

FINAL

2005/2006 WORK PLAN

NEW WORLD MINING DISTRICT RESPONSE AND RESTORATION PROJECT



JULY 2005

United States Department of Agriculture
Forest Service
Gallatin National Forest

MAXIM
TECHNOLOGIES INC.

Final

**2005/2006 WORK PLAN
NEW WORLD MINING DISTRICT
RESPONSE AND RESTORATION PROJECT**

Prepared for:

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I.0 INTRODUCTION

This document provides descriptions of work tasks to be completed during 2005/2006 in conjunction with response and restoration activities for the New World Mining District Response and Restoration Project in Park County, Montana (**Figure 1**). The 2005/2006 Work Plan complements the Overall Project Work Plan (Maxim, 1999a) by providing a description of specific work elements that will be completed in 2005/2006. This work plan initiates the project cycle for the seventh year of the project. Project activities conducted by the U.S. Department of Agriculture (USDA) Forest Service began in 1999. Those activities are described in the 1999, 2000, 2001, 2002/2003, 2003/2004, and 2004/2005 Work Plans (Maxim, 1999b; 2000; 2001a; 2002a; 2003a; 2004a).

This year's work plan for the project crosses over into 2006 and is designated the 2005/2006 Work Plan. This period of time is covered in this document because it is more useful for the planning period to begin in the spring to accommodate field and construction activities that must be completed during a relatively short season beginning in late May and ending in early October.

A general description of the site, project objectives, and project organization are provided in this introductory section. Following this introductory section is a detailed description of the work tasks that will be completed during 2005/2006, a project schedule, and project deliverables. For more detailed descriptions of the overall project, the reader can refer to the Overall Project Work Plan (Maxim, 1999a) and/or annual project summary documents produced in 2001 through 2004 (Maxim, 2001b; 2002b; 2003b, 2004b). These documents are available on the project website at,

<http://www.fs.fed.us/r1/gallatin>

and at three project information repositories located at the Gallatin National Forest Supervisor's Office in Bozeman, Montana; the Gardiner Ranger District Office in Gardiner, Montana; and at the Cooke City Chamber of Commerce office in Cooke City, Montana. The reader is encouraged to review these documents to gain a better understanding of the overall project.

I.1 PROJECT BACKGROUND

On August 12, 1996, the United States signed a Settlement Agreement (Agreement) with Crown Butte Mining, Inc. (CBMI) to purchase CBMI's interest in their New World Mining District (District) holdings. This transfer of property to the U.S. government effectively ended CBMI's proposed mine development plans and provided \$22.5 million to cleanup historic mining impacts in the District. In June 1998, all interested parties and CBMI signed a Consent Decree (Decree). The Decree, approved by the United States District Court, finalized the terms of the Agreement and made available the funds that are being used for mine cleanup. Monies available for cleanup will be spent first on District Property, which, as defined in the Decree, includes all property or interests in property that CBMI relinquished to the United States (**Figure 1**). As funds are available after District Property is cleaned up to the satisfaction of the United States, other mining disturbances in the District may be addressed.

The USDA Forest Service, as the lead agency responsible for implementing the cleanup, has assembled a management team and has published objectives to guide reclamation and restoration of the historic mining impacts in the District. Under their Superfund authority, the USDA Forest Service will execute the response and restoration project by following guidance provided by the EPA for non-time-critical removal actions (EPA, 1993). Non-time-critical removal actions are defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) as actions that are implemented by the lead

agency to respond to “the cleanup or removal of released hazardous substances from the environment ... as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment...” (EPA, 1993).

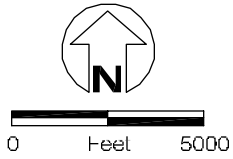
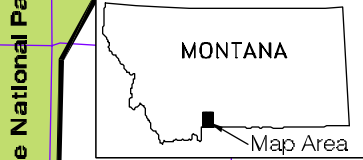
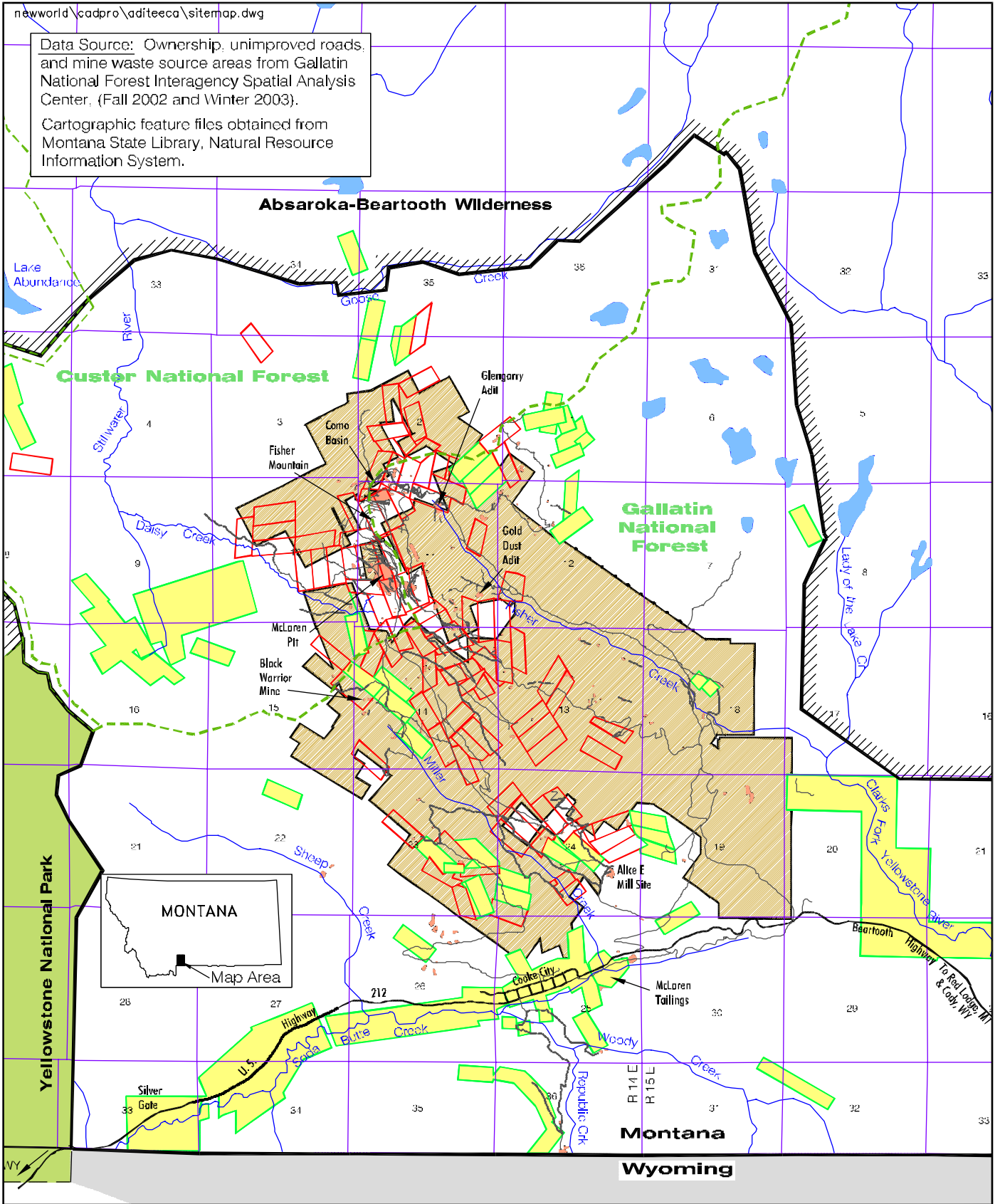
In 1995, EPA began a site investigation after initial announcement of the property transfer from CBMI. The EPA investigation involved installation of monitoring wells, surface water sampling, groundwater monitoring, and completion of a groundwater tracer study. In October 1998, the USDA Forest Service assisted CBMI in completing and submitting a Support Document and Implementation Plan to support the CBMI petition for temporary modification of water quality standards. Under the Decree and Agreement, CBMI is required to submit petitions regarding temporary standards if requested by the USDA Forest Service. The Support Document and Implementation Plan (Stanley and Maxim, 1998) was submitted to the State of Montana Board of Environmental Review (Board) on January 22, 1999. The petition for the adoption of temporary standards for Fisher Creek, Daisy Creek, and a portion of the upper Stillwater River was accepted by the Board and noticed for public hearing. The proposed rule was modified to reflect public comment and the temporary water quality standards were approved and adopted by the Board on June 4, 1999. The goal of the temporary standards is to allow the project to proceed so that water quality in Fisher Creek, Daisy Creek, and the Stillwater River improves to the point where these streams meet uses for waters classified B-I under classification standards established by the State of Montana.

The temporary standards are subject to change as improvements in water quality are realized. They are reviewed every three years to determine if changes are desirable, and the first review was required in 2002. The Board held a hearing on July 26, 2002, to review the long-term water quality data collected since the standards became effective in June 1999, and compared project progress with that presented in the implementation plan (Maxim, 2002c). As a result of this review, the Board took no action to modify the temporary standards as originally defined in June 1999. A second tri-annual review hearing on temporary water quality standards was held by the Board on June 3, 2005, with the same result.

In March 1999, the USDA Forest Service initiated the planning process for the project. Planning documents were in place in June 1999, and work began on the project with the monitoring of surface water and groundwater quality at selected monitoring points. Activities that have been conducted to date include the following:

- Establishing a database management system for the project.
- Cataloging existing information available for the site.
- Conducting public meetings and annual technical meetings to distribute relevant project information to interested parties.
- Completing a technical evaluation of existing information and data.
- Developing a suitable map base of District Property to support engineering design.
- Conducting annual monitoring of surface water and groundwater quality at select locations in the District.
- Obtaining data to fill identified data gaps for proposed response actions at the site including installing monitoring wells, collecting environmental samples, and collecting other environmental data.
- Identifying unrecorded mine waste dumps, adits, and boreholes, and developing a database of site characteristics.

Data Source: Ownership, unimproved roads, and mine waste source areas from Gallatin National Forest Interagency Spatial Analysis Center, (Fall 2002 and Winter 2003).
 Cartographic feature files obtained from Montana State Library, Natural Resource Information System.



