	15:54	2,691		6,820	8.2	551	2.58	8,570	2,759	0.0	400	428	80	8.5	380	108	77.4	0.0	0.0	13.5	6,114	0.40	0.34	26.35
MBMG	01/21/14	15:35	2,885	3.18	7,260	9.8	571	2.49	8,830	3,088	0.0	427	492	67	7.7	432	120	79.9	0.0	0.0	13.7	6,801	<0.05	<0.05	29.74
Mean Value			2,664	3.24	5,037	11.5	539	3.00	5,361	2,423	0	447	316	79	9.5	297	118	76	0.0	0.0	16.12	5,364	2.6	0.3	14.53
Maximum Value			6,350	5.65	9,010	22.8	821	3.96	9,910	3,763	15	555	655	100	13.0	937	160	94	0.0	0.0	33.60	13,453	9.8	0.5	48.61
Minimum Value			820	1.52	1,523	2.2	286	2.14	3,920	1,882	0	395	106	61	1.5	97	77	56	0.0	0.0	8.69	3,010	0.3	0.3	1.24
Number Readings			174	170	174	173	167	172	171	177	175	178	178	178	177	178	178	170	170	170	106	170	10	20	163

nd/na - not measured or analyzed

**Montana Bureau of Mines and Geology
Horseshoe Bend Drainage
Water Quality Data**

03/12/14
Horseshoe Bend Drainage
M#:125744

DISSOLVED CONCENTRATION

Collector/ Lab Analyzer	Date (mm/dd/yy)	Al (ug/l)	Ag (ug/l)	As (ug/l)	B (ug/l)	Be (ug/l)	Cd (ug/l)	Cr (ug/l)	Co (ug/l)	Cu (ug/l)	Li (ug/l)	Mo (ug/l)	Ni (ug/l)	Pb (ug/l)	Se (ug/l)	Sr (ug/l)	Ti (ug/l)	Tl (ug/l)	U (ug/l)	V (ug/l)	Zn (ug/l)	Zr (ug/l)
MBMG	07/19/11	350,645	<5.0	<5.0	<20.0	32.5	1,408	54.3	1,062	49,251	148.1	<5.0	786	2.4	13.55	895	144.07	<5.0	447	<5.0	318,245	<5.0
MBMG	08/15/11	347,763	<1.0	<1.0	28.8	32.3	1,213	25.0	1,028	25,893	119.1	<1.0	756	1.2	8.55	823	59.54	<1.0	473	<1.0	318,662	<1.0
MBMG	09/15/11	274,969	<1.0	2.9	33.6	28.2	1,057	20.1	906	20,375	100.0	<1.0	627	0.9	11.98	883	53.99	<1.0	381	<1.0	287,991	<1.0
MBMG	10/17/11	272,106	<1.0	<1.0	<5.0	29.6	1,122	34.0	878	31,034	122.8	<1.0	650	1.1	2.33	878	33.37	<1.0	374	1.13	290,448	<1.0
MBMG	11/16/11	252,338	<1.0	12.5	36.7	29.8	1,219	21.1	918	32,206	135.9	<1.0	634	3.4	17.99	921	47.22	<1.0	370	11.78	396,355	<1.0
MBMG	12/20/11	243,979	<1.0	6.8	13.1	29.6	1,172	17.4	864	29,106	105.6	<1.0	638	1.5	18.83	901	47.43	<1.0	360	4.66	295,155	<1.0
MBMG	01/19/12	267,378	<1.0	10.3	19.6	13.0	1,112	32.8	860	31,459	45.9	<1.0	658	<0.4	4.67	889	47.32	<1.0	402	13.37	304,420	<1.0
MBMG	02/17/12	209,372	<1.0	4.9	45.7	26.3	1,114	25.3	836	41,346	105.9	<1.0	616	<0.4	10.03	953	51.56	<1.0	307	2.28	272,328	<1.0
MBMG	03/15/12	263,993	<1.0	2.5	94.8	29.1	1,095	29.4	831	24,015	92.8	<1.0	685	0.9	<1.0	916	51.00	<1.0	327	1.17	297,997	<1.0
MBMG	04/16/12	234,044	12.43	7.0	156.1	27.2	1,050	36.2	871	13,115	120.7	<1.0	602	<0.4	6.51	955	40.42	<1.0	229	1.79	261,118	<1.0
MBMG	05/16/12	402,090	<1.0	3.9	232.5	37.7	1,416	74.1	1,203	22,404	134.5	<1.0	904	<0.4	8.60	885	64.63	<1.0	492	12.01	358,428	<1.0
MBMG	06/25/12	320,975	<1.0	9.0	513.0	37.0	1,351	45.2	1,162	22,527	142.0	<1.0	827	<0.4	9.22	811	50.38	<1.0	422	1.11	334,770	<1.0
Total Recoverable	06/25/12	345,888		7.8	386.6	36.8	1,285	78.6	1,106	22,121	138.0	<1.0	779	2.4	23.49	845	65.49	<1.0	431	35.84	310,370	<1.0
MBMG	07/24/12	258,114	<1.0	9.3	298.2	32.7	1,134	37.6	1,020	15,606	118.4	<1.0	699	1.5	7.26	887	65.52	<1.0	334	<1.0	274,369	<1.0
MBMG	08/24/12	214,406	<1.0	6.1	27.3	24.5	1,061	25.0	886	18,234	127.8	<1.0	636	<0.4	6.06	922	52.40	<1.0	273	<1.0	251,834	<1.0
MBMG	09/24/12	366,597	<1.0	12.0	35.8	35.7	1,079	48.2	1,082	24,119	194.7	<1.0	789	2.5	7.32	886	68.48	<1.0	390	2.45	308,921	<1.0
MBMG	10/17/12	525,479	<1.0	17.5	242.6	43.4	1,346	99.7	1,390	31,511	154.9	<1.0	1,032	2.1	7.63	741	63.49	<1.0	589	9.13	379,379	<1.0
MBMG	11/16/12	509,165	<1.0	20.7	298.3	44.5	1,378	113.7	1,399	22,514	80.6	<1.0	1,020	<0.6	9.64	674	91.65	<1.0	622	16.27	379,144	<1.0
MBMG	12/04/12	547,525	<1.0	30.3	334.1	45.5	1,430	153.5	1,414	23,580	78.1	<1.0	1,041	<0.6	9.23	606	95.90	<1.0	664	36.27	383,331	<1.0
Total Recoverable	12/04/12	657,448		66.5	251.9	47.0	1,338	142.2	1,429	25,836	157.4	<1.0	1,091	<0.6	6.75	587	94.08	<1.0	645	58.13	434,103	<1.0
MBMG	01/16/13	385,821	<1.0	13.6	254.2	35.4	1,218	90.4	1,147	22,810	75.4	<1.0	822	<0.6	7.75	706	84.00	<1.0	498	8.99	318,687	<1.0
MBMG	02/14/13	455,678	<1.0	28.1	244.0	39.0	1,220	79.9	1,166	25,823	159.9	<1.0	881	<0.6	5.61	688	73.84	<1.0	385	14.01	366,990	<1.0
MBMG	03/18/13	299,568	<1.0	13.9	22.4	23.9	1,120	57.9	1,058	16,393	60.3	<1.0	731	<0.6	5.00	747	56.23	<1.0	483	24.30	271,813	<1.0
MBMG	04/23/13	381,402	<1.0	15.0	279.4	22.8	1,200	95.7	1,100	17,141	157.6	<1.0	810	<0.6	5.22	813	49.21	<1.0	482	5.83	319,950	<1.0
MBMG	05/16/13	403,725	<1.0	13.2	283.5	42.8	1,060	74.2	1,103	38,009	198.9	<1.0	900	2.5	5.88	739	70.23	<1.0	473	45.11	324,400	<1.0
MBMG	06/19/13	284,934	<1.0	13.2	19.9	26.4	997	77.7	964	20,908	116.0	<1.0	683	2.2	3.48	709	35.39	<1.0	428	2.33	286,687	<1.0
MBMG	07/16/13	325,253	<1.0	19.5	18.4	23.2	1,215	60.7	1,095	13,252	128.4	<1.0	828	<0.6	2.51	781	44.77	<1.0	626	5.17	301,662	<1.0
MBMG	08/29/13	304,052	<1.0	10.7	20.1	22.6	1,182	48.1	1,028	19,361	60.2	<1.0	733	<0.6	<1.0	817	32.12	<1.0	422	2.16	299,748	<1.0
MBMG	09/24/13	270,242	<1.0	12.3	237.7	29.4	1,259	52.5	1,004	16,099	128.1	<1.0	733	4.1	4.06	878	37.22	<1.0	307	8.87	284,031	<1.0
MBMG	10/14/13	312,955	<1.0	23.7	24.4	38.3	1,320	74.8	1,119	16,847	131.5	<1.0	784	<0.6	<1.0	822	41.60	<1.0	418	70.11	244,192	<1.0
MBMG	11/15/13	205,340	<1.0	13.1	9.8	11.7	1,173	19.9	841	10,485	75.0	<1.0	618	<0.6	27.99	897	25.65	<1.0	352	<1.0	262,603	<1.0
MBMG	12/15/13	228,380	<1.0	19.8	8.3	13.3	1,249	24.4	896	25,486	84.5	<1.0	657	2.3	32.29	795	25.09	<1.0	360	2.05	271,948	<1.0
MBMG	01/21/14	274,642	<1.0	29.0	6.8	17.5	1,166	29.0	989	22,103	98.5	<1.0	709	<0.6	33.86	730	30.58	<1.0	431	11.87	297,271	<1.0
Mean Value		206,910	7	16.1	77	25.3	1,269	36.0	797	44,057	130	11	556	6.3	19	1,084	46.8	2.28	319	11.4	255,776	11
Maximum Value		657,448	18	66.5	513	52.9	2,151	153.5	1,429	101,000	703	20	1,165	59.1	148	1,327	157	13.20	664	70.1	434,103	23
Minimum Value		92,344	1	0.9	1	11.7	595	10.6	340	10,485	7	1	148	0.6	2	587	1.3	0.23	105	0.8	148,000	1.0
Number Readings		174	11	106	76	150	180	120	180	180	175	4	178	50	109	175	87	7	161	59	180	11

nd/na - not measured or analyzed

Montana Bureau of Mines and Geology
 East Camp Alluvial Water-Level Elevations
 Site Name/Monthly Elevations

