

# STATE OF COLORADO

## DIVISION OF RECLAMATION, MINING AND SAFETY

Department of Natural Resources

1313 Sherman St., Room 215  
Denver, Colorado 80203  
Phone: (303) 866-3567  
FAX: (303) 832-8106



January 7, 2013

Shannon P. Murphy  
Providence Mining, LLC  
100 W. Bennett Ave.  
P.O. Box 661  
Cripple Creek, CO 80813

John W. Hickenlooper  
Governor

Mike King  
Executive Director

Loretta E. Pineda  
Director

**Re: Providence Mine, Permit No. M-2012-052,  
Receipt of 110d Hard Rock/Metal Mining Reclamation Permit Application Package**

Mr. Murphy:

On December 31, 2012, the Division of Reclamation, Mining and Safety (Division) received your 110d Hard Rock/Metal Mining Reclamation Permit Application package for the Providence Mine, File No. M-2012-052. Preliminary review of the information received determined that the following items must be received before the Division can consider your application as being submitted and technical review can begin:

**EXHIBIT A - Legal Description (Rule 6.3.1(1)):** The legal description must identify the affected land, specify affected areas and be adequate to field locate the property. Description shall be by township, range, and section, to at least the nearest quarter-quarter section. A metes and bounds survey description is also acceptable. Also, the street address or lot number(s) may be used. This information is available from the County Assessor's office or U.S. Geological Survey (USGS) maps.

**EXHIBIT A - Location Map (Rule 6.3.1(2)):** A map showing information sufficient to determine the location of the affected land on the ground and existing and proposed roads or access routes to be used in connection with the mining operation. Names of all immediately adjacent surface owners of record shall also be shown. The operation location map shall be a standard 1:24,000 scale U.S. Geological Survey map. The location of the proposed operation shall be shown and labeled with the mine site name.

**EXHIBIT B - Site Description (Rule 6.3.2(a)):** You must address Item (a) to the extent necessary to demonstrate compliance with the applicable performance standard requirements of Rule 3. At a minimum, you must include a description of the vegetation and soil characteristics in the area of the proposed operation. The local office of the Natural Resources Conservation Service (NRCS) may provide you with this information as well as recommendations for Exhibit D - Reclamation Plan;

**EXHIBIT B - Site Description (Rule 6.3.2(b)):** You must address Item (b) to the extent necessary to demonstrate compliance with the applicable performance standard requirements of Rule 3. At a minimum, you must identify any permanent man-made structures within two hundred (200) feet of the affected area and the owner of each structure. Permanent man-made structures include houses, barns, fences, above or below ground utilities, irrigation ditches, maintained or public roads, bridges, wells, pipelines, water storage impoundments, railroad tracks, cemeteries, and communication antennas, etc. Each structure should be located on Exhibit E - Map;

**EXHIBIT B - Site Description (Rule 6.3.2(c)):** You must address Item (c) to the extent necessary to demonstrate compliance with the applicable performance standard requirements of Rule 3. At a minimum, you must give a description of the water resources in the area of the proposed operation. Identify any streams, springs, lakes, stock water ponds, ditches, reservoirs, and aquifers which would receive drainage directly from the affected area. Provide any information available from publications or monitoring data on flow rates, water table elevations and water quality conditions.

**EXHIBIT C - Mining Plan (Rule 6.3.3):** (1) The purpose of the mining plan is to describe how mining will affect the permit area for the duration of the operation. This plan must be correlated to Exhibit E - Map. The description of the mining plan must be adequate to satisfy the requirements of Section 3.1 and demonstrate compliance with Rule 3. At a minimum, you must include the following information:

