

Mina La Colorada

Conceptual Reclamation Plan

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1.0 Introduction

Plata Panamericana S.A. de C.V. recognizes its environmental responsibility for protecting resources affected by its mining operations and intends to implement an effective and environmentally sound reclamation program using proven scientific procedures, best management practices and state-of-the art applications.

Plata Panamericana's reclamation plan is designed to minimize the effects of disturbance while operating both within previously disturbed areas and in areas newly disturbed by the planned project expansion. The reclamation plan is also designed to meet the Mexican federal and state government definitions of reclamation, and to adhere to World Bank Group (WBG) standards and requirements. The plan includes all of those actions performed during or after mining and processing activities to shape, stabilize, revegetate, or otherwise treat the affected lands in order to achieve a safe and ecologically stable condition and land use that is consistent with long-term land and resource management plans and local environmental conditions.

1.1 Background

The La Colorada Mine is located in the small town of "La Colorada" within the Municipality of Chalchihuites, Zacatecas State, west-central Mexico. The project consists of approximately 1600 hectares of mining and exploration claims, within the Chalchihuites mining district. The Chalchihuites area has been developed primarily as a mining district since the 1500's. The various mines have operated intermittently since then with periods of relative prosperity when metal prices were high interspersed with times of depression when metal prices were low. Small scale farming and ranching provides largely subsistence agriculture. The town of La Colorada has developed around the mine to provide housing and basic services to mine workers.

Pan American Silver Corp. (PASC) refurbished an existing sulphide flotation plant in January 2001. January through May 2001 only lead concentrate was produced due to equipment limitations. From June through December 2001, both lead and zinc concentrates were produced. The mill is currently operating at 200 tonnes/day, producing both lead and zinc concentrates. The plant has been operated on a limited budget with very little capital available for improvements.

Originally, the project was scheduled to commence construction in the fall of 2000. Due to financial constraints, only the existing sulphide circuit has been operating at 200 tonnes/day. The upgrade construction project is scheduled to commence in September 2002 with operations scheduled to commence in September 2003. The construction preparation schedule began with a new mill

arriving at site in June 2002. Construction will last approximately 12 months with the tailings pond construction completed in May 2003.

In connection with this schedule, Plata Panamericana is developing a conceptual plan for reclamation. The plan is preliminary in nature but emphasizes a commitment by Plata Panamericana to developing, operating, and reclaiming the mine in a manner that provides for public health, protection of environmental resources, and complies with Mexican and World Bank guidelines. A full Reclamation Plan will be completed prior to December 31, 2003 and will be submitted to SEMARNAT and IFC for review and disclosure. The Reclamation Plan will be updated throughout the life of the project to reflect concurrent reclamation, changes in design, and additional studies that will facilitate final reclamation after closure of operations.

Reclamation best practices will be implemented during construction and operations of the mine, mill, and related facilities in accordance with Mexican and World Bank guidelines.

2.0 Scope

The purpose of this document is to outline the concepts, methods, activities, and schedules that will be applied to the La Colorada mine during reclamation and closure of the facility. This preliminary plan will be the basis of a final reclamation plan that will be submitted to Mexican environmental regulatory agencies prior to commencement of operations. When approved, the plan submitted to Mexican agencies will act as the overall guidelines for ongoing reclamation work at the La Colorada site. Though this plan is conceptual in nature, it emphasizes a commitment by Plata Panamericana to develop, operate, and reclaiming the mine in a manner that provides for public health and environmental resources, and complies with both Mexican and World Bank Group policies and guidelines.

This plan also addresses reclamation issues related to construction and operation. Any area that is not to be used during operations and is not due to historical mining will be reclaimed. The plan also focuses on managing runoff, erosion, and acid mine drainage, and other closure issues as early as possible during operation.

As part of the on-going reclamation efforts, on or before December 31, 2003, Plata Panamericana will prepare and deliver to IFC the detailed Mine Reclamation and Closure Plan (MRCP) for IFC review, including budget and schedule for ongoing reclamation during operations and mine closure activities relating to the project facilities; the final version of the Mine Reclamation and Closure Plan will be submitted to the appropriate Mexican regulatory authorities not later than June 2004.