- District Property Boundary
- District Boundary
- ~ Unimproved Road
- - - National Forest Boundary
- /// Wilderness Boundary
- Mine Waste Source Area
- District Property (Patented Claims)
- ▨ District Property (Unpatented Claims)
- Private Property

Project Vicinity Map
 New World Mining District
 Response and Restoration Project
 Cooke City Area, Montana
 FIGURE 1

Figure I- back page

- Improving portions of the Daisy Pass and Lulu Pass roads to accommodate construction traffic.
- Improving a previously constructed surface water diversion around the Como Shaft.
- Completing a repository siting evaluation report and collecting hydrogeologic data on two prospective repository sites.
- Completing a surface water tracer study by the U.S. Geological Survey on Daisy Creek and Miller Creek to determine surface water inputs of metal contaminants.
- Ranking mine waste sources according to a modified Hazard Ranking System to aid in the prioritization of sites slated for clean up.
- Identifying unrecorded cultural features.
- Reopening the Glengarry Adit and Como Raise to more fully characterize underground sources of water within the mine.
- Evaluating water quality treatment alternatives for acid mine discharges.
- Preparing a Selective Source Response Action Engineering Evaluation/Cost Analysis (EE/CA) for potential response alternatives (Maxim, 2001c).
- Removing approximately 25,000 cubic meters (32,700 cubic yards) of mine waste rock and mill tailings (nine percent of the total District waste) from seven mine waste areas, disposing of these wastes in an engineered repository, and revegetating about 1.9 hectares (4.6 acres) of the former waste areas for the Selective Source Response Action.
- Preparing a McLaren Pit Response Action EE/CA (Maxim, 2001d).
- Consolidating and capping waste rock dumps from the Daisy Creek headwaters into the McLaren Pit. These waste source areas account for about 67% of the District's total waste rock volume on District Property. Construction activities were initiated in 2002 with the consolidation of the wastes, and concluded with capping the consolidated wastes with an impermeable cover in 2003.
- Preparing a report for the Board of Environmental Review with respect to their review of the temporary water quality standards.
- Preparing a Como Basin/Glengarry Adit/Fisher Creek Response Action EE/CA (Maxim, 2002d).
- Initiating closure of the Glengarry Adit to eliminate contaminated outflows. The Glengarry adit source area reclamation work was begun in 2003 and is expected to be completed in 2005.
- Reopening and evaluating the McLaren Adit, and grouting an exploration boring that intersected the adit tunnel.
- Preparing the Miller Creek Response Action EE/CA (Maxim, 2004c).
- Monitoring reclaimed and revegetated sites in the District.
- Completing construction of surface controls at select sites in the Miller Creek and Fisher Creek drainages.
- Preparing Response Action construction packages for the preferred cleanup alternatives for the Como Basin, remaining work in Fisher Creek, and cleanup work identified for Miller Creek.
- Characterizing the distribution of sediment in Fisher Creek and Daisy Creek.
- Continuing a study of ferricrete deposition in Fisher Creek and Daisy Creek.

- Continuing a study of the effects of reclamation work on grizzly bear activity in the District.
- Studying the occurrence of metal contaminated sediment in the Stillwater wetland.
- Initiating the process to list the District on the National Register of Historic Places.
- Preparing Project Summary documents to succinctly describe project activities over the years.

I.2 SITE LOCATION AND DESCRIPTION

The District falls within the Gallatin and Custer National Forests and abuts Yellowstone National Park's northeast corner. The Absaroka-Beartooth Wilderness Area bounds the District to the north and east, with the Montana-Wyoming state line forming the southern boundary of the District. The District lies entirely within Park County, Montana (**Figure I**).

The communities of Cooke City and Silver Gate, Montana, are the only population centers near the District. The neighboring communities of Mammoth, Wyoming, and Gardiner, Montana, are located about 80 kilometers (50 miles) to the west. Red Lodge, Montana, is located about 105 kilometers (65 miles) to the northeast via the Beartooth Highway, and Cody, Wyoming, is located 95 kilometers (60 miles) to the southeast.

The District is located at an elevation that ranges from 2,400 meters (7,900 feet) to over 3,170 meters (10,400 feet) above sea level. The site is snow-covered for much of the year and only one route of travel is open on a year-round basis -- the highway between Mammoth and Cooke City. The Sunlight Basin road accesses the District from northwestern Wyoming during the spring, summer, and fall but only allows access to within a few miles of the District in winter. The Beartooth Highway allows access to the District from the east but is closed during winter.

The District covers an area of about 10,360 hectares (25,600 acres). Historic mining disturbances affect about 20 hectares (50 acres) located on District Property. Mining disturbances on non-District Property include the McLaren Tailings and McLaren Millsite, which cover an additional 6.9 hectares (17 acres), and the Great Republic Smelter, which is located in the town of Cooke City and covers 0.2 hectares (0.5 acres).

The topography of the District is mountainous with dominant glacial features, and is situated at the headwaters of three river systems that all flow into the Yellowstone River. The three tributaries are the Clarks Fork of the Yellowstone, the Stillwater, and the Lamar. The Lamar River flows through Yellowstone Park. The major tributary streams in the District include Daisy, Miller, Fisher, Goose, Sheep, Lady of the Lake, Republic, Woody, and Soda Butte creeks.

I.3 PURPOSE AND OBJECTIVES

The primary purpose of this work plan is to guide project activities that will be conducted in the 2005/2006 planning year. Objectives for the 2005/2006 Work Plan are consistent with those detailed in the Overall Project Work Plan (Maxim, 1999a) and those described in the Revised Support Document and Implementation Plan for Temporary Water Quality Standards (Maxim, 2003c). Primary objectives for work done in 2005/2006 include: conducting response actions; preparing response action construction packages; collecting sufficient information to support engineering analyses and designs for response actions; monitoring water quality and revegetation success to document the results of response and restoration actions; and, satisfying the requirements of the rule allowing adoption of temporary water quality standards.

2.0 SCOPE OF WORK

To meet the objectives for 2005/2006, the following activities will be performed:

- Maintain community relations in accordance with the Community Relations Plan (Maxim, 1999c).
- Maintain the project database and project website.
- Continue monitoring surface water and groundwater in the District including closely monitoring surface water and groundwater conditions downstream of the closed Glengarry Adit and downstream and within the capped McLaren Pit.
- Complete Phase II construction of the Glengarry Adit closure.
- Begin the first year of construction on the Como Basin cap and the final expansion of the Selective Source Repository.
- Collect construction monitoring data during construction of the Como Basin cap and the repository expansion.
- Continue to monitor the repository sump and associated surface water and groundwater locations.
- Monitor revegetation at the McLaren Pit and McLaren Triangle.
- Grout exploration boreholes in the Gold Dust Adit.
- Plug and abandon unused monitoring wells and piezometers in the project area.
- Continue to collect data for the Ferricrete Study.
- Grow additional whitebark pine seedlings for transplant in the McLaren borrow area.
- Prepare a Progress Report for the 3-Year Review of the Temporary Standards by the Board of Environmental Review.
- Prepare the 2005 Project Summary
- Prepare the 2006/2007 Work Plan
- Prepare a Long-Term Repository Monitoring Plan

A more complete description of each of these activities is presented below.

2.1 COMMUNITY RELATIONS

A Community Relations Plan (CRP) has been developed for the project and is included in the Overall Project Work Plan (Maxim, 1999c). The CRP describes community relation strategies that will be used to share information with the public and obtain timely input on proposed project activities. Community relation techniques include preparing news releases, preparing project summaries, conducting technical workshops and public meetings, making project documents readily available to interested parties, and accepting and responding to public comment on project activities.

Community relation activities described in the CRP will be used in 2005/2006 to keep the public informed of project activities. Events expected for 2005/2006 with the anticipated timing of the events are listed in **Table I**. As other events arise during the year, the public will be informed in a timely manner in accordance with the CRP.

TABLE I COMMUNITY RELATION ACTIVITIES 2005/2006 Work Plan	
Event/Task	Timing
Release Updated Project Summary Report	June 2005
Public Meeting	June/July 2005 - Cooke City
Public Meeting	August/September 2005 - Cooke City
Technical Workshop on Work Plan Activities	December 2005 – Bozeman

2.2 MAINTAIN PROJECT WEBSITE AND DATABASE

The USDA Forest Service has maintained a project website since project inception. The website address is:

<http://www.fs.fed.us/r1/gallatin>

The project website contains general information on the project as well as a library of archived information specific to the work that has been conducted over the past six years. The library contains downloadable versions of all documents that have been made available to the public in addition to a list of historic documents produced by various authors during the 1990's. Project information stored at the New World Response and Restoration Project document repository in Bozeman is also listed on the website. Environmental data that have been collected at the New World site are cataloged in a Microsoft Access® database, and analytical data for surface water and mine waste samples are available for downloading from this database.

The project website will be maintained to disseminate information, reports, and data related to the project. Relevant reports prepared during 2005/2006 will be posted to the website after hard copy documents are made available to the public. Other reports, such as technical memoranda, will also be available on the project website. The project water quality database will continue to be updated as new project information is collected during 2005/2006.

2.3 SURFACE WATER QUALITY MONITORING

This section of the work plan describes surface water monitoring activities that will be completed in 2005. Surface water monitoring includes monitoring for long-term, supplemental, and construction purposes.

2.3.1 Long-Term Surface Water Quality Monitoring

Surface water quality monitoring will be conducted in 2005 at the 12 sampling stations identified in the Long-Term Surface Water Quality Monitoring Plan (Maxim, 1999d). Long-term surface water sampling

sites are shown on **Figure 2** and listed in **Table 2**. Samples will be collected before the onset of snowmelt (April), during higher flow conditions (June/July), and during low flow (September/October).

Surface water samples will be collected and analyzed in accordance with procedures and methods described in the Site-Wide Sampling and Analysis Plan (SAP) (Maxim, 1999f). In addition to the analytical methods described in the Site-Wide SAP, analysis of dissolved metals will be added to the parameter list for selected sites. Analysis of dissolved metals will allow further evaluation of reclamation success, particularly in the McLaren Pit area, as dissolved metals analysis removes the contribution of metals present in suspended sediment. Sites selected for dissolved metals analysis are identified in **Table 2**.