- (a) specify the estimated dates that mining will commence and end;
- (b) the estimated depth to which soil, suitable as a plant growth medium, will be salvaged for use in the reclamation process. This description must be consistent with information provided in Exhibit B. Sufficient soil must be salvaged to meet the vegetation establishment criteria of Subsection 3.1.10. If plant growth medium is not reapplied on a graded area immediately after salvage, then you must specify how the topsoil will be stockpiled and stabilized with a vegetative cover until used in reclamation. Plant growth medium stockpiles must be located separate from other stockpiles, out of the way of mine traffic and out of stream channels or drainageways. The location of plant growth medium stockpiles must be shown on Exhibit E - Map;
- (c) specify the thickness of overburden or quantity of waste rock, if any, to be removed to reach the deposit. The location of any overburden stockpiles or waste rock fills must be shown on Exhibit E - Map;
- (d) specify the thickness of the deposit to be mined;
- (e) describe the major components of the mining operation such as: roads and access routes, pit, office, shop/maintenance buildings, plant, processing facilities, and any underground openings such as adits or ventilation facilities. These components must be located on Exhibit E - Map;
- (f) specify the dimensions of any significant disturbances to the land surface such as pit excavations, mine benches, impoundments, stockpiles, waste rock disposal areas, etc;
- (g) specify the dimensions of any existing or proposed roads that will be used for the mining operation. Describe any improvements necessary on existing roads and the specifications to be used in the construction of new roads. New or improved roads must be included as part of the permitted acreage. Describe any associated drainage and runoff conveyance structures to include sufficient information to evaluate structure sizing;
- (h) specify how much water will be used in conjunction with the operation, and the source of this water;
- (i) if groundwater will be encountered and/or surface water intercepted or disturbed, describe how mining will affect the quantity and quality of the surface or groundwater and the methods to be used to minimize disturbance to the surface and groundwater systems including

proposed dewatering, sediment-containment or chemical treatment systems, storm water run-off controls, and groundwater points of compliance;

(j) specify how you will comply with applicable Colorado water laws and regulations governing injury to existing water rights;

(k) regardless of DMO status, if refuse and acid or toxic producing materials are exposed during mining, describe how they shall be handled and disposed of in a manner that will control unsightliness and protect the drainage system from pollution;

(l) describe what measures will be taken to minimize disturbance to the hydrologic balance, prevent off-site damage, and provide for a stable configuration of the reclaimed area consistent with the proposed future land use; and

(m) specify whether the deposit/ore will be processed on-site. Processing includes crushing, screening, washing, concrete or asphalt mixing, leaching or milling. If the deposit/ore will be processed, then describe the nature of the process, facilities and chemicals utilized. The process area and any structures must be described on Exhibit E - Map.

(n) identify the primary and secondary commodities to be mined/extracted and describe their intended use.

(o) name and describe the intended use of all expected incidental products to be mined/extracted by the operation.

(2) If tailing ponds are part of the milling process, the mine plan description should address the following:

(a) **Plant Facilities:** Describe the chemical types and quantities to be utilized, chemical storage and spill containment and emergency response plans for on-site spills. Plant operation details should include tank capacities and operating solution volumes.

(b) **Tailings:** Describe the geochemical constituents of the tailing or leached ore, the chemistry of any leachate, anticipated impacts to ground or surface waters and design details such as liners, ponds and embankments, diversions or chemical treatment facilities to be used to control these impacts, and ground and surface water monitoring systems, to include proposed groundwater points of compliance.

(c) **Drainage Control:** Describe the measures used to divert upland drainage away from the site both during and after operation. This must include design details demonstrating the capacity of ditches and impoundment structures to contain operating solutions and the volume of water generated by a one hundred (100) year 24-hour rainfall event.

(d) **Maps and Plans:** Design drawings must, at a minimum, describe specific design details for tailing ponds and embankments, ponds and ditches, ore and tail transport systems, and ground and surface water monitoring systems.