DATE MO/YR (MP Elev.)	LP-01 ELEV.		MO. DIFF (FT)	LP-02 ELEV.		MO. DIFF (FT)	LP-03 ELEV.		MO. DIFF (FT)	LP-04 ELEV.		MO. DIFF (FT)	LP-05 ELEV.		MO. DIFF (FT)	LP-06 ELEV.		MO. DIFF (FT)
	SWL (FT)	ELEV. (FT)		SWL (FT)	ELEV. (FT)		SWL (FT)	ELEV. (FT)		SWL (FT)	ELEV. (FT)		SWL (FT)	ELEV. (FT)		SWL (FT)	ELEV. (FT)	
	TD-200'	SI-177-197'		TD-162'	SI-129.5-159.5'		TD-55.20'	SI-32-52'		TD-150'	SI-128-148'		TD-231'	SI-189-229'		TD-115'	SI-92.2-112.2'	
		5619.70			5624.70			5566.00			5585.50			5583.90			5713.18	
Jan-12	160.88	5458.82	-0.35	155.56	5469.14	-0.40	P&A			120.13	5465.37	-0.29	141.26	5442.64	-0.36	P&A		
Feb-12	160.59	5459.11	0.29	155.93	5468.77	-0.37	P&A			119.97	5465.53	0.16	141.19	5442.71	0.07	P&A		
Mar-12	160.68	5459.02	-0.09	156.08	5468.62	-0.15	P&A			120.04	5465.46	-0.07	141.24	5442.66	-0.05	P&A		
Apr-12	160.27	5459.43	0.41	155.88	5468.82	0.20	P&A			119.75	5465.75	0.29	141.01	5442.89	0.23	P&A		
May-12	160.51	5459.19	-0.24	156.14	5468.56	-0.26	P&A			120.00	5465.50	-0.25	141.33	5442.57	-0.32	P&A		
Jun-12	160.37	5459.33	0.14	155.89	5468.81	0.25	P&A			120.00	5465.50	0.00	141.26	5442.64	0.07	P&A		
Jul-12	160.05	5459.65	0.32	155.96	5468.74	-0.07	P&A			119.77	5465.73	0.23	141.11	5442.79	0.15	P&A		
Aug-12	159.84	5459.86	0.21	155.72	5468.98	0.24	P&A			119.72	5465.78	0.05	141.01	5442.89	0.10	P&A		
Sep-12	159.75	5459.95	0.09	155.54	5469.16	0.18	P&A			119.69	5465.81	0.03	140.97	5442.93	0.04	P&A		
Oct-12	159.62	5460.08	0.13	155.67	5469.03	-0.13	P&A			119.71	5465.79	-0.02	140.94	5442.96	0.03	P&A		
Nov-12	159.37	5460.33	0.25	155.27	5469.43	0.40	P&A			119.52	5465.98	0.19	140.79	5443.11	0.15	P&A		
Dec-12	159.38	5460.32	-0.01	155.24	5469.46	0.03	P&A			119.58	5465.92	-0.06	140.83	5443.07	-0.04	P&A		
Yearly Change			1.15			-0.08						0.26			0.07			
Jan-13	159.00	5460.70	0.38	154.75	5469.95	0.49	P&A			119.29	5466.21	0.29	140.61	5443.29	0.22	P&A		
Feb-13	159.13	5460.57	-0.13	155.41	5469.29	-0.66	P&A			119.30	5466.20	-0.01	140.75	5443.15	-0.14	P&A		
Mar-13	158.92	5460.78	0.21	155.31	5469.39	0.10	P&A			119.33	5466.17	-0.03	140.77	5443.13	-0.02	P&A		
Apr-13	158.50	5461.20	0.42	155.03	5469.67	0.28	P&A			119.45	5466.05	-0.12	140.79	5443.11	-0.02	P&A		
May-13	158.41	5461.29	0.09	154.83	5469.87	0.20	P&A			118.34	5467.16	1.11	140.20	5443.70	0.59	P&A		
Jun-13	158.53	5461.17	-0.12	155.42	5469.28	-0.59	P&A			118.36	5467.14	-0.02	140.33	5443.57	-0.13	P&A		
Jul-13	158.17	5461.53	0.36	154.96	5469.74	0.46	P&A			118.32	5467.18	0.04	140.38	5443.52	-0.05	P&A		
Aug-13	157.88	5461.82	0.29	154.93	5469.77	0.03	P&A			117.63	5467.87	0.69	139.91	5443.99	0.47	P&A		
Sep-13	157.40	5462.30	0.48	154.73	5469.97	0.20	P&A			117.36	5468.14	0.27	139.67	5444.23	0.24	P&A		
Oct-13	157.16	5462.54	0.24	154.36	5470.34	0.37	P&A			117.75	5467.75	-0.39	139.51	5444.39	0.16	P&A		
Nov-13	156.99	5462.71	0.17	154.62	5470.08	-0.26	P&A			116.68	5468.82	1.07	139.33	5444.57	0.18	P&A		
Dec-13	156.21	5463.49	0.78	154.81	5469.89	-0.19	P&A			116.42	5469.08	0.26	139.22	5444.68	0.11	P&A		
Yearly Change			3.17			0.43						3.16			1.61			
Jan-14	156.13	5463.57	0.08	154.14	5470.56	0.67	P&A			115.99	5469.51	0.43	138.69	5445.21	0.53	P&A		
Feb-14	155.94	5463.76	0.19	154.35	5470.35	-0.21	P&A			115.89	5469.61	0.10	138.67	5445.23	0.02	P&A		
Mar-14																		
Apr-14																		
May-14																		
Jun-14																		
Jul-14																		
Aug-14																		
Sep-14																		
Oct-14																		
Nov-14																		
Dec-14																		
Yearly Change			0.27			0.46						0.53			0.55			

Montana Bureau of Mines and Geology
 East Camp Alluvial Water-Level Elevations
 Site Name/Monthly Elevations

DATE MO/YR (MP Elev.)	LP-07 SWL (FT)	ELEV. (FT)	MO. DIFF (FT)	LP-08 SWL (FT)	ELEV. (FT)	MO. DIFF (FT)	LP-09 SWL (FT)	ELEV. (FT)	MO. DIFF (FT)	LP-10 SWL (FT)	ELEV. (FT)	MO. DIFF (FT)	LP-11 SWL (FT)	ELEV. (FT)	MO. DIFF (FT)	LP-12 SWL (FT)	ELEV. (FT)	MO. DIFF (FT)
	TD-101.50'	SI-93-98'		TD-100'	SI-81-96'		TD-107'	SI-82-102'		TD-169'	SI-132-162'		TD-284'	SI-247-277'		TD-133'	SI-110-130'	
		5617.00			5577.29			5561.52			5609.12			5609.61			5543.82	
Jan-12	Dry	D@98.40	0.00	Dry@99'			96.04	5465.48	-0.33	124.55	5484.57	-0.07	Plugged and abandoned			71.62	5472.20	-0.53
Feb-12	Dry	D@98.40	0.00	Dry@99'			95.94	5465.58	0.10	124.57	5484.55	-0.02	Plugged and abandoned			71.61	5472.21	0.01
Mar-12	Dry	D@98.40	0.00	Dry@99'			96.04	5465.48	-0.10	124.66	5484.46	-0.09	Plugged and abandoned			71.81	5472.01	-0.20
Apr-12	Dry	D@98.40	0.00	Dry@99'			95.78	5465.74	0.26	124.88	5484.24	-0.22	Plugged and abandoned			71.86	5471.96	-0.05
May-12	Dry	D@98.40	0.00	Dry@99'			95.91	5465.61	-0.13	125.21	5483.91	-0.33	Plugged and abandoned			72.75	5471.07	-0.89
Jun-12	Dry	D@98.40	0.00	Dry@99'			95.60	5465.92	0.31	125.52	5483.60	-0.31	Plugged and abandoned			73.43	5470.39	-0.68
Jul-12	Dry	D@98.40	0.00	Dry@99'			94.75	5466.77	0.85	125.86	5483.26	-0.34	Plugged and abandoned			74.00	5469.82	-0.57
Aug-12	Dry	D@98.40	0.00	Dry@99'			94.05	5467.47	0.70	126.16	5482.96	-0.30	Plugged and abandoned			74.71	5469.11	-0.71
Sep-12	Dry	D@98.40	0.00	Dry@99'			93.47	5468.05	0.58	126.41	5482.71	-0.25	Plugged and abandoned			75.24	5468.58	-0.53
Oct-12	Dry	D@98.40	0.00	Dry@99'			92.79	5468.73	0.68	126.96	5482.16	-0.55	Plugged and abandoned			75.81	5468.01	-0.57
Nov-12	Dry	D@98.40	0.00	Dry@99'			92.07	5469.45	0.72	127.52	5481.60	-0.56	Plugged and abandoned			76.29	5467.53	-0.48
Dec-12	Dry	D@98.40	0.00	Dry@99'			91.76	5469.76	0.31	127.60	5481.52	-0.08	Plugged and abandoned			76.68	5467.14	-0.39
Yearly Change			0.00			0.00			3.95			-3.12						-5.59
Jan-13	98.30	5518.70	0.10	Dry@99'			91.10	5470.42	0.66	127.68	5481.44	-0.08	Plugged and abandoned			77.11	5466.71	-0.43
Feb-13	98.31	5518.69	-0.01	Dry@99'			90.87	5470.65	0.23	127.85	5481.27	-0.17	Plugged and abandoned			77.63	5466.19	-0.52
Mar-13	98.33	5518.67	-0.02	Dry@99'			90.51	5471.01	0.36	127.87	5481.25	-0.02	Plugged and abandoned			77.81	5466.01	-0.18
Apr-13	98.35	5518.65	-0.02	Dry@99'			90.39	5471.13	0.12	127.89	5481.23	-0.02	Plugged and abandoned			77.96	5465.86	-0.15
May-13	98.38	5518.62	-0.03	Dry@99'			90.04	5471.48	0.35	127.27	5481.85	0.62	Plugged and abandoned			78.49	5465.33	-0.53
Jun-13	98.36	5518.64	0.02	Dry@99'			90.11	5471.41	-0.07	126.90	5482.22	0.37	Plugged and abandoned			78.52	5465.30	-0.03
Jul-13	98.33	5518.67	0.03	Dry@99'			89.83	5471.69	0.28	126.98	5482.14	-0.08	Plugged and abandoned			78.33	5465.49	0.19
Aug-13	98.38	5518.62	-0.05	Dry@99'			89.49	5472.03	0.34	126.28	5482.84	0.70	Plugged and abandoned			78.28	5465.54	0.05
Sep-13	98.41	5518.59	-0.03	Dry@99'			89.33	5472.19	0.16	126.31	5482.81	-0.03	Plugged and abandoned			78.40	5465.42	-0.12
Oct-13	98.36	5518.64	0.05	Dry@99'			88.79	5472.73	0.54	126.25	5482.87	0.06	Plugged and abandoned			78.35	5465.47	0.05
Nov-13	98.35	5518.65	0.01	Dry@99'			88.48	5473.04	0.31	126.44	5482.68	-0.19	Plugged and abandoned			78.41	5465.41	-0.06
Dec-13	98.34	5518.66	0.01	Dry@99'			88.04	5473.48	0.44	126.82	5482.30	-0.38	Plugged and abandoned			78.77	5465.05	-0.36
Yearly Change			0.06			0.00			3.72			0.78						-2.09
Jan-14	98.34	5518.66	0.00	98.98	5478.31		87.56	5473.96	0.48	126.82	5482.30	0.00	Plugged and abandoned			78.93	5464.89	-0.16
Feb-14	98.31	5518.69	0.03	98.31	5478.98	0.67	87.25	5474.27	0.31	126.81	5482.31	0.01	Plugged and abandoned			78.87	5464.95	0.06
Mar-14																		
Apr-14																		
May-14																		
Jun-14																		
Jul-14																		
Aug-14																		
Sep-14																		
Oct-14																		
Nov-14																		
Dec-14																		
Yearly Change			0.03			0.67			0.79			0.01						-0.10

Montana Bureau of Mines and Geology
 East Camp Alluvial Water-Level Elevations
 Site Name/Monthly Elevations

DATE MO/YR (MP Elev.)	LP-13 ELEV.		MO. DIFF (FT)	LP-14 ELEV.		MO. DIFF (FT)	LP-15 ELEV.		MO. DIFF (FT)	LP-16 ELEV.		MO. DIFF (FT)	*LP-17 ELEV.		MO. DIFF (FT)	LP-17R ELEV.		MO. DIFF (FT)	
	SWL (FT)	ELEV. (FT)		SWL (FT)	ELEV. (FT)		SWL (FT)	ELEV. (FT)		SWL (FT)	ELEV. (FT)		SWL (FT)	ELEV. (FT)		SWL (FT)	ELEV. (FT)		SWL (FT)
	TD-242'	SI-219-239'		TD-108.5'	SI-85-105'		TD-242.5'	SI-218.3-238.3'		TD-126'	SI-103.4-123.4'		TD-222'	SI-201-226'		TD-222'	SI-17-221'		
		5543.05		5525.68	5526.36		5520.23			5519.88			5623.34	5621.54				5619.09	
Jan-12	79.82	5463.23	-0.20	58.66	5467.70	-0.35	85.12	5435.11	-0.06	85.85	5434.03	-0.14	168.66	5452.88	0.04				
Feb-12	79.85	5463.20	-0.03	58.52	5467.84	0.14	85.14	5435.09	-0.02	85.71	5434.17	0.14	168.53	5453.01	0.13				
Mar-12	79.97	5463.08	-0.12	58.62	5467.74	-0.10	84.84	5435.39	0.30	85.79	5434.09	-0.08	168.73	5452.81	-0.20				
Apr-12	80.04	5463.01	-0.07	58.56	5467.80	0.06	84.74	5435.49	0.10	85.58	5434.30	0.21	168.57	5452.97	0.16				
May-12	80.50	5462.55	-0.46	59.19	5467.17	-0.63	85.00	5435.23	-0.26	85.85	5434.03	-0.27	169.07	5452.47	-0.50				
Jun-12	80.88	5462.17	-0.38	59.61	5466.75	-0.42	85.26	5434.97	-0.26	86.02	5433.86	-0.17	169.42	5452.12	-0.35				
Jul-12	81.23	5461.82	-0.35	59.89	5466.47	-0.28	85.46	5434.77	-0.20	86.07	5433.81	-0.05	169.53	5452.01	-0.11				
Aug-12	82.32	5460.73	-1.09	60.36	5466.00	-0.47	129.55	5390.68	-44.09	86.05	5433.83	0.02	169.94	5451.60	-0.41				
Sep-12	82.62	5460.43	-0.30	60.63	5465.73	-0.27	127.45	5392.78	2.10	86.23	5433.65	-0.18	170.56	5450.98	-0.62				
Oct-12	83.69	5459.36	-1.07	60.96	5465.40	-0.33	128.30	5391.93	-0.85	88.53	5431.35	-2.30	171.61	5449.93	-1.05				
Nov-12	84.66	5458.39	-0.97	61.32	5465.04	-0.36	150.38	5369.85	-22.08	89.62	5430.26	-1.09	172.51	5449.03	-0.90				
Dec-12	84.08	5458.97	0.58	61.50	5464.86	-0.18	NA			89.24	5430.64	0.38	172.75	5448.79	-0.24				
Yearly Change			-4.46			-3.19			-65.32			-3.53			-4.05				
Jan-13	84.37	5458.68	-0.29	61.77	5464.59	-0.27	107.99	5412.24	42.39	89.49	5430.39	-0.25	173.12	5448.42	-0.37				
Feb-13	85.61	5457.44	-1.24	62.25	5464.11	-0.48	149.43	5370.80	-41.44	90.03	5429.85	-0.54	173.82	5447.72	-0.70				
Mar-13	85.81	5457.24	-0.20	62.46	5463.90	-0.21	149.41	5370.82	0.02	90.22	5429.66	-0.19	173.98	5447.56	-0.16				
Apr-13	86.02	5457.03	-0.21	62.56	5463.80	-0.10	105.22	5415.01	44.19	90.40	5429.48	-0.18	174.15	5447.39	-0.17				
May-13	86.41	5456.64	-0.39	63.15	5463.21	-0.59	150.18	5370.05	-44.96	91.88	5428.00	-1.48	175.21	5446.33	-1.06				
Jun-13	86.53	5456.52	-0.12	63.27	5463.09	-0.12	150.77	5369.46	-0.59	92.26	5427.62	-0.38	175.51	5446.03	-0.30				
Jul-13	86.56	5456.49	-0.03	63.39	5462.97	-0.12	151.35	5368.88	-0.58	92.58	5427.30	-0.32	175.75	5445.79	-0.24				
Aug-13	86.94	5456.11	-0.38	63.49	5462.87	-0.10	159.46	5360.77	-8.11	93.17	5426.71	-0.59	175.89	5445.65	-0.14				
Sep-13	87.08	5455.97	-0.14	63.65	5462.71	-0.16	160.35	5359.88	-0.89	93.55	5426.33	-0.38	176.12	5445.42	-0.23				
Oct-13	86.12	5456.93	0.96	63.45	5462.91	0.20	118.75	5401.48	41.60	92.77	5427.11	0.78	P&A			174.20	5444.89	0.00	
Nov-13	86.20	5456.85	-0.08	63.35	5463.01	0.10	119.72	5400.51	-0.97	92.63	5427.25	0.14	P&A			173.99	5445.10	0.21	
Dec-13	87.20	5455.85	-1.00	63.55	5462.81	-0.20	165.73	5354.50	-46.01	93.60	5426.28	-0.97	P&A			174.51	5444.58	-0.52	
Yearly Change			-3.12			-2.05			-15.35			-4.36			-3.37				-0.31
Jan-14	87.29	5455.76	-0.09	63.55	5462.81	0.00	166.53	5353.70	-0.80	93.70	5426.18	-0.10	P&A			174.61	5444.48	-0.10	
Feb-14	87.27	5455.78	0.02	63.64	5462.72	-0.09	168.19	5352.04	-1.66	93.62	5426.26	0.08	P&A			174.48	5444.61	0.13	
Mar-14																			
Apr-14																			
May-14																			
Jun-14																			
Jul-14																			
Aug-14																			
Sep-14																			
Oct-14																			
Nov-14																			
Dec-14																			
Yearly Change			-0.07			-0.09			-2.46			-0.02			0.00				0.03

