
**WATER RESOURCES MONITORING
2012 ANNUAL REPORT
BLACK BUTTE COPPER PROJECT**

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WATER RESOURCES MONITORING

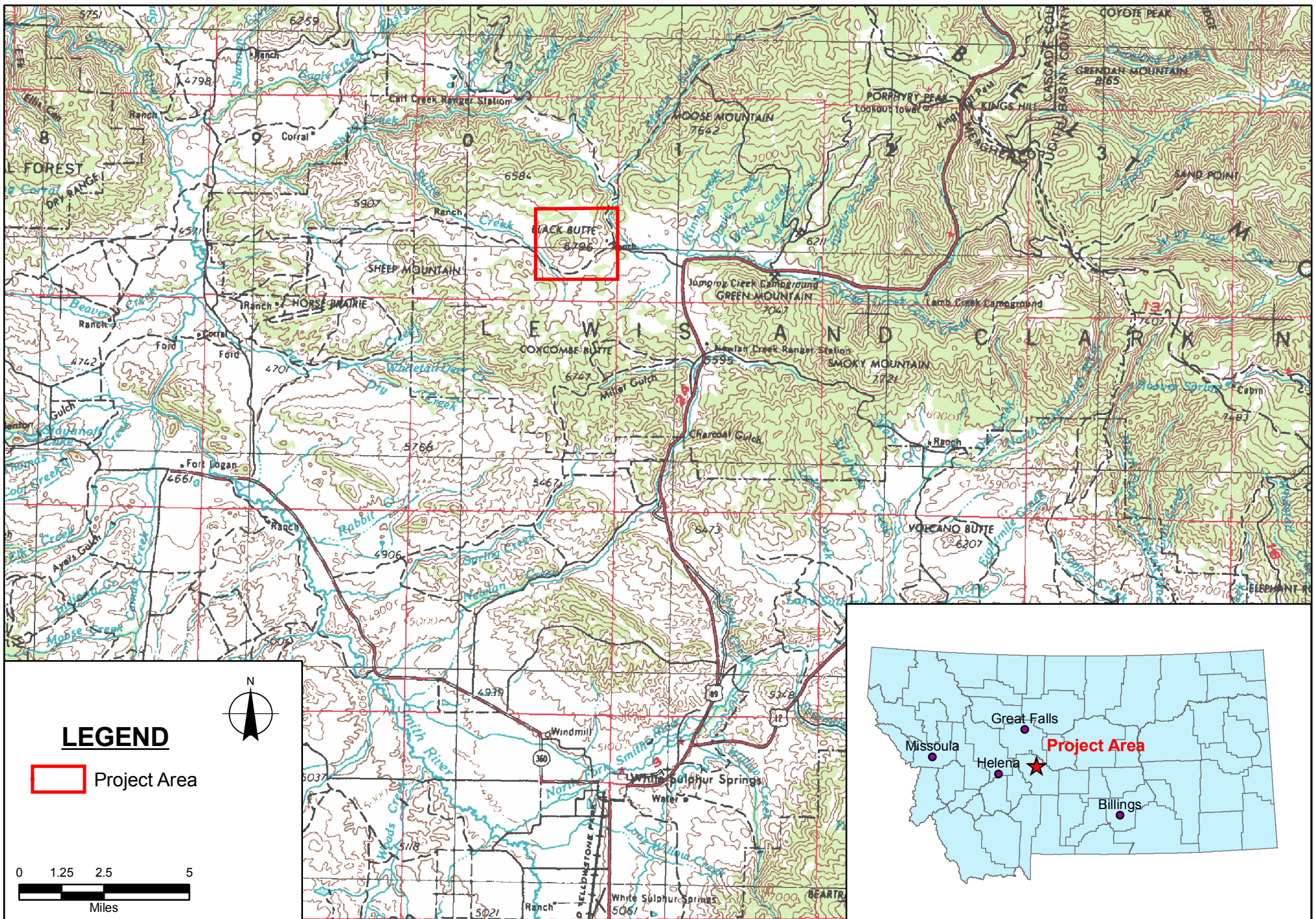
2012 ANNUAL REPORT

BLACK BUTTE COPPER PROJECT

1.0 INTRODUCTION

Hydrometrics has conducted quarterly baseline groundwater and surface water monitoring for the Black Butte Copper Project since the second quarter of 2011. The 2011 second quarter monitoring was only conducted for surface water as groundwater monitoring wells were not constructed at that time; groundwater and surface water monitoring was conducted during all other monitoring events. The Black Butte Copper Project is located approximately 16 miles north of White Sulphur Springs, Montana in Meagher County (Figure 1). The groundwater and surface water monitoring is being performed to establish baseline flows, water level elevations, and water quality in the vicinity of the project area.

Groundwater and surface water monitoring was conducted in accordance with Hydrometrics SOPs as described in the Water Resource Monitoring Sampling and Analysis Plan (Hydrometrics, 2012). Water quality samples were submitted to Energy Laboratories in Helena, MT for analyses of physical parameters, common constituents, nutrients, and a comprehensive suite of trace constituents as listed in Table 1. With the exception of aluminum, trace constituents were analyzed for the total recoverable fraction for surface water samples; aluminum was analyzed for the dissolved fraction. All trace constituents for groundwater samples were analyzed for the dissolved fraction. This report summarizes the results of groundwater and surface water monitoring conducted in 2011 and 2012.



**TABLE 1. ANALYTICAL METHODS AND DETECTION LIMITS FOR
SURFACE WATER AND GROUNDWATER SAMPLES**

Parameter	Analytical Method ⁽¹⁾	Project-Required Detection Limit (mg/L)
Physical Parameters		
TDS	SM 2540C	10
TSS	SM 2540C	10
Common Ions		
Alkalinity	SM 2320B	4
Sulfate	300.0	1
Chloride	300.0/SM 4500CL-B	1
Fluoride	A4500-F C	0.1
Calcium	215.1/200.7	1
Magnesium	242.1/200.7	1
Sodium	273.1/200.7	1
Potassium	258.1/200.7	1
Nutrients		
Nitrate+Nitrite as N	353.2	0.01
Trace Constituents (SW - Total Recoverable except Aluminum [Dissolved], GW - Dissolved)⁽²⁾		
Aluminum (Al)	200.7/200.8	0.009
Antimony (Sb)	200.7/200.8	0.0005
Arsenic (As)	200.8/SM 3114B	0.001
Barium (Ba)	200.7/200.8	0.003
Beryllium (Be)	200.7/200.8	0.0008
Cadmium (Cd)	200.7/200.8	0.00003
Chromium (Cr)	200.7/200.8	0.01
Cobalt (Co)	200.7/200.8	0.01
Copper (Cu)	200.7/200.8	0.002
Iron (Fe)	200.7/200.8	0.02
Lead (Pb)	200.7/200.8	0.0003
Manganese (Mn)	200.7/200.8	0.005
Mercury (Hg)	245.2/245.1/200.8/SM 3112B	0.000005
Molybdenum (Mo)	200.7/200.8	0.002
Nickel (Ni)	200.7/200.8	0.001
Selenium (Se)	200.7/200.8/SM 3114B	0.0002
Silver (Ag)	200.7/200.8	0.02
Strontium (Sr)	200.7/200.8	0.0002
Thallium (Tl)	200.7/200.8	0.0002
Uranium	200.7/200.8	0.008
Zinc (Zn)	200.7/200.8	0.002
Field Parameters		
Stream Flow	HF-SOP-37/-44/-46	NA
Water Temperature	HF-SOP-20	0.1 °C
Dissolved Oxygen (DO)	HF-SOP-22	0.1 mg/L
pH	HF-SOP-20	0.1 s.u.
Specific Conductance (SC)	HF-SOP-79	1 µmhos/cm

(1) Analytical methods are from *Standard Methods for the Examination of Water and Wastewater* (SM) or EPA's *Methods for Chemical Analysis of Water and Waste* (1983).