3.0 Reclamation Principles, Objectives and Standards

The purpose of reclamation is to return the disturbed areas to stabilized conditions following mining and ore processing activities, as well as ensure long-term protection of land and water resources in the area. Any interim reclamation completed will have the goal of stabilizing a given area as soon as possible after project activities are completed in that area.

3.1 Principles

The overall reclamation plan will have the following goals:

- Establish stable topographic and drainage conditions that are compatible with the surrounding landscape and controlling erosion;
- Establish surface conditions that are conducive to regeneration of a stable plant community through removal, stockpiling, and re-application of a suitable soil cover; and,
- Establish a long-term productive, self-sustaining, biotic community compatible with the proposed future land uses and comparable to what currently exists at the site by revegetating disturbed areas using species adapted to site conditions.

The following principles are proposed for reclamation of areas disturbed by mining at La Colorada. It must be noted that these are principles, and the degree of implementation possible will depend on the existing situation, as activities may have taken place that make full implementation difficult or impossible. These principles are:

- Vehicular access to portals and old workings will be inhibited by closing off access tracks;
- Acid generation from exposed reactive waste rock and tailings will be inhibited through encapsulation and inhibition of water infiltration;
- Drainage on exposed surfaces liable to erosion will be controlled by surface preparation, catch drains and direction to adjacent forested areas or control structures;
- Siltation dams will be constructed on drainage lines where sediment transport from exposed surfaces is likely;
- There will be no further clearing of land to retrieve topsoil unless the clearing is being generated directly through mining or other project activities;
- Tailings impoundment area will be recontoured and sloped to prevent pooling and infiltration of water and the area will be revegetated.

- Plant species used in reclamation will be appropriate to the proposed end use; and,
- Clean runoff will be directed to existing watercourses.

3.2 Objectives

Project sponsors are required to prepare and implement a mine reclamation plan. The plan should include reclamation of tailings deposits, any open pit areas, sedimentation basins, and abandoned mine, mill, and campsites. The main objectives of the mine reclamation plan are:

- Return the land to conditions capable of supporting prior land use or uses that are equal to or better than prior land use, to the extent practical and feasible.
- Eliminate significant adverse effects on adjacent water resources.

Mine reclamation plans should incorporate the following components:

- Where available, conserve, stockpile and use topsoil for reclamation;
- Slopes of more than 30% should be recontoured to minimize runoff and erosion;
- Native vegetation should be planted to prevent erosion and encourage self-sustaining development of a productive ecosystem on the reclaimed land;
- Budget and schedule for pre-post abandonment reclamation activities; and,
- Plan views that show areas cleared, mined, refilled and revegetated during each of the next 5 years and estimated activities at subsequent 5-year intervals.

3.3 World Bank Group Requirements

According to the IFC, issues to consider in developing a mine reclamation plan include:

- Instability of slopes and surface materials.
- Safety issues relating to open pits, shafts, subsidence, toxic or radiological hazards.
- The physical characteristics, nutrients status, and inherent toxicity of tailings or waste rock that may constrain vegetation.
- The potential for acid rock drainage (ARD) from abandoned pits and shafts, tailings and waste rock dumps (as a consequence of oxidation of sulphides contained in the ore or wastes).
- The costs of ongoing and post-closure reclamation and financial guarantees.

3.3.1 World Bank Group Environmental Guidelines

In July 1998 the World Bank produced the “Pollution Prevention and Abatement Handbook: - Toward Cleaner Production,” which is designed to replace the 1988 Environmental Guidelines. The guidelines contained in this Handbook will apply to all Bank Group funded projects approved on or after 1st July 1998. These guidelines require that the restoration and closure plan should incorporate the following requirements:

- “Return of the land to conditions capable of supporting prior land use, equivalent uses, or other acceptable use.”
- “Elimination of significant adverse affects on adjacent water resources”.
- “Use of waste rock for backfill and of topsoil for reclamation to the extent possible”.
- “Contouring of slopes to minimize erosion and runoff.”
- “Reduce ARD formation by sealing of pyrite containing waste from oxidation and percolating water.”
- “Budget and schedule for pre-and post abandonment reclamation activities”.
- “Diverting and managing leachates from waste dumps to avoid contact with, and contamination of surface and groundwater.”