Table 3 lists surface water field parameters and standard operating procedures (SOPs) from the Site-Wide SAP. **Table 4** lists preservation and bottle requirements and **Table 5** lists surface water analytical requirements and practical quantitation limits (PQLs).

2.3.2 Construction Monitoring

Surface water quality monitoring will be performed during response action construction in the Como Basin at stations FCT-11 and SW-3 (**Figure 2**). Construction monitoring will be conducted on a weekly basis when construction earthwork is active. The objective of construction water quality monitoring is to document water quality conditions and make appropriate adjustments to construction practices if water quality is significantly affected by construction activities. Construction monitoring will consist of measuring the following field parameters: flow, pH, specific conductance, turbidity, and total iron and copper concentrations using a colorimetric Hach field kit. Field parameters will be measured according to procedures and methods described in the Site-Wide SAP (Maxim, 1999f). **Table 3** lists SOPs for measurement of field parameters.

2.3.3 Supplemental Water Quality Monitoring

Supplemental surface water stations will be monitored in Daisy Creek, Fisher Creek, and at the Selective Source repository (**Table 2**). Supplemental stations located in the Daisy Creek drainage will be monitored to augment groundwater monitoring in the McLaren Pit area. In Fisher Creek, stations FCT-11 and FCT-12 will be monitored to allow evaluation of loading changes in Fisher Creek that result from the Glengarry Adit closure. In Miller Creek, station SW-5, located at the mouth of the creek, has been monitored supplementally for the past few years to augment water quality data in Miller Creek. Station SBT-6, located downstream of the repository in the Soda Butte Creek drainage, will also be monitored to continue documenting water quality downstream of the repository.

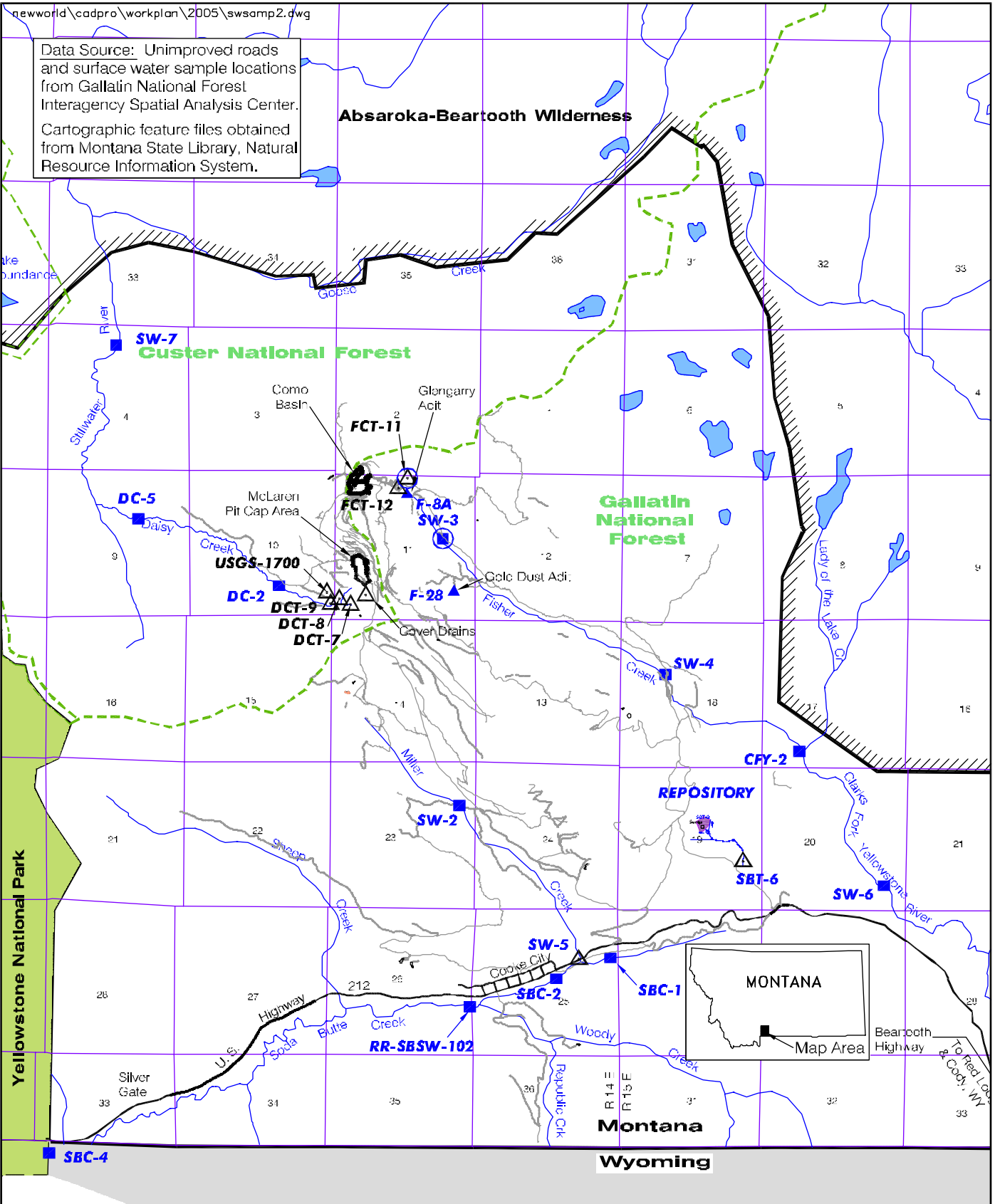
Samples will be collected from all supplemental surface water stations in conjunction with other long-term monitoring events (**Table 2**). Supplemental stations will be sampled and analyzed in accordance with procedures and methods described in the Site-Wide SAP (Maxim, 1999f). **Tables 3, 4, and 5** list field parameters, sampling requirements, and analytical requirements.

2.3.4 Adit Discharge Monitoring

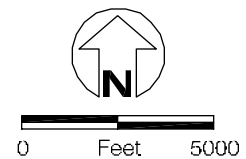
Two adit discharges will be monitored in 2005. Monitoring will continue at the Glengarry Adit by measuring flow and field parameters prior to and following completion of closure construction. The Gold Dust Adit will be monitored for flow and field parameters prior to and following completion of grouting operations (see **Section 2.10**).

TABLE 2 2005 SURFACE WATER SAMPLE SITES 2005/2006 Work Plan				
Site Name⁽¹⁾	Location	April	June/ July	Sept/ Oct
Daisy Creek Drainage				
DCT-7†*	Daisy Cr. tributary south of McLaren Pit	--	X	X
DCT-8†*	Daisy Cr. tributary south of McLaren Pit	--	X	X
DCT-9†*	Daisy Cr. tributary south of McLaren Pit	--	X	X
USGS-1700†*	Daisy Cr. tributary south of McLaren Pit	--	X	X
Cover Drains†*	McLaren Pit drains beneath cover (DCSW-101, -102, -103)	--	X	X
DC-2*	Daisy Creek below confluence of McLaren tributaries	X	X	X
DC-5*	Daisy Creek above confluence with Stillwater River	X	X	X
SW-7*	Stillwater River at Stillwater Trail Crossing	X	X	X
Fisher Creek Drainage				
FCT-12†*§	Tributary south of Glengarry Adit	--	X	X
FCT-11††*§	Tributary below Como Basin	--	X	X
SW-3*‡	Fisher Creek below Glengarry Adit	X	X	X
SW-4*	Fisher Creek at Lulu Road Crossing	X	X	X
CFY-2*	Fisher Creek above Clarks Fork confluence	X	X	X
Clarks Fork River Drainage				
SW-6*	Clarks Fork Yellowstone River at Saw Mill Road	X	X	X
Miller Creek Drainage				
SW-2*	Miller Creek below Miller Mountain Road Crossing	X	X	X
SW-5†*	Miller Creek near mouth	X	X	X
Soda Butte Creek Drainage				
SBT-6†	Soda Butte Creek Tributary below Repository Site	X	X	X
SBC-1	Soda Butte Creek above confluence with Miller Creek	X	X	X
SBC-2	Soda Butte Creek below McLaren Tailings	X	X	X
RR-SBSW-102	Soda Butte Creek below Woody Creek	X	X	X
SBC-4	Soda Butte Creek at Park Boundary	X	X	X

Note: (1) All stations will be sampled and analyzed for the full suite of laboratory parameters except for construction samples.
‡ Indicates construction monitoring site; construction samples will be analyzed for field parameters and total field copper and iron.
† Indicates supplemental surface water monitoring station.
* Indicates sample will be analyzed for both total and dissolved metals.
§ If visual observations of flow indicate FCT-11 and FCT-12 may dry up before the September/October sampling event, a sample will be collected in August or earlier in September; both tributaries will be visited during construction monitoring of FCT-11 to identify and note any seeps/springs that may result from closure of the Glengarry Adit.



Data Source: Unimproved roads and surface water sample locations from Gallatin National Forest Interagency Spatial Analysis Center. Cartographic feature files obtained from Montana State Library, Natural Resource Information System.