(2) Samples to be analyzed for dissolved constituents will be field-filtered through a 0.45 µm filter.

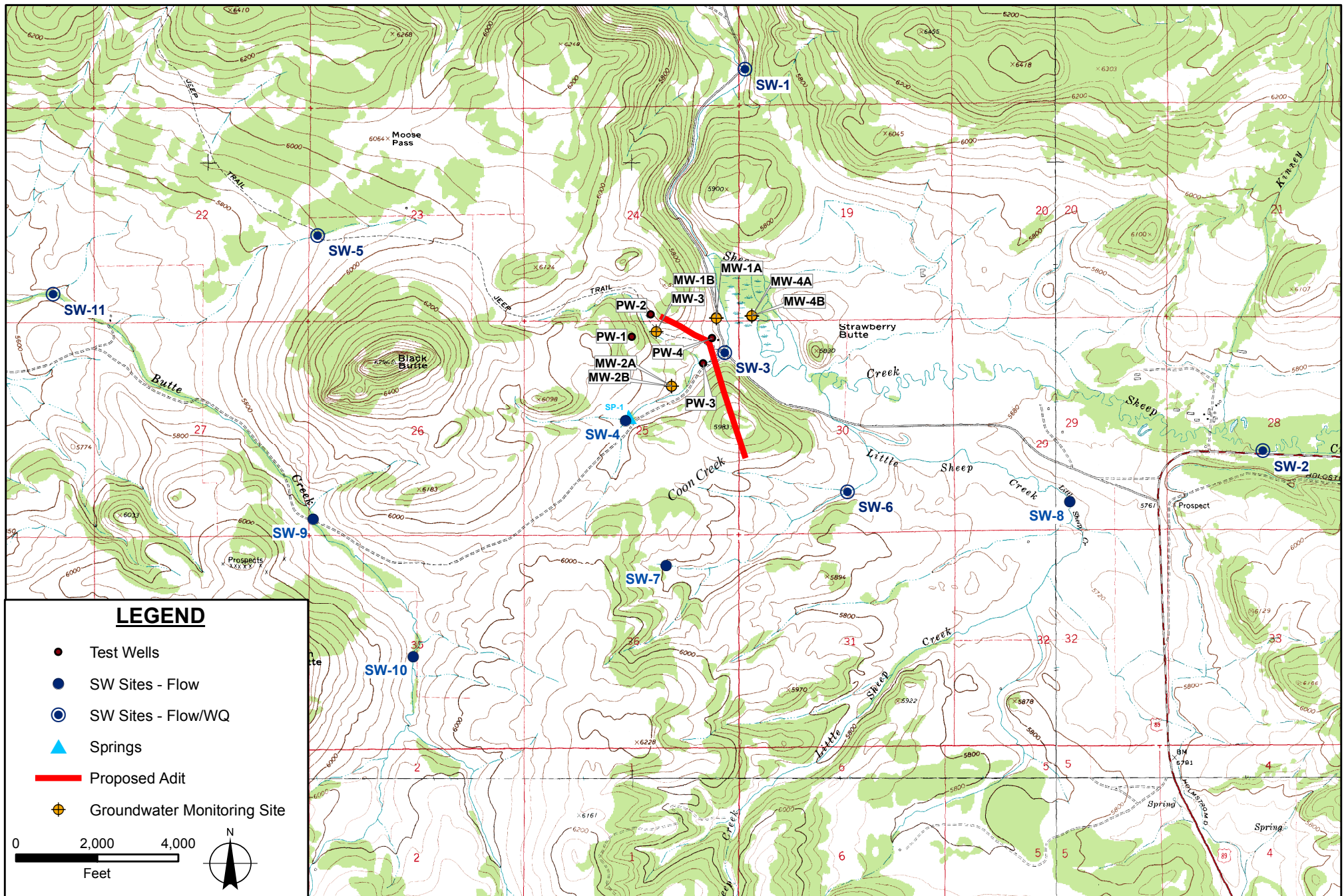
2.0 SURFACE WATER

2.1 MONITORING SUMMARY

The project site lies within the Sheep Creek drainage. Sheep Creek originates in the Little Belt Mountains at an elevation of about 7,600 feet and discharges to the Smith River approximately 34 river miles to the west at an elevation of 4,380 feet. The project area is approximately 17 miles above the confluence with the Smith River. Sheep Creek flows in a meandering channel through a broad alluvial valley upstream of the project site but enters a constricted bedrock canyon just downstream.

Primary tributaries to Sheep Creek in the immediate project area are Little Sheep Creek, and Coon Creek (Figure 2). There are also two un-named tributaries that receive flow from the northeast side of the valley and discharge to Sheep Creek immediately upstream and downstream of Strawberry Butte. Black Butte Creek lies just to the west of the project area and discharges to Sheep Creek approximately 7 miles further downstream. Flow in the tributary drainages is only perennial on their lower reaches, and ephemeral upstream.

Eleven surface water stations have been established as baseline monitoring sites. Flow, stage and field parameters (temperature, pH and SC) are monitored quarterly at all of these sites. Water quality samples are collected at six of the sites during quarterly monitoring. Flow and water quality monitoring locations are shown on Figure 2. Monitoring was initiated at these sites in May of 2011 with subsequent quarterly monitoring events scheduled in the months of August, November, March and May/June (high flow) of each year.



2.2 RESULTS

During the first year of the baseline study from May to November 2011, discharge in Sheep Creek ranged from approximately 21 to 250 cfs at the upstream site (SW-2) and 21 to 612 cfs at the downstream site (SW-1). During the second year of monitoring, there was a decrease in flows measured in the month of May with the upstream Sheep Creek Monitoring site (SW-2) decreasing from approximately 250 cfs in 2011 to 103 cfs in 2012 and the downstream monitoring site (SW-1) ranging from approximately 612 cfs in 2011 to 111 cfs in 2012. Flow monitoring results for each of the monitoring sites are summarized in Table 2. Flows decreased at all surface water sites from the spring of 2011 to the spring of 2012. This decrease was due to unusually high runoff conditions in the spring 2011 versus more typical conditions in 2012.

Water quality data for each site is tabulated in Appendix A. Surface water results show neutral to slightly alkaline pH values (6.8 to 8.6), and low to moderate specific conductance (49 to 443 $\mu\text{mhos/cm}$). Major ion chemistry is dominated by calcium and bicarbonate. Metals data show some infrequent excursions above the Circular DEQ-7 (MDEQ, 2012) water quality standard for aluminum and iron during high runoff events as well as excursions above Federal secondary aesthetic based guidelines for iron and manganese as noted below:

- Total recoverable iron concentrations at sites SW-1, SW-2, and SW-3, exceeded the aquatic life standard during peak runoff in 2011.
- Dissolved aluminum concentrations exceeded the aquatic life standard during peak runoff season at sites SW-1, SW-2, SW-5, and SW-11 in 2011, and in SW-5 in 2012.
- Total recoverable manganese results exceeded the aesthetic standard during peak runoff season (2011 only) at SW-1 and SW-2.
- The aesthetic standards for total recoverable iron was exceeded at sites SW-1, SW-2, SW-3, SW-5, SW-6, SW-7, and SW-11 during at least one monitoring event.

