

Appendix III: Outer Camp water quality

Bedrock aquifer

Underground workings
Marget Ann Mine
Orphan Boy Mine

S-4 well

Ground-Water Information Center - All Parameters Report - Montana Bureau of Mines and Geology

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1987Q1107	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		11/11/87 14:45:00	MBMG	7.40		7.34	808.10	540.39	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
125.	20.0	10.9	3.6	.42	2.02	8.4	8.600		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
125.4	0.0	288.	19.5	.34	.1		8.630		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	.9	20.			<100.	<2.	12.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
3.		10.	<20.	<10.	<40.		<.1		1880.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
2.	<1.	330.	<4.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1987Q1108	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		11/11/87 15:04:00	MBMG	7.70		7.27	812.50	531.28	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
124.	19.8	10.8	3.6	.55	1.43	8.3	8.507		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
124.9	0.0	282.	18.5	.50	.2		8.462		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	2.9	50.			<100.	<2.	14.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
4.		9.	<20.	<10.	<40.		<.1		1890.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
4.	<1.	64.	<4.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1987Q1109	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		11/11/87 15:10:00	MBMG	7.65		7.20	812.50	529.90	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
123.	19.8	10.8	3.3	.42	1.40	8.3	8.437		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
125.9	0.0	282.	18.4	.14	.2		8.459		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	1.8	<20.			<100.	<2.	16.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
3.		10.	<20.	<10.	<40.		<.1		1890.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
3.	<1.	15.	<4.		Dissolved				

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Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1987Q1110	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		11/11/87 15:25:00	MBMG	7.93		7.58	850.40	559.67	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
130.	20.7	11.3	3.5	.64	1.86	8.7	8.917		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
135.2	0.0	298.	17.7	.36	.2		8.949		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	1.3	200.			<100.	<2.	16.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		9.	<20.	<10.	<40.		<.1		1960.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
6.	<1.	9.	<4.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1988Q0066	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		1/29/88 11:15:00	MBMG	6.56		7.00	670.80	524.42	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
123.	19.8	10.7	3.5	.41	1.36	8.5	8.455		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
122.0	0.0	278.	18.4	.06	.2		8.329		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
5.	80.	2.0	80.			<100.	<2.		6.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
6.		<2.	<20.	<10.	40.				1930.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
9.	12.	5.	12.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1988Q0461	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		6/1/88 11:20:00	MBMG	6.66		7.09	830.20	574.07	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
136.	23.1	12.2	4.3	.38	1.62	8.8	9.461		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
165.4	0.0	268.	37.8	.12	.2		9.366		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	2.4	20.			<100.	<2.	<5.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		7.	<20.	<10.					2180.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
6.	<1.	69.	<4.		Dissolved				

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Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1988Q0758	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		7/1/88 19:30:00	MBMG	7.27		7.62	838.40	591.20	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
140.	23.7	11.9	3.6	.39	1.77	8.5	9.685		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
147.4	0.0	287.	39.6	1.92	.2		9.557		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	1.4	<20.			400.	<2.	14.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
6.		6.	<20.	<10.	40.				2200.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
3.	<1.	<3.	<4.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1988Q1090	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		7/29/88 11:36:00	MBMG	6.85		7.20	872.30	575.29	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
134.	23.0	11.8	3.5	.50	1.94	8.4	9.337		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
147.6	0.0	283.	35.7	.15	.2		9.327		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	2.1	30.			<100.	2.		<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
6.		8.	<20.	<10.	40.				2190.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
8.	<1.	280.	<4.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1988Q1623	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		11/30/88 14:30:00	MBMG	7.38		7.25	870.70	617.17	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
148.	24.8	13.7	4.5	.13	2.20	10.2	10.304		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
233.	0.0	274.	24.5	.04	.3		10.241		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	.9	50.				2.	7.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		8.	<20.	<10.	<40.				2890.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
12.	<1.	17.	<4.		Dissolved				