It also requires that money be reserved over the life of mine to cover the costs associated with mine closure.

3.3.2 Erosion and Sediment Control Plan for Reclamation and Closure

Project sponsors are required to prepare and implement an erosion and sediment control plan. The plan should include measures appropriate to the situation to intercept, divert, or otherwise reduce the stormwater runoff from exposed soil surfaces, tailings dams, and waste rock dumps. Project sponsors are encouraged to integrate vegetative and non-vegetative soil stabilization measures in the erosion control plan. Sediments control structures (e.g., detention/retention basins) should be installed to treat surface runoff prior to discharge to surface water bodies. All erosion control and sediment containment facilities must receive proper maintenance during their design life.

3.4 Other International Standards

Standards of international best practice were determined by review of the following documents:

- United Nations

- United Nations International Roundtable on Mining and the Environment, Towards Environmental Guidelines on Mining in Developing Countries, Berlin, June 1991.
- Mining and Environment Guidelines adopted at the United Nations International Roundtable on Mining and the Environment, Berlin, June 1991.
- A Guide to Tailing Dams and Impoundments – Design, Constructions, Use and Rehabilitation. United Nations environment Programme 1996.

- Australia
 - Best Practice Environmental Management in Mining – Rehabilitation and Revegetation, Environment Protection Agency, Australian Federal Environment Department, 1995
 - Rehabilitation Standards and Mine Abandonment, Department of Mines, Queensland.
 - Guidelines for Waste Dump Design and Rehabilitation, Department of Mines, Western Australia.
 - Guidelines on Safety Bund Walls Around Abandoned Open Pits, Department of Mines, Western Australia.

- Canada
 - Environmental Code of Practice for Mines

- United States
 - Land Reclamation Regulation, Nevada Bureau of Land Management.
 - Society of Mining Engineering Handbook, Chapter 12.3 – Reclamation.

4.0 Sites Subject to Reclamation

The La Colorada mine lies within an area that has been strongly impacted by historic mining activities. SEMARNAP (predecessor to current regulatory agency, SEMARNAT) has acknowledged the historical disturbances and provided Plata Panamericana with a letter stating that Plata Panamericana will not be held responsible for these areas. Nonetheless, Plata Panamericana has incorporated many steps during construction and operation of the project designed to mitigate impacts from historical operations. Ongoing data collection will allow integrated and prioritized mitigation measures to be defined for the La Colorada site, as well as optimization of parameters during construction and operations. The following sections provide information on what the total areas are disturbed due to historical impacts, what are the total areas that will be disturbed during construction, and what are the total areas that will be disturbed during operations.

4.1 Historical Disturbance

The total existing land disturbance estimated due to previous operations is provided in Table 1.

Table 1 Historic land disturbance

Historic Facility	Land Disturbance (ha)
Tailings impoundment #1	1.81
Tailings impoundment #2	0.61
Tailings impoundment #3,4,5	10.16
Waste dump Candelaria	1.15
Waste dump Campana	0.30
Waste dump San Fermin	0.63
Waste dump Veta Dos	0.35
Access roads	4.13
Mill/plant	1.68
Offices/administration building	0.15
Fuel storage/handling	0.06
Bunkhouse/kitchen	0.15
Water tank/treatment	0.12
Mine facilities	0.34
Other buildings/areas	10.0
Total	31.64

4.2 Construction Disturbance

The project goals for development of the deposit are based on maximum use of previously developed land in the vicinity of the proposed sites for construction of the mine, processing mill, tailings facility, auxiliary facilities, and access roads. The proportions of newly disturbed areas and areas that will be used with existing disturbance are shown in Table 2.