In addition, the human health surface water standard for thallium of 0.00024 mg/L was exceeded at SW-3 during three separate monitoring events in 2011.

TABLE 2. SURFACE WATER FLOW SUMMARY 2011 - 2012

Flow in Cubic Feet Per Second

	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9	SW-10	SW-11
May-11	612	250	4.9	2	4.7	4.1	0.286	9.1	12.7	15.2	21.4
Jul-11	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	0.038	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>
Aug-11	34.26	29.77	0.34	0.04	Dry	0.18	0.040	0.45	0.83	0.5	0.86
Nov-11	20.7	20.7	0.113	0.03	Dry	0.16	<i>F</i>	<i>F</i>	0.42	<i>NM</i>	<i>F</i>
Mar-12	30.24	<i>F</i>	<i>F</i>	<i>NM</i>	<i>NM</i>	<i>F</i>	<i>F</i>	<i>F</i>	1.13	<i>F</i>	1.0307
May-12	110.73	102.57	0.401	0.253	0.75	0.81	0.062	2.65	2.33	1.85	3.24
Jul-12	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	0.034	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>
Aug-12	15.24	9.74	0.1685	0.033	Dry	0.33	0.0061	1.09	0.78	0.54	1.00
Nov-12	17.971	<1.0	0.08	0.011	Dry	0.157	0.0004	0.453	0.536	0.345	0.844

F denotes frozen conditions. No flow taken.

NM denotes no flow measurements taken.

3.0 GROUNDWATER

3.1 MONITORING SUMMARY

The proposed exploration adit (Figure 2) will penetrate dolomitic and silicic shales of the Newland Formation. The shale bedrock formations have a thin colluvial cover over most upland areas, but are overlain by thicker Tertiary deposits along the flanks of the major drainages. Quaternary alluvial deposits are present beneath the stream channels and along the axes of the major drainages.

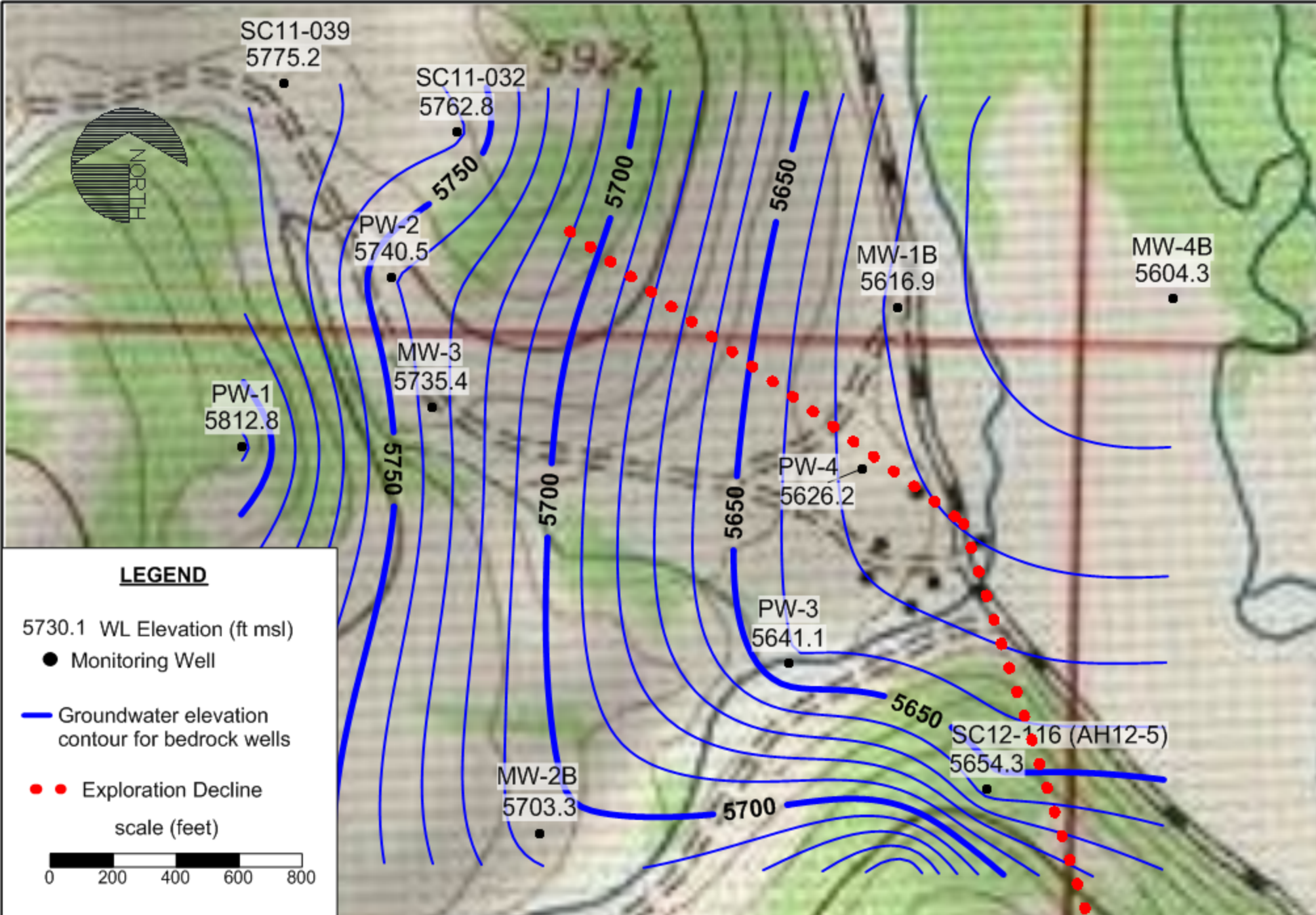
An initial set of paired monitoring wells (MW-1A and -1B) was installed for baseline groundwater monitoring in June 2011. These wells were completed immediately upgradient of the Sheep Creek hay meadows in unconsolidated Tertiary clayey gravel deposits and in the underlying shallow bedrock groundwater system. A second set of paired monitoring wells (MW-2A and -2B) were completed in November near Coon Creek in unconsolidated clayey gravels and underlying shallow bedrock. An additional monitoring well (MW-3) was completed in November 2011 near the proposed terminus of the exploration adit within the sulfide ore body. A third set of paired monitoring wells (MW-4A and MW-4B) was completed in May 2012 in the hay meadow field north of the proposed mine area near Sheep Creek. Wells MW-4A and MW-4B were installed in the shallow alluvial gravels and shallow bedrock to provide baseline data between the project area and Sheep Creek. Well locations are shown in Figure 2 and well completion data is summarized in Table 3.

In addition to the monitoring wells, four test wells have been installed to provide information on the hydrologic characteristics of the bedrock. Two of the test wells (PW-1 and PW-2) were installed in November 2011 and two additional test wells (PW-3 and PW-4) were installed in March 2012 (Figure 3). Water level and water quality data were collected at these locations during aquifer testing; however these wells are not routinely monitored during quarterly baseline monitoring events.

Water level data have also been collected from various exploration boreholes during hydrologic testing.