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Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1989Q1158	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		8/10/89 15:45:00	MBMG	7.38		7.88	900.50	562.69	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
104.	16.4	9.64	3.1	0.088	1.47	9.3	7.153		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
221.8	0.0	280.	28.8	0.14	0.4		10.302		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	80.	.6	<20.			<100.	<2.		15.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		<2.	<20.	<10.	<40.				1973.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
2.	<1.	10.	<4.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1989Q1436	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		10/21/89 15:00:00	MBMG	7.66		7.75	921.20	623.60	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
153.	24.6	12.86	4.56	0.171	2.333	9.8	10.491		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:	Total Anions Meq/L:			
227.	0.0	278.	25.7	0.13	0.6	10.265			
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<4.	<40.	0.6	<50.	26.		<100.	<5.		<5.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
7.		13.	<40.	<20.	<50.				2880.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
<4.	<4.	21.	<6.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1990Q0083	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		4/5/90 11:40:00	MBMG	7.14					
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
154.	24.88	12.62	4.32	2.098	2.51	14.2	10.774		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<4.	912.	6.9	45.	24.			<5.	50.	<5.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
16.		9.	<40.	<20.	80.		<0.1		2880.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
48.	<4.	385.	<6.		Total Recoverable				

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Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1990Q0082	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		4/5/90 11:40:00	MBMG	7.14		7.57	905.50	608.29	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
150.	24.15	12.38	4.22	0.112	2.284	9.5	10.286		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
231.	0.0	266.	25.5	0.06	0.23		10.059		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<4.	<40.	0.6	<40.	21.		<100.	<5.	<50.	<5.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<4.		8.	<40.	<20.	<50.		<0.1		2840.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
7.	<4.	61.	<6.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1992Q0045	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		4/2/92 00:00:00	MBMG	7.31		7.38	885.90	589.46	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
140.	23.2	13.1	3.8	0.102	1.87	10.4	9.709		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
248.4	0.0	249.7	24.7	<0.1	0.22		9.977		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<6.	<100.	<1.	<100.			<100.	<1.		<6.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		10.	<1.	<20.	<0.4				2900.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
49.	27.	<3.	<8.		DISSOLVED				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1992Q0044	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		4/2/92 00:00:00	MBMG	7.31		7.35	875.60	584.41	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
138.	23.	13.	3.5	0.097	1.78	10.5	9.577		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
248.9	0.0	246.7	25.	<0.1	0.22		9.935		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<6.	<100.	<1.	<100.			<100.	<1.		<6.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		9.	<1.	<20.	<0.4				2925.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
48.	35.	<3.	<8.		DISSOLVED				

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Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1996Q0550	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		10/26/95 14:40:00	MBMG	6.72		7.79	878.00	604.92	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
146.3	25.5	13.1	3.9	.122	2.2	10.3	10.223		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:	Total Anions Meq/L:			
270.4	0.0	250.	20.	<.05	.3	10.224			
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<1.	<30.	1.1	<30.	28.7	<2.	<50.	<2.	<2.	2.1
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.	<.1	11.	<10.	4.0	<2.	<2.	2.4		2885.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	Tl Ugl:	Procedure Type:				
<10.	<5.	<2.	29.		DISSOLVED				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1996Q0653	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		4/8/96 12:20:00	MBMG	7.07		7.74	875.00	607.02	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
149.8	24.3	12.6	4.0	.175	2.2	10.1	10.285		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:	Total Anions Meq/L:			
265.4	0.0	250.7	22.4	<.25	<.5	10.202			
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<1.	<30.	<1.	<80.	31.0	<2.		<2.	<2.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		10.1	<10.	23.3	<2.	<2.	<1.		2905.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
<10.	<5.	5.8	<20.		DISSOLVED				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1997Q0571	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		12/9/96 09:45:00	MBMG	6.70		7.60	895.00	606.11	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
145.2	25.4	13.2	4.2	.437	2.3	10.8	10.199		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
245.0	0.0	262.9	20.9	<.05	<1.		10.090		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<1.	<30.	<1.	<30.	30.4	<2.	<250.	<2.	<2.	2.4
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		16.	<10.	6.3	<2.	<2.	5.5		3036.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	Tl Ugl:	Procedure Type:				
<10.	<5.	84.	<20.		DISSOLVED				

