#### **RECEIPT OF DELIVERY**

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## 1750 33rd Street

## **Boulder, Colorado**

# CERTIFICATION

I, Kahe Tymkovich certify that a copy of the

Response Letter and Attachments to the Colorado Milling Company, LLC's Application for an Amendment to MLRD Permit No. M-1994-177 for the Gold Hill Mill, dated December 8, 2018, addressed to the Colorado Division of Reclamation, Mining and Safety was hand-delivered to me on December  $\underline{D}$ , 2018.

Signed: \_\_\_

Dated: 12-10-12

#### COLORADO MILLING COMPANY, LLC P.O. Box 1523 Longmont, Colorado 80502



Colorado Division of Reclamation, Mining and Safety Amy Eschberger Environmental Protection Specialist 1313 Sherman Street – Room 215 Denver, Colorado 80203 December 8, 2018

RECEIVED

DEC 112018

DIVISION OF RECLAMATION, RE: Gold Hill Mill; DRMS File No. M-1994-117: Adequacy Review No. 1 (AM 01) MINING AND SAFETY

Attention: Amy Eschberger

This is the Colorado Milling Company, LLC's Response Letter to the Michael Cunningham's Adequacy Review of the Application for an Amendment to the Gold Hill Mill Limited Impact 110 (2) Permit No. M-1994-117, to formally add the previously permitted Left Hand Creek Pump Station, Gold Hill Mill Pipeline, and the Times Mine adit portal to the affected land boundary of the Gold Hill Mill Permit. These three features are collectively referred to as the Gold Hill Mill Waterline in this Response Letter. In order to ensure that the responses to the Division of Reclamation, Mining and Safety's request for additional information and clarification can be properly reviewed, the responses are set out below each of Michael Cunningham's Adequacy Review comments. A separate cover letter for each of the responses that require additional material is attached to this Response Letter.

1. The Division received comments from Boulder County Parks and Open Space, Boulder County Land Use Department, Colorado Historical Society, Division of Water Resources and Pine Brook Water District. The comments have been attached for your review, please make any changes to the application as necessary.

**CMC Response**: The comments received by the DRMS do not require any changes to the Application for an Amendment to the Gold Hill Mill Permit No. M-1994-117. The addition of the Left Hand Creek Pump Station, Gold Hill Mill Pipeline, and the Times Mine adit portal to the affected land boundary of the Gold Hill Mill Permit have either already been addressed in the previous Permit Application that was approved by the Colorado Mined Land Reclamation Board or are being addressed in this Response Letter. The terms and conditions of the Water Pipeline Easement Deed with Boulder County will be monitored by the Boulder County Parks and Open Space Department as the Gold Hill Mill Waterline is installed and operated by the Colorado Milling Company, LLC (CMC). Boulder County Land Use Department determines that CMC needs any building permits to proceed with its activities, they will be obtained from the County Land Use Department. The Office of Archaeology and Historic Preservation has not recorded

any properties of historical significance on this property. If CMC discovers any human remains during the installation of the Gold Hill Mill Waterline, it will follow the requirements under CRS 24-80 part 13. The Colorado Division of Water Resources raised the issue of the Left Hand Ditch Company shares not being decreed to allow for the proposed milling use. A copy of the Water Court Decree for these shares is appended to this Permit Amendment Application. The concerns raised by the Pine Brook Water District do not include any specific ones that need to be addressed by CMC in this Response Letter.

2. As required by Rule 1.6.2(d) and 1.6.5(2), please submit proof of publication in a newspaper of general circulation in the locality of the proposed mining operation.

**CMC Response:** As required by Rule 1.6.2(d) and 1.6.5(2), proof of publication in the Boulder Daily Camera is attached to this Response Letter.

3. As required by Rule 1.6.2 (e), please submit proof of the notice to all owners of record of surface and mineral rights of the affected land and the owners of record of all land surface within 200 feet of the boundary of the affected land including all easement holders located on the affected land and within 200 feet of the boundary of the affected land. Proof of notice may be return receipts of a Certified Mailing or by proof of personal service.