TABLE 3. WELL COMPLETION DETAILS

Well Name	Easting (meters)	Northing (meters)	G.S. Elev. (feet amsl)	M.P. Elev. (feet amsl)	Total Depth (feet, bgs)	Perforated/ Screen Interval (feet, bgs)	Filter Pack Interval (feet, bgs)
	UTM Zone 12 North						
MW-1A	506935.22	5180841.55	5635.81	5637.73	38	25 - 34	25 - 34
MW-1B	506934.19	5180845.46	5636.14	5637.9	98	88 - 98	88 - 98
MW-2A	506598.18	5180331.93	5743.72	5745.31	62	52 - 62	47 - 62
MW-2B	506596.96	5180328.73	5743.44	5745.53	80	70 - 80	65 - 80
MW-3	506484.07	5180740.22	5760.06	5762.17	305	285 - 305	278 - 305
MW-4A	507201.471	5180855.425	5618.1 est.	5610.1	23	14-23	011 - 23
MW-4B	507200.122	5180858.49	5608.07 est.	5610.07	59	39-59	37-59
PW-1	506301.42	5180698.4	5912.07	5913.74	213	140-211	108-213
PW-2	506443.15	5180865.03	5793.08	5791.28	215	132 - 212	121 - 212
PW-3	506835.074 est.	5180497.79 est.	5650.6 est.	5652.60 est.	131	90-127	80-130
PW-4	506901.789 est.	5180688.26 est.	56764.73 est.	5676.73 est.	242	200-239	191-242



3.2 RESULTS

Potentiometric water level data from May 2012 are compiled in Figure 3 and show an eastward trending groundwater flow direction in the bedrock groundwater system which is consistent with the earlier Cominco results (Chen-Northern, 1989). The potentiometric contours indicate an average hydraulic gradient of approximately 0.08. Paired wells MW-1A and -1B have a strong downward gradient during all monitoring events with a head differential between the two wells of 15 to 18 feet. All of the other paired wells show upward gradients with head differences between the paired wells of 0.26 to 0.48 feet.

The groundwater quality field data and analytical results are compiled in Appendix B. Groundwater in the shallow alluvial wells and in shallow bedrock wells is calcium/magnesium bicarbonate type water with near neutral pH and moderately low dissolved solids. One exception is well MW-1B, which is a calcium/magnesium sulfate type water with a lower pH range (6.2 to 6.47) and moderate dissolved solids (336 to 405 mg/L). The water quality at MW-1B is similar to MW-3 and test well PW-4, both of which are completed in the sulfide ore zone.

Wells completed in shallow unconsolidated overburden deposits include MW-1A, MW-2A and MW-4A. These wells have neutral pH water (7.2-7.7) with low to non-detectable concentrations of dissolved metals. MW-1A, however, periodically exhibits variable water quality with some excursions of arsenic, barium, lead, and thallium above the Human Health standards. Well MW-1A is screened in fine-grained sediments and has very high turbidity present in the water during sampling events. Monitoring events where metals are detected at higher concentrations at this well may reflect breakthrough of particulate through the filters due to the very high turbidity.

Wells completed in shallow bedrock above the sulfide ore zone include MW-2B, MW-4B and test wells PW-1, PW-2 and PW-3. Dissolved trace constituents that are present at detectable concentrations in the shallow bedrock wells include arsenic, barium, iron, manganese, strontium, thallium, uranium and zinc. Water quality at test wells PW-1, PW-2 and PW-3 exceeds aesthetic guidelines for iron (0.3 mg/L) and manganese (0.05 mg/L). The

concentration of thallium at MW-2B (0.0031-0.0036 mg/L) exceeds the human health standard of 0.002 mg/L. Thallium concentrations at the other shallow bedrock wells are below regulatory limits. All other parameters in the shallow aquifer meet applicable regulatory limits.

Wells completed in the sulfide ore zone (MW-3 and PW-4) have the highest concentrations of dissolved solids and sulfate compared to the other wells. As previously discussed MW-1B has similar water quality to these ore zone wells. The pH of water at these ore zone wells and well MW-1B is slightly lower than the other well sites with pHs ranging from 6.2 to 7.1. Dissolved trace constituents that are present at detectable concentrations in the ore zone wells include arsenic, barium, cobalt (MW-1B only), iron, manganese, mercury, nickel, strontium, thallium, uranium, and zinc. Strontium concentrations are highly elevated (9.3 to 16.2 mg/L) at MW-3 and PW-4 and exceed the human health standard of 4 mg/L. Arsenic concentrations at MW-1B, MW-3 and PW-4 range from 0.054 mg/L to 0.067 mg/L and exceed the human health standard of 0.010 mg/L. Arsenic speciation of samples from MW-1B and MW-3 indicate that the majority of the arsenic is present in reduced form as As (III). Concentrations of thallium at MW-1B (0.013 mg/L) also exceed human health groundwater standard of 0.002 mg/L. While thallium is also present at detectable concentrations in MW-3 and PW-4 it does not exceed the human health standard. All of the ore zone wells exceed the recommended aesthetic guidelines for iron, and MW-1B and PW-4 also exceed the aesthetic guideline for manganese in drinking water.

4.0 REFERENCES

Chen-Northern, 1989. Sheep Creek Project – Hydrology Screening Study. June 1989.

EPA, 1983. Methods for Chemical Analysis of Water and Wastes. EPA-600/14-79-020. Revised March 1983.

Hydrometrics, Inc., 2012. Water Resources Monitoring Field Sampling and Analysis Plan, Black Butte Copper Project. March 2012.

MDEQ, 2012. Circular DEQ-7. Montana Numeric Water Quality Standards. October 2012.