- District Boundary
- Unimproved Road
- National Forest Boundary
- Wilderness Boundary
- Long-Term Surface Water Monitoring Station
- Adit Station
- Construction Monitoring Station
- Supplemental Monitoring Station

2005 Surface Water Monitoring Stations
 New World Mining District
 Response and Restoration Project
 Cooke City Area, Montana

FIGURE 2

Figure 2 – Back page

**TABLE 3
SURFACE WATER FIELD PARAMETERS
2005/2006 Work Plan**

Parameter	SOP Number⁽¹⁾	SOP Title	Event
Specific Conductance	SOP-05	Field Measurement of Specific Conductance	All
pH	SOP-06	Field Measurement of pH	All
Water Temperature	SOP-07	Field Measurement of Water Temperature	All
Flow	SOP-01	Streamflow Measurement; Wading Technique	All
Turbidity	SOP-35	Field Measurement of Turbidity	Construction
Total Iron	Hach ⁽²⁾	Hach Water Analysis Handbook	Construction
Total Copper	Hach ⁽²⁾	Hach Water Analysis Handbook	Construction

- 1 Maxim Standard Operating Procedures (Appendix A, Site-Wide SAP)
- 2 Field analysis will be conducted using a Hach DR 2000 Spectrophotometer following the procedures in Hach Water Analysis Handbook (1991)

**TABLE 4
SURFACE WATER SAMPLING REQUIREMENTS
2005/2006 Work Plan**

Parameter	Preservation⁽¹⁾	Bottle Size/Type
Total Recoverable Metals	HNO ₃ to pH < 2; Iced to 4°C	500 milliliter polyethylene
Dissolved Metals	Filtered through 0.45 micron filter; HNO ₃ to pH < 2; Iced to 4°C	500 milliliter polyethylene
Common Ions/Physicochemical	Iced to 4°C	1 liter polyethylene

- 1 HNO₃ = nitric acid

**TABLE 5
SURFACE WATER ANALYTICAL REQUIREMENTS
2005/2006 Work Plan**

Parameter	PQL (mg/L)⁽¹⁾	EPA Method No.	Max. Holding Time
Physicochemical			
Specific Conductivity	None	2310B	28 days
pH	None	150.1	Upon arrival at lab
Total Dissolved Solids	None	2340C	7 days
Total Suspended Solids	None	160.2	7 days
Hardness	None	2340B	6 months
Acidity	None	305.1	14 days
Metals⁽²⁾			
Aluminum	0.05	200.8/200.7	6 months
Cadmium	0.0001	200.8/200.7	6 months
Copper	0.001	200.8/200.7	6 months
Iron	0.01	200.8/200.7	6 months
Lead	0.001	200.8/200.7	6 months
Manganese	0.003	200.8/200.7	6 months
Zinc	0.01	200.8/200.7	6 months
Common Cations⁽²⁾			
Calcium	1.0	200.8/200.7	6 months
Magnesium	1.0	200.8/200.7	6 months
Potassium	1.0	200.8/200.7	6 months
Sodium	1.0	200.8/200.7	6 months
Common Anions⁽²⁾			
Sulfate	None	375.2	28 Days
Bicarbonate	None	2320B	14 Days
Carbonate	None	2320B	14 Days
Chloride	None	325.3	28 Days

1 PQL = Practical Quantitation Limit in milligrams per liter (mg/L)

2 Surface water parameters will be analyzed as total recoverable (unfiltered); for the select stations shown in Table 2, both total and dissolved metals will be analyzed.

2.4 GROUNDWATER MONITORING

Groundwater monitoring will be conducted in 2005 at the wells shown in **Tables 6 and 7**. Well locations are shown on **Figures 3 and 4**. Groundwater monitoring activities are discussed in the following subsections.

2.4.1 Long-Term Groundwater Monitoring Event

Wells scheduled for the long-term monitoring event will be monitored one time in 2005 in July (**Table 6**). These wells have generally been monitored annually since well installation. Monitoring will be conducted in July when water levels at the higher elevation sites are typically at the highest level reached during the year. Past experience has shown that water quality is generally more mineralized and contains higher concentrations of contaminants during this high water level period.

The July long-term groundwater monitoring event will involve measuring water levels, measuring field parameters, and collecting samples for laboratory analysis. **Table 8** lists field parameters that will be measured and **Tables 9 and 10** list groundwater analytical parameters and practical quantitation limits (PQLs).

2.4.2 McLaren Pit Groundwater Monitoring

Extensive monitoring will be conducted in the McLaren Pit area (**Table 7**), as was done in 2003 and 2004, to closely monitor changes in groundwater conditions that may result from the capping of the McLaren Pit waste rock, which was capped in 2003. McLaren Pit wells will be monitored in July, when water levels are at or near seasonal highs, and once again in September/October.

Monitoring will involve measuring water levels, measuring field parameters, and collecting samples for laboratory analysis. As shown in **Table 7**, samples will only be collected from select wells for laboratory analysis in July, with the remaining wells slated for measurement of field parameters only. In September, a subset of the select wells will be sampled again for analysis of a limited suite of laboratory parameters, a full suite of laboratory parameters (DCGW-104, -111S, and -111D), and field parameters only (**Table 7**). Groundwater samples will be submitted to an analytical laboratory for analysis of parameters listed in **Table 10**.

2.4.3 Groundwater Monitoring of the Glengarry Adit Closure

Well FCGW-100 (**Table 6**) was installed in August 2004 in conjunction with monitoring of the Glengarry Adit closure. The well was completed at a depth of 386 feet in the tunnel near the Y-intersection of the Glengarry, and was installed to monitor water levels in the mine workings following completion of plugging and backfilling work in the Glengarry. Water levels, which were measured in September, October, and November 2004 in this well and in wells EPA-11 and EPA-12, rose steadily in both the plugged workings and in bedrock in the two EPA wells.

Water level monitoring in these three wells will be continued in 2005, with monitoring scheduled for April (if possible), May, June, and weekly from July through September. Field parameters will also be measured in August and September, along with samples collected in July from the two EPA wells for laboratory analysis (**Table 6**).

TABLE 6 FISHER CREEK, MILLER CREEK, STILLWATER MARSH, AND REPOSITORY MONITORING WELLS SCHEDULED FOR SAMPLING IN 2005 2005/2006 Work Plan					
Well No.	Year Installed	Completion Formation	Monitoring Event		
			July	Aug/Sept	Continuous
Fisher Creek Area					
EPA-11§	1996	Tertiary Intrusive Dike	X	F	--
EPA-12§	1996	Scotch Bonnet Diorite	X	F	--
FCGW-100§	2004	Glengarry Adit behind plugs	F	F	--
MW-1	1989	Wolsey Shale	X	--	--
MW-9A	1990	Alluvium	X	--	--
MW-9B	1990	Precambrian	X	--	--
MW-10A	1990	Alluvium	X	--	--
MW-10B	1991	Precambrian	X	--	--
MW-11	1990	Precambrian	X	--	--
SB-16	1991	Precambrian	X	--	--
Tracer-5	1997	Fisher Mtn. Intrusive	X	--	--
Miller Creek Area					
MW-5A	1989	Glacial Till/Dolomite	X	--	--
MW-5P	1989	Wolsey Shale	X	--	--
Stillwater Marsh					
5 wells	2003	Alluvium	X	--	--
Selective Source Repository					
SBGW-105T	1999	Till	X		W
SBGW-105	1999	Granite	X	--	--
SBGW-107T	1999	Till	X		W
SBGW-107	1999	Granite	X	--	--
SBGW-108T	1999	Till	X		W
SBGW-108	1999	Granite	X	--	--

Note: X Samples collected and analyzed for full suite of laboratory parameters.
 F Samples collected and monitored for field parameters only; Aug/Sept indicates sample collected each month.
 W Continuous water level monitoring.
 § Water levels will be measured in April (if possible), May, June, and weekly from July through September

**TABLE 7
MCLAREN PIT AREA MONITORING WELLS
SCHEDULED FOR SAMPLING IN 2005
2005/2006 Work Plan**

Well No.	Year Installed	Completion Formation	Monitoring Event	
			July	September
DCGW-100	2003	Meagher Limestone	X*	F
DCGW-101S	2001	Colluvium	X*	L*
DCGW-101D	2001	Lulu Pass Rhyodacite Porphyry	X*	L*
DCGW-111S	2003	Colluvium	X*	X*
DCGW-111D	2003	Bedrock	X*	X*
Tracer-2	1997	Fisher Mtn. Intrusive	X*	--
MW-2§	1989	Wolsey Shale	X*	F
MW-3	1989	Wolsey Shale	X*	--
DCGW-104§	2001	Waste Rock	X*	X*
DCGW-105§	2001	Waste Rock	X*	L*
DCGW-106	2002	Colluvium	F	--
DCGW-107	2002	Colluvium	F	--
DCGW-108	2002	Colluvium	F	--
DCGW-109	2002	Colluvium	F	--
DCGW-110	2002	Colluvium	F	--
DCGW-131	2002	Colluvium	F	--
DCGW-132	2002	Colluvium	X*	L*
DCGW-133	2002	Colluvium	X*	L*
DCGW-134	2002	Colluvium	F	--
DCGW-135	2002	Colluvium	F	--
DCGW-136	2002	Colluvium	X*	L*
DCGW-137	2002	Colluvium	X*	L*

Notes: X* Indicates well will be sampled for full suite of laboratory parameters along with depth to water and field parameters
 F Indicates only depth to water and field parameters monitored
 L* Indicates wells to be sampled for limited suite of laboratory parameters (acidity, sulfate, TDS, cadmium, copper, & iron)
 § Water levels will be measured in April (if possible), May, and June; continuous water level monitors will be installed in waste rock monitoring wells DCGW-104 and DCGW-105 in late May or early June.
 -- Indicates no monitoring