**CMC Response:** As required by Rule 1.6.2 (e), CMC is submitting proof that notices were sent to all owners of record of surface and mineral rights of the affected land and to the owners of record of all land surface within 200 feet of the boundary of the affected land including all easement holders on the affected land and within 200 feet of the boundary of the affected land. The addition of the permitted Gold Hill Mill Permit boundary has resulted in only one more land owner within 200 feet of that boundary. Proof of notices by Certified Mailing and proof of personal service is attached to this Response Letter.

4. Pursuant to Rule 1.10(2), a 110 Amendment Application is not required to contain information which duplicates applicable previous submittals. However, the Applicant shall clearly describe where, in the original Application and supporting documents, the information not included in the Amendment Application, but necessary to render the Amendment technically adequate, may be found. The Amendment Application contains several references to the approved Reclamation Permit. The Applicant shall revise the Application Exhibits which reference the approved Reclamation Permit, to include the specific document name(s) and date(s) in which the existing information may be found.

**CMC Response:** CMC has revised the Application Exhibits to include specific references to the previously approved Cash Mine Limited Impact Permit No. M-1983-141, and the 1985 Amendment to the Cash Mine Permit, which included the Gold Hill Millsite and Tailings Impoundment Area. Copies of the corrected pages are attached to this Response Letter. In addition, CMC is attaching copies of Exhibit D: Wildlife, Water Resources, Vegetation and Soils

Information from the Cash Mine Limited Impact Permit Application for the benefit of anyone interested in this information.

#### Application

5. The latitude/longitude coordinates provided on page 3 of the Application Form do not correspond to the primary mine entrance location. Please review and revise the latitude/longitude coordinates on page 3 of the Application Form to correspond with the primary entrance to the Gold Hill Mill.

**CMC Response:** This has been reviewed and revised by the Registered Mineral Surveyor retained by CMC to prepare all the maps submitted with this Application for an Amendment to the Gold Hill Mill Limited Impact Permit. A corrected copy of page 3 of the Application Form is attached to this Response Letter.

## 6.3.1 Exhibit A – Legal Description and Location Map

6. Pursuant to Rule 6.3.1(1), the legal description must identify the affected land, specify affected areas and be adequate to field locate the property. The legal description provided under Exhibit A only describes the affected land of the 0.797 acres which are being added to the existing permit area of 8.4 acres. Please revise the legal description to include the entire affected area of the Gold Hill Mill operation.

**CMC Response:** Exhibit A- Legal Description and Location Map has been revised to include the entire area affected by the Gold Hill Mill operation. A copy of this corrected page is attached to this Response Letter.

7. Pursuant to Rule 6.3.1(2), the latitude and longitude coordinates of the main entrance to the mine must be labeled. Please revise the Location Map to include the coordinates of the mine entrance.

**CMC Response:** The Location Map has been revised to include the coordinates of the entrance to the Gold Hill Mill. These are the coordinates for the entrance gate into the Gold Hill Millsite: Latitude 40 Degrees 03 Minutes 55.7 Seconds North; Longitude 105 Degrees 24 Minutes 12.1 Seconds West.

<sup>8.</sup> Pursuant to Rule 6.3.1(3), the Location Map must show the names of all immediately adjacent surface owners of record. Please revise the Location Map to show the names of all immediately adjacent surface owners for the entire affected area of the Gold Hill Mill operation. In addition, the Location Map must contain a label with the mine site name.

**CMC Response:** Map E-2, Surface Ownership & Permit Area has been revised to show the names of all immediately adjacent surface owners of record for the area affected by the inclusion of the Gold Hill Mill Permit boundary. These are shown on Map E-4, Surface Ownership and Permit Area for the entire area affected by the Gold Hill Mill operation.

#### 6.3.2 Exhibit B – Site Description

9. Pursuant to Rule 6.3.2(b), all permanent man-made structures within 200 feet of the affected area and the owner of each structure must be identified. The list of structures must be revised to include the owners of each structure. In addition, the list must be revised to include any permanent man-made structures within 200 feet of the entire affected area of the Gold Hill Mill operation.