APPENDIX A

SURFACE WATER QUALITY DATA

SURFACE WATER QUALITY RESULTS

Field Parameters								General Parameters (mg/L)										Common Ions (mg/L)										TOTAL RECOVERABLE TRACE CONSTITUENTS (mg/L)																											
SITE CODE	DATE	Sample ID	Staff (ft)	Flow (CFS)	pH (s.u.)	Specific Conductance (umhos/cm)	Temp. (C)	Dissolved Oxygen (mg/L)	Total Suspended Solids	Total Dissolved Solids	Calculated Hardness as CaCO3	Alkalinity as CaCO3	Bicarbonate as HCO3	Carbonate as CO3	Sulfate	Chloride	Fluoride	Calcium	Magnesium	Sodium	Potassium	Nitrate and Nitrite as N (mg/L)	Dissolved Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Strontium	Thallium	Uranium	Zinc												
SW-1	5/24/2011	TSC-1105-101	2.57	612	7.59	181	4.5	10.3	--	118	82	87	110	<1	2	1	<0.1	23	6	1	1	0.02	0.32	<0.003	<0.003	0.099	<0.001	<0.00008	0.004	<0.01	0.003	1.86	0.0015	0.053	0.00002	<0.005	<0.01	<0.001	<0.0005	<0.1	<0.0002	<0.0003	<0.01												
SW-1 Dup	5/24/2011	TSC-1105-102	--	--	--	--	--	--	--	104	80	87	110	<1	2	1	<0.1	22	6	1	1	0.02	0.32	<0.003	<0.003	0.099	<0.001	<0.00008	0.004	<0.01	0.003	1.78	0.0017	0.080	0.00002	<0.005	<0.01	<0.001	<0.0005	<0.1	<0.0002	<0.0003	<0.01												
SW-1	8/26/2011	TSC-1108-109	1.02	34.26	8.43	317	12.85	10.45	--	182	176	170	200	8	4	1	<0.1	49	13	2	1	<0.01	<0.03	<0.003	<0.003	0.103	<0.001	<0.00008	<0.001	<0.01	<0.001	0.11	<0.0005	0.011	0.00002	<0.005	<0.01	<0.001	<0.0005	0.1	<0.0002	0.0004	<0.01												
SW-1	11/02/2011	BBC-1111-103	0.91	20.7	8.56	321	0.03	11.01	--	182	169	180	200	10	5	2	<0.1	48	12	2	1	0.02	<0.03	<0.003	<0.003	0.095	<0.001	<0.00008	<0.001	<0.01	<0.001	0.19	<0.0005	0.016	<0.00001	<0.005	<0.01	<0.001	<0.0005	0.1	<0.0002	0.0004	<0.01												
SW-1	3/23/2012	BBC-1203-103	NM	30.24	8.28	239	0.07	12.8	--	158	113	140	--	--	4	3	<0.1	32	8	2	3	0.07	<0.03	<0.003	<0.003	0.093	<0.001	<0.00008	<0.001	<0.01	<0.001	0.25	<0.0005	0.019	<0.00001	<0.005	<0.01	<0.001	<0.0005	<0.1	<0.0002	0.0003	<0.01												
SW-1 Dup	3/23/2012	BBC-1203-104	--	--	--	--	--	--	--	160	110	140	--	--	5	3	<0.1	31	10	8	2	3	0.07	<0.03	<0.003	<0.003	0.095	<0.001	<0.00008	<0.001	<0.01	<0.001	0.27	<0.0005	0.020	0.00002	<0.005	<0.01	<0.001	<0.0005	<0.1	<0.0002	0.0003	<0.01											
SW-1	5/30/2012	BBC-1205-104	1.55	110.73	8.21	228	7.2	10.53	16	126	113	130	140	11	3	1	<0.1	32	11	3	2	<1	<0.01	0.06	<0.003	<0.003	0.090	<0.001	<0.00008	0.001	<0.01	0.002	0.41	<0.0005	0.013	<0.00001	<0.005	<0.01	<0.001	<0.0005	<0.1	<0.0002	<0.0003	<0.01											
SW-1	8/21/2012	BBC-1208-102	0.45	30.1	8.21	301	9.56	<10	10	165	160	150	160	4	4	1	0.1	42	12	2	1	<0.01	<0.03	<0.003	<0.003	0.122	<0.001	<0.00008	<0.001	<0.01	<0.001	0.15	<0.0005	0.014	<0.0001	<0.005	<0.01	<0.001	<0.0005	0.1	<0.0002	0.0004	<0.01												
SW-1	#####	BBC-1211-118	1.01	17.971	8.47	347	0.03	13.91	<10	169	--	199	--	200	220	8	5	1	--	55	15	2	1	0.07	<0.009	<0.0005	<0.001	0.118	<0.0008	<0.00003	<0.001	<0.01	<0.002	0.13	<0.0003	0.009	<0.000005	<0.005	<0.002	<0.001	<0.0002	0.14	<0.0002	0.0004	<0.008										
SW-10	5/24/2011	TSC-1105-112	NM	15.2	8.25	353	--	6.4	10.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--												
SW-10	8/25/2011	TSC-1108-112	0.94	0.5	8.48	401	15.38	9.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--												
SW-10	11/2/2011	TSC-1111-100	Frozen	Frozen	8.49	415	0.14	11.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--											
SW-10	3/22/2012	BBC-1203-105	Frozen	Frozen	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--											
SW-10	5/30/2012	BBC-1205-107	1.21	1.85	8.25	436	4.7	10.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--											
SW-10	8/21/2012	BBC-1208-106	0.7	0.54	8.52	407	17.6	8.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--											