**TABLE 8
GROUNDWATER FIELD PARAMETERS
2005/2006 Work Plan**

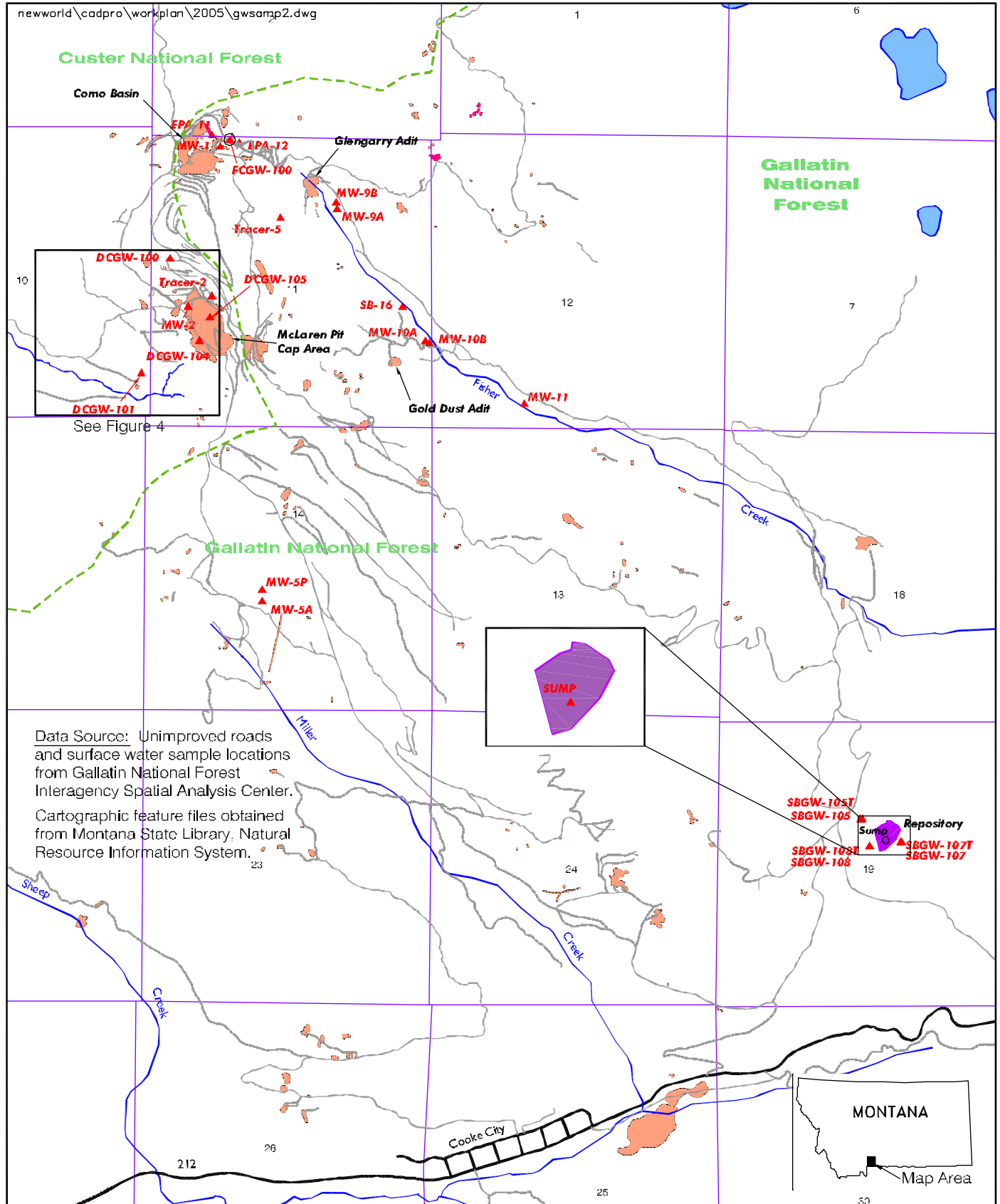
Parameter	SOP Number⁽¹⁾	SOP Title	Event
Specific Conductance	SOP-05	Field Measurement of Specific Conductance	All
pH	SOP-06	Field Measurement of pH	All
Water Temperature	SOP-07	Field Measurement of Water Temperature	All
Oxidation-Reduction	SOP-28	Field Measurement of Redox Potential (Eh)	All
Dissolved Oxygen	SOP-08	Field Measurement of Dissolved Oxygen	All
Depth to Water	SOP-20	Field Measurement of Groundwater Level	All

1 Maxim Standard Operating Procedures (Appendix A, Site-Wide SAP)

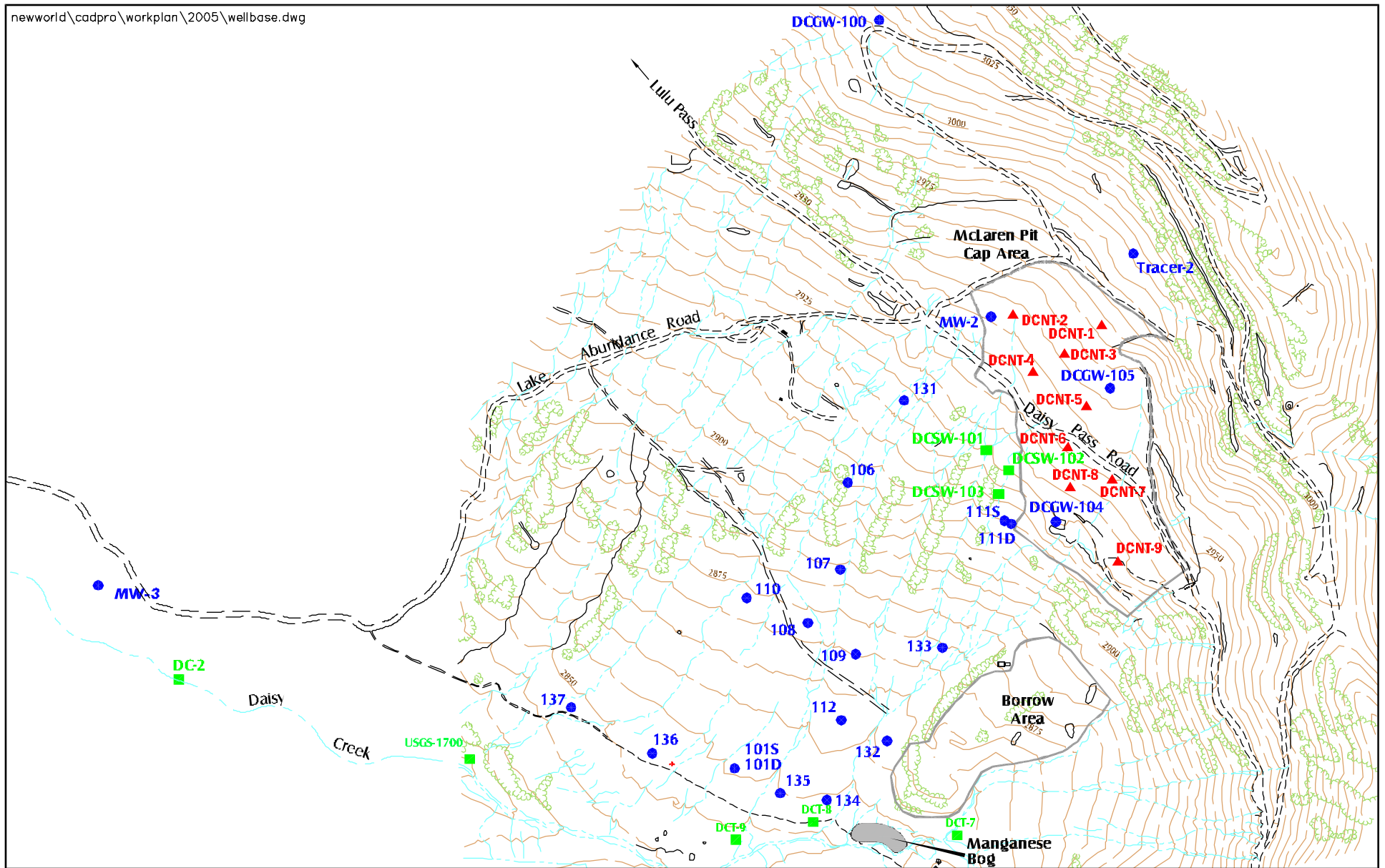
**TABLE 9
GROUNDWATER SAMPLING REQUIREMENTS
2005/2006 Work Plan**

Parameter	Preservation⁽¹⁾	Bottle Size/Type
Dissolved Metals	Filtered through 0.45 micron filter; HNO ₃ to pH < 2; Iced to 4°C	500 milliliter polyethylene
Common Ions/Physicochemical	Iced to 4°C	1 liter polyethylene

1 HNO₃ = nitric acid



2005 Groundwater Monitoring Stations
 New World Mining District
 Response and Restoration Project
 Cooke City Area, Montana
FIGURE 3



0 10 Meters 50
1:5000

Contour Interval = 5 meters

- Surface Water Station
- 101 Monitoring Well (DCGW prefix not included)
- Creek/Drainage
- Road/Trail
- ▲ DCNT-9 Moisture Monitoring Tube

2005 McLaren Pit Area Monitoring Stations
New World Mining District
Response and Restoration Project
Cooke City Area, Montana

FIGURE 4

**TABLE 10
GROUNDWATER ANALYTICAL REQUIREMENTS
2005/2006 Work Plan**

Parameter	PQL (mg/l) ⁽¹⁾	EPA Method No.	Max. Holding Time
Physicochemical			
Specific Conductivity	None	2310B	28 days
pH	None	150.1	Upon arrival at lab
Total Dissolved Solids	None	2340C	7 days
Hardness	None	2340B	6 months
Acidity	None	305.1	14 days
Metals⁽²⁾			
Aluminum	0.05	200.8/200.7	6 months
Cadmium	0.0001	200.8/200.7	6 months
Copper	0.001	200.8/200.7	6 months
Iron	0.01	200.8/200.7	6 months
Lead	0.001	200.8/200.7	6 months
Manganese	0.003	200.8/200.7	6 months
Zinc	0.01	200.8/200.7	6 months
Common Cations⁽²⁾			
Calcium	1.0	200.8/200.7	6 months
Magnesium	1.0	200.8/200.7	6 months
Potassium	1.0	200.8/200.7	6 months
Sodium	1.0	200.8/200.7	6 months
Common Anions⁽²⁾			
Sulfate	None	375.2	28 Days
Bicarbonate	None	2320B	14 Days
Carbonate	None	2320B	14 Days
Chloride	None	325.3	28 Days

1 PQL = Practical Quantitation Limit in milligrams per liter (mg/L)

2 Groundwater parameters will be analyzed as dissolved constituents as filtered through a 0.45 micron filter

2.4.4 Selective Source Repository Monitoring

At the Selective Source Repository, water samples will be collected from six monitoring wells in July in conjunction with long-term groundwater monitoring activities. Wells that will be monitored are listed in **Table 6** and are shown on **Figure 3**. Groundwater samples will be submitted to an analytical laboratory for analysis of parameters listed in **Table 10**.

In October 2003, continuous water level monitors were installed in the repository sump and in one monitoring well upgradient of the sump (SBGW-105T) and one monitoring well downgradient of the sump (SBGW-107T). Water levels are measured daily by the instruments and stored on a data logger at each location. These data will be used to closely monitor water level in the sump and in adjacent groundwater. A water quality sample will be collected from the sump in June/July. Water quality parameters are listed in **Table 5** for the sump (includes total suspended solids). If the sump fills to capacity with water as it did in 2004, water in the sump will be pumped into appropriate water trucks and disposed at the Cody, Wyoming, sewage treatment ponds.

2.4.5 Stillwater Marsh Groundwater Sampling

Five shallow wells were installed in the Stillwater marsh in 2003. These wells will be sampled once in July in conjunction with long-term groundwater monitoring activities. Groundwater samples will be submitted to an analytical laboratory for analysis of parameters listed in **Table 10**.