**CMC Response:** There are three small wooden frame structures located on the Mammoth Millsite MS Lickskillet Road. It is owned by James K. McCumber and Amy Fortunato, P.O. Box 1927, Boulder, Colorado 80306. There is a single family residence, several sheds and an unused corral located on the Eureka Millsite MS No. 601B. The Eureka Millsite has a property address of 4801 Lickskillet Road. It is owned by Gene L. Sapp and Dene F. Sapp. These are the only permanent man-made structures located within 200 feet of the entire area affected by the Gold Hill Mill operation.

10. Exhibit B states three permanent man-made structures are located within 200 feet of the affected area. This contradicts the statement made under Exhibit L which indicates there are seven permanent man-made structures within 200 feet of the affected area. Please clarify this discrepancy and make the necessary changes to the appropriate Application Exhibit.

**CMC Response:** Exhibit L – Permanent Man-Made Structures has been revised to include any permanent man-made structures within two-hundred (200) feet of the operation or affected land as well as structures that are not on the Boulder County Assessor's list of Improvements on the Mammoth Millsite MS No.17576 and the Eureka Millsite MS No. 601B.

11. Exhibit B references the approved Reclamation Permit for a complete list of native vegetative species and wildlife species found at the site, as well as water quality sampling and analytical data from sampling the water in Left Hand Creek. Please revise Exhibit B to include a specific reference to this information. Please see additional comments under Item No. 4.

CMC Response: Exhibit B has been revised to include a specific reference to this information.

#### 6.3.3 Exhibit C – Mining Plan

12. Pursuant to Rule 6.3.3(1)(a), the Applicant is to specify the estimated date that mining will

end. The Division understands the life of the mine is in part determined by commodity prices. Please provide an estimate of the date that mining will end based on current commodity prices. In addition, provide an estimate of how long the mill can operate at full capacity before the tailings impoundment is full.

**CMC Response:** The currently permitted mine dumps located at the Cash, Who Do, and White Cloud mines and the mill stockpile contain a minimum of 92,000 tons of material that are available for processing in the Gold Hill Mill. Based upon a 50 ton per day operation at 260 days of operation per year, there are at least 7 years of mine dump production available from this source of feed for the mill. In addition, there are 37,100 tons of Indicated and Inferred Ore Reserves in the permitted Cash mine which will take a minimum of 3 years to process. Based upon these currently available resources, if milling operations commenced on May 1, 2019, milling operations would cease sometime in 2028 or 2029. This production estimate does not include any additional resources that would become available as a result of an increase in precious metal prices, or any successful exploration and development of ore reserves on the many veins that are accessible from the Cash Mine's Third Level Cross-Cut. It also does not include any future possible production from the Rex, Tammany, Victoria, Black Cloud, Who Do, Prussian, and Slide Mines, or the many hundreds of thousands of tons of mine dumps that are available for future processing in the Gold Hill Mill. Any of these activities would extend the life of the operation far beyond the period of cessation of milling operations stated above.

The available tailings capacity in the existing impoundment is estimated at 5,000 tons. Based upon milling operations at 50 tons per day, the mill can operate at full capacity for one-hundred (100) days without raising the embankment.

13. The Division requests the following information regarding the installation of the Gold Hill Mill Pipeline:

a) Specify the length of the pipe segments which will be used to construct the Gold Hill Mill Pipeline.

b) Specify the number of welds required to fuse the pipe segments together.

c) Specify the QA/QC procedures which will be used to verify the pipe segment welds were performed properly.

d) Specify the pressure rating of the HDPE pipeline.

e) Calculate the potential surge pressure within the HDPE pipeline.

**CMC Response:** The following information regarding the installation of the Gold Hill Mill Pipeline is provided to answer these questions:

a) The High Density Polyethylene (HDPE) pipe segments that will be used to construct the Gold Hill Mill Pipeline are fifty (50) feet in length.

b) Two welds will be required to fuse each of the pipe segments together. If the entire length of the Gold Hill Mill Pipeline is installed using HDPE pipe it will require a minimum of 94 welds to fuse the pipe segments together. However, it has been determined that the lower 1,500 to 2,000 feet of the Pipeline will be installed using two (2) inch diameter galvanized steel pipe that comes in twenty-one (21) foot lengths. This will reduce the number of welds required to fuse the HDPE pipe to a maximum of 64 welds.