SW-10	#####	BBC-1211-120	NM	0.345	8.25	418	0.03	12.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--										
SW-11	5/25/2011	TSC-1105-108	NM	21.4	8.1	338	6.2	10.3	130	140	180	210	210	4	9	1	0.1	0.1	--	17	2	1	<0.01	0.12	<0.003	<0.003	0.093	<0.001	<0.00008	<0.001	<0.01	0.28	<0.0005	0.008	<0.00001	<0.005	<0.01	<0.001	<0.0005	0.2	<0.0002	0.0008	<0.01												
SW-11	8/25/2011	TSC-1108-101	0.55	0.86	8.31	384	12.1	10.5	--	236	--	180	260	7	10	1	0.2	--	--	23	2	1	0.05	<0.03	<0.003	<0.003	0.130	<0.001	<0.00008	<0.001	<0.01	0.33	<0.0005	0.016	<0.00001	<0.005	<0.01	<0.001	<0.0005	0.2	<0.0002	0.0008	<0.01												
SW-11	11/2/2011	BBC-1111-100	0.91	Frozen	8.28	417	0	11.85	--	234	--	230	260	7	12	16	2	0.2	--	24	3	1	0.03	<0.03	<0.003	<0.003	0.113	<0.001	<0.00008	<0.001	<0.01	0.17	<0.0005	0.007	0.00002	<0.005	<0.01	<0.001	<0.0005	0.2	<0.0002	0.0008	<0.01												
SW-11	3/22/2012	BBC-1203-100	0.55	1.0307	8.2	340	0.8	11.94	--	166	--	170	--	--	15	2	0.2	--	16	2	1	0.19	<0.03	<0.003	<0.003	0.096	<0.001	<0.00008	<0.001	<0.01	<0.001	0.48	0.0007	0.031	0.00001	<0.005	<0.01	<0.001	<0.0005	0.1	<0.0002	0.0009	<0.01												
SW-11	5/29/2012	BBC-1205-100	0.73	3.24	8.32	388	8.9	10.39	13	211	--	200	220	8	13	1	0.2	--	19	2	<1	0.05	0.03	<0.003	<0.003	0.098	<0.001	<0.00008	<0.001	<0.01	0.002	0.35	<0.0005	0.013	<0.00001	<0.005	<0.01	<0.001	<0.0005	0.2	<0.0002	0.0009	<0.01												
SW-11	8/21/2012	BBC-1208-102	0.45	1	8.52	398	16.3	8.42	<10	220	--	210	240	12	12	2	0.2	--	21	3	1	0.03	<0.03	<0.003	<0.003	0.111	<0.001	<0.00008	<0.001	<0.01	0.001	0.38	<0.0005	0.013	<0.00001	<0.005	<0.01	<0.001	<0.0005	0.2	<0.0002	0.0007	<0.01												
SW-11	#####	BBC-1211-100	0.45	0.844	7.53	437	0.07	13.26	<10	227	--	220	250	10	18	1	0.2	--	25	3	1	0.12	<0.009	<0.0005	<0.001	0.105	<0.0008	<0.00003	<0.001	<0.01	<0.002	0.11	<0.0003	<0.005	<0.000005	<0.005	<0.002	<0.001	<0.0002	0.17	<0.0002	0.0009	<0.008												
SW-2	5/24/2011	TSC-1105-100	0.38	250	7.09	156	3.2	10.9	--	117	73	80	98	<1	2	1	0.04	21	5	1	1	0.02	0.39	<0.003	<0.003	0.107	<0.001	<0.00008	0.006	<0.01	0.004	2.49	0.0017	0.053	0.00001	<0.005	<0.01	<0.001	<0.0005	<0.1	<0.0002	<0.0003	0.01												
SW-2	8/26/2011	TSC-1108-110	0.81	29.77	8.39	322	13.22	10.54	--	182	177	180	200	7	4	1	<0.1	51	12	2	1	<0.01	<0.03	<0.003	<0.003	0.086	<0.001	<0.00008	<0.001	<0.01	<0.001	0.09	<0.0005	0.009	0.00001	<0.005	<0.01	<0.001	<0.0005	0.1	<0.0002	0.0003	<0.01												
SW-2 Dup	8/26/2011	TSC-1108-111	--	--	--	--	--	--	--	180	174	180	200	7	4	1	<0.1	50	12	2	1	<0.01	<0.03	<0.003	<0.003	0.088	<0.001	<0.00008	<0.001	<0.01	<0.001	0.09	<0.0005	0.009	0.00002	<0.005	<0.01	<0.001	<0.0005	0.1	<0.0002	0.0004	<0.01												
SW-2	11/2/2011	BBC-1111-102	0.9	20.7	8.54	340	10	10.92	--	182	162	180	210	11	5	0.1	0.1	5	10	2	1	0.07	<0.03	<0.003	<0.003	0.099	<0.001	<0.00008	<0.001	<0.01	<0.001	0.18	<0.0005	0.019	<0.00001	<0.005	<0.01	<0.001	<0.0005	0.1	<0.0002	0.0004	<0.01												
SW-2	3/23/2012	BBC-1203-101	Frozen	Frozen	7.78	258	-0.01	12.12	--	162	127	150	140	11	3	1	<0.1	36	9	2	1	0.07	<0.03	<0.003	<0.003	0.090	<0.001	<0.00008	<0.001	<0.01	<0.001	0.30	<0.0005	0.020	<0.00001	<0.005	<0.01	<0.001	<0.0005	0.1	<0.0002	0.0003	<0.01												
SW-2	5/30/2012	BBC-1205-105	1.45	102.57	7.93	222	6.2	10.8	<10	123	113	130	140	11	3	1	<0.1	32	8	1	<1	<0.01	0.05	<0.003	<0.003	0.083	<0.001	<0.00008	<0.001	<0.01	<0.001	0.30	<0.0005	0.009	<0.00001	<0.005	<0.01	<0.001	<0.0005	<0.1	<0.0002	<0.0003	<0.01												
SW-2 Dup	5/30/2012	BBC-1205-106	--	--	--	--	--	--	--	<10	128	110	130	140	11	3	1	<0.1	31	8	1	<1	<0.01	0.05	<0.003	<0.003	0.083	<0.001	<0.00008	<0.001	<0.01	<0.001	0.31	<0.0005	0.008	<0.00001	<0.005	<0.01	<0.001	<0.0005	<0.1	<0.0002	<0.0003	<0.01											
SW-2	8/21/2012	BBC-1208-101	0.49	9.74	8.51	265	15.8	9.35	<10	145	136	140	170	4	4	1																																							