2.5 MCLAREN PIT MOISTURE MONITORING

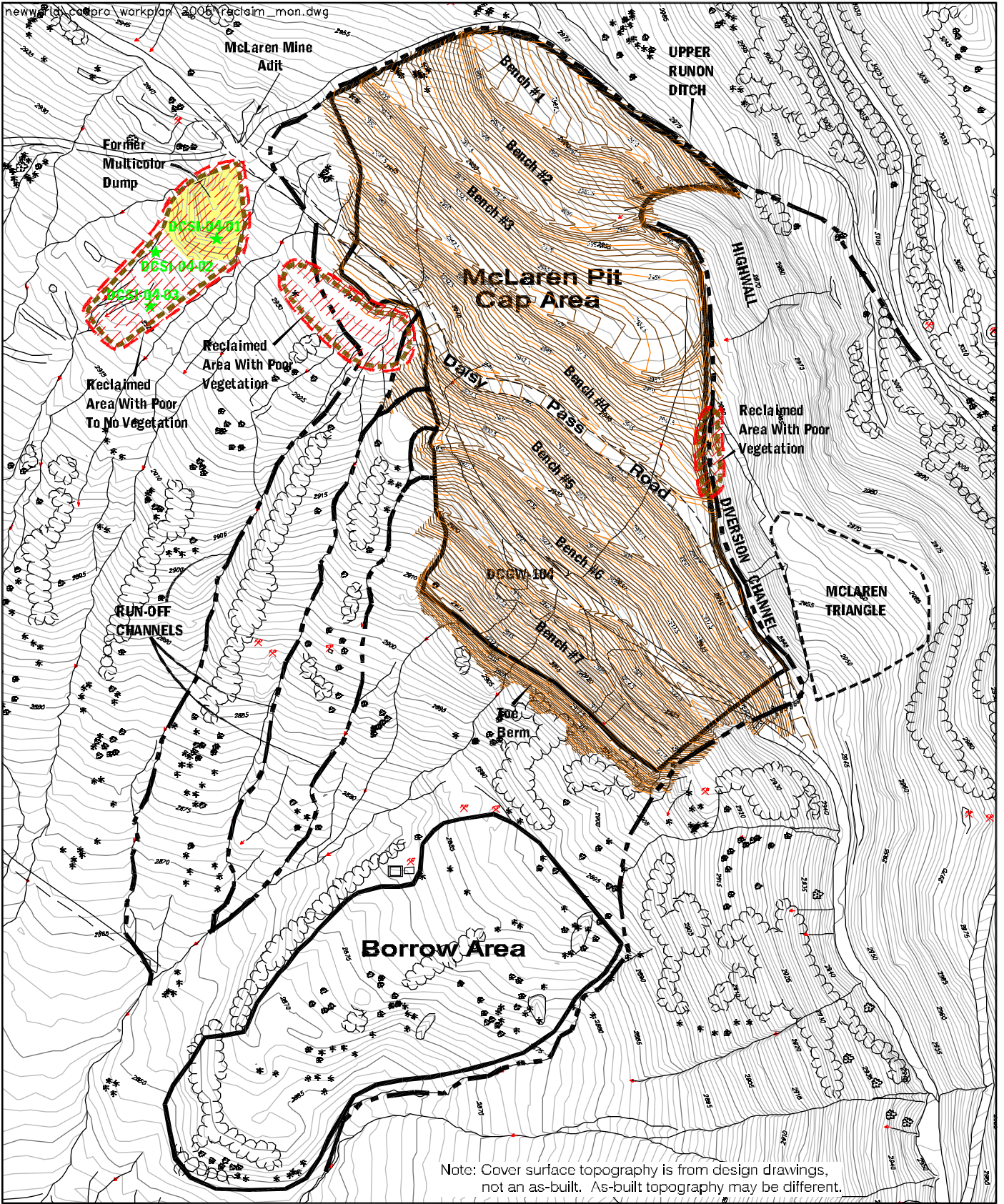
In 2003, nine moisture monitoring tubes were installed in the McLaren Pit capped area (**Figure 4**). Six tubes are accessible while blockages in three of the tubes prevent access with instrumentation. The six accessible tubes will be monitored in 2005 using a neutron probe instrument that measures relative moisture content in the wastes beneath the McLaren Pit cap. Measurements made in 2005 will be compared to measurements made in 2003 and 2004 to determine relative moisture changes in the waste. Moisture monitoring will be conducted in July and September in conjunction with McLaren Pit groundwater monitoring activities.

2.6 RECLAMATION MONITORING AND MAINTENANCE

Revegetation in the McLaren Pit, the McLaren Triangle, and the McLaren borrow area will be monitored in 2005 to document cover and species composition on these reclaimed sites. Reclamation monitoring will be conducted in accordance with monitoring procedures that are described in the Long-Term Revegetation Monitoring Plan (Maxim, 1999e). The purpose of cover monitoring at these sites is to determine if revegetation cover is meeting the project objective of 20%.

If bare or eroded areas are observed during cover monitoring, soil samples will be collected for laboratory analysis. Samples will be collected from a depth of about 15 cm and placed in one-gallon polyethylene bags. Samples will be labeled by location and returned to a qualified laboratory for selected analyses in accordance with the parameters and methods in the Site-Wide SAP for native soil collection. Laboratory parameters may include USDA soil texture, coarse fragment content, pH, electrical conductivity, organic matter, nutrients, and total metals (aluminum, arsenic, cadmium, copper, lead, and zinc). Sample collection and parameter selection will be performed at the discretion of the field investigator to ensure site-specific conditions are being addressed. Following receipt of the laboratory analysis, recommendations will be made to amend soils or reseed barren areas. Reclamation maintenance will either be performed in 2005 or 2006.

In 2004, area-wide monitoring of the McLaren Pit cap identified a 0.5 acre area where vegetation did not grow (**Figure 5**). This area is adjacent to the cap where mine waste from the multicolor dump was removed and where mine drainage from the McLaren Mine formerly discharged. Soil samples were collected from this area for analysis of fertility, acid/base account, and other physical parameters to determine whether soil problems were the cause of the revegetation failure. Soil analytical results indicated that the soils were strongly acidic (Maxim, 2005). The lime requirement to neutralize the soils



Note: Cover surface topography is from design drawings, not an as-built. As-built topography may be different.

0 5 Meters 50
 Contour Interval - 1 meter
 1:2400

MAXIM
 TECHNOLOGIES 1560831.114

- DCSI-04-01 ★ Soil Sample Location
- Prospect Pit
- Existing Index Contour
- Existing Intermediate Contour
- Index Contour of Cover Surface
- Intermediate Contour of Cover Surface
- 2005 Revegetation Maintenance Areas

2005 Revegetation Maintenance
 McLaren Pit Cap Area
 New World Mining District
 Response and Restoration Project
 Cooke City, Montana
FIGURE 5

Figure 5 – Back Page

to a circum-neutral pH ranged from 146 tons of calcium carbonate equivalent material per 1,000 tons of soil in the footprint of the former multicolor dump to an average of about 30 tons/1,000 tons in the unvegetated area below to former multicolor dump footprint (**Figure 5**).

To alleviate the unvegetated condition described above, the Forest Service will remove the erosion mat, amend the area with limestone, reseed with the project seed mix, and then cover the area with erosion mat. Fine-grained, agricultural limestone will be applied at two rates – 24 tons in the former footprint of the multicolor dump and 10 tons in the unvegetated area below the former footprint of the multicolor dump. Limestone will be incorporated into the top six inches of soil using an agricultural disk or other suitable equipment.

2.7 GLENGARRY ADIT RESPONSE ACTION CONSTRUCTION

Phase II construction of the Glengarry Adit closure will be completed in July and August of 2005. Work on this project was initiated in 2003 by preparing the site for construction, installing sediment controls, cleaning muck out of the underground workings, rehabilitating the adit for safety, grouting the Como Raise, and drilling and grouting the 1050 roof leak. In 2004, watertight adit plugs were set at two locations, and cement and waste rock backfill was placed in two areas of the Glengarry underground workings. To complete the closure, remaining work in 2005 involves installing two more watertight plugs and placing cement backfill in one remaining section of the workings. Surface reclamation, including dump removal, regrading, and revegetation, will be done under the Como Basin/Selective Source Repository expansion contract.

2.8 COMO BASIN CAP CONSTRUCTION, SELECTIVE SOURCE REPOSITORY EXPANSION, AND FISHER CREEK AND MILLER CREEK DUMP REMOVALS

This work is described in the Como Basin/Glengarry Adit/Fisher Creek Response Action EE/CA (Maxim, 2002d) and the Miller Creek Response Action EE/CA (Maxim, 2004c). Construction of this Response Action involves installation of a geomembrane and amended soil capping system in the Como Basin, removal of selected dumps in Fisher Creek and Miller Creek (Gold Dust, Glengarry, Black Warrior, and Little Daisy), and expansion of the Selective Source repository. Expansion of the repository involves removing the temporary cover that was installed in 2001, stripping waste from the approximately 60 foot wide by 300 foot long uphill edge of the existing repository, and extending the bottom liner uphill to accommodate the new waste material. Following the placement of waste, the final cover will be installed on the expansion area and joined with the existing final cover.

Construction on the Como Basin and repository expansion is expected to begin in July 2005. Waste dump removals are planned to be done in 2005 so that the repository can be permanently closed before the end of the 2005 construction season. Work in the Como Basin should conclude in late fall 2006.

2.9 GROUT EXPLORATION BOREHOLES IN THE GOLD DUST ADIT

The Gold Dust Adit is an abandoned underground mine located in the New World Mining District and is about 2,350 feet in length. In 1992-1993, CBMI executed a minerals exploration drilling program from four underground drill stations constructed in the Gold Dust Adit. Drill stations are located at 1,770, 1,920, 2,070, and 2,280 feet from the portal. A total of 33 exploration holes were drilled (23,331 feet) at various up, down, and horizontal angles at these drill stations. Boreholes that produced significant amounts of water (about 14 of the holes) were plugged using rubber packers. Assessment monitoring in 2003 identified six holes that were open and leaking small amounts of water (less than 7.5 liters per minute (2.0 gallons per minute), seven holes with packers that were suspected to be holding back

significant heads of water, and one hole where a packer had fallen out and was leaking about 26.5 to 30 liters per minute (7.0 to 8.0 gallons per minute).