c) The HDPE pipe segment welds will be field tested using compressed air and an air pressure gauge to determine if the welds were performed properly. This will be done as each 1,000 foot length of the HDPE pipeline is installed. Any leaks detected by this test work will be addressed by the workers installing the pipeline by repairing the welded segments before any water is pumped up from Left Hand Creek. At the conclusion of the installation of the Gold Hill Mill Pipeline, when water is first pumped from the creek, the pipeline will be inspected along its entire length for any water leaking from the welded segments. Inspections will be conducted to ensure that the Gold Hill Mill Pipeline is not leaking water, and repairs will be made according to the manufactures' guidelines for this activity.

d) The pressure rating for the HDPE pipeline is 230 psi. For the galvanized steel pipeline, the pressure rating is between 600 and 700 psi, depending upon the location of the pipe.

e) The surge pressure within the HDPE pipeline is 300 psi during recurrent surges and 400 psi during occasional surges.

12. [Duplicate number 12] Specify the depth and total length of each segment of the pipeline to be buried.

**CMC Response:** The lowermost portion of the Pipeline will be buried at a depth of three (3) feet for a length of one-hundred (100) feet from the point of intake at Left Hand Creek to ensure that access can be obtained across the property in the future. The only other place where the Pipeline will be buried is where it crosses the old mine access road below the Red Cloud and Cold Spring mine dumps. It will be incased in a steel pipe and buried at this location at a maximum depth of three (3) feet for a length of approximately fifteen (15) feet.

13. [Duplicate number 13] Identify where the check valves and anti-siphon valves will be installed by labeling these features on a revised Mining Plan Map.

**CMC Response:** There will be five (5) check valves placed along the length of the Pipeline. These will be located every one-thousand (1000) feet along the length of the Pipeline. An antisiphon valve will be installed in the two (2) inch HDPE pipeline inside the Times Mine adit to relieve air pressure when the Bean pump is pushing the water column up from Left Hand Creek. A check valve has already been installed inside the Times Mine adit to prevent water flowing from behind the bulkhead in the future. Four of these five (5) check valves are identified on Map E-1 Mine Plan and on Map E-2 Gold Hill Mill Waterline Map attached to the Response Letter. The fifth check valve is located inside the Times Mine adit. 14. Clarify if the pump will have an automatic shut-off system installed or otherwise describe what measures will be used to ensure the pump does not continue to operate in the event there is a failure of the pipeline.

**CMC Response:** The Bean pump will have a water pressure sensitive automatic shut-off valve installed to ensure that the pump does not continue to operate in the event there is a loss of water pressure or a failure of the Gold Hill Mill Pipeline.

15. The Operator has committed to removing the existing pipeline before installing the new 2" HDPE pipeline. Please clarify if there are any segments of the existing pipeline which must be excavated. If so, provide an estimate of the size of the area which must be excavated and describe how the land will be stabilized to prevent erosion and siltation of the affected lands and offsite areas.

**CMC Response:** The existing pipeline was placed on the surface of the land except for one very short segment. The only segment of the existing pipeline which will need to be excavated is the fifteen feet that was buried where it crossed the old mine access road below the Red Cloud and Cold Spring mine dumps. This will be done when the new pipeline is installed, and it will be buried to a maximum depth of three (3) feet by approximately fifteen (15) feet in length. There will be very little land surface disturbed by this excavation, and the decomposed granite that is removed during this activity will be distributed along the access road below the excavation.

16. Specify if any trees will need to be removed during installation of the Gold Hill Mill Pipeline. If trees will be removed, specify how the woody materials would be put to a beneficial use as required by Rule 3.1.9(2).

**CMC Response:** There are very few large living trees that will need to be removed to install the Gold Hill Mill Pipeline. The Boulder County Parks and Open Space Department will be consulted regarding this activity. The installation of the new pipeline will follow the previous waterline, where the trees were cut and cleared when the first pipeline was installed. The entire length of the Gold Hill Mill Pipeline has been inspected several times during the preparation of this Response Letter, and most of the trees that will have to be removed from the Waterline and Access Easement are dead trees. The only use for the dead trees that will have to be removed is for firewood.