Table 2 Construction Impacts

Disturbance	Hectares (ha)
Existing disturbance	31.64
New disturbance due to construction	35.00
Total disturbance	66.64

4.3 Operations Disturbance

Plata Panamericana will aggressively reclaim areas that are not used during operations. Reclamation as soon as possible will reduce potential long-term impacts and prevent erosion and sediment transport. Additionally, surface

disturbance will be reduced during operations based on the design using existing tailings for construction of new tailings dam, reprocessing tailings impoundment #1, and using waste rock as backfill. Reclamation of these areas provides the *maximum* opportunity for mitigation of existing impacts. The Environmental Impact Assessment showed the majority of impacts from this project occurred due to existing land disturbances, tailings impoundments, and waste rock piles impacting the Arroyo La Colorada. Reclaiming these existing impacts provides a major positive environmental impact from the project design. Table 3 shows a *conservative* estimate of areas that can be reclaimed during operations.

Table 3 Potential Reclaim Areas

Disturbance	Hectares (ha)
Tailings Pond #1 and #2	2.42
Portion of Tailings Pond #3,4,5	4.00
San Fermin waste rock pile	0.63
Campana waste rock pile	0.30
Candelaria waste rock pile	1.15
Total	8.50

4.4 Closure disturbance

Based on maximum reclamation during construction and operations, there should be no more than 58.14 ha of reclamation at closure of operations. This area includes the facilities listed in Table 4.

Table 4 Land disturbance at closure

Historic Facility	Land Disturbance (ha)
Tailings impoundment #3,4,5	6.16
Waste dump Veta Dos	0.35
Access roads	4.13
Mill/plant	1.68
Offices/administration building	0.15
Fuel storage/handling	0.06
Bunkhouse/kitchen	0.15
Water tank/treatment	0.12
Mine facilities	0.34
Other buildings/areas	10.0
New tailings area	35.00
Total	58.14

5.0 Proposed Reclamation Measures

Conceptually, Plata Panamericana is prepared to conduct the following reclamation activities during the mine life and after closure:

5.1 Tailings Impoundment #1

Initial indications show that the tailings are potentially acid generating. Testwork has indicated that it is economically viable to reprocess tails from this area. The tailings will be reprocessed during operations. The exact schedule for reprocessing of the tails is dependent on operational parameters. Prior to reprocessing, Plata Panamericana will construct a lined, containment area to catch any run-off or seepage that occurs from the impoundment. This catchment area will be constructed during construction. On-going monitoring will be completed during construction and throughout operations.

After processing of tailings impoundment #1, all equipment will be removed and this area will be re-contoured and revegetated.

5.2 Tailings impoundment #2

Initial monitoring shows that the tailings are acid generating. Testwork has not been completed to determine whether or not tailings can be retreated in the mill during operations. The run-off from tailings impoundment #2 will be captured in the same facility built during construction to capture run-off from tailings impoundment #1. On-going monitoring will be completed during construction and throughout operations.

Additional remediation measures include measures to prevent infiltration and seepage from this impoundment.

5.3 Tailings impoundments #3 and 4

A portion of tailings impoundments #3 and #4 will be used for the construction of the new dam. These tails will be taken from the Arroyo La Colorada side of the impoundment during construction. Initial ABA testing indicates that the samples have the potential to be acid generating. Further tests will be completed prior to and during construction of the dam. If the tails are found to be acid generating, appropriate control measures will be implemented to prevent infiltration and pooling of water near or on the dam.

The remaining tails will be recontoured and sloped in such a way to minimize infiltration and pooling of water in this area. As part of these efforts, tailings that that have slumped near the creek (Arroyo La Colorada) will be cleaned-up and placed in the recontoured area. It is anticipated that this work will be completed prior to the end of 2004. On-going monitoring will be completed during construction and throughout operations.