To prevent a potential release of water in the event the packers fail, the USDA Forest Service will grout these boreholes with cement in 2005. Grouting work will require providing adequate ventilation to the drill stations, removing several small sloughs in the workings, installing temporary air and electrical utilities, mobilizing equipment to the drill stations, removing packers, and completing the grouting work. Monitoring will be performed following grouting to determine the effectiveness of the grout closure in reducing or eliminating flow from the boreholes. Monitoring will consist of measuring flow at the Y-intersection and at the portal prior to and after grouting is complete.

2.10 ABANDON UNUSED MONITORING WELLS IN THE DISTRICT

Table II and **Figure 6** display the monitoring wells in the District that are no longer used for monitoring groundwater quality. These wells were installed over the years by various agencies and CBMI for site assessment purposes. Wells listed in **Table II** are no longer used for groundwater monitoring generally because the wells were installed for a different purpose than is now needed for response and restoration activities. For instance, wells with the “KP” and “SB” prefix were installed by CBMI to investigate groundwater conditions in the area of CBMI’s proposed mine facilities. Wells with the “SBGW” prefix were installed in 1999 during the repository siting investigation. These “SBGW” wells are no longer needed to monitor the constructed repository site. Monitoring wells shown on **Figure 6** and **Table II** will be abandoned in accordance with State of Montana monitoring well abandonment procedures by a licensed monitoring well abandonment contractor.

2.11 FERRICRETE STUDY

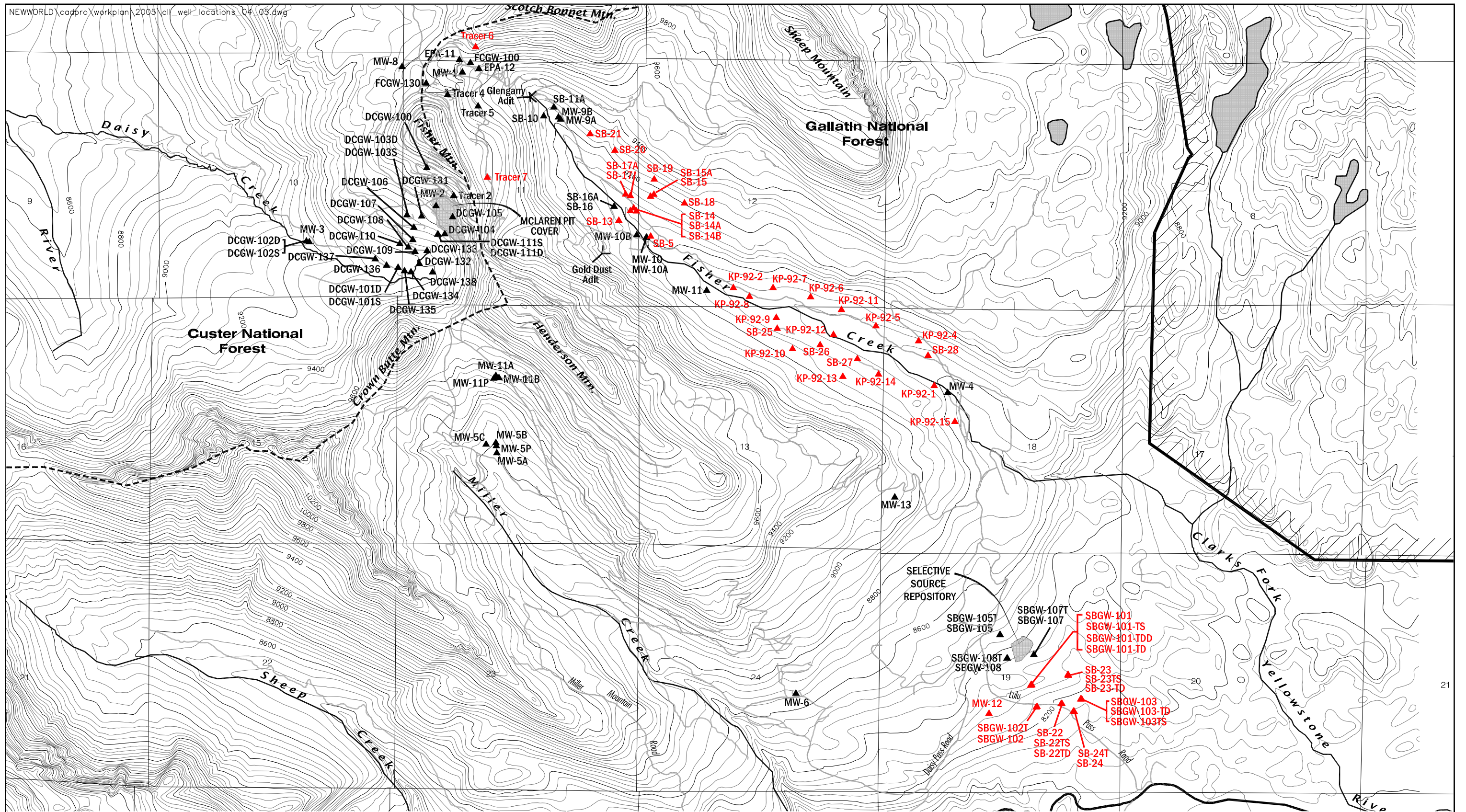
The study of ferricrete deposits in the District has been ongoing since the late 1990’s. Work for this study has included collecting samples of ferricrete, radiocarbon dating ferricrete material to determine its depositional history, and collecting iron oxy-hydroxide precipitate from numerous stations in Fisher Creek and Daisy Creek to identify the chemical makeup of modern ferricrete for comparison to pre-historic ferricrete composition. A detailed study plan was included in the 2002/2003 Work Plan listing the methods and approach for the study. In 2004, the U.S. Geological Survey became a partner in the ferricrete study to assist with chemical modeling of modern ferricrete. In 2005, chemical modeling will continue.

2.12 COMPLETE THE NATIONAL HISTORIC REGISTER NOMINATION PROCESS FOR THE DISTRICT

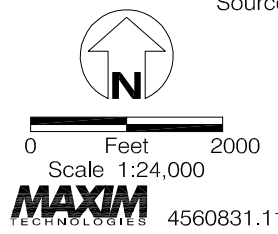
A Programmatic Agreement with Montana State Historic Preservation Office (SHPO) and the Advisory Council was developed at the beginning of the New World Project. The concluding accomplishment in this Agreement was to nominate the New World Historic Mining District to the National Register of Historic Places. In 2004, nomination information was compiled. In 2005, the nomination process will continue.

2.13 WHITE BARK PINE SEED COLLECTION

A number of white bark pine trees were removed from the McLaren Pit borrow area in 2003 to gain access to soil that was used in cap construction. White bark pine seed was initially collected in 2002 from cone-bearing trees on Fisher and Henderson mountains, and the cones were shipped to Bitterroot Restoration in Corvallis, Montana, for seed preparation and seedling propagation.



Source: Topographic data from USGS 7.5 Cooke City Quad
 Contour Interval = 40'



- District Boundary
- Forest Boundary
- Roads
- Groundwater Monitoring Well
- Groundwater Monitoring Well To Be Abandoned

Monitoring Wells To Be Abandoned
 New World Mining District
 Response and Restoration Project
 Cooke City Area, Montana
 FIGURE 6

Figure 6 – back page

**TABLE 11
MONITORING WELLS SCHEDULED FOR ABANDONMENT
2005/2006 Work Plan**

Drainage	Well ID	Location	Install Date	Installer	Casing Diam. (in)	Cased Depth (ft)	Well Screen(ft)	Well Protector	COMMENT
Fisher Ck	KP92 1	Fisher Ck	6/28/1992	KnightP/Ruen	1.5	35.5	25.5-35.5	4" steel	
Fisher Ck	KP92 2	Fisher Ck	6/30/1992	KnightP/Ruen	1.5	43.8	33.8-43.8	4" steel	
Fisher Ck	KP92 4	Fisher Ck	6/9/1992	KnightP/Ruen	1.5	48.5	38.5-48.5	4" steel	
Fisher Ck	KP92 5	Fisher Ck	6/11/1992	KnightP/Ruen	1.5	35.3	25.3-35.3	4" steel	
Fisher Ck	KP92 6	Fisher Ck	1992	KnightP/Ruen					
Fisher Ck	KP92 7	Fisher Ck	6/17/1992	KnightP/Ruen	1.5	38.5	28.5-38.5	4" steel	
Fisher Ck	KP92 8	Fisher Ck	6/20/1992	KnightP/Ruen	1.5	51.0	41-51	4" steel	
Fisher Ck	KP92 9	Fisher Ck	6/22/1992	KnightP/Ruen	1.5	51.0	41-51	4" steel	
Fisher Ck	KP92 10	Fisher Ck	6/28/1992	KnightP/Ruen	1.5	94.5	74.5-94.5	4" steel	
Fisher Ck	KP92 11	Fisher Ck	6/13/1992	KnightP/Ruen	1.5	32.0	22-32	4" steel	
Fisher Ck	KP92 12	Fisher Ck	6/23/1992	KnightP/Ruen	1.5	36.5	26.5-36.5	4" steel	
Fisher Ck	KP92 13	Fisher Ck	6/25/1992	KnightP/Ruen	1.5	50.0	40-50	4" steel	
Fisher Ck	KP92 14	Fisher Ck	6/26/1992	KnightP/Ruen	1.5	37.0	27-37	4" steel	
Fisher Ck	KP92 15	Fisher Ck	6/30/1992	KnightP/Ruen	1.5	36.9	26.9-36.9	4" steel	
Soda Butte	MW 12	1/4 mi W of Fisher Ck Rd	9/13/1990	Hydrom/Ruen	4	5.0	2.5-5.0	6" steel	
Fisher Ck	SB 5	Near MW-10	8/10/1990	Bechtel/Ruen	2	25.0	12-22	NG	
Fisher Ck	SB 9 B	Fischer Ck							
Fisher Ck	SB 9	None given	8/11/1990	Bechtel/Ruen	2	20.5	13-20	NG	Artesian
Fisher Ck	SB 10 B	10' W of MW-10							
Fisher Ck	SB 13	Fisher Ck	9/24/1991	Bechtel/Ruen	1.5	100.0	70-99.5	6" steel	
Fisher Ck	SB 14	Fisher Ck	9/20/1991	Bechtel/Ruen	2	100.0	85-99.5	6" steel	
Fisher Ck	SB 14 A	Fisher Ck	9/22/1991	Hydrom/Ruen	2	45.3	25-45	4" steel	
Fisher Ck	SB 14 B	8' NE of Bechtel's deep SB-14	9/22/1991	Hydrom/Ruen	2	71.5	56-71	NG	
Fisher Ck	SB 15 A	Twinned with SB-15B Bechtel	9/17/1991	Hydrom/Ruen	2	37.0	12-37	4" steel	
Fisher Ck	SB 15	Fisher Ck	9/18/1991	Bechtel/Ruen	2	55.5	45.6-53.1	6" steel	
Fisher Ck	SB 17 A	W of SB-14	9/25/1991	Hydrom/Ruen	2	30.0	15-30	4" steel	
Fisher Ck	SB 17	Fisher Ck	9/25/1991	Bechtel/Ruen	2	49.5	39.5-49.1	6" steel	
Fisher Ck	SB 18	Fisher Ck	9/13/1991	Bechtel/Ruen	1.5	50.5	27.3-46.5	6" steel	