17. Provide a description of the piping and other infrastructure which will be placed directly in Left Hand Creek.

**CMC Response:** The only infrastructure that will be placed directly in Left Hand Creck will be a metal box with trash screens. A two (2) inch steel pipe will be used to extract water from Left Hand Creek.

18. Specify the total volume of fuel which will be stored at the pump house, if any. In addition, describe the secondary containment which will be used to contain all stored fuel.

**CMC Response:** The Bean pump will be powered by a diesel generator unless the Public Service Company is granted access by the owners of the Mammoth Millsite MS No. 17576 to install a pole and transformer and power box to run the pump with electricity. The maximum total volume of fuel that will be stored at the pump house is 300 gallons. This fuel will be stored in a standard metal container approved for fuel storage. The Bean pump and the generator will be installed within metal containment frames that will retain any fuel or lubricants inside the pump house, where they can be properly managed.

19. Clarify if there is any other existing infrastructure in addition to the PVC pipeline which must be removed before the new HDPE pipeline is installed.

**CMC Response:** No. There is no other existing infrastructure in addition to the three (3) inch and two (2) inch PVC pipeline which must be removed before the new Gold Hill Mill Pipeline is installed to improve the existing Gold Hill Mill Pipeline.

20. The proposed location of the pump house and footbridge is within the floodplain of Left Hand Creck and this area was heavily impacted by the floods of 2013. Pursuant to Rule 3.1.6(1), disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quantity and quality of water in surface and groundwater systems shall be minimized. The Division is concerned the pump house and associated infrastructure has the potential to be mobilized during a flood event. If this were to occur, the generator would likely release fuel or oil into the floodwaters. In addition, there is the potential the pump house could become lodged on the upstream side of any bridges located downstream of the pump house location, causing a further impediment to the passage of floodwaters. Please describe how the Operator intends to minimize these potential impacts during a flood event

**CMC Response:** The pump house is a 10 by 8 foot metal "conex" container. It will be located outside of the area affected by the 2013 flood. The pump house and the metal fuel container will be located on the deeded easement on the Golden Gate Millsite well above the Left Hand Creek floodplain. The metal pump house that will contain the Bean pump and generator weigh more than 8,000 pounds, and it is very unlikely that it could be mobilized during a flood event and release fuel or oil into the floodwaters. The nearest bridge located downstream from the pump house is the one that accesses the Slide Mine. This bridge is nearly a quarter of a mile below the location of the pump house. With the pump house and the associated fuel tank located on the Waterline Easement on the Golden Gate Millsite MS No. 5149A, the Left Hand Creek Pump Station will be situated above the floodplain. The footbridge will be situated well above the highest observed level of Left Hand Creek at this location during the 2013 flood. It is constructed of metal and weighs more than 1,500 pounds. It will be located on the Western side of the Pump Station boundary where Left Hand Creek is quite narrow.

21. The approved Reclamation Permit allows the Operator to store water in the underground working of the Times and Wynona Mines. The Reclamation Permit states there is sufficient capacity within the Times and Wynona Mine to store water to be used in the operation of the mill. The Operator's water right will allow a maximum of 22.53 acre-feet per year to be diverted from Left Hand Creek. The Division requests the following information related to the storage of water in the Times and Wynona Mine:

a) Specify the total volume of water which can be stored in the underground workings of the Times and Wynona Mines.

b) Provide a detail drawing which depicts all portions of the Times and Wynona Mines which would be used to store water and which shows how the Times and Wynona Mines are connected.

c) Provide a description of how water will be discharged into the mine and specify where within the Times Mine the water will be discharged. The description shall account for any supporting infrastructure associated with the delivery of water.