5.4 Tailings impoundment #5

Tailings impoundment is currently used for placement of sulphide tailings from the mill. The upper portion of the wall has been partially revegetated, while the lower portion is bare and subject to erosion. During the rainy season, there is some seepage from the toe of the dam. The future plans for this impoundment include additional sulphide tailings placement (if the tailings are not placed underground) and the outside will become part of the new tailings facility. Run-off or seepage from this area will be captured by construction of the new dam.

Final reclamation and closure of tailings impoundment #5 will be part of the final closure of the tailings facility. This area will be recontoured to prevent water pooling and infiltration and revegetated. It is anticipated that this work will be completed 1 year after the mill stops operating. On-going monitoring will be completed during construction and throughout operations.

5.5 Breccia Pipes

The Breccia pipe area contains a large amount of historical disturbance. Plata Panamericana does not have legal liabilities for this area, and does not own the surface rights to these lands, but has agreed to implement measures to prevent further degradation of these areas to include erosion and control measures and planting of trees in some areas. Acid generation is not anticipated in this area. If acid generating is noted, measures will be taken to prevent surface run-off and erosion in these areas.

Currently, Plata Panamericana is undertaking an aggressive program of reclamation for a de-nuded area near the mine access road in areas impacted by previous exploration drilling. This includes terracing and planting of trees to prevent erosion. This program will continue in this area throughout the life of the mine.

5.6 Construction Reclamation

When construction is completed (end of 2003), Plata Panamericana will commence reclamation of areas that will not be used during operations. This includes: areas around the mill, near the mine adits, and near the existing office areas. Reclamation of this area will include proper recontouring, sloping and revegetation. As part of the reclamation, proper surface water run-off control will be implemented.

6.0 Closure

Reclamation will be scheduled to take place as soon as practical after operational activities are completed in a given area to minimize erosion and other impacts to the ambient environment. In general, reclamation activities will be timed to take advantage of climatic conditions, particularly the peak season rainfall. Areas to be revegetated will be prepared and seeding will be completed in late summer or early fall to capitalize on available moisture.

The reclamation plan is intended to be flexible to permit changes and refinements as site knowledge expands or reclamation techniques are refined, and to take advantage of results of the ongoing program of test plots and vegetation research. Successful results will be used to shape the ongoing program. The project will also explore new reclamation technologies that are being developed by Mexican researchers, and consider new methods of erosion control.

It is anticipated that the following measures will be included at closure

6.1 Removal of equipment

Materials and equipment will be removed from their structures. Plata Panamericana will salvage all mechanical/electrical equipment, piping, tanks, and monitoring and control equipment. It is estimated that the salvage value will be approximately \$US 3 million. All tanks and thickeners will be cleaned and cut into manageable pieces. Power lines and conveyors will be cut into manageable pieces. All equipment that cannot be salvaged will be evaluated to determine if the equipment is safe for disposal in the landfill.

6.2 Removal of Structures

Plata Panamericana will work with the Chalchuihites municipality to determine structures that should remain standing based on the request of the municipality. For all other structures, Plata Panamericana will remove all furniture, stock, and shelving and dismantle surface structures. Any modular buildings or salvageable parts of the structures will be reduced into manageable pieces and sold for re-use. The dismantled items will mainly include items such as steel, timber, and

concrete. Items that are not sold will be placed in the landfill. The area previously occupied by the structure will be made to blend with the surrounding topography.

6.3 Portal Closure

Mine water discharge is currently about 700 USGPM and it comprises the majority of the flow in the Arroyo La Colorado. At some points in the past, this water has been used for agricultural purposes by a small number of downstream users, but is not currently being used for this purpose. During the proposed operations the discharge will probably fluctuate, going down slightly when the mill starts up (the mill will use about 80 USGPM) and then increasing slightly as mining proceeds to deeper levels.