Montana Bureau of Mines and Geology
 1997 Alluvial Wells - Periodic Water-Level Measurements
 Montana Resources, Butte, MT

GWIC ID	166372			166373			166374			166375		
	97-1			97-2			97-3			97-4		
Date	SWL	Elevation*	Change	SWL	Elevation*	Change	SWL	Elevation*	Change	SWL	Elevation*	Change
	MP-ToS(ft)	5561.35	(ft)	MP-CT(ft)	5577.42	(ft)	MP-CT(ft)	5591.18	(ft)	MP-CT(ft)	5576.80	(ft)
01/31/12	43.79	5517.56	1.15	24.95	5552.47	0.39	11.97	5579.21	-0.29	28.33	5548.47	0.49
02/28/12	43.39	5517.96	0.40	24.98	5552.44	-0.03	11.67	5579.51	0.30	28.17	5548.63	0.16
03/29/12	42.81	5518.54	0.58	25.10	5552.32	-0.12	11.24	5579.94	0.43	28.87	5547.93	-0.70
04/30/12	43.30	5518.05	-0.49	24.88	5552.54	0.22	10.86	5580.32	0.38	28.99	5547.81	-0.12
05/30/12	42.70	5518.65	0.60	23.99	5553.43	0.89	11.28	5579.90	-0.42	28.97	5547.83	0.02
06/27/12	42.39	5518.96	0.31	23.34	5554.08	0.65	11.10	5580.08	0.18	28.97	5547.83	0.00
07/30/12	42.78	5518.57	-0.39	23.29	5554.13	0.05	10.93	5580.25	0.17	29.01	5547.79	-0.04
08/30/12	42.55	5518.80	0.23	23.64	5553.78	-0.35	11.18	5580.00	-0.25	28.77	5548.03	0.24
09/28/12	44.17	5517.18	-1.62	24.71	5552.71	-1.07	11.54	5579.64	-0.36	29.36	5547.44	-0.59
10/30/12	45.17	5516.18	-1.00	25.31	5552.11	-0.60	11.61	5579.57	-0.07	29.56	5547.24	-0.20
11/29/12	44.95	5516.40	0.22	24.75	5552.67	0.56	11.08	5580.10	0.53	29.52	5547.28	0.04
12/28/12	44.07	5517.28	0.88	24.05	5553.37	0.70	11.30	5579.88	-0.22	29.03	5547.77	0.49
01/30/13	43.83	5517.52	0.24	23.98	5553.44	0.07	11.37	5579.81	-0.07	29.17	5547.63	-0.14
02/26/13	44.13	5517.22	-0.30	24.27	5553.15	-0.29	11.46	5579.72	-0.09	29.44	5547.36	-0.27
03/25/13	44.09	5517.26	0.04	24.09	5553.33	0.18	11.50	5579.68	-0.04	29.50	5547.30	-0.06
04/25/13	44.12	5517.23	-0.03	24.15	5553.27	-0.06	11.58	5579.60	-0.08	29.63	5547.17	-0.13
06/03/13	43.53	5517.82	0.59	22.83	5554.59	1.32	10.17	5581.01	1.41	29.13	5547.67	0.50
06/27/13	43.16	5518.19	0.37	22.51	5554.91	0.32	10.28	5580.90	-0.11	29.24	5547.56	-0.11
07/31/13	42.09	5519.26	1.07	22.37	5555.05	0.14	10.10	5581.08	0.18	29.43	5547.37	-0.19
08/30/13	41.54	5519.81	0.55	21.47	5555.95	0.90	9.67	5581.51	0.43	29.57	5547.23	-0.14
09/27/13	41.87	5519.48	-0.33	21.67	5555.75	-0.20	9.45	5581.73	0.22	29.62	5547.18	-0.05
10/31/13	41.95	5519.40	-0.08	21.03	5556.39	0.64	9.61	5581.57	-0.16	29.69	5547.11	-0.07
11/27/13	41.74	5519.61	0.21	21.73	5555.69	-0.70	9.42	5581.76	0.19	29.78	5547.02	-0.09
01/02/14	42.21	5519.14	-0.47	22.02	5555.40	-0.29	9.35	5581.83	0.07	29.21	5547.59	0.57
02/03/14	42.39	5518.96	-0.18	21.93	5555.49	0.09	9.34	5581.84	0.01	29.53	5547.27	-0.32
03/03/14	42.16	5519.19	0.23	21.53	5555.89	0.40	9.33	5581.85	0.01	29.12	5547.68	0.41

Total Change **5.27** **3.47** **-3.07** **-0.21**

* Elevations are based on MR survey data using AMC datum, corrected to USGS.

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	DATE	4597 AMC-5			4604 AMC-6			4611 AMC-8		
		SWL	Elevation	Mo Change	SWL	Elevation	Mo Change*	SWL	Elevation	Mo Change
			5509.21			5492.48	5489.62		5524.03	
	01/31/11	71.15	5438.06	-0.13	29.97	5459.65	-0.16	56.57	5467.46	-0.39
	02/28/11	71.24	5437.97	-0.09	30.13	5459.49	-0.16	56.90	5467.13	-0.33
	03/28/11	71.39	5437.82	-0.15	30.15	5459.47	-0.02	56.92	5467.11	-0.02
	04/27/11	71.40	5437.81	-0.01	30.26	5459.36	-0.11	57.18	5466.85	-0.26
	05/25/11	71.45	5437.76	-0.05	30.26	5459.36	0.00	57.18	5466.85	0.00
	06/30/11	71.45	5437.76	0.00	29.85	5459.77	0.41	56.89	5467.14	0.29
	07/28/11	71.35	5437.86	0.10	29.64	5459.98	0.21	56.63	5467.40	0.26
	08/31/11	71.18	5438.03	0.17	29.37	5460.25	0.27	55.91	5468.12	0.72
	09/30/11	71.09	5438.12	0.09	29.31	5460.31	0.06	55.57	5468.46	0.34
	10/28/11	71.14	5438.07	-0.05	28.58	5461.04	0.73	54.96	5469.07	0.61
	11/29/11	70.98	5438.23	0.16	28.16	5461.46	0.42	54.69	5469.34	0.27
	12/30/11	70.61	5438.60	0.37	27.91	5461.71	0.25	54.31	5469.72	0.38
	Annual WL Change			0.41			1.90			1.87
	01/31/12	70.48	5438.73	0.13	27.78	5461.84	0.13	54.21	5469.82	0.10
	02/28/12	70.28	5438.93	0.20	27.77	5461.85	0.01	54.37	5469.66	-0.16
	03/29/12	70.20	5439.01	0.08	27.72	5461.90	0.05	54.36	5469.67	0.01
	04/30/12	70.02	5439.19	0.18	27.67	5461.95	0.05	54.61	5469.42	-0.25
	05/30/12	70.06	5439.15	-0.04	28.09	5461.53	-0.42	54.79	5469.24	-0.18
	06/27/12	70.21	5439.00	-0.15	28.56	5461.06	-0.47	55.15	5468.88	-0.36
	07/30/12	70.32	5438.89	-0.11	28.87	5460.75	-0.31	55.47	5468.56	-0.32
	08/31/12	70.43	5438.78	-0.11	29.19	5460.43	-0.32	55.61	5468.42	-0.14
	09/27/12	70.61	5438.60	-0.18	29.32	5460.30	-0.13	55.81	5468.22	-0.20
	10/30/12	70.95	5438.26	-0.34	29.51	5460.11	-0.19	55.80	5468.23	0.01
	11/29/12	71.24	5437.97	-0.29	29.87	5459.75	-0.36	56.40	5467.63	-0.60
	12/27/12	71.38	5437.83	-0.14	30.07	5459.55	-0.20	56.41	5467.62	-0.01
	Annual WL Change			-0.77			-2.16			-2.10
	01/30/13	71.58	5437.63	-0.20	30.28	5459.34	-0.21	56.57	5467.46	-0.16
	02/27/13	71.80	5437.41	-0.22	30.61	5459.01	-0.33	57.07	5466.96	-0.50
	03/25/13	72.03	5437.18	-0.23	30.77	5458.85	-0.16	57.13	5466.90	-0.06
	04/26/13	72.35	5436.86	-0.32	31.01	5458.61	-0.24	57.27	5466.76	-0.14
	05/31/13	72.62	5436.59	-0.27	31.37	5458.25	-0.36	58.05	5465.98	-0.78
	06/26/13	72.78	5436.43	-0.16	31.44	5458.18	-0.07	58.21	5465.82	-0.16
	07/30/13	72.85	5436.36	-0.07	31.54	5458.08	-0.10	58.42	5465.61	-0.21
	08/30/13	72.86	5436.35	-0.01	31.40	5458.22	0.14	58.46	5465.57	-0.04
	09/27/13	72.77	5436.44	0.09	31.31	5458.31	0.09	58.68	5465.35	-0.22
	10/31/13	72.58	5436.63	0.19	31.14	5458.48	0.17	58.36	5465.67	0.32
	11/27/13	72.57	5436.64	0.01	31.17	5458.45	-0.03	58.34	5465.69	0.02
	12/30/13	72.81	5436.40	-0.24	31.41	5458.21	-0.24	58.28	5465.75	0.06
	Annual WL Change			-1.43			-1.34			-1.87
	01/30/14	72.92	5436.29	-0.11	31.57	5458.05	-0.16	58.15	5465.88	0.13
	02/25/14	72.89	5436.32	0.03	31.80	5457.82	-0.23	58.33	5465.70	-0.18
	03/01/14									
	04/01/14									
	05/01/14									
	06/01/14									
	07/01/14									
	08/01/14									
	09/01/14									
	10/01/14									
	11/01/14									
	12/01/14									
	Annual WL Change			-0.08			-0.39			-0.05