**CMC Response:** The following information relates to the storage of water in the Times and Wynona Mines:

a) The total volume of water that can be stored in the underground mine workings of the Times and Wynona Mines is in excess of 1,400,000 gallons of water.

b) The underground mine workings in the Times Mine were mapped by Russell R. McLellan in 1947. It is attached to this Response Letter. The underground mine workings in the Wynona Mine were mapped by A.E. Reardon in 1934 and confirmed by Russell R. McLellan in 1947. A detailed drawing of the Wynona Mine is attached to this Response Letter.

c) Water will be pumped into the Times Mine by way of a three (3) inch pipeline that was installed through the existing concrete bulkhead in 1987. The new two (2) inch HDPE pipeline has been connected to this pipeline with a standard transition coupling. A check valve has been installed adjacent to this coupling to prevent water stored behind the bulkhead from flowing out of the Times Mine. An anti-siphon valve will also be installed in this HDPE line to release air pressure ahead of the column of water that is being pushed up the Gold Hill Mill Waterline from the Left Hand Creek Pump Station.

22. The Operator's water right allows for diversion of 10.4 acre-feet of water per dry year and 22.53 acre-feet of water in a wet year. Please clarify how a dry year versus a wet year is determined

CMC Response: The determination of a wet year verses a dry year is made by the Left Hand Ditch Company. This determination is made based upon the history of water flow in Left Hand

Crcek, and the Left Hand Ditch Company advises its shareholders how much water is available for consumption on a pro-rata share of the water available from Left Hand Creek.

23. The approved Reclamation Permit references a bulkhead within the Times Mine. A review of the permit file found the Division does not have any information about the bulkhead. Please confirm there is a bulkhead within the Times Mine and provide a detail drawing of the bulkhead, a description of the how the bulkhead was constructed, and specify where within the Times Mine portal the bulkhead is located.

**CMC Response:** The bulkhead was constructed fifty-four (54) feet behind the original portal of the Times Mine adit, which was driven in solid country rock. The Times Mine bulkhead is now situated one-hundred (100) feet from the metal door of the five (5) foot diameter galvanized steel culvert that provides a safe and secure entrance into the Times Mine. The bulkhead is three (3) feet thick and was constructed of concrete and rebar in a wooden form in 1987. There are three PVC pipes set within the concrete bulkhead. One is a three (3) inch intake pipe situated in the upper right hand portion of the bulkhead. Another, two (2) inch pipe is situated in the lower middle of the bulkhead. All these pipes are closed with ball valves, and none of them are leaking water.

24. The Reclamation Plan includes a statement which indicates there is the potential for water to flow from the Times Mine adit. Please verify if the Times Mine currently retains groundwater. In addition, clarify if there have been seasonal discharges of groundwater from the Times Mine during periods when the mine has been inactive and provide the Division with the results of water quality sampling within the Times Mine, if available.

**CMC Response:** There is no ground water flowing from the portal of the Times Mine adit. There have not been any seasonal discharges of groundwater from the Times Mine during the periods when the mine has been inactive, because the Times Mine was thoroughly sealed by the concrete bulkhead constructed in 1987. When the bulkhead was last examined in September 2018, no water was leaking anywhere from behind the bulkhead. The Times Mine still retains water from the last period when water was pumped behind the bulkhead. There have not been any water samples taken within the Times Mine since the bulkhead was constructed in 1987, and there are no water quality sampling results available to provide to the DRMS.

<sup>25.</sup> The Operator is proposing to store fresh water from Left Hand Creek in the underground workings of the Times and Wynona Mines. As required by Rule 6.3.3(1)(j), specify how the Operator will ensure there is no injury to existing water rights as a result of comingling fresh water with groundwater. The Operator has stated a meter will be installed at the pump to monitor the amount of water diverted from Left Hand Creek. How will the Operator monitor the amount of water which is pumped from the Wynona?

**CMC Response:** The use of underground mine workings to store process water is a common practice in the mining industry. Many of the mining and milling operations that were historically active in Colorado used underground mine workings for this purpose, as well as to dispose of mill tailings. The decision to store water for milling purposes in the Times and Wynona underground mine workings was arrived at after carefully considering the geology and hydrology of this area. The builders of the Gold Hill Mill did not purchase shares in the Left Hand Ditch Company with the intention of building a costly pumping station and water pipeline in order to observe how fast this expensive water could flow out of underground mine workings. This underground water storage plan was approved by the Mined Land Reclamation Board after a thorough investigation of the proposal by the DRMS when it was first submitted in the original Amendment to the Cash Mine Permit in 1985. CMC is complying with the approved operating permit for the Gold Hill Mill by installing the Left Hand Creek Pump Station; replacing the Gold Hill Mill Pipeline; and utilizing the Times Mine adit bulkhead to store water underground for milling purposes.