Bold concentrations exceed DEQ 7 (October 2012) standards for Human Health and/or Aquatic (chronic).
 Surface water standards for metals and metalloids are based on total recoverable concentrations, except for aluminum is dissolved.
 + = hardness dependent parameter values shown for a hardness of 73 mg/L (lowest hardness on perennial stream). Bolded excedences noted in table are based on calculated hardness.
 e = estimated flow # = narrative standard (guidance level given based on Secondary Federal MCL).

APPENDIX B

GROUNDWATER QUALITY DATA

GROUND WATER QUALITY RESULTS

			Field Parameters						Common Ions (mg/L)											TOTAL METAL SPECIATION (ug/L)	
			Static Water Level (ft below MP)	pH (s.u.)	Specific Conductance (umhos/cm)	Temp. (C)	Dissolved Oxygen (mg/L)	Total Dissolved Solids	Alkalinity as CaCO3 (mg/L)	Bicarbonate as HCO3 (mg/L)	Carbonate as CO3 (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Nitrate and Nitrite as N (mg/L)	TOTAL Arsenic-III (ug/L)	TOTAL Arsenic-V (ug/L)
Site Code	DATE	Sample ID																			
MW-1A	8/26/2011	TSC-1108-200	2.72	7.44	339	7.7	9.6	186	170	210	< 1	9	1	0.3	38	15	10	1	0.37		
MW-1A	11/2/2011	BBC-1111-203	5.05	7.4	342	7.5		184	180	210	< 1	9	1	0.2	38	15	11	1	0.40		
MW-1A	3/22/2012	BBC-1203-201	6.11	7.41	328	6.9	11.3	178	170			8	1	0.2	41	21	7	6	0.37		
MW-1A	5/30/2012	BBC-1205-203	3.44	7.32	347	6.6	11.24	202	190	230	< 1	8	1	0.2	41	17	5	1	0.42		
MW-1A	8/22/2012	BBC-1208-202	4.01	7.24	345	6.8	11.46	188	180	210	< 1	9	1	0.2	41	17	3	< 1	0.42		
MW-1A	11/27/2012	BBC-1211-109	6.68	7.66	331	6.4	10.47	188	180	220	< 1	8	< 1	0.2	43	18	5	1	0.45		
MW-1B	8/26/2011	TSC-1108-201	21.71	6.47	556	8.2	1.16	364	75	92	< 1	200	1	0.2	53	27	3	3	< 0.01		
MW-1B	11/2/2011	BBC-1111-202	24.11	6.25	661	7.5		370	49	60	< 1	210	3	0.2	51	26	3	3	< 0.01		
MW-1B	3/22/2012	BBC-1203-202	21.58	6.2	579	7.2	0.25	338	86			200	1	0.2	58	30	3	3	< 0.01		
MW-1B	5/30/2012	BBC-1205-204	20.93	6.18	609	7.1	0.21	401	77	94	< 1	220	1	0.2	55	28	3	3	< 0.01	60	13
MW-1B	8/22/2012	BBC-1208-201	22.1	6.12	589	7.6	0.2	405	73	90	< 1	230	1	0.3	59	29	3	3	< 0.01		
MW-1B	11/27/2012	BBC-1211-110	22.6	6.51	589	6.8	0.41	404	99	120	< 1	220	1	0.2	61	33	3	3	< 0.01		
MW-1B Dup	3/22/2012	BBC-1203-203						336	88			210	1	0.2	58	30	3	3	< 0.01		
MW-2A	11/30/2011	BBC-1111-401	43.18	7.32	375	6.86	6.4	210	190	230	< 1	23	2	0.4	43	23	3	1	0.16		
MW-2A	3/22/2012	BBC-1203-205	42.71	7.2	374	6.6	4.3	194	190			21	2	0.3	43	23	2	1	0.15		
MW-2A	5/30/2012	BBC-1205-201	40.81	7.19	394	6.7	6.65	212	210	250	< 1	18	2	0.3	43	23	3	1	0.23		
MW-2A	8/22/2012	BBC-1208-204	41.49	7.25	389	7.4	7.59	203	190	230	< 1	16	2	0.3	42	22	3	1	0.23		
MW-2A	11/27/2012	BBC-1211-106	41.9	7.52	373	6.3	7.45	202	200	240	< 1	15	1	0.3	44	24	3	1	0.24		
MW-2A Dup	8/22/2012	BBC-1208-205						205	190	230	< 1	16	2	0.3	42	22	3	1	0.23		
MW-2B	11/30/2011	BBC-1111-402	43.14	7.28	471	7.02	0.47	268	230	280	< 1	42	1	0.4	55	31	3	2	< 0.01		
MW-2B	3/22/2012	BBC-1203-204	42.58	7.08	469	6.8	0.22	234	230			39	1	0.4	58	33	3	2	< 0.01		
MW-2B	5/30/2012	BBC-1205-202	40.77	7.28	525	6.7	0.26	284	260	310	< 1	46	1	0.3	58	32	3	2	< 0.01		
MW-2B	8/22/2012	BBC-1208-203	41.41	7.15	455	7.5	0.26	251	220	270	< 1	36	1	0.4	52	28	3	2	< 0.01		
MW-2B	11/27/2012	BBC-1211-108	41.79	7.51	464	6.5	0.45	262	240	290	< 1	36	< 1	0.3	57	32	3	2	< 0.01		
MW-3	11/30/2011	BBC-1111-400	26.74	7.05	823	9.06	0.32	544	220	270	< 1	260	2	0.7	124	52	14	3	< 0.01		
MW-3	3/22/2012	BBC-1203-200	27.92	7	829	10	0.1	558	220			260	2	0.7	88	58	14	3	< 0.01		
MW-3	5/30/2012	BBC-1205-200	26.23	7.01	877	9.8	0.37	579	230	290	< 1	260	1	0.7	83	54	15	3	< 0.01	64	5
MW-3	8/20/2012	BBC-1208-200	31.62	7.04	867	8.86	-121.7	605	210	260	< 1	280	1	0.7	82	53	15	3	< 0.01		
MW-3	11/27/2012	BBC-1211-105	32.51	7.31	837	9.2	0.28	593	220	270	< 1	260	1	0.6	87	58	15	3	< 0.01		
MW-3 Dup	11/27/2012	BBC-1211-107						584	220	270	< 1	260	1	0.6	86	57	15	3	< 0.01		
MW-4A	5/31/2012	BBC-1205-205	4.83	7.23	511	4.7	1.34	291	290	350	< 1	15	2	0.1	78	21	2	1	< 0.01		
MW-4A	8/22/2012	BBC-1208-207	6.02	7.26	517	7.3	0.59	282	270	330	< 1	15	3	0.1	74	20	3	1	< 0.01		
MW-4A	11/27/2012	BBC-1211-111	5.68	7.53	489	7.1	1.44	277	270	330	< 1	15	2	0.1	78	22	2	1	< 0.01		
MW-4B	5/31/2012	BBC-1205-206	4.34	7.49	468	6.1	0.13	259	270	330	< 1	14	2	0.1	66	21	3	1	0.03		
MW-4B	8/22/2012	BBC-1208-206	5.51	7.49	473	6.5	0.19	250	240	300	< 1	14	2	0.1	64	20	2	1	0.02		
MW-4B	11/27/2012	BBC-1211-112	5.22	7.76	449	5.9	0.33	240	250	300	< 1	12	1	0.1	69	23	2	1	0.03		
MW-4B Dup	5/31/2012	BBC-1205-207						260	270	320	< 1	14	2	0.1	66	21	3	1	0.04		
PW-1	11/15/2011	BBC-1111-206		7.55	603	5.7		340	260	310	< 1	68	1	0.5	75	36	3	5	< 0.01		
PW-2	11/22/2011	BBC-1111-301		7.34	782	7.1		482	270	330	< 1	160	2	0.8	83	51	8	6	< 0.01		
PW-3	5/10/2012	BBC-1205-PW3-DD		6.98	676	10.68	0.28	448	280			120	2	0.4	76	37	4	3	< 0.01		
PW-4	5/17/2012	BBC-1205-600		7.14	620			403	230			120	1	0.4	81	37	4	2	< 0.01		
Human Health Standard			--	--	--	--	--	--	--	--	--	--	--	4	--	--	--	--	10	10	10