* Well AMC-06 measuring point elevation changed Oct 04, re-surveyed Jan-10

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	DATE	155569			4656			4673		
		AMC-10	Elevation	Mo Change	AMC-12	Elevation	Mo Change	AMC-13	Elevation	Mo Change
		SWL	5511.26		SWL	5479.58		SWL	5475.34	
	01/31/11	DRY			21.36	5458.22	-0.15	19.89	5455.45	-0.18
	02/28/11	DRY			21.51	5458.07	-0.15	20.02	5455.32	-0.13
	03/28/11	DRY			21.59	5457.99	-0.08	20.02	5455.32	0.00
	04/27/11	DRY			21.53	5458.05	0.06	19.89	5455.45	0.13
	05/25/11	DRY			21.43	5458.15	0.10	19.76	5455.58	0.13
	06/30/11	DRY			20.74	5458.84	0.69	18.98	5456.36	0.78
	07/28/11	DRY			20.45	5459.13	0.29	18.89	5456.45	0.09
	08/31/11	DRY			20.24	5459.34	0.21	18.82	5456.52	0.07
	09/30/11	DRY			20.26	5459.32	-0.02	18.86	5456.48	-0.04
	10/28/11	DRY			20.06	5459.52	0.20	18.82	5456.52	0.04
	11/29/11	DRY			20.05	5459.53	0.01	18.98	5456.36	-0.16
	12/30/11	DRY			20.08	5459.50	-0.03	19.12	5456.22	-0.14
Annual WL Change				0.00			1.13			0.59
	01/31/12	DRY			20.19	5459.39	-0.11	19.40	5455.94	-0.28
	02/28/12	DRY			20.36	5459.22	-0.17	19.37	5455.97	0.03
	03/29/12	DRY			20.30	5459.28	0.06	19.31	5456.03	0.06
	04/30/12	DRY			20.21	5459.37	0.09	19.22	5456.12	0.09
	05/30/12	DRY			20.26	5459.32	-0.05	19.24	5456.10	-0.02
	06/27/12	DRY			20.22	5459.36	0.04	19.12	5456.22	0.12
	07/30/12	DRY			21.59	5457.99	-1.37	18.91	5456.43	0.21
	08/31/12	DRY			21.00	5458.58	0.59	19.10	5456.24	-0.19
	09/27/12	DRY			20.64	5458.94	0.36	19.11	5456.23	-0.01
	10/30/12	DRY			20.84	5458.74	-0.20	19.31	5456.03	-0.20
	11/29/12	DRY			21.07	5458.51	-0.23	19.52	5455.82	-0.21
	12/27/12	DRY			21.16	5458.42	-0.09	19.61	5455.73	-0.09
Annual WL Change				0.00			-1.08			-0.49
	01/30/13	DRY			21.39	5458.19	-0.23	19.80	5455.54	-0.19
	02/27/13	DRY			21.67	5457.91	-0.28	20.02	5455.32	-0.22
	03/25/13	DRY			21.72	5457.86	-0.05	19.96	5455.38	0.06
	04/26/13	DRY			21.91	5457.67	-0.19	20.55	5454.79	-0.59
	05/31/13	DRY			22.13	5457.45	-0.22	20.25	5455.09	0.30
	06/26/13	DRY			22.01	5457.57	0.12	20.11	5455.23	0.14
	07/30/13	DRY			21.98	5457.60	0.03	20.20	5455.14	-0.09
	08/30/13	DRY			21.80	5457.78	0.18	19.92	5455.42	0.28
	09/27/13	DRY			21.37	5458.21	0.43	19.73	5455.61	0.19
	10/31/13	DRY			21.58	5458.00	-0.21	19.61	5455.73	0.12
	11/27/13	DRY			21.72	5457.86	-0.14	19.86	5455.48	-0.25
	12/30/13	DRY			21.99	5457.59	-0.27	20.13	5455.21	-0.27
Annual WL Change				0.00			-0.83			-0.52
	01/30/14	DRY			22.26	5457.32	-0.27	20.38	5454.96	-0.25
	02/25/14	DRY			22.48	5457.10	-0.22	20.58	5454.76	-0.20
	03/01/14									
	04/01/14									
	05/01/14									
	06/01/14									
	07/01/14									
	08/01/14									
	09/01/14									
	10/01/14									
	11/01/14									
	12/01/14									
Annual WL Change				0.00			-0.49			-0.45

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	DATE	4702 AMC-15 SWL	Elevation	Mo Change
			5559.00	
	01/31/11	89.34	5469.66	-0.36
	02/28/11	89.72	5469.28	-0.38
	03/28/11	90.03	5468.97	-0.31
	04/27/11	90.22	5468.78	-0.19
	05/25/11	90.30	5468.70	-0.08
	06/30/11	90.05	5468.95	0.25
	07/28/11	90.02	5468.98	0.03
	08/31/11	89.45	5469.55	0.57
	09/30/11	89.06	5469.94	0.39
	10/28/11	88.89	5470.11	0.17
	11/29/11	88.54	5470.46	0.35
	12/30/11	88.12	5470.88	0.42
Annual WL Change				0.86
	01/31/12	88.42	5470.58	-0.30
	02/28/12	88.39	5470.61	0.03
	03/29/12	88.65	5470.35	-0.26
	04/30/12	88.60	5470.40	0.05
	05/30/12	89.18	5469.82	-0.58
	06/27/12	NA		
	07/30/12	NA		
	08/31/12	NA		
	09/27/12	89.87	5469.13	-0.69
	10/30/12	89.85	5469.15	0.02
	11/29/12	89.82	5469.18	0.03
	12/27/12	89.89	5469.11	-0.07
Annual WL Change				-1.77
	01/30/13	90.08	5468.92	-0.19
	02/27/13	90.22	5468.78	-0.14
	03/25/13	90.31	5468.69	-0.09
	04/26/13	90.45	5468.55	-0.14
	05/31/13	91.18	5467.82	-0.73
	06/26/13	91.45	5467.55	-0.27
	07/30/13	91.20	5467.80	0.25
	08/30/13	92.06	5466.94	-0.86
	09/27/13	92.21	5466.79	-0.15
	10/31/13	92.15	5466.85	0.06
	11/27/13	92.04	5466.96	0.11
	12/30/13	92.07	5466.93	-0.03
Annual WL Change				-2.18
	01/30/14	92.29	5466.71	-0.22
	02/25/14	92.31	5466.69	-0.02
	03/01/14			
	04/01/14			
	05/01/14			
	06/01/14			
	07/01/14			
	08/01/14			
	09/01/14			
	10/01/14			
	11/01/14			
	12/01/14			
Annual WL Change				-0.24

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	150401 GS-41S			150402 GS-41D			150409 GS-44S		
	SWL	ELEV.	Mo. Diff (ft)	SWL	ELEV.	Mo. Diff	SWL	ELEV.	Mo. Diff
		5491.90			5491.30	5491.39		5476.20	5478.45
01/30/12	32.81	5459.09	-0.27	32.82	5458.57	-0.25	20.17	5458.28	-0.13
02/27/12	33.14	5458.76	-0.33	33.09	5458.30	-0.27	20.31	5458.14	-0.14
03/28/12	33.00	5458.90	0.14	32.89	5458.50	0.20	20.29	5458.16	0.02
04/27/12	32.92	5458.98	0.08	32.80	5458.59	0.09	20.21	5458.24	0.08
05/31/12	32.85	5459.05	0.07	32.80	5458.59	0.00	20.18	5458.27	0.03
07/02/12	32.84	5459.06	0.01	32.80	5458.59	0.00	19.96	5458.49	0.22
07/27/12	33.23	5458.67	-0.39	33.32	5458.07	-0.52	19.74	5458.71	0.22
08/29/12	33.57	5458.33	-0.34	33.42	5457.97	-0.10	19.98	5458.47	-0.24
09/26/12	33.17	5458.73	0.40	33.12	5458.27	0.30	19.93	5458.52	0.05
10/31/12	33.29	5458.61	-0.12	33.34	5458.05	-0.22	20.19	5458.26	-0.26
12/03/12	33.55	5458.35	-0.26	33.54	5457.85	-0.20	20.43	5458.02	-0.24
12/26/12	33.56	5458.34	-0.01	33.60	5457.79	-0.06	20.60	5457.85	-0.17
Yearly Change			-1.02			-1.03			-0.56
01/28/13	33.82	5458.08	-0.26	33.83	5457.56	-0.23	20.86	5457.59	-0.26
03/01/13	34.08	5457.82	-0.26	34.08	5457.31	-0.25	21.02	5457.43	-0.16
03/26/13	34.12	5457.78	-0.04	34.10	5457.29	-0.02	21.09	5457.36	-0.07
04/29/13	34.30	5457.60	-0.18	34.29	5457.10	-0.19	21.28	5457.17	-0.19
05/31/13	34.54	5457.36	-0.24	34.47	5456.92	-0.18	21.43	5457.02	-0.15
06/26/13	34.45	5457.45	0.09	34.37	5457.02	0.10	21.21	5457.24	0.22
07/27/13	34.38	5457.52	0.07	34.33	5457.06	0.04	21.08	5457.37	0.13
08/28/13	34.24	5457.66	0.14	34.21	5457.18	0.12	20.91	5457.54	0.17
09/26/13	34.14	5457.76	0.10	34.11	5457.28	0.10	20.77	5457.68	0.14
10/30/13	33.96	5457.94	0.18	33.99	5457.40	0.12	20.63	5457.82	0.14
11/25/13	34.07	5457.83	-0.11	34.13	5457.26	-0.14	20.87	5457.58	-0.24
12/30/13	34.28	5457.62	-0.21	34.35	5457.04	-0.22	21.25	5457.20	-0.38
Yearly Change			-0.72			-0.75			-0.65
01/30/14	34.56	5457.34	-0.28	34.61	5456.78	-0.26	21.55	5456.90	-0.30
02/25/14	34.76	5457.14	-0.20	34.81	5456.58	-0.20	21.76	5456.69	-0.21
03/01/14									
04/01/14									
05/01/14									
06/01/14									
07/01/14									
08/01/14									
09/01/14									
10/01/14									
11/01/14									
12/01/14									
Yearly Change			-0.48			-0.46			-0.51

Measuring point elevations changed October 2008 for wells GS-44S, GS-44D, GS-46S, and GS-46D

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	150411 GS-44D			150412 GS-46S			150413 GS-46D		
	SWL	ELEV.	Mo. Diff	SWL	ELEV.	Mo. Diff	SWL	ELEV.	Mo. Diff
		5476.20	5478.48		5483.80	5486.18		5484.00	5486.32
01/30/12	20.90	5457.58	-0.12	24.91	5461.27	-0.09	24.70	5461.62	-0.08
02/27/12	21.05	5457.43	-0.15	25.04	5461.14	-0.13	24.82	5461.50	-0.12
03/28/12	20.98	5457.50	0.07	25.10	5461.08	-0.06	24.88	5461.44	-0.06
04/27/12	20.91	5457.57	0.07	25.13	5461.05	-0.03	24.92	5461.40	-0.04
05/31/12	20.92	5457.56	-0.01	25.15	5461.03	-0.02	25.00	5461.32	-0.08
07/02/12	20.80	5457.68	0.12	25.10	5461.08	0.05	25.00	5461.32	0.00
07/27/12	20.74	5457.74	0.06	24.93	5461.25	0.17	24.91	5461.41	0.09
08/29/12	20.90	5457.58	-0.16	25.02	5461.16	-0.09	24.99	5461.33	-0.08
09/26/12	20.83	5457.65	0.07	24.94	5461.24	0.08	24.86	5461.46	0.13
10/31/12	21.04	5457.44	-0.21	25.11	5461.07	-0.17	25.01	5461.31	-0.15
12/03/12	21.26	5457.22	-0.22	25.39	5460.79	-0.28	25.27	5461.05	-0.26
12/26/12	21.38	5457.10	-0.12	25.56	5460.62	-0.17	25.37	5460.95	-0.10
Yearly Change			-0.60			-0.74			-0.75
01/28/13	21.61	5456.87	-0.23	25.82	5460.36	-0.26	25.60	5460.72	-0.23
03/01/13	21.77	5456.71	-0.16	26.12	5460.06	-0.30	25.97	5460.35	-0.37
03/26/13	21.78	5456.70	-0.01	26.31	5459.87	-0.19	26.12	5460.20	-0.15
04/29/13	22.01	5456.47	-0.23	26.59	5459.59	-0.28	26.38	5459.94	-0.26
05/31/13	22.15	5456.33	-0.14	26.88	5459.30	-0.29	26.73	5459.59	-0.35
06/26/13	22.00	5456.48	0.15	26.88	5459.30	0.00	26.74	5459.58	-0.01
07/27/13	21.96	5456.52	0.04	26.74	5459.44	0.14	26.70	5459.62	0.04
08/28/13	21.79	5456.69	0.17	26.47	5459.71	0.27	26.46	5459.86	0.24
09/26/13	21.62	5456.86	0.17	26.31	5459.87	0.16	26.29	5460.03	0.17
10/30/13	21.54	5456.94	0.08	26.11	5460.07	0.20	26.12	5460.20	0.17
11/25/13	21.73	5456.75	-0.19	26.28	5459.90	-0.17	26.22	5460.10	-0.10
12/30/13	22.03	5456.45	-0.30	26.57	5459.61	-0.29	26.47	5459.85	-0.25
Yearly Change			-0.65			-1.01			-1.10
01/30/14	22.28	5456.20	-0.25	26.89	5459.29	-0.32	26.77	5459.55	-0.30
02/25/14	22.50	5455.98	-0.22	27.12	5459.06	-0.23	26.99	5459.33	-0.22
03/01/14									
04/01/14									
05/01/14									
06/01/14									
07/01/14									
08/01/14									
09/01/14									
10/01/14									
11/01/14									
12/01/14									
Yearly Change			-0.47			-0.55			-0.52