**TABLE 11
MONITORING WELLS SCHEDULED FOR ABANDONMENT
2005/2006 Work Plan**

Drainage	Well ID	Location	Install Date	Installer	Casing Diam. (in)	Cased Depth (ft)	Well Screen(ft)	Well Protector	COMMENT
Fisher Ck	SB 19	Fisher Ck	9/16/1991	Bechtel/Ruen	1.5	50.5	28.5-38.5	6" steel	
Fisher Ck	SB 20	Fisher Ck	9/10/1991	Bechtel/Ruen	2	49.0	29-48.6	6" steel	
Fisher Ck	SB 21	Fisher Ck	9/8/1991	Bechtel/Ruen	1.5	60.5	55-60	6" steel	
Repository	SB 22	SE of Repository	9/28/1991	Bechtel/Ruen	2	70.0	58.3-67.9	6" steel	Artesian
Repository	SB 22 TS	SE of Repository	8/2/1999	Maxim/Bush	2	23.5	20.5-23.5	6' of 6" steel	
Repository	SB 22 TD	SE of Repository	8/2/1999	Maxim/Bush	2	39.0	36-39	6' of 6" steel	
Repository	SB 23	SE of Repository	9/29/1991	Bechtel/Ruen	2	70.5	50.7-70.3	6" steel	
Repository	SB 23 TS	SE of Repository	7/27/1999	Maxim/Bush	2	9.0	6-9	6' of 6" steel	
Repository	SB 23 TD	SE of Repository	7/27/1999	Maxim/Bush	2	19.0	16-19	6' of 6" steel	
Repository	SB 24	SE of Repository	9/30/1991	Bechtel/Ruen	2	70.0	50-69.6	6" steel	Artesian
Repository	SB 24 T	SE of Repository	7/28/1999	Maxim/Bush	2	9.0	6-9	6' of 6" steel	
Fisher Ck	SB 25	Fisher Ck	10/10/1991	Bechtel/Ruen	2	50.0	open end	NG	Artesian
Fisher Ck	SB 26	Fisher Ck	10/14/1991	Bechtel/Ruen	2	60.0	open end	NG	
Fisher Ck	SB 27	Fisher Ck	10/17/1991	Bechtel/Ruen	2	70.0	open end	NG	
Fisher Ck	SB 28	Fisher Ck	10/19/1991	Bechtel/Ruen	2	70.0	open end	NG	
Repository	SB(GW) 101	S SE of Repository	7/24/1999	Maxim/Bush	2	102.0	92-102	6' of 6" steel	
Repository	SB(GW) 101 TS	S SE of Repository	7/26/1999	Maxim/Bush	2	22.0	19-22	6' of 6" steel	
Repository	SB(GW) 101 TD	S SE of Repository	7/26/1999	Maxim/Bush	2	33.0	29-33	6' of 6" steel	
Repository	SB(GW) 101 TDD	S SE of Repository	9/19/1999	Maxim/Bush	2	76.5	73.5-76.5	6' of 6" steel	
Repository	SB(GW) 102	S SE of Repository	7/22/1999	Maxim/Bush	2	29.5	19.5-29.5	6' of 6" steel	
Repository	SB(GW) 102 T	S SE of Repository	7/28/1999	Maxim/Bush	2	10.0	5-10	6' of 6" steel	
Repository	SB(GW) 103	S SE of Repository	7/24/1999	Maxim/Bush	2	50.0	40-50	6' of 6" steel	
Repository	SB(GW) 103 TS	S SE of Repository	7/28/1999	Maxim/Bush	2	13.0	10-13	6' of 6" steel	
Repository	SB(GW) 103 TD	S SE of Repository	7/28/1999	Maxim/Bush	2	21.0	18-21	6' of 6" steel	
Fisher Ck	Tracer 7 (BC-12)	E flank Fisher Mtn.		CBMI	--	open borehole	--	--	270 feet deep; not cased

The intent was to obtain 500 seedlings for planting in 2004. However, as a result of poor germination, only 50 seedlings are available in 2005 for planting from this source. The USDA Forest Service has obtained an additional 150 seedlings, and, together with the other 50 seedlings, these seedlings will be planted in the borrow area in July.

The Forest Service also intends to continue to collect native white bark pine seeds from mature trees on NFS land that grow at an elevation between 9,200 and 9,800 feet, which is the elevation range for the McLaren Pit borrow site. Seeds will be sent to a nursery where the seeds will be grown for approximately two years to obtain 500 seedlings. These native seedlings will be planted at the borrow site during the following growing season.

2.14 TEMPORARY STANDARDS REVIEW

Temporary water quality standards were adopted by the State of Montana Board of Environmental Review in 1999 for Daisy Creek, Fisher Creek, and a portion of the upper Stillwater River. The Board reviews these standards every three years to determine whether adequate efforts have been made to implement the plans submitted as the basis for the temporary standards. Under the Montana Water Quality Act, 75-5-312 (10), the 3-year review of temporary standards involves a public hearing with notice and opportunity for comment. Depending on the Board's review, the temporary standards can be left unchanged, modified, or terminated.

This is the second cycle for the 3-Year review process, with the first review completed in June 2002. As part of this process, a Progress Report will be prepared for the Board that summarizes the results of actions taken to date and reviews the progress of the project against that submitted with the Revised Support Document and Implementation Plan (Maxim, 2003c). The Board held a public hearing on June 3, 2005 to allow opportunity for public comment and discuss whether any actions should be taken on the temporary standards. Following the conclusion of the hearing, the Board decided to leave the temporary standards in place without changes until the next 3-Year review cycle.

2.15 PREPARE 2006/2007 WORK PLAN

A work plan similar to this plan will be prepared to guide specific work activities to be completed during 2006/2007. These activities will complement those performed under the long-term plans and will involve surface water, groundwater, and revegetation monitoring, construction monitoring, and construction activities.

2.16 PREPARE A LONG-TERM REPOSITORY MONITORING PLAN

A long-term repository monitoring plan will be prepared in 2005. The purpose of this plan is to describe monitoring that will be conducted at the repository following the construction of the final expansion. The plan will include sections on operations and maintenance of the facility, surface water and groundwater monitoring, monitoring and maintenance of the sump, and revegetation monitoring and maintenance. The plan will cover a period of 10 years following construction completion in 2006 and will include a cost estimate that will itemize expected annual monitoring costs indexed to the consumer price index.

3.0 PROJECT SCHEDULE

Figure 7 illustrates the schedule for 2005/2006 activities.

4.0 REPORTS

Project documents will be prepared during 2005/2006 for many of the items discussed in Section 2.0. These documents are summarized in **Table 12** along with a description of the document contents and approximate delivery schedule.

Deliverable Title	Contents	Delivery Schedule
2005/2006 Work Plan	This Document	Draft – April 2005 Final – June 2005
Progress Report, Temporary Water Quality Standards Second 3-Year Review Cycle	Summarizes the results of actions taken to date and reviews the progress of the project for the Board of Environmental Review	Draft – March 2005
Project Summary 2005	Summary document of project activities completed since 1999	June 2005
Technical Memorandum – Reclamation Monitoring	Reclamation monitoring results	December 2005
2005 Surface Water and Groundwater Monitoring Report	Results and analyses of ongoing surface water, groundwater, and moisture monitoring	February 2006
Long-Term Repository Monitoring Plan	Detailed plan for monitoring surface water, groundwater, sump, and revegetation at the repository site over a ten-year period.	Draft – August 2005 Final – October 2005
2006/2007 Work Plan	Proposed activities for 2006/2007	Draft – May 2006 Final – June 2006

FIGURE 7
NEW WORLD MINING DISTRICT RESPONSE AND RESTORATION PROJECT
2005/2006 PROJECT SCHEDULE

Task Name	Jan '05	Feb '05	Mar '05	Apr '05	May '05	Jun '05	Jul '05	Aug '05	Sep '05	Oct '05	Nov '05	Dec '05	Jan '06	Feb '06	Mar '06	Apr '06	
Community Relations	[Active]																
Maintain Project Website/Database	[Active]																
Prepare 2005/2006 Work Plan	[Active]																
Prepare Project Summary 2005					[Active]												
Repository Sump Monitoring	[Active]																
Perform Spring Water Quality Mon.				[Active]													
Perform Mid-Summer Monitoring							[Active]										
Perform July Groundwater Sampling							[Active]										
McLaren Pit Area Groundwater/Moisture Monitoring							[Active]										
Glengarry Mine Closure Phase II Construction							[Active]										
Como Basin/Dump Removals Construction							[Active]										
Final Selective Source Repository Construction							[Active]										
Grout Boreholes in Gold Dust Adit								[Active]									
Construction Monitoring							[Active]										
Revegetation Monitoring								[Active]									
Abandon Unused Monitoring Wells in District								[Active]									
Perform Fall Water Quality Mon.										[Active]							
Ferricrete Study								[Active]									
National Register of Historic Places Process						[Active]											
White Bark Pine Seed Collection									[Active]								
Temporary Standards Review			[Active]														
Prepare 2006/2007 Work Plan												[Active]					
Prepare Long-Term Repository Monitoring Plan							[Active]										

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