After closure, long term maintenance of the mine water supply is a major concern of downstream agricultural users. Two options exist for long-term supply:

1. Providing the pumps to the municipality for continuing pumping; or
2. Letting the mine flood back to a static level.

Historically, during times of mine shutdown, the water level in the mine rose to approximately 160 meters below surface and then became static. At present it is not known what level the mine will flood back to or whether the flood back level could result in discharge and provide a water supply without the need for long term pumping. In order to assess which scenario is likely a site investigation is proposed. The investigation may include measurement of water levels in existing monitoring wells and any open diamond drill holes if available and/or other hydrological predictive means designed to determine final water levels. These studies will provide useful information about probable minimum floodback water levels. The predictions will allow assessment of which options are feasible and cost effective for long term maintenance of water supply for the downstream users after Plata Panamericana has ceased operations in the mine. Plata Panamericana does not accept long-term financial responsibility for maintaining the pumps for downstream agricultural users. The study would simply provide additional data for the municipality to make a decision about the long-term viability of pumping water after mine closure.

6.4 Roads

For roads on the site, Plata Panamericana will remove culverts, and any miscellaneous structures along the road and rip the roadway and shoulders. The roads will be contoured to blend with the surrounding areas. It is anticipated that a layer of subsoil will not need to be placed over the road material to establish vegetation. Traffic will be prohibited on the reclaimed road areas.

6.5 Ponds

Approximately 3.34 million tonnes of new tailings will be generated from processing 2.1 million tonnes of oxide ore, 0.7 million tonnes of sulphide ore and 0.5 million tonnes of old tailings. During operations seepage from these tailings will be contained in the seepage collection pond and recycled to the tailings dam. The HDPE liner under the tailings, the arid climate and depth to the regional water table (in excess of 200 m) and the crystalline nature of the bedrock indicate that minimal impacts to the groundwater will occur during operations.

The long-term impacts to groundwater are also estimated to be minimal, regardless of leachate quality. Once operations cease, the tailings water will drain within a short period of time (probably less than 20 years since the process water drained from impoundment #5 within 2 years after the operations ceased in 1997). The thickness of the unsaturated zone between the tailings and the regional water table combined with the arid climate and low permeability crystalline bedrock will ensure that no groundwater mounding will occur.

The long term impacts on surface water could be significant if rainfall or runoff were allowed to infiltrate into the pile and subsequent seepage discharge from the toe of the impoundment entered the surface water system. Grading the final contours of the pile to maintain positive drainage will minimize infiltration. Placement of available soil cover material and revegetation will further reduce the infiltration into the tailings over the long term. Maintenance of freshwater diversion channel around the site is practical during operations, however in the long term some diversion water may infiltrate the tailings. Therefore the characteristics of the tailings will be further quantified during construction and operations. Based on these results, Plata Panamericana will determine the appropriate measures for closing the tailings impoundment.

7.0 General Requirements for Future Land Use

The area surrounding the La Colorada mine has been developed primarily as a mining district since the 1500's. The various mines have operated intermittently since that time with periods of relative prosperity when metal prices were high interspersed with times of depression when metal prices were low. Small scale farming and ranching developed primarily to service the mines and provides largely subsistence agriculture. The town of La Colorada itself grew up around the mine to provide housing and basic services to mine workers. Following closure of the La Colorada mine it is expected that land use will revert to small scale farming and ranching.

7.1 Revegetation

For the La Colorada area, natural regeneration is preferred over planting, since this process tends to ensure re-establishment of appropriate genotype species, follow natural successional stages, and provide varying, unique, and limited wildlife habitat. To date, naturally regenerated plants are well adapted to growing on site, with seeds either migrating from surrounding native plants or, in many instances, are already in the soil. Natural regeneration benefits the environment by ensuring the succession of naturally occurring, site adapted species. However, where revegetation is considered essential:

- Plant species will be selected which are adapted to the generally cool, semi-arid climate, with only seasonal rains, as well as for their ability to quickly generate widespread and long-lived cover. Only species approved by SEMARNAT will be considered, and where feasible preference will be given to native species. Surface manipulations such as ripping and discing along the contours, contour furrows, pits or terraces will be conducted as appropriate to provide adequate seed beds.
- Plant species selected will be established using appropriate techniques such as seeding, sprigging, coring or planting.
- The need to apply cover material or soil amendments will be assessed on a site-by-site basis. In the event that soil amendments are needed they will be applied at levels recommended by sound scientific precedent prior to revegetation. Soils with good nutrients may be hauled to an area to assist in providing a good growth medium. Soil will be placed at variable depths based upon need and availability. An organic layer may be placed in some areas to provide nutrients and native seeds necessary for revegetation.