Prior utilization of the approved Times and Wynona Mines for underground water storage (cirea 1987-1988) successfully demonstrated that no downgradient water rights or wells were impacted, or otherwise injured during the course of operations at the Gold Hill Mill. There are no identified water rights or wells that are at elevations equal to or higher than the underground mine workings in the Times and Wynona Mines in this area. The closest downgradient well is situated approximately 3,670 feet to the Northeast of the Times Mine adit at an elevation of 7,475 feet. This is approximately 905 feet lower than the portal of the Times Mine. The significant distance and difference in elevation between the underground workings in the Times and Wynona Mines and the nearest water well virtually precludes comingling of fresh water pumped from Left Hand Creek with groundwater having any negative impact on these water rights. As noted above, water has been stored behind the Times Mine bulkhead for more than thirty years. There has not been a single claim made by anyone during the ensuing three decades asserting that their water rights have been injured by the water that was stored in the Times and Wynona Mines.

Inasmuch as the Times and Wynona Mines are being utilized for underground water storage, only inflows will be monitored at the Left Hand Creek pump location; and, in a similar manner, withdrawals will be monitored where the water is pumped into the Gold Hill Mill from the Wynona wellhead. An operational balance is required in order to sustain milling operations. Operating at 50 tons per day for 260 days per year and at 4 tons of water per ton of ore processed would result in the removal of 1,651,000 gallons of water per year. This is well below the maximum volume of water that could be withdrawn from Left Hand Creek during the irrigation season, which is 3,388,850 gallons of water. The difference of 1,737,850 gallons of unconsumed water insures that the downstream users of Left Hand Creek will not suffer any injury.

<sup>26.</sup> As noted above, the Operator will comingle fresh water pumped from Left Hand Creek with groundwater which is currently in the underground mine workings. As required by Rule6.3.3(1)(i), describe how mining will affect the quality of groundwater and describe the methods used to minimize disturbance to the groundwater systems.

**CMC Response:** The Times mine adit is situated at an elevation of 8,355 feet. The Times Mine Cross-Cut extends 395 feet in a southeasterly direction towards the Wynona Mine, where it was driven 190 feet along the Times vein. The Times Mine is connected with the Wynona Mine's First Level workings by way of a 50 foot deep winze. The Wynona Mine shaft is collared at an elevation of 8,445 feet and is 210 feet deep. It has total of four levels, with two main working levels that extend 1,500 feet towards the northeast and the southwest. These two levels were driven along the Wynona vein at a depth of 100 feet and 205 feet below the Wynona Mine shaft's collar. The water that will be stored behind the Times Mine bulkhead will fill down to the Second Level of the Wynona Mine by way of the 50 foot winze and the 210 foot shaft. The elevation of the bottom the Wynona shaft is 8,235 feet.

Because of the crystalline nature of the of the Boulder Creek granite where these underground mine workings are located, the ground water that is found in this area is only present where the granite has been fractured. Generally, the openings of these fractures (joints and faults) decrease in size with increasing depth, and the chances of obtaining groundwater in any volume is significantly reduced below a depth of 300 feet. The water recharge is by seepage through small joints and voids and intergranular spaces in a diffuse groundwater system. The movement of water in these granitic rocks is very slow and shows little response to changes in precipitation. The groundwater that is present in these rocks probably migrates downward and laterally through a northeast-southwest trending fracture system. All of the veins near the Times and Wynona Mines are particularly narrow and tight, and contained within very competent wallrocks that are nearly impervious. Water that has been pumped from the any of the mines in this district and stored underground behind bulkheads has remained at a nearly constant level behind those bulkheads throughout the year. Water has been stored behind the Times Mine bulkhead for thirty-one years. The historic use of these underground mine workings for water storage has not disturbed the prevailing hydrologic balance of the surrounding area. The quality of the fresh water pumped from Left Hand Creek behind the Times Mine bulkhead is not anticipated to introduce any adverse impacts on the quality of the groundwater found in any mine workings in this area. The elevation and location of the underground mine workings of the Times and Wynona Mines, and the impermeable nature of the wallrocks, insures that there will be no disturbance to the groundwater system.