Measuring point elevations changed October 2008 for wells GS-44S, GS-44D, GS-46S, and GS-46D

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	137598 AMW-8			247722 AMW-20			166182 AMW-22		
	SWL	ELEV.	Mo. Diff	SWL	Elev	Mo. Diff	SWL	ELEV.	Mo. Diff
		5496.34	5496.05	5486.78	5487.27	(ft)		5497.42	(ft)
01/30/12	34.60	5461.45	0.07	20.79	5466.48	-0.29	35.57	5461.85	0.16
02/27/12	34.66	5461.39	-0.06	20.46	5466.81	0.33	35.60	5461.82	-0.03
03/28/12	34.65	5461.40	0.01	20.28	5466.99	0.18	35.62	5461.80	-0.02
04/27/12	34.57	5461.48	0.08	19.86	5467.41	0.42	35.59	5461.83	0.03
05/31/12	34.86	5461.19	-0.29	23.09	5464.18	-3.23	35.72	5461.70	-0.13
07/02/12	35.18	5460.87	-0.32	24.58	5462.69	-1.49	36.04	5461.38	-0.32
07/27/12	35.70	5460.35	-0.52	25.25	5462.02	-0.67	36.24	5461.18	-0.20
08/29/12	36.57	5459.48	-0.87	25.62	5461.65	-0.37	36.50	5460.92	-0.26
09/26/12	36.25	5459.80	0.32	26.25	5461.02	-0.63	36.61	5460.81	-0.11
10/31/12	36.38	5459.67	-0.13	26.69	5460.58	-0.44	36.71	5460.71	-0.10
12/03/12	36.67	5459.38	-0.29	26.85	5460.42	-0.16	36.96	5460.46	-0.25
12/26/12	36.75	5459.30	-0.08	27.11	5460.16	-0.26	37.16	5460.26	-0.20
Yearly Change			-2.08			-6.61			-1.43
01/28/13	36.99	5459.06	-0.24	27.49	5459.78	-0.38	37.37	5460.05	-0.21
03/01/13	37.26	5458.79	-0.27	27.72	5459.55	-0.23	37.69	5459.73	-0.32
03/26/13	37.38	5458.67	-0.12	27.79	5459.48	-0.07	37.85	5459.57	-0.16
04/29/13	37.60	5458.45	-0.22	28.13	5459.14	-0.34	38.16	5459.26	-0.31
05/31/13	37.94	5458.11	-0.34	28.16	5459.11	-0.03	38.51	5458.91	-0.35
06/26/13	37.98	5458.07	-0.04	28.12	5459.15	0.04	38.66	5458.76	-0.15
07/27/13	38.02	5458.03	-0.04	28.06	5459.21	0.06	38.82	5458.60	-0.16
08/28/13	37.90	5458.15	0.12	27.71	5459.56	0.35	38.76	5458.66	0.06
09/26/13	37.83	5458.22	0.07	27.34	5459.93	0.37	38.70	5458.72	0.06
10/30/13	37.60	5458.45	0.23	27.33	5459.94	0.01	37.81	5459.61	0.89
11/25/13	37.61	5458.44	-0.01	27.56	5459.71	-0.23	38.47	5458.95	-0.66
12/30/13	37.80	5458.25	-0.19	28.13	5459.14	-0.57	38.57	5458.85	-0.10
Yearly Change			-1.05			-1.02			-1.41
01/30/14	38.03	5458.02	-0.23	28.47	5458.80	-0.34	38.68	5458.74	-0.11
02/25/14	38.23	5457.82	-0.20	28.57	5458.70	-0.10	38.89	5458.53	-0.21
03/01/14									
04/01/14									
05/01/14									
06/01/14									
07/01/14									
08/01/14									
09/01/14									
10/01/14									
11/01/14									
12/01/14									
Yearly Change			-0.43			-0.44			-0.32

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	222920 BMF05-1			222921 BMF05-2			224152 BMF05-3		
	SWL	ELEV.	Mo. Diff (ft)	SWL	ELEV.	Mo. Diff (ft)	SWL	ELEV. ¹⁾	Mo. Diff (ft)
		5481.95			5504.96		5501.29	5500.17	
01/30/12	19.57	5462.38	0.02	39.88	5465.08	0.03	35.00	5465.17	-0.11
02/27/12	19.62	5462.33	-0.05	40.00	5464.96	-0.12	35.18	5464.99	-0.18
03/28/12	19.55	5462.40	0.07	39.99	5464.97	0.01	35.32	5464.85	-0.14
04/27/12	19.47	5462.48	0.08	40.15	5464.81	-0.16	35.51	5464.66	-0.19
05/31/12	20.13	5461.82	-0.66	40.28	5464.68	-0.13	35.64	5464.53	-0.13
07/02/12	20.74	5461.21	-0.61	40.53	5464.43	-0.25	35.85	5464.32	-0.21
07/27/12	21.26	5460.69	-0.52	40.59	5464.37	-0.06	35.84	5464.33	0.01
08/29/12	21.68	5460.27	-0.42	40.64	5464.32	-0.05	35.52	5464.65	0.32
09/26/12	21.63	5460.32	0.05	40.59	5464.37	0.05	35.38	5464.79	0.14
10/31/12	21.91	5460.04	-0.28	40.51	5464.45	0.08	35.32	5464.85	0.06
12/03/12	22.19	5459.76	-0.28	40.88	5464.08	-0.37	35.55	5464.62	-0.23
12/26/12	22.35	5459.60	-0.16	40.92	5464.04	-0.04	35.64	5464.53	-0.09
Yearly Change			-2.76			-1.01			-0.75
01/28/13	22.58	5459.37	-0.23	41.15	5463.81	-0.23	35.84	5464.33	-0.20
03/01/13	22.93	5459.02	-0.35	41.61	5463.35	-0.46	36.27	5463.90	-0.43
03/26/13	23.06	5458.89	-0.13	41.62	5463.34	-0.01	36.21	5463.96	0.06
04/29/13	23.30	5458.65	-0.24	41.88	5463.08	-0.26	36.35	5463.82	-0.14
05/31/13	23.59	5458.36	-0.29	42.44	5462.52	-0.56	36.99	5463.18	-0.64
06/26/13	23.61	5458.34	-0.02	42.65	5462.31	-0.21	37.17	5463.00	-0.18
07/27/13	23.63	5458.32	-0.02	42.88	5462.08	-0.23	37.41	5462.76	-0.24
08/28/13	23.42	5458.53	0.21	42.78	5462.18	0.10	37.19	5462.98	0.22
09/26/13	23.29	5458.66	0.13	42.75	5462.21	0.03	37.24	5462.93	-0.05
10/30/13	23.07	5458.88	0.22	42.53	5462.43	0.22	36.67	5463.50	0.57
11/25/13	23.18	5458.77	-0.11	42.47	5462.49	0.06	36.71	5463.46	-0.04
12/30/13	23.46	5458.49	-0.28	42.55	5462.41	-0.08	36.84	5463.33	-0.13
Yearly Change			-1.11			-1.63			-1.20
01/30/14	23.72	5458.23	-0.26	42.69	5462.27	-0.14	37.08	5463.09	-0.24
02/25/14	23.97	5457.98	-0.25	42.89	5462.07	-0.20	37.33	5462.84	-0.25
03/01/14									
04/01/14									
05/01/14									
06/01/14									
07/01/14									
08/01/14									
09/01/14									
10/01/14									
11/01/14									
12/01/14									
Yearly Change			-0.51			-0.34			-0.49

1) Measuring point elevation changed April 2006 when well fitted with surface

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	224153		
	BMF05-4		
	SWL	ELEV.	Mo. Diff
		5542.37	(ft)
01/30/12	71.64	5470.73	0.04
02/27/12	71.94	5470.43	-0.30
03/28/12	72.10	5470.27	-0.16
04/27/12	72.41	5469.96	-0.31
05/31/12	72.59	5469.78	-0.18
07/02/12	72.99	5469.38	-0.40
07/27/12	73.23	5469.14	-0.24
08/29/12	73.31	5469.06	-0.08
09/26/12	73.30	5469.07	0.01
10/31/12	73.21	5469.16	0.09
12/03/12	73.46	5468.91	-0.25
12/26/12	73.39	5468.98	0.07
Yearly Change			-1.71
01/28/13	73.46	5468.91	-0.07
03/01/13	73.87	5468.50	-0.41
03/26/13	73.82	5468.55	0.05
04/29/13	73.99	5468.38	-0.17
05/31/13	74.75	5467.62	-0.76
06/26/13	75.00	5467.37	-0.25
07/27/13	75.44	5466.93	-0.44
08/28/13	75.59	5466.78	-0.15
09/26/13	75.75	5466.62	-0.16
10/30/13	75.55	5466.82	0.20
11/25/13	75.57	5466.80	-0.02
12/30/13	75.49	5466.88	0.08
Yearly Change			-2.10
01/30/14	75.75	5466.62	-0.26
02/25/14	75.69	5466.68	0.06
03/01/14			
04/01/14			
05/01/14			
06/01/14			
07/01/14			
08/01/14			
09/01/14			
10/01/14			
11/01/14			
12/01/14			
Yearly Change			-0.20

ce mount cap.

Montana Bureau of Mines and Geology
 Bedrock Water-Level Elevations
 East Camp Mines and Bedrock Wells
 Site Name/Monthly Elevations