Bold concentrations exceed DEQ 7 (October 2012) standards for Human Health.

= narrative standard (guidance level given based on Secondary Federal MCL).

GROUND WATER QUALITY RESULTS

Site Code	DATE	Sample ID	DISSOLVED TRACE CONSTITUENTS (mg/L)																				
			Aluminum (mg/L)	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Strontium (mg/L)	Thallium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
MW-1A	8/26/2011	TSC-1108-200	< 0.03	< 0.003	< 0.003	0.125	< 0.001	< 0.00008	< 0.001	< 0.01	0.003	< 0.03	< 0.0005	0.030	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	0.1	0.0005	0.0017	< 0.01
MW-1A	11/2/2011	BBC-1111-203	1.29	< 0.003	< 0.003	0.863	< 0.001	0.00013	0.002	< 0.01	0.102	1.15	0.0624	0.043	< 0.00004	< 0.005	< 0.01	< 0.001	< 0.0005	0.1	0.0019	0.0017	0.02
MW-1A	3/22/2012	BBC-1203-201	33.8	< 0.003	0.015	1.12	0.001	0.00010	0.010	< 0.01	0.129	26.5	0.157	0.096	0.0001	< 0.005	< 0.01	< 0.001	< 0.0005	0.1	0.0048	0.0033	0.04
MW-1A	5/30/2012	BBC-1205-203	2.06	< 0.003	< 0.003	0.170	< 0.001	< 0.00008	< 0.001	< 0.01	0.007	0.13	0.0043	0.010	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	0.1	0.0004	0.0013	< 0.01
MW-1A	8/22/2012	BBC-1208-202	0.05	< 0.003	< 0.003	0.154	< 0.001	< 0.00008	< 0.001	< 0.01	0.002	0.04	< 0.0005	< 0.005	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	0.1	0.0004	0.0010	< 0.01
MW-1A	11/27/2012	BBC-1211-109	0.236	< 0.0005	< 0.001	0.151	< 0.0008	< 0.00003	< 0.001	< 0.01	0.003	0.17	0.0014	< 0.005	< 0.000005	< 0.005	< 0.002	< 0.001	< 0.0002	0.11	0.0004	0.0013	< 0.008
MW-1B	8/26/2011	TSC-1108-201	< 0.03	< 0.003	0.054	0.015	< 0.001	< 0.00008	< 0.001	0.03	< 0.001	27.1	< 0.0005	0.122	< 0.00001	< 0.005	0.01	< 0.001	< 0.0005	1.4	0.0124	< 0.0003	0.02
MW-1B	11/2/2011	BBC-1111-202	< 0.03	< 0.003	0.058	0.014	< 0.001	< 0.00008	< 0.001	0.03	< 0.001	25.2	< 0.0005	0.105	< 0.00001	< 0.005	0.01	< 0.001	< 0.0005	1.4	0.0128	< 0.0003	0.02
MW-1B	3/22/2012	BBC-1203-202	< 0.03	< 0.003	0.063	0.013	< 0.001	< 0.00008	< 0.001	0.03	< 0.001	25.6	< 0.0005	0.101	0.00001	< 0.005	0.01	< 0.001	< 0.0005	1.6	0.0127	< 0.0003	0.02
MW-1B	5/30/2012	BBC-1205-204	< 0.03	< 0.003	0.061	0.013	< 0.001	< 0.00008	< 0.001	0.03	< 0.001	25.7	< 0.0005	0.093	< 0.00001	< 0.005	0.01	< 0.001	< 0.0005	1.6	0.0131	< 0.0003	0.02
MW-1B	8/22/2012	BBC-1208-201	< 0.03	< 0.003	0.064	0.012	< 0.001	< 0.00008	< 0.001	0.03	< 0.001	24.0	< 0.0005	0.091	< 0.00001	< 0.005	0.01	< 0.001	< 0.0005	1.6	0.0125	< 0.0003	0.02
MW-1B	11/27/2012	BBC-1211-110	< 0.009	< 0.0005	0.063	0.012	< 0.0008	< 0.00003	< 0.001	0.03	< 0.002	24.7	< 0.0003	0.088	< 0.000005	< 0.005	0.012	< 0.001	< 0.0002	1.68	0.0123	< 0.0002	0.015
MW-1B Dup	3/22/2012	BBC-1203-203	< 0.03	< 0.003	0.062	0.012	< 0.001	< 0.00008	< 0.001	0.03	< 0.001	25.7	< 0.0005	0.102	< 0.00001	< 0.005	0.01	< 0.001	< 0.0005	1.6	0.0128	< 0.0003	0.02
MW-2A	11/30/2011	BBC-1111-401	0.05	< 0.003	< 0.003	0.097	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	0.18	0.0009	0.135	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	< 0.1	0.0013	0.0006	< 0.01
MW-2A	3/22/2012	BBC-1203-205	< 0.03	< 0.003	< 0.003	0.071	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	< 0.03	< 0.0005	0.038	0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	< 0.1	0.0010	0.0005	< 0.01
MW-2A	5/30/2012	BBC-1205-201	< 0.03	< 0.003	< 0.003	0.078	< 0.001	< 0.00008	< 0.001	< 0.01	0.001	< 0.03	< 0.0005	0.009	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	< 0.1	0.0005	0.0005	< 0.01
MW-2A	8/22/2012	BBC-1208-204	< 0.03	< 0.003	< 0.003	0.079	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	< 0.03	< 0.0005	< 0.005	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	< 0.1	0.0004	0.0004	< 0.01
MW-2A	11/27/2012	BBC-1211-106	< 0.009	< 0.0005	< 0.001	0.081	< 0.0008	< 0.00003	< 0.001	< 0.01	< 0.002	< 0.02	< 0.0003	< 0.005	< 0.000005	< 0.005	< 0.002	< 0.001	< 0.0002	0.09	0.0003	0.0004	< 0.008
MW-2A Dup	3/22/2012	BBC-1208-205	< 0.03	< 0.003	< 0.003	0.081	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	< 0.03	< 0.0005	< 0.005	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	< 0.1	0.0004	0.0004	< 0.01
MW-2B	11/30/2011	BBC-1111-402	< 0.03	< 0.003	0.003	0.041	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	0.09	< 0.0005	0.026	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	0.1	0.0032	0.0025	< 0.01
MW-2B	3/22/2012	BBC-1203-204	< 0.03	< 0.003	0.004	0.040	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	0.21	< 0.0005	0.017	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	0.1	0.0036	0.0023	< 0.01
MW-2B	5/30/2012	BBC-1205-202	< 0.03	< 0.003	< 0.003	0.035	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	0.25	< 0.0005	0.020	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	0.1	0.0031	0.0022	< 0.01
MW-2B	8/22/2012	BBC-1208-203	< 0.03	< 0.003	0.004	0.040	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	0.09	< 0.0005	0.012	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	< 0.1	0.0034	0.0023	< 0.01
MW-2B	11/27/2012	BBC-1211-108	< 0.009	< 0.0005	0.003	0.040	< 0.0008	< 0.00003	< 0.001	< 0.01	< 0.002	0.10	< 0.0003	0.013	< 0.000005	< 0.005	< 0.002	< 0.001	< 0.0002	0.10	0.0035	0.0020	< 0.008
MW-3	11/30/2011	BBC-1111-400	< 0.03	< 0.003	0.062	0.013	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	1.02	< 0.0005	0.035	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	14.6	0.0006	0.0010	< 0.01
MW-3	3/22/2012	BBC-1203-200	< 0.03	< 0.003	0.062	0.012	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	1.20	< 0.0005	0.035	0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	16.2	0.0005	0.0011	< 0.01
MW-3	5/30/2012	BBC-1205-200	< 0.03	< 0.003	0.062	0.011	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	1.23	< 0.0005	0.025	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	15.8	0.0004	0.0011	< 0.01
MW-3	8/20/2012	BBC-1208-200	< 0.03	< 0.003	0.064	0.012	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	1.14	< 0.0005	0.035	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	15.0	0.0004	0.0011	< 0.01
MW-3	11/27/2012	BBC-1211-105	< 0.009	< 0.0005	0.063	0.010	< 0.0008	< 0.00003	< 0.001	< 0.01	< 0.002	1.23	< 0.0003	0.024	< 0.000005	< 0.005	< 0.002	< 0.001	< 0.0002	15.2	0.0004	0.0011	< 0.008
MW-3 Dup	11/27/2012	BBC-1211-107	< 0.009	< 0.0005	0.063	0.010	< 0.0008	< 0.00003	< 0.001	< 0.01	< 0.002	1.22	< 0.0003	0.023	< 0.000005	< 0.005	< 0.002	< 0.001	< 0.0002	15.3	0.0004	0.0011	< 0.008
MW-4A	5/31/2012	BBC-1205-205	< 0.03	< 0.003	< 0.003	0.189	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	< 0.03	< 0.0005	0.057	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	0.2	< 0.0002	0.0004	< 0.01
MW-4A	8/22/2012	BBC-1208-207	< 0.03	< 0.003	< 0.003	0.186	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	< 0.03	< 0.0005	0.130	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	0.2	< 0.0002	0.0004	< 0.01
MW-4A	11/27/2012	BBC-1211-111	< 0.009	< 0.0005	< 0.001	0.183	< 0.0008	< 0.00003	< 0.001	< 0.01	< 0.002	< 0.02	< 0.0003	0.144	< 0.000005	< 0.005	< 0.002	< 0.001	< 0.0002	0.17	< 0.0002	0.0004	< 0.008
MW-4B	5/31/2012	BBC-1205-206	< 0.03	< 0.003	< 0.003	0.127	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	< 0.03	< 0.0005	0.006	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	0.2	< 0.0002	0.0008	< 0.01
MW-4B	8/22/2012	BBC-1208-206	< 0.03	< 0.003	< 0.003	0.123	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	< 0.03	< 0.0005	< 0.005	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	0.2	< 0.0002	0.0007	< 0.01
MW-4B	11/27/2012	BBC-1211-112	< 0.009	< 0.0005	< 0.001	0.121	< 0.0008	< 0.00003	< 0.001	< 0.01	< 0.002	< 0.02	< 0.0003	< 0.005	< 0.000005	< 0.005	< 0.002	< 0.001	< 0.0002	0.17	< 0.0002	0.0007	< 0.008
MW-4B Dup	5/31/2012	BBC-1205-207	< 0.03	< 0.003	< 0.003	0.126	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	< 0.03	< 0.0005	0.005	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	0.2	< 0.0002	0.0008	< 0.01
PW-1	11/15/2011	BBC-1111-206	< 0.03	< 0.003	0.009	0.106	< 0.001	0.00008	< 0.001	< 0.01	< 0.001	1.11	< 0.0005	0.294	< 0.00001	< 0.005	< 0.01	< 0.001	< 0.0005	< 0.1	0.0012	0.0010	0.57
PW-2	11/22/2011	BBC-1111-301	< 0.03	< 0.003	0.006	0.034	< 0.001	< 0.00008	< 0.001	< 0.01	< 0.001	0.76	<										