27. The Mining Plan calls for installing a footbridge over Left Hand Creek. Please clarify why a footbridge is necessary if the pump house will be located on the south side of Left Hand Creek.

**CMC Response:** The installation of a footbridge over Left Hand Creek is necessary to provide access to the pump house for employees to inspect and maintain the pumping operations, because there is no decded casement across the Mammoth Millsite MS No. 17576A.

<sup>28.</sup> As required by Rule 6.3.3(1)(h), specify how much water will be used in conjunction with the operation. The estimate may be based on annual consumption rates when the mill is operating at full capacity.

**CMC Response:** When the Gold Hill Mill is operating at its full capacity of 50 tons of ore per day and 260 days of operation per year, the annual consumption rate will be 1,651,000 gallons of water. This is well below the 3,388,850 gallons of water that can be pumped from Left Hand Creek during a dry year.

29. The Hazel A adit was previously utilized to manage the water balance at the mill. The authorization to use the Hazel A adit was primarily based on a lack of adequate storage capacity within the tailings pond to contain a 100 year – 24 hour storm event. On August 5, 1998, the Division approved Technical Revision No. 3, which addressed the expansion of the tailings pond and eliminated the need to utilize the Hazel A adit for additional water storage capacity. On November 11, 2002, the Division received correspondence from Mr. Steen which confirmed the Hazel A adit would no longer be used to store water. A review of the permit file found there are a number of unresolved issues relating to water storage within the Hazel A adit. In order for the Division to determine if the Hazel A adit and attending infrastructure should be included in the affected area; the following information must be provided.

a) Clarify if the decant lines, which connected the tailings pond with the Hazel A adit were removed. If so, provide documentation to demonstrate the removal and proper disposal of the decant lines. (*Inspection Report dated May 20, 1999, noted the decant lines were still in place.*)

b) Demonstrate the tailings placed within the Hazel A adit were removed. (In a letter dated October 10, 1995, the Division informed the Operator the tailings which were deposited behind the bulkhead within the Hazel A adit were to be removed and deposited in the tailings pond. On November 21, 1995, the Division approved a plan for removal of tailings within the Hazel A adit. In a letter dated, December 15, 1995, the Operator submitted a letter which indicated the tailings were removed. In a letter dated December 17, 1997, the Division noted the Operator had not demonstrated the tailings had been removed from the Hazel A adit. On August 14, 1998, the Operator acknowledged the tailings within the Hazel A adit must be removed.)

c) Clarify if the bulkhead is still present within the Hazel A adit.

d) Clarify if a discharge permit has been obtained for the Hazel A adit. (In a letter dated December 17, 1997, the Division notified the Operator the adit would not be allowed to free drain until such time as a discharge permit was obtained from the Water Quality Control Division. Alternately, the Operator could petition the Water Quality Control Division for a finding that discharges from the adit do not require a discharge permit.)

**CMC Response:** The Hazel A adit has not been a part of the Gold Hill Mill operation since its decommissioning in 1999, and CMC has no plan to use it in the future. The following information should assist the DRMS in the resolution of these issues:

a) The decant lines which connected the tailings pond with the Hazel A adit were disconnected by the undersigned, when it became apparent that Colino Oro Molina's on-site Mill Superintendent, J.Wayne Tatman, was incapable of mastering the operation of the water valve attached to the decant water line. The water line was removed during the period when ITEC Environmental was the permitted operator of the Gold Hill Mill. At that time, the entire length of that PVC pipeline was cut up and hauled away as trash. This was done sometime in 1999.

b) All of the tailings that were deposited behind the wooden bulkhead in the Hazel A Mine by J. Wayne Tatman, were vacuumed out of the mine at the expense of the company responsible for the tailings being deposited in the mine, Colina Oro Molina. This occurred in December of 1995. The actual tailings vacuuming operation at the Hazel A Mine