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Gwic Id:	Sample Id:	Site Name:					Type:		
4732	1998Q0094	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		7/25/97 13:45:00	MBMG			7.33	938.00	635.48	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
154.8	26.1	13.4	4.0	.338	2.1	10.1	10.718		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:	Total Anions Meq/L:			
261.08	0.0	274.	22.0	<.05		10.611			
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<1.	<30.	1.3	<80.	34.1	<2.	<25.	<2.	<2.	3.2
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		15.	<10.	17.6	<2.	<2.	<1.		3188.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
<10.	<5.	30.0	<20.		DISSOLVED				

Gwic Id:	Sample Id:	Site Name:					Type:		
4732	2000Q0717	MARGET ANN MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		2/24/00 16:10:00	MBMG	6.08	12.0	7.36	843.00	637.79	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
142	25.4	13.0	4.41	.257	1.81	8.45	10.007		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:	Total Anions Meq/L:			
191.3	0.0	329.2	19.021	<.5	<.5	10.537			
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<1	<30	<1	<30	35.7	<2	<500	<2	<2	<2
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2		<25	<10	27.7	<2	<2	<1		2920
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
<50	<5	3.33	<25	<5	DISSOLVED				

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Gwic Id:	Sample Id:	Site Name:					Type:		
4822	1987Q0018	ORPHAN BOY MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		1/27/87 14:00:00	MBMG	6.44					
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:	Total Anions Meq/L:			
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
					TOTAL				

Gwic Id:	Sample Id:	Site Name:					Type:		
4822	1987Q0259	ORPHAN BOY MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		5/28/87 12:40:00	MBMG	6.47		7.20	2260.40	1749.85	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
310.	89.6	139.	10.5	.25	8.84	28.6	29.661		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:	Total Anions Meq/L:			
905.	0.0	702.	14.5	.13	.6	29.889			
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	90.	140.			<100.	<2.		<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
12.		160.	<20.	<10.	<40.		.1		7270.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
46.	<1.	10.	<4.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4822	1987Q0426	ORPHAN BOY MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		6/25/87 11:25:00	MBMG	6.62					
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
311.	86.8	136.	10.1	.27	8.18	29.3	29.327		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:	Total Anions Meq/L:			
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	18.	110.				<2.		<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		170.	<20.	<10.					7570.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
35.	<1.	22.	12.		Dissolved				

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Gwic Id:	Sample Id:	Site Name:					Type:		
4822	1988Q0470	ORPHAN BOY MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		5/31/88 17:10:00	MBMG	6.25		7.04	2261.00	1690.29	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
309.	83.2	135.	10.5	.57	7.67	28.6	28.883		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
939.	0.0	638.	14.5	.06	.6		29.119		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	12.	170.			<100.	<2.	16.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		150.	<20.	<10.					7090.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
<1.	<1.	29.	<4.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4822	1988Q0705	ORPHAN BOY MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		6/29/88 17:10:00	MBMG	6.33		7.02	2232.00	1698.35	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
313.	85.4	138.	10.4	.46	8.04	29.0	29.404		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
915.	0.0	648.	14.5	.07	.7		28.949		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	175.	70.			<100.	<2.	26.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		150.	<20.	<10.	<40.				7210.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
6.	<1.	46.	<4.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4822	1989Q1470	ORPHAN BOY MINE * BUTTE MT					MINE		
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:	
MBMG		11/8/89 15:50:00	MBMG	6.60		7.50	2082.90	1597.44	
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
307.	84.7	137.	10.64	0.244	7.281	27.	28.959		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
854.	0.0	587.	14.5	0.07	1.29		26.709		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<4.	<40.	6.1	104.	67.		<100.	<5.		<5.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<4.		184.	<40.	<20.	50.				6990.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
<4.	<4.	24.	<6.		Dissolved				