DATE MO/YR (MP Elev)	ANSELMO* SWL (FT)	ELEV (FT)	MO. DIFF (FT)	BELMONT SWL (FT)	ELEV (FT)	MO. DIFF (FT)	BERKELEY ELEV (FT)(1)	PIT (FT)	MO. DIFF (FT)	GRANITE MTN SWL (FT)	ELEV (FT)	MO. DIFF (FT)	KELLEY SWL (FT)	ELEV (FT)	MO. DIFF (FT)	STEWARD SWL (FT)	ELEV (FT)	MO. DIFF (FT)	WELL A SWL (FT)	ELEV (FT)	MO. DIFF (FT)	
	5783.80	5782.10			5604.00						6051.80		5877.52	5905.34	5906.27		5856.45			5525.00	5526.51	
Jan-12	458.47	5323.63	0.39	NA			5300.08	0.58		736.04	5315.76	0.47	594.96	5311.31	-0.58	536.55	5319.90	0.45	211.15	5315.36	0.42	
Feb-12	458.07	5324.03	0.40	NA			5300.50	0.42		735.75	5316.05	0.29	593.52	5312.75	1.44	536.07	5320.38	0.48	210.52	5315.99	0.63	
Mar-12	457.47	5324.63	0.60	NA			5301.13	0.63		735.18	5316.62	0.57	593.00	5313.27	0.52	535.39	5321.06	0.68	209.99	5316.52	0.53	
Apr-12	456.80	5325.30	0.67	NA			5301.92	0.79		734.64	5317.16	0.54	592.41	5313.86	0.59	534.78	5321.67	0.61	209.25	5317.26	0.74	
May-12	456.12	5325.98	0.68	NA			5302.76	0.84		734.09	5317.71	0.55	591.95	5314.32	0.46	534.33	5322.12	0.45	208.79	5317.72	0.46	
Jun-12	455.67	5326.43	0.45	NA			5303.16	0.40		733.69	5318.11	0.40	591.65	5314.62	0.30	534.14	5322.31	0.19	208.91	5317.60	-0.12	
Jul-12	455.32	5326.78	0.35	NA			5303.55	0.39		733.14	5318.66	0.55	591.53	5314.74	0.12	533.77	5322.68	0.37	207.96	5318.55	0.95	
Aug-12	454.91	5327.19	0.41	NA			5304.17	0.62		733.26	5318.54	-0.12	590.58	5315.69	0.95	533.30	5323.15	0.47	207.31	5319.20	0.65	
Sep-12	454.41	5327.69	0.50	NA			5304.63	0.46		732.05	5319.75	1.21	590.38	5315.89	0.20	532.78	5323.67	0.52	206.92	5319.59	0.39	
Oct-12	453.86	5328.24	0.55	NA			5305.23	0.60		731.45	5320.35	0.60	589.62	5316.65	0.76	531.98	5324.47	0.80	206.27	5320.24	0.65	
Nov-12	452.91	5329.19	0.95	NA			5305.82	0.59		730.56	5321.24	0.89	588.60	5317.67	1.02	531.08	5325.37	0.90	205.66	5320.85	0.61	
Dec-12	452.32	5329.78	0.59	NA			5306.24	0.42		730.09	5321.71	0.47	587.96	5318.31	0.64	530.57	5325.88	0.51	205.02	5321.49	0.64	
Yearly Change			6.54					6.74				6.42			6.42			6.43			6.55	
Jan-13	451.95	5330.15	0.37	NA			5307.22	0.98		729.54	5322.26	0.55	587.40	5318.87	0.56	530.00	5326.45	0.57	204.39	5322.12	0.63	
Feb-13	451.01	5331.09	0.94	NA			5308.82	1.60		728.52	5323.28	1.02	586.35	5319.92	1.05	529.33	5327.12	0.67	203.49	5323.02	0.90	
Mar-13	450.66	5331.44	0.35	NA			5309.38	0.56		727.97	5323.83	0.55	585.90	5320.37	0.45	528.81	5327.64	0.52	202.97	5323.54	0.52	
Apr-13	450.03	5332.07	0.63	NA			5309.81	0.43		727.53	5324.27	0.44	585.41	5320.86	0.49	528.30	5328.15	0.51	202.36	5324.15	0.61	
May-13	449.27	5332.83	0.76	NA			5310.48	0.67		726.77	5325.03	0.76	584.83	5321.44	0.58	527.66	5328.79	0.64	201.92	5324.59	0.44	
Jun-13	448.78	5333.32	0.49	NA			5310.89	0.41		726.32	5325.48	0.45	584.49	5321.78	0.34	527.27	5329.18	0.39	201.54	5324.97	0.38	
Jul-13	448.25	5333.85	0.53	NA			5311.38	0.49		726.11	5325.69	0.21	584.00	5322.27	0.49	526.82	5329.63	0.45	201.09	5325.42	0.45	
Aug-13	448.06	5334.04	0.19	NA			5311.89	0.51		725.81	5325.99	0.30	583.80	5322.47	0.20	526.70	5329.75	0.12	200.55	5325.96	0.54	
Sep-13	447.30	5334.80	0.76	NA			5312.59	0.70		724.99	5326.81	0.82	583.00	5323.27	0.80	525.91	5330.54	0.79	200.08	5326.43	0.47	
Oct-13	446.81	5335.29	0.49	NA			5313.10	0.51		724.53	5327.27	0.46	582.45	5323.82	0.55	525.48	5330.97	0.43	199.48	5327.03	0.60	
Nov-13	446.30	5335.80	0.51	NA			5313.69	0.59		724.12	5327.68	0.41	581.85	5324.42	0.60	524.77	5331.68	0.71	199.04	5327.47	0.44	
Dec-13	445.45	5336.65	0.85	NA			5314.36	0.67		723.37	5328.43	0.75	580.98	5325.29	0.87	523.95	5332.50	0.82	198.48	5328.03	0.56	
Yearly Change			6.87					8.12				6.72			6.98			6.62			6.54	
Jan-14	445.07	5337.03	0.38	NA			5314.99	0.63		722.86	5328.94	0.51	580.53	5325.74	0.45	523.49	5332.96	0.46	197.74	5328.77	0.74	
Feb-14	444.51	5337.59	0.56	NA			5315.51	0.52		722.31	5329.49	0.55	579.95	5326.32	0.58	522.94	5333.51	0.55	197.18	5329.33	0.56	
Mar-14																						
Apr-14																						
May-14																						
Jun-14																						
Jul-14																						
Aug-14																						
Sep-14																						
Oct-14																						
Nov-14																						
Dec-14																						
Yearly Change			0.94					1.15				1.06			1.03			1.01			1.30	

* Measuring point elevation changed 3/91.

Dec 1992 Kelley Mine SWL is 1/21/93 measurement.

Kelley Mine measuring point changed 6/99; 11/08 measuring point elevation change.

(1) 12/97 Berkeley Pit water level adjusted based upon Cashell Engineers survey data. Correction lowered water-level 1.11ft.

Montana Bureau of Mines and Geology
 Bedrock Water-Level Elevations
 East Camp Mines and Bedrock Wells
 Site Name/Monthly Elevations

DATE	WELL B	ELEV	MO. DIFF	WELL C	ELEV	MO. DIFF	WELL D-1	ELEV	MO. DIFF	WELL D-2	ELEV	MO. DIFF	WELL E	ELEV	MO. DIFF	WELL F	ELEV	MO. DIFF	WELL G	ELEV	MO. DIFF
MO/YR	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)
(MP Elev)		5557.82			5578.00			5591.54			5579.50			5562.40			5487.48			5537.56	
Jan-12	170.81	5387.01	0.32	265.89	5312.11	0.39	279.23	5312.31	0.27	267.70	5311.80	0.35	183.18	5379.22	-0.01	30.97	5456.51	-0.10	214.67	5322.89	0.37
Feb-12	170.21	5387.61	0.60	265.34	5312.66	0.55	278.63	5312.91	0.60	267.14	5312.36	0.56	182.91	5379.49	0.27	31.02	5456.46	-0.05	214.15	5323.41	0.52
Mar-12	169.92	5387.90	0.29	264.78	5313.22	0.56	278.15	5313.39	0.48	266.04	5313.46	1.10	182.81	5379.59	0.10	31.11	5456.37	-0.09	213.67	5323.89	0.48
Apr-12	169.33	5388.49	0.59	264.25	5313.75	0.53	277.29	5314.25	0.86	265.55	5313.95	0.49	182.62	5379.78	0.19	30.88	5456.60	0.23	213.09	5324.47	0.58
May-12	169.04	5388.78	0.29	263.91	5314.09	0.34	277.06	5314.48	0.23	265.60	5313.90	-0.05	182.56	5379.84	0.06	31.03	5456.45	-0.15	212.71	5324.85	0.38
Jun-12	168.65	5389.17	0.39	263.81	5314.19	0.10	276.53	5315.01	0.53	264.99	5314.51	0.61	182.37	5380.03	0.19	31.34	5456.14	-0.31	212.63	5324.93	0.08
Jul-12	167.92	5389.90	0.73	263.37	5314.63	0.44	275.92	5315.62	0.61	264.44	5315.06	0.55	182.21	5380.19	0.16	31.84	5455.64	-0.50	212.31	5325.25	0.32
Aug-12	167.28	5390.54	0.64	262.62	5315.38	0.75	275.31	5316.23	0.61	263.88	5315.62	0.56	181.81	5380.59	0.40	31.98	5455.50	-0.14	211.56	5326.00	0.75
Sep-12	167.04	5390.78	0.24	262.27	5315.73	0.35	275.00	5316.54	0.31	263.47	5316.03	0.41	181.68	5380.72	0.13	31.99	5455.49	-0.01	211.19	5326.37	0.37
Oct-12	166.69	5391.13	0.35	261.61	5316.39	0.66	274.37	5317.17	0.63	262.92	5316.58	0.55	181.32	5381.08	0.36	32.32	5455.16	-0.33	210.62	5326.94	0.57
Nov-12	166.48	5391.34	0.21	261.06	5316.94	0.55	273.75	5317.79	0.62	262.27	5317.23	0.65	181.08	5381.32	0.24	32.46	5455.02	-0.14	210.09	5327.47	0.53
Dec-12	165.89	5391.93	0.59	260.26	5317.74	0.80	273.13	5318.41	0.62	262.61	5316.89	-0.34	180.71	5381.69	0.37	32.59	5454.89	-0.13	209.37	5328.19	0.72
Yearly Change			5.24			6.02			6.37			5.44			2.46			-1.72			5.67
Jan-13	165.31	5392.51	0.58	259.66	5318.34	0.60	272.52	5319.02	0.61	261.00	5318.50	1.61	180.44	5381.96	0.27	32.90	5454.58	-0.31	208.74	5328.82	0.63
Feb-13	164.65	5393.17	0.66	258.96	5319.04	0.70	271.94	5319.60	0.58	260.35	5319.15	0.65	180.38	5382.02	0.06	33.26	5454.22	-0.36	208.25	5329.31	0.49
Mar-13	164.51	5393.31	0.14	258.47	5319.53	0.49	271.51	5320.03	0.43	259.88	5319.62	0.47	180.11	5382.29	0.27	33.34	5454.14	-0.08	207.64	5329.92	0.61
Apr-13	166.99	5390.83	-2.48	257.91	5320.09	0.56	271.03	5320.51	0.48	259.26	5320.24	0.62	179.75	5382.65	0.36	33.60	5453.88	-0.26	207.08	5330.48	0.56
May-13	163.24	5394.58	3.75	257.65	5320.35	0.26	270.08	5321.46	0.95	258.57	5320.93	0.69	179.52	5382.88	0.23	34.06	5453.42	-0.46	206.63	5330.93	0.45
Jun-13	162.90	5394.92	0.34	257.04	5320.96	0.61	269.84	5321.70	0.24	258.15	5321.35	0.42	179.31	5383.09	0.21	34.10	5453.38	-0.04	206.39	5331.17	0.24
Jul-13	162.41	5395.41	0.49	256.57	5321.43	0.47	268.92	5322.62	0.92	257.22	5322.28	0.93	178.88	5383.52	0.43	34.20	5453.28	-0.10	205.81	5331.75	0.58
Aug-13	161.92	5395.90	0.49	256.25	5321.75	0.32	268.84	5322.70	0.08	257.42	5322.08	-0.20	178.45	5383.95	0.43	34.08	5453.40	0.12	205.39	5332.17	0.42
Sep-13	161.31	5396.51	0.61	255.62	5322.38	0.63	268.29	5323.25	0.55	256.79	5322.71	0.63	177.90	5384.50	0.55	33.96	5453.52	0.12	204.81	5332.75	0.58
Oct-13	160.51	5397.31	0.80	254.82	5323.18	0.80	267.61	5323.93	0.68	256.11	5323.39	0.68	177.49	5384.91	0.41	33.70	5453.78	0.26	204.11	5333.45	0.70
Nov-13	160.11	5397.71	0.40	254.52	5323.48	0.30	267.08	5324.46	0.53	253.86	5325.64	2.25	177.32	5385.08	0.17	33.64	5453.84	0.06	203.95	5333.61	0.16
Dec-13	159.23	5398.59	0.88	254.02	5323.98	0.50	266.62	5324.92	0.46	255.20	5324.30	-1.34	176.97	5385.43	0.35	33.79	5453.69	-0.15	203.30	5334.26	0.65
Yearly Change			6.66			6.24			6.51			7.41			3.74			-1.20			6.07
Jan-14	158.45	5399.37	0.78	253.33	5324.67	0.69	265.72	5325.82	0.90	254.26	5325.24	0.94	176.22	5386.18	0.75	34.14	5453.34	-0.35	202.64	5334.92	0.66
Feb-14	157.94	5399.88	0.51	252.70	5325.30	0.63	265.23	5326.31	0.49	253.78	5325.72	0.48	175.81	5386.59	0.41	34.17	5453.31	-0.03	202.05	5335.51	0.59
Mar-14																					
Apr-14																					
May-14																					
Jun-14																					
Jul-14																					
Aug-14																					
Sep-14																					
Oct-14																					
Nov-14																					
Dec-14																					
Yearly Change			1.29			1.32			1.39			1.42			1.16			-0.38			1.25

SWL - Static water-level, in feet, below ground surface
 ELEV - Water-level elevation, in feet USGS Datum
 NA - No water-level available due to access problems or obstructions
 2003eastcmp-bdr-sites.xls

Montana Bureau of Mines and Geology
 Bedrock Water-Level Elevations
 East Camp Mines and Bedrock Wells
 Site Name/Monthly Elevations