**EXHIBIT D - Reclamation Plan (Rule 6.3.4):** (1) The purpose of the Reclamation Plan is to describe the timing, procedures, criteria and materials that will be used to reclaim the affected land to the proposed future land use. This plan must be correlated to Exhibit E - Map. The description

of the Reclamation Plan must be adequate to satisfy the requirements of Section 3.1 and demonstrate compliance with Rule 3. At a minimum, the Application shall include the following information:

(a) specify at what point in the mining plan and to what depth(s) overburden will be replaced in relation to ongoing extraction.

(b) specify the maximum gradient of reclaimed slopes (horizontal:vertical). If the Application proposes slopes steeper than 3:1, you must include a justification that supports steeper slopes for the proposed post-mining land use, and demonstrates compliance with the applicable performance standards of Section 3.1.

(c) specify the measures that will be taken to revegetate the site, if applicable, including:

(i) The thickness of plant growth medium to be replaced. Sample and analyze available soils sufficiently to establish quantity and quality;

(ii) state at what point in the mining plan the site will be seeded. Explain how the seedbed will be prepared to eliminate compacted conditions (e.g., plowed, chiselled, disced). State the type, application rate, and soil incorporation methods of fertilizer application, if any. NOTE: Soil amendments shall only be applied where soil tests indicate nutrient deficiencies for the plant species to be established;

(iii) state the grass, forb, shrub and tree species to be planted and the applicable quantities. Specify the quantity of each grass and forb species as pounds of pure live seed per acre;

(iv) specify the application method for grass and forb seeding. If the seed is to be broadcast, the application rate shall be twice the rate required for seed drilling. If the seedbed has not been adequately roughened prior to seeding, the seed shall be raked or harrowed after broadcast application;

(v) if a mulch is needed, specify the kind to be used, the crimping method, and rate of application; and

(vi) explain the establishment methods for each species of shrub and/or tree, and state the number of each to be established per acre.

(d) Specify which ponds, streams, roads and buildings, if any, will remain after reclamation. These features must be shown on the Exhibit E - Map. If ponds are part of the Reclamation Plan, slopes from 5 vertical feet above to 10 vertical feet below the expected average water level cannot be steeper than 3H:1V; remaining slope lengths may not be steeper than 2H:1V. Where wildlife habitat is the proposed future land use, shorelines should be irregularly shaped to promote a diverse wildlife habitat. The Colorado Division of Wildlife (DOW) must be consulted where wildlife use is the proposed future land use.

(e) Specify the reclamation treatment of any waste rock dumps, tailing impoundments, underground mine openings, ditches, sediment control facilities, buildings and other features specified in your mine plan but not previously addressed in the Reclamation Plan narrative. These features must be shown on Exhibit E - Map. This should describe the measures taken to minimize

disturbance to the hydrologic balance, prevent off-site damage, and provide for a stable configuration consistent with the proposed future land use.

(f) All Limited Impact 110 applications must provide an estimate of the actual costs to reclaim the site based on what it would cost the state using an independent contractor to complete reclamation. Include the unit costs for the following activities as appropriate to the operation: backfilling, grading, topsoil application, seeding, mulching, fertilization, and labor to complete reclamation. Determine and specify the point during the operation when the site has reached a point of maximum disturbance. The cost to reclaim the site to the specifications of the Reclamation Plan at this point must be estimated. Unit costs (cost per cubic yard), volumes, haul or push distances, and grades must be included when backfilling and grading is part of the Reclamation Plan. Volume and unit costs for finish grading, subsoil and topsoil application must be provided in terms of cost per cubic yard. The estimated cost for fertilizer, seed and mulch acquisition and application must be provided as cost per acre.

(2) Equipment costs must include such factors as equipment operator wages and benefits, fuel and lubricant consumption and depreciation. The cost to mobilize and demobilize the equipment from the nearest population center should be estimated.

(3) All items referenced in the Reclamation Plan must be included in the cost calculation. These items in addition to earthwork, such as detoxification, building demolition, fencing, monitoring well sealing or stream channel reconstruction must also be included in the reclamation cost estimate.