8.0 Reclamation Management and Monitoring

The project will have strong experience with reclamation at the site based on Plata Pan Americana's commitment to begin reclamation of areas that are not needed during project operations. This experience will support the reclamation effort that must be completed after closure. Newly reclaimed areas will be managed consistent with the project reclamation goals, and Plata Panamericana will provide appropriate reclamation management and monitoring. Newly reclaimed areas will be managed in a manner consistent with the reclamation goals of the project. Maintenance will be conducted on the site as necessary to assure reestablishment of vegetative species. The sites will be evaluated periodically during the first several years after re-vegetation to determine the effectiveness of the reclamation plan, and to ensure erosion has been prevented.

Reclamation management during the first 1-3 years following closure will include the monitoring of vegetation growth and propagation, water quality monitoring, and maintenance of permanent reclamation features to ensure public health and safety. Quantitative monitoring of reclamation activities and successes will illustrate site reclamation performance and verify test plot results. Monitoring will continue until reclamation is complete and compliant with the Reclamation Plan. Monitoring and reporting will be coordinated with the necessary agencies.

Revegetation success will be monitored for three years following seedbed preparation, potential soil fertility treatments, seeding, mulching, and temporary erosion control measures. Growth, ground cover, and species survival will be measured and reported on an annual basis. Inspections will ensure that soil covers have maintained integrity, that seeps have not developed in the side slopes, that stability has been maintained on reclaimed slopes and that erosion in the reclaimed area is limited to erosional features less than 6 inches deep and 6 inches wide.

Post closure water quality monitoring will also be ongoing. Plata Pan Americana will continue to:

- Sample and test groundwater monitoring wells.
- Sample and test surface water monitoring sites.

9.0 Costs

Plata Panamericana has estimated the costs for reclamation based on general rates and the conditions of the La Colorada property. Most of the major reclamation activities will take place during operations as part of Plata Panamericana's attempt to mitigate historical impacts. After closure, the majority of reclamation will consist of recontouring, seeding and physical stabilization. Based on this fact, and the fact that the maximum amount of reclamation is estimated to be 58.14 ha, Plata Panamericana has agreed to accrue \$US 125,000 per year during operations towards reclamation (\$US 1,125,000 total). This is money that will be earmarked explicitly for reclamation and closure. This money may be used during operations to complete reclamation activities designed to reduce impacts and facilitate closure at the end of mine. Appropriate interim reclamation activities include:

- Reprocessing tailings impoundment #1 to prevent further impacts to Arroyo La Colorada;
- Stabilizing and removing sections of tailings impoundments #2, #3, #4, and #5 to prevent further degradation of Arroyo La Colorada;
- Removal of waste rock piles to underground to prevent further environmental degradation; and,

- Reclamation of other areas during construction or operations to prevent impacts to the environment.

Amounts spent on reclamation during operations will be reported as part of the Annual Monitoring Report submitted to IFC. Additionally, Plata Panamericana will use salvage money from the property towards any outstanding reclamation at the facility. Therefore, the estimated money that will be available (if necessary) for reclamation is approximately \$US 4,125,000.

It should be noted that the amount of money calculated for reclamation is considered a preliminary figure. The company has committed to completing a reclamation plan prior to commencement of operations that will be provided to IFC and Mexican regulatory authorities. This plan will also be publicly disclosed in the World Bank Info Shop. Based on the results of the submitted Reclamation Plan, the amount of money set aside for reclamation can be adjusted up or down.