DATE	WELL H	ELEV	MO. DIFF	WELL J	ELEV	MO. DIFF	DDH-1	ELEV	MO. DIFF	DDH-2	ELEV	MO. DIFF	DDH-4	ELEV	MO. DIFF	DDH-5	ELEV	MO. DIFF	DDH-8	ELEV	MO. DIFF
MO/YR	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)	(FT)	(FT)	SWL (FT)****	(FT)	(FT)	SWL (FT)	(FT)	(FT)
(MP Elev)		5572.82		5530.03	5530.99			5509.60			5583.60			5545.41			5519.56	5523.75		5518.40	
Jan-12	Plugged&abandoned			226.81	5304.18	0.48	plugged			274.58	5309.02	0.51				Plugged&abandoned			153.14	5365.26	0.28
Feb-12	Plugged&abandoned			226.29	5304.70	0.52	plugged			274.02	5309.58	0.56				Plugged&abandoned			152.73	5365.67	0.41
Mar-12	Plugged&abandoned			225.60	5305.39	0.69	plugged			273.45	5310.15	0.57				Plugged&abandoned			152.43	5365.97	0.30
Apr-12	Plugged&abandoned			224.92	5306.07	0.68	plugged			272.74	5310.86	0.71				Plugged&abandoned			151.99	5366.41	0.44
May-12	Plugged&abandoned			224.31	5306.68	0.61	plugged			272.18	5311.42	0.56				Plugged&abandoned			151.73	5366.67	0.26
Jun-12	Plugged&abandoned			224.29	5306.70	0.02	plugged			271.69	5311.91	0.49				Plugged&abandoned			151.52	5366.88	0.21
Jul-12	Plugged&abandoned			223.35	5307.64	0.94	plugged			271.03	5312.57	0.66				Plugged&abandoned			151.26	5367.14	0.26
Aug-12	Plugged&abandoned			222.86	5308.13	0.49	plugged			270.59	5313.01	0.44				Plugged&abandoned			150.81	5367.59	0.45
Sep-12	Plugged&abandoned			222.44	5308.55	0.42	plugged			270.17	5313.43	0.42				Plugged&abandoned			150.93	5367.47	-0.12
Oct-12	Plugged&abandoned			221.71	5309.28	0.73	plugged			269.45	5314.15	0.72				Plugged&abandoned			150.61	5367.79	0.32
Nov-12	Plugged&abandoned			220.93	5310.06	0.78	plugged			268.71	5314.89	0.74				Plugged&abandoned			150.65	5367.75	-0.04
Dec-12	Plugged&abandoned			220.26	5310.73	0.67	plugged			267.99	5315.61	0.72				Plugged&abandoned			150.91	5367.49	-0.26
Yearly Change			0.00			7.03			0.00			7.10			0.00			0.00			2.51
Jan-13	Plugged&abandoned			219.63	5311.36	0.63	plugged			267.41	5316.19	0.58				Plugged&abandoned			150.56	5367.84	0.35
Feb-13	Plugged&abandoned			218.49	5312.50	1.14	plugged			266.22	5317.38	1.19				Plugged&abandoned			150.27	5368.13	0.29
Mar-13	Plugged&abandoned			218.04	5312.95	0.45	plugged			265.77	5317.83	0.45				Plugged&abandoned			149.87	5368.53	0.40
Apr-13	Plugged&abandoned			217.56	5313.43	0.48	plugged			265.28	5318.32	0.49				Plugged&abandoned			149.98	5368.42	-0.11
May-13	Plugged&abandoned			216.87	5314.12	0.69	plugged			264.51	5319.09	0.77				Plugged&abandoned			149.77	5368.63	0.21
Jun-13	Plugged&abandoned			216.69	5314.30	0.18	plugged			264.23	5319.37	0.28				Plugged&abandoned			149.64	5368.76	0.13
Jul-13	Plugged&abandoned			216.25	5314.74	0.44	plugged			263.95	5319.65	0.28				Plugged&abandoned			149.49	5368.91	0.15
Aug-13	Plugged&abandoned			215.98	5315.01	0.27	plugged			263.60	5320.00	0.35				Plugged&abandoned			148.87	5369.53	0.62
Sep-13	Plugged&abandoned			215.39	5315.60	0.59	plugged			263.05	5320.55	0.55				Plugged&abandoned			148.71	5369.69	0.16
Oct-13	Plugged&abandoned			214.65	5316.34	0.74	plugged			262.30	5321.30	0.75				Plugged&abandoned			148.59	5369.81	0.12
Nov-13	Plugged&abandoned			214.06	5316.93	0.59	plugged			261.70	5321.90	0.60				Plugged&abandoned			148.32	5370.08	0.27
Dec-13	Plugged&abandoned			213.56	5317.43	0.50	plugged			261.23	5322.37	0.47				Plugged&abandoned			147.83	5370.57	0.49
Yearly Change						6.70						6.76									3.08
Jan-14	Plugged&abandoned			212.84	5318.15	0.72	plugged			260.48	5323.12	0.75				Plugged&abandoned			147.66	5370.74	0.17
Feb-14	Plugged&abandoned			212.23	5318.76	0.61	plugged			259.88	5323.72	0.60				Plugged&abandoned			147.33	5371.07	0.33
Mar-14																					
Apr-14																					
May-14																					
Jun-14																					
Jul-14																					
Aug-14																					
Sep-14																					
Oct-14																					
Nov-14																					
Dec-14																					
Yearly Change						1.33						1.35									0.50

**** Measuring point elevation changed 7/96, due to reclamation activities.

Montana Bureau of Mines and Geology

Bedrock Water-Level Elevations

East Camp Mines and Bedrock Wells

Site Name/Monthly Elevations

DATE MO/YR (MP Elev)	LEXINGTON SWL (FT)	ELEV (FT)	MO. DIFF (FT)	MISSOULA SWL (FT)	ELEV (FT)	MO. DIFF (FT)	PILOT BUTTE SWL (FT)	ELEV (FT)	MO. DIFF (FT)	BELMONT 1 SWL (FT)	ELEV (FT)	MO. DIFF (FT)	BELMONT 2 SWL (FT)	ELEV (FT)	MO. DIFF (FT)
		6216.59			6030.00			6056.98			5600.82			5602.72	
Jan-12	894.86	5321.73	0.23	NA			730.39	5326.59	0.48	95.53	5505.29	0.65	289.58	5313.14	0.49
Feb-12	893.91	5322.68	0.95	NA			730.06	5326.92	0.33	95.89	5504.93	-0.36	289.31	5313.41	0.27
Mar-12	893.26	5323.33	0.65	NA			729.72	5327.26	0.34	96.32	5504.50	-0.43	288.71	5314.01	0.60
Apr-12	892.63	5323.96	0.63	NA			728.95	5328.03	0.77	96.10	5504.72	0.22	288.13	5314.59	0.58
May-12	892.04	5324.55	0.59	NA			728.35	5328.63	0.60	95.68	5505.14	0.42	286.94	5315.78	1.19
Jun-12	891.64	5324.95	0.40	NA			728.09	5328.89	0.26	94.64	5506.18	1.04	286.88	5315.84	0.06
Jul-12	891.20	5325.39	0.44	NA			727.65	5329.33	0.44	95.27	5505.55	-0.63	286.46	5316.26	0.42
Aug-12	890.75	5325.84	0.45	NA			727.25	5329.73	0.40	96.60	5504.22	-1.33	286.06	5316.66	0.40
Sep-12	890.26	5326.33	0.49	NA			726.75	5330.23	0.50	96.58	5504.24	0.02	285.67	5317.05	0.39
Oct-12	889.54	5327.05	0.72	NA			726.25	5330.73	0.50	98.28	5502.54	-1.70	284.78	5317.94	0.89
Nov-12	888.52	5328.07	1.02	NA			725.30	5331.68	0.95	100.73	5500.09	-2.45	283.99	5318.73	0.79
Dec-12	888.01	5328.58	0.51	NA			724.91	5332.07	0.39	104.63	5496.19	-3.90	283.40	5319.32	0.59
Yearly Change			7.08			0.00			5.96			-8.45			6.67
Jan-13	887.48	5329.11	0.53	NA			724.29	5332.69	0.62	109.24	5491.58	-4.61	282.92	5319.80	0.48
Feb-13	886.41	5330.18	1.07	NA			723.42	5333.56	0.87	112.71	5488.11	-3.47	282.17	5320.55	0.75
Mar-13	885.91	5330.68	0.50	NA			722.78	5334.20	0.64	116.93	5483.89	-4.22	281.24	5321.48	0.93
Apr-13	885.60	5330.99	0.31	NA			722.44	5334.54	0.34	121.11	5479.71	-4.18	280.94	5321.78	0.30
May-13	884.89	5331.70	0.71	NA			721.71	5335.27	0.73	125.00	5475.82	-3.89	280.34	5322.38	0.60
Jun-13	884.48	5332.11	0.41	NA			721.26	5335.72	0.45	121.89	5478.93	3.11	279.98	5322.74	0.36
Jul-13	884.02	5332.57	0.46	NA			721.01	5335.97	0.25	121.12	5479.70	0.77	279.54	5323.18	0.44
Aug-13	883.79	5332.80	0.23	NA			720.65	5336.33	0.36	118.48	5482.34	2.64	279.22	5323.50	0.32
Sep-13	882.98	5333.61	0.81	NA			720.03	5336.95	0.62	103.35	5497.47	15.13	278.64	5324.08	0.58
Oct-13	882.50	5334.09	0.48	NA			719.42	5337.56	0.61	89.41	5511.41	13.94	278.01	5324.71	0.63
Nov-13	881.84	5334.75	0.66	NA			718.97	5338.01	0.45	90.57	5510.25	-1.16	277.26	5325.46	0.75
Dec-13	881.16	5335.43	0.68	NA			718.14	5338.84	0.83	98.58	5502.24	-8.01	276.56	5326.16	0.70
Yearly Change			6.85						6.77			6.05			6.84
Jan-14	880.69	5335.90	0.47	NA			717.74	5339.24	0.40	102.14	5498.68	-3.56	276.00	5326.72	0.56
Feb-14	880.09	5336.50	0.60	NA			717.19	5339.79	0.55	107.04	5493.78	-4.90	275.39	5327.33	0.61
Mar-14															
Apr-14															
May-14															
Jun-14															
Jul-14															
Aug-14															
Sep-14															
Oct-14															
Nov-14															
Dec-14															
Yearly Change			1.07						0.95			-8.46			1.17

SWL - Static water-level, in feet, below ground surface
 ELEV - Water-level elevation, in feet USGS Datum
 NA - No water-level available due to access problems or obstructions
 2003eastcmp-bdr-sites.xls

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring**

GWIC ID	Agency	4647 Parrot Park Well			157638 Belmont Well #1			4644 Hebgen Park Well			
		Date (mm/dd/yy)	SWL(ft) (mp=ct)	Elev(ft) 5520.66	Diff (ft)**	SWL(ft) (mp=ct)	Elev(ft) 5600.82	Diff (ft)**	SWL(ft) (mp=ct)	Elev(ft) 5516.15	Diff (ft)**
MBMG		01/30/12	119.63	5401.03	-1.34	95.53	5505.29	0.65	27.64	5488.51	-0.92
MBMG		02/27/12	120.53	5400.13	-0.90	95.89	5504.93	-0.36	28.63	5487.52	-0.99
MBMG		03/28/12	121.36	5399.30	-0.83	96.32	5504.50	-0.43	29.52	5486.63	-0.89
MBMG		04/27/12	122.03	5398.63	-0.67	96.10	5504.72	0.22	30.24	5485.91	-0.72
MBMG		05/31/12	122.63	5398.03	-0.60	95.68	5505.14	0.42	30.71	5485.44	-0.47
MBMG		07/02/12	123.35	5397.31	-0.72	94.64	5506.18	1.04	30.68	5485.47	0.03
MBMG		07/27/12	123.62	5397.04	-0.27	95.27	5505.55	-0.63	30.60	5485.55	0.08
MBMG		08/28/12	122.92	5397.74	0.70	96.60	5504.22	-1.33	29.65	5486.50	0.95
MBMG		09/26/12	121.98	5398.68	0.94	96.58	5504.24	0.02	29.41	5486.74	0.24
MBMG		10/29/12	121.16	5399.50	0.82	98.28	5502.54	-1.70	29.44	5486.71	-0.03
MBMG		11/27/12	121.22	5399.44	-0.06	100.73	5500.09	-2.45	29.78	5486.37	-0.34
MBMG		12/26/12	121.57	5399.09	-0.35	104.63	5496.19	-3.90	30.04	5486.11	-0.26
MBMG		01/28/13	122.12	5398.54	-0.55	109.24	5491.58	-4.61	30.52	5485.63	-0.48
MBMG		02/25/13	122.58	5398.08	-0.46	112.71	5488.11	-3.47	31.00	5485.15	-0.48
MBMG		03/26/13	122.96	5397.70	-0.38	116.93	5483.89	-4.22	31.45	5484.70	-0.45
MBMG		04/26/13	123.41	5397.25	-0.45	121.11	5479.71	-4.18	31.99	5484.16	-0.54
MBMG		05/30/13	124.11	5396.55	-0.70	125.00	5475.82	-3.89	32.52	5483.63	-0.53
MBMG		06/26/13	124.42	5396.24	-0.31	121.89	5478.93	3.11	32.72	5483.43	-0.20
MBMG		07/29/13	124.70	5395.96	-0.28	121.12	5479.70	0.77	32.93	5483.22	-0.21
MBMG		08/28/13	124.69	5395.97	0.01	118.48	5482.34	2.64	32.45	5483.70	0.48
MBMG		09/26/13	122.16	5398.50	2.53	103.35	5497.47	15.13	32.18	5483.97	0.27
MBMG		10/30/13	119.09	5401.57	3.07	89.41	5511.41	13.94	31.81	5484.34	0.37
MBMG		11/25/13	118.84	5401.82	0.25	90.57	5510.25	-1.16	30.69	5485.46	1.12
MBMG		12/30/13	118.63	5402.03	0.21	98.58	5502.24	-8.01	30.28	5485.87	0.41
MBMG		01/30/14	119.60	5401.06	-0.97	102.14	5498.68	-3.56	30.19	5485.96	0.09
MBMG		02/25/14	120.31	5400.35	-0.71	107.04	5493.78	-4.90	30.96	5485.19	-0.77
TOTAL CHANGE ==>				FROM 11/94==>	0.20		FROM 8/96 ==>	-18.12			-9.54