(4) After the direct costs noted above have been estimated, the Office may add up to an additional maximum eighteen and one-half (18.5%) percent of that total, which includes private contract, typical overhead costs. This additional cost is required to cover indirect costs that an independent contractor would incur when performing reclamation of the site. Five (5%) percent additional cost shall be added to cover Office administration cost in the event of bond forfeiture and permit revocation.

**EXHIBIT E - Map (Rule 6.3.5):** (1) In addition to the requirements of 6.2.1(2), you must provide a map that clearly describes the features associated with the mining plan and the components of the Reclamation Plan. Include one map for the mine plan and one map for the Reclamation Plan. The map(s) must be drawn to a scale no smaller than appropriate to clearly show all elements that are required to be delineated by the Act and these Rules; show a north arrow, note any section corners adjacent to the proposed operation, and indicate the date illustrated. At a minimum, maps must include the following information:

(2) **Mining Plan Map**

(a) outline and label the permit boundaries, described in Exhibit A - Legal Description; for all Limited Impact 110 and Special 111 Operations, the Office considers the area bounded by the permit boundary to be analogous to the affected area;

(b) label the names of owner(s) of record of the surface of the affected area, of the land within two hundred (200) feet of the affected area, identify the owner of the substance to be mined, and the type of structure and owners of record of any permanent or man-made structures within 200 feet of the affected area;

(c) outline and label all major surface features to be used in connection with the proposed operation such as: existing and proposed roads, pit boundary, topsoil stockpiles, overburden stockpiles, product stockpiles, waste rock fills, stream channels, buildings, processing plant, underground openings such as adits or ventilation facilities, ponds, impoundments, dewatering pumps, diversions, tail or waste disposal areas;

(d) indicate the direction that mineral extraction will proceed;

(e) note the location of any significant, valuable, and permanent man-made structures within two hundred (200) feet of the affected area such as houses, barns, fences, above or below ground utilities, irrigation ditches, maintained or public roads, bridges, wells, pipelines, water storage impoundments, railroad tracks, cemeteries, and communication antennas. A narrative description must be provided in Exhibit B - Site Description; and

(f) outline and label existing disturbance within and/or adjacent to the permit boundary (e.g., previously mined areas, roads or excavations resulting from utility construction). Re-disturbance of previously disturbed areas, by the proposed mining operation, must be included in the permit area and addressed in Exhibit D - Reclamation Plan.

(3) **Reclamation Plan Map**

(a) show the gradient of all reclaimed slopes (horizontal:vertical) sufficient to describe the post mine topography;

(b) indicate where vegetation will not be established and the general area(s) for shrub or tree planting;

(c) if ponds are a part of the Reclamation Plan, outline the final shore configuration of the ponds and shallow areas if the future land use is for wildlife;

(d) state the average thickness of replaced overburden by reclamation area or phase; and

(e) state the average thickness of replaced topsoil by reclamation area or phase.

**EXHIBIT H - Municipalities Within a Two-Mile Radius (Rule 6.3.8):** List the mailing address and telephone number of the governing body for all municipalities within a 2-mile radius of the proposed mining operation.

**EXHIBIT I - Proof of Filing with County Clerk (Rule 6.3.9):** Provide an affidavit or receipt indicating the date on which the application was placed with the local County Clerk and Recorder. Also, refer to Rule 1.6.2(1)(c).

**EXHIBIT J - Proof of Mailing Notices of Permit Application (Rule 6.3.10):** Include proof of mailings of the "Notice of Permit Application" sent to the County Board of Commissioners and Board of Supervisors of the local Soil Conservation District, in the application, by submitting the date-stamped receipt for Certified Mailing or a date-stamped copy of the notice form with signature acknowledging personal service and receipt by the appropriate board. Also, refer to Rule 1.6.2(1)(a).