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Gwic Id:	Sample Id:	Site Name:					Type:		
4725	1988Q0759	MARGET ANN * BLOCK WELL S-4					WELL		
Agency:	Td:	Sample Date:		Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:
MBMG	156.00	7/1/88 17:34:00		MBMG	7.71		7.70	728.60	519.27
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
118.	22.1	12.7	4.1	.24	.35	11.9	8.413		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
150.5	0.0	271.	4.5	.04	.2		8.247		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	<30.	2.0	20.			<100.	<2.	5.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<2.		13.	<20.	<10.	<40.				1190.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
4.	7.	<3.	<4.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4725	1988Q1624	MARGET ANN * BLOCK WELL S-4					WELL		
Agency:	Td:	Sample Date:		Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:
MBMG	156.00	11/30/88 13:45:00		MBMG	7.03		6.98	678.50	487.47
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
102.	18.6	14.2	4.8	.70	1.16	15.5	7.562		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
93.7	0.0	278.	2.9	.61	.2		7.432		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<2.	250.	.6	60.			<100.	22.	12.	<2.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
68.		17.	<20.	10.	<40.				930.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
12.	4.	2320.	<4.		Dissolved				

Gwic Id:	Sample Id:	Site Name:					Type:		
4725	1989Q1159	MARGET ANN * BLOCK WELL S-4					WELL		
Agency:	Td:	Sample Date:		Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:
MBMG	156.00	8/8/89 16:20:00		MBMG	7.65		7.88	655.70	449.25
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:		
103.	19.	10.5	4.4	.26	.61	11.2	7.330		
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:		Total Anions Meq/L:		
142.	0.0	224.	6.	.11	.2		7.179		
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:
<4.	<40.	3.4	50.				5.		<5.
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:
<4.		13.	<40.	<20.	<40.				1000.
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	TI Ugl:	Procedure Type:				
<4.	4.	20.	<6.		Dissolved				

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Gwic Id:	Sample Id:	Site Name:								Type:
4725	1989Q1310	MARGET ANN * BLOCK WELL S-4								WELL
Agency:	Td:	Sample Date:	Lab:	Field Ph:	Temp C:	Lab Ph:	Lab Sc:	Tds Mgl:		
MBMG	156.00	9/17/89 02:30:00	MBMG			7.62	697.90	445.35		
Ca Mgl:	Mg Mgl:	Na Mgl:	K Mgl:	Fe Mgl:	Mn Mgl:	Sio2 Mgl:	Total Cations Meq/L:			
101.	18.0	9.8	3.7	.061	.30	10.6	7.078			
Hco3 Mgl:	Co3 Mgl:	So4 Mgl:	Cl Mgl:	No3-N Mgl:	F Mgl:	Total Anions Meq/L:				
140.	0.0	228.	4.40	.1	.4	7.184				
Ag Ugl:	Al Ugl:	As Ugl:	B Ugl:	Ba Ugl:	Be Ugl:	Br ugl:	Cd Ugl:	Co Ugl:	Cr Ugl:	
<4.	<40.	2.6	40.			<100.	<5.		<5.	
Cu Ugl:	Hg Ugl:	Li Ugl:	Mo Ugl:	Ni Ugl:	Pb Ugl:	Sb Ugl:	Se Ugl:	Sn Ugl:	Sr Ugl:	
10.		10.	<40.	<20.	<50.				1040.	
Ti Ugl:	V Ugl:	Zn Ugl:	Zr Ugl:	Tl Ugl:	Procedure Type:					
<4.	<4.	16.	<6.		Dissolved					