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring Data
West Camp Ground-Water Sites**

GWIC ID	WCPW-1 184133	Chester Steele 4773		WC Extraction Well Data									
				SWL (gs)	Elev. (ft)	Change	Reading	Diff	Daily Avg. Pump Rate	g Rate	Monthly Average Pumpin	Monthly Total	Monthly Total
Date	SWL (gs)	Elev. (ft)	Change	SWL (gs)	Elev. (ft)	Change	Reading	Diff	Daily Avg. Pump Rate	g Rate	Monthly Average Pumpin	Monthly Total	Monthly Total
		5471.35		(ft)	5629.57	(ft)		(gallons)	(gallons)	(gpm)	(gpm)	(Gallons)	(Acre-Ft)
01/25/10	NA			47.79	5581.78	-2.64	82,489,100	8,529,500	250,868	174	174	8,529,500	26.18
02/26/10	NA			50.30	5579.27	-2.51	90,089,800	7,600,700	237,522	165	165	7,600,700	23.33
03/31/10	NA			52.62	5576.95	-2.32	97,859,800	7,770,000	235,455	164	164	7,770,000	23.85
05/03/10	NA			52.83	5576.74	-0.21	104,808,200	6,948,400	210,558	146	146	6,948,400	21.32
06/02/10	NA			52.90	5576.67	-0.07	10,179,700	5,371,500	179,050	124	124	5,371,500	16.48
06/29/10	NA			55.33	5574.24	-2.43	14,930,900	4,751,200	175,970	122	122	4,751,200	14.58
07/27/10	NA			38.54	5591.03	16.79	20,628,000	5,697,100	203,468	141	141	5,697,100	17.48
08/26/10	NA			38.31	5591.26	0.23	27,686,100	7,058,100	235,270	163	163	7,058,100	21.66
09/28/10	NA			40.41	5589.16	-2.10	36,146,000	8,459,900	256,361	178	178	8,459,900	25.96
10/25/10	NA			41.70	5587.87	-1.29	42,940,300	6,794,300	251,641	175	175	6,794,300	20.85
12/01/10	NA			43.99	5585.58	-2.29	50,784,100	7,843,800	211,995	147	147	7,843,800	24.07
12/27/10	NA			45.97	5583.60	-1.98	56,558,400	5,774,300	222,088	154	154	5,774,300	17.72
01/25/11	NA			49.12	5580.45	-3.15	62,138,400	5,580,000	192,414	134	134	5,580,000	17.12
02/28/11	NA			52.60	5576.97	-3.48	68,513,000	6,374,600	187,488	130	130	6,374,600	19.56
03/30/11	NA			53.88	5575.69	-1.28	73,695,100	5,182,100	172,737	120	120	5,182,100	15.90
04/27/11	NA			55.77	5573.80	-1.89	78,452,300	4,757,200	169,900	118	118	4,757,200	14.60
05/26/11	NA			38.46	5591.11	17.31	83,933,500	5,481,200	189,007	131	131	5,481,200	16.82
06/29/11	NA			37.93	5591.64	0.53	90,531,600	6,598,100	194,062	135	135	6,598,100	20.25
08/01/11	NA			40.17	5589.40	-2.24	NA	3,729,731	113,022	78	78	3,729,731	11.45
08/29/11	NA			38.85	5590.72	1.32	NA	6,612,000	236,143	164	164	6,612,000	20.29
09/28/11	NA			38.45	5591.12	0.40	NA	13,860,000	462,000	321	321	13,860,000	42.53
10/31/11	NA			38.44	5591.13	0.01	NA	10,836,000	328,364	228	228	10,836,000	33.25
11/28/11	NA			41.14	5588.43	-2.70	NA	10,382,400	370,800	258	258	10,382,400	31.86
12/27/11	NA			44.20	5585.37	-3.06	NA	3,024,000	104,276	72	72	3,024,000	9.28
01/30/12	NA			47.92	5581.65	-3.72	NA	2,984,400	87,776	61	61	2,984,400	9.16
02/27/12	NA			50.91	5578.66	-2.99	NA	6,808,419	243,158	169	169	6,808,419	20.89
03/28/12	NA			53.51	5576.06	-2.60	NA	4,846,657	161,555	112	112	4,846,657	14.87
04/27/12	NA			55.51	5574.06	-2.00	NA	5,026,116	167,537	116	116	5,026,116	15.42
06/01/12	NA			55.81	5573.76	-0.30	NA	6,030,278	172,294	120	120	6,030,278	18.51
06/27/12	NA			39.36	5590.21	16.45	NA	4,941,136	190,044	132	132	4,941,136	15.16
07/27/12	NA			35.15	5594.42	4.21	NA	5,406,647	180,222	125	125	5,406,647	16.59
08/29/12	NA			36.22	5593.35	-1.07	NA	8,039,457	243,620	169	169	8,039,457	24.67
09/26/12	NA			38.58	5590.99	-2.36	NA	7,011,540	250,412	174	174	7,011,540	21.52
10/29/12	NA			39.89	5589.68	-1.31	NA	8,985,060	272,275	189	189	8,985,060	27.57
11/27/12	NA			41.82	5587.75	-1.93	NA	6,557,340	226,115	157	157	6,557,340	20.12
12/27/12	NA			44.08	5585.49	-2.26	NA	6,234,840	207,828	144	144	6,234,840	19.13
01/29/13	NA			47.16	5582.41	-3.08	NA	7,369,740	223,325	155	155	7,369,740	22.62
02/25/13	NA			49.71	5579.86	-2.55	NA	5,804,880	214,996	149	149	5,804,880	17.81
03/25/13	NA			52.28	5577.29	-2.57	NA	5,480,940	195,748	136	136	5,480,940	16.82
04/29/13	NA			55.15	5574.42	-2.87	NA	6,283,020	179,515	125	125	6,283,020	19.28
05/30/13	NA			57.28	5572.29	-2.13	NA	3,337,380	107,657	75	75	3,337,380	10.24
06/25/13	NA			40.86	5588.71	16.42	NA	4,608,097	177,235	123	123	4,608,097	14.14
07/29/13	NA			40.80	5588.77	0.06	NA	1,947,360	57,275	40	40	1,947,360	5.98
08/29/13	NA			41.65	5587.92	-0.85	NA	0	0	0	0	0	0.00
09/30/13	NA			42.33	5587.24	-0.68	NA	1,525,996	47,687	33	33	1,525,996	4.68
10/30/13	NA			42.07	5587.50	0.26	NA	5,838,096	194,603	135	135	5,838,096	17.92
11/25/13	NA			43.24	5586.33	-1.17	NA	5,587,704	214,912	149	149	5,587,704	17.15
12/31/13	NA			45.19	5584.38	-1.95	NA	5,828,333	161,898	112	112	5,828,333	17.89
01/29/14	NA			46.97	5582.60	-1.78	NA	7,686,769	265,061	184	184	7,686,769	23.59
02/27/14	NA			49.19	5580.38	-2.22	NA	6,311,313	217,631	151	151	6,311,313	19.37

Total Change -11.41

MP elevations
changed 7/99
(BMF96-1D)
and 7/04
(BMF96-4)

**Montana Bureau of Mines and Geology
Butte Mine Flooding Monitoring Data
West Camp Ground-Water Sites**

GWIC ID	Comments
	Date
	01/25/10 1/26/10-190 gpm
	02/26/10 2/26/10-220 gpm
	03/31/10 3/31/10-180 gpm
	05/03/10 5/3/10-160 gpm
	06/02/10 6/2/10-160 gpm
	06/29/10 6/29/10-140 gpm
	07/27/10 7/27/10-200 gpm
	08/26/10 8/26/10-200 gpm
	09/28/10 9/28/10-210 gpm
	10/25/10 10/25/10-200 gpm
	12/01/10 12/01/10-190 gpm
	12/27/10 12/27/10-190 gpm
	01/25/11 1/25/11-160 gpm
	02/28/11 2/28/11-160 gpm
	03/30/11 3/30/11-140 gpm
	04/27/11 4/27/11-140 gpm
	05/26/11 5/26/11-160 gpm
	06/29/11 6/29/11-160 gpm
	08/01/11 8/1/11 site construction, flow data from Pioneer records.
	08/29/11 8/29/11 site construction, flow data from Pioneer records.
	09/28/11 9/28/11 site construction, flow data from Pioneer records.
	10/31/11 10/31/11 site construction, flow data from Pioneer records.
	11/28/11 11/28/11 site construction, flow data from Pioneer records.
	12/27/11 12/28/11 site construction, flow data from Pioneer records.
	01/30/12 1/30/12 site construction, flow data from Pioneer records.
	02/27/12 Flow data from Pioneer records
	03/28/12 Flow data from Pioneer records
	04/27/12 Flow data from Pioneer records
	06/01/12 Flow data from Pioneer records
	06/27/12 Flow data from Pioneer records
	07/27/12 Flow data from Pioneer records
	08/29/12 Flow data from Pioneer records
	09/26/12 Flow data from Pioneer records
	10/29/12 Flow data from Pioneer records
	11/27/12 Flow data from Pioneer records
	12/27/12 Flow data from Pioneer records
	01/29/13 Flow data from Pioneer records
	02/25/13 Flow data from Pioneer records
	03/25/13 Flow data from Pioneer records, lowered Q-125 gpm, 3/18/13
	04/29/13 Flow data from Pioneer records
	WCP pump shutdown on 5/23/13 due to heavy
	05/30/13 rainfall/increased flows. WCP re-started on 5/31/13.
	06/25/13 Flow data from Pioneer records
	Flow data from Pioneer records. Pumping suspended 7/8/13 for
	07/29/13 West Camp Study.
	08/29/13 Pumping suspended for West Camp Study
	09/30/13 Restarted pumping 9/17/13-10:55. Flow data from Pioneer
	10/30/13 Flow data from Pioneer records
	11/25/13 WCP pumping rate increased to Approx. 145 gpm. on 11/1/13
	12/31/13 Flow data from Pioneer records
	01/29/14 WCP pumping rate increased to Approx. 155 gpm on 12/31/13.
	02/27/14 Pumping rate increased to approx.160 gpm on 2/18/14.

Total Change

MP elevations
changed 7/99
(BMF96-1D)
and 7/04
(BMF96-4)

Butte Mine Flooding Outer Camp Water-Levels

Periodic Monitoring

ORPHAN BOY AREA

DATE (mmddyy)	Orphan Boy SWL(ft)	Orphan Boy Elevation*Mo. Diff.		Yearly Change	Seep Flow(gpm)
		(ft)	(ft)		
		5689.66	5691.25		
08/01/11	107.75	5583.50	0.28		26.00
08/31/11	105.40	5585.85	2.35		32.00
09/28/11	105.11	5586.14	0.29		25.00
10/31/11	104.74	5586.51	0.37		42.00
11/28/11	104.83	5586.42	-0.09		35.00
12/28/11	104.93	5586.32	-0.10	5.64	58.00
02/01/12	105.39	5585.86	-0.46		48.00
02/29/12	105.76	5585.49	-0.37		50.00
03/29/12	106.24	5585.01	-0.48		44.00
04/27/12	106.70	5584.55	-0.46		52.00
05/29/12	107.14	5584.11	-0.44		47.00
06/27/12	107.56	5583.69	-0.42		15.00
07/27/12	108.32	5582.93	-0.76		20.00
08/29/12	108.94	5582.31	-0.62		19.00
09/26/12	109.47	5581.78	-0.53		25.00
10/29/12	109.94	5581.31	-0.47		20.00
11/28/12	110.38	5580.87	-0.44		22.00
12/26/12	110.70	5580.55	-0.32	-5.77	19.00
01/29/13	111.22	5580.03	-0.52		18.00
02/26/13	111.69	5579.56	-0.47		16.00
03/25/13	111.92	5579.33	-0.23		20.00
04/26/13	112.27	5578.98	-0.35		14.00
05/29/13	112.68	5578.57	-0.41		18.00
06/25/13	113.03	5578.22	-0.35		21.00
07/30/13	113.23	5578.02	-0.20		19.00
08/28/13	113.52	5577.73	-0.29		17.00
09/25/13	113.66	5577.59	-0.14		15.00
10/31/13	113.76	5577.49	-0.10		12.00
11/26/13	113.93	5577.32	-0.17		15.40
12/31/13	114.20	5577.05	-0.27	-3.50	10.00
01/29/14	114.23	5577.02	-0.03		10.00
03/04/14	114.42	5576.83	-0.19		12.00

Yearly Change		-3.72	Mean Q	14.99
Total Change**	17.97	14.47	Min Q	3.75
			Max Q	58.00

* Elevation data is based upon USGS topo map interpretation