**EXHIBIT L - Permanent Man-Made Structures (Rule 6.3.12):** You must provide information sufficient to demonstrate that the stability of any structures located within two hundred (200) feet of the operation or affected land will not be adversely affected. If the Office determines that such information is inadequate to demonstrate that the operation will not adversely affect the stability of any significant, valuable or permanent man-made structure, the Applicant shall either:

(a) provide a notarized agreement between the applicant and the person(s) having an interest in the structure, that the applicant is to provide compensation for any damage to the structure; or

(b) where such an agreement cannot be reached, the applicant shall provide an appropriate engineering evaluation that demonstrates that such structure shall not be damaged by activities occurring at the mining operation.

**EXHIBIT U - Designated Mining Operation Environmental Protection Plan (Rule 6.4.21):**

The Environmental Protection Plan shall describe how the Operator/Applicant will assure compliance with the provisions of the Act and Rules in order to protect all areas that have the potential to be affected by designated chemicals, toxic or acid-forming materials or acid mine drainage. In addition, the plan shall include an Emergency Response Plan that complies with Sections 34-32-103(4.9) and 34-32-116.5(5), C.R.S. 1984, as amended, and Section 8.3, for designated chemicals used on site, and appropriate measures recommended by the Colorado Division of Wildlife (DOW) for the protection of wildlife from damage from designated chemicals, toxic or acid-forming materials and acid mine drainage. Please refer to Rule 6.4.21 (pp. 154 – 165) of the Mineral Rules and Regulations of The Colorado Mined Land Reclamation Board for Hard Rock, Metal, and Designated Mining Operations for additional requirements to include in Exhibit U.

**ADDENDUM 1 - Notice Requirements - Affidavit of Posting Notice (Sign) (Rule 1.6.2(1)(b)):**

Prior to filing the application, post notices (signs) at the location of the proposed mine site, as required by the Office, of sufficient size and number to clearly identify the site as the location of a proposed mining operation giving name, address, and phone number of the Applicant, and stating that (name of Applicant) has applied for a mining permit with the Colorado Mined Land Reclamation Board. Anyone wishing to comment on the application may view the application at the County Clerk's or Recorder's office and should send comments prior to the end of the public comment period to the Colorado Mined Land Reclamation Office, at the address given on the cover of these Rules and Regulations. Any class of Limited Impact 110 or 110d operation need only post notice (sign) at the location of the proposed access to the site. After having posted such notice (sign), failure by an Applicant to maintain such notice shall not constitute just cause to deny approval of the application. At the time the application is filed with the Office, the Applicant shall provide a signed affidavit that such notice (sign) was posted according to the provisions of this Rule.

A sample notice is enclosed for your use.

Your application will not be considered filed until the information listed above is received and found sufficient to begin our review. A decision date will be established 30 days from the date of receipt of all of the requested information. Additionally, if you have already published notice you will need to republish notice, after the Division considers the application submitted. Republication must occur once within ten (10) days of the submittal date. We will notify you when you should initiate republication of your notice. The final date for receiving comments is ten (10) days after the date of publication or the next regular

business day.

**You have sixty (60) days from the above date, or until March 9, 2013 to submit all necessary documents that the Office needs for an application to be considered filed. If, at the end of the sixty day period, the application has not been determined to be filed with the Office, the Office shall deny the application and terminate the application file.**

This letter shall not be construed to mean that there are no other technical deficiencies in your application. The Division will review your application to determine whether it is adequate to meet the requirements of the Act after submittal of all required items.

If you have any questions on the above, please contact me at (303) 866-3567, ext. 8169.

Sincerely,

A handwritten signature in blue ink, reading "Timothy A. Cazier". The signature is fluid and cursive, with the first name "Timothy" being the most prominent.

Timothy A. Cazier, P.E.  
Environmental Protection Specialist

Enclosure

cc: Tom Kaldenbach, DRMS w/o enclosure  
DRMS file w/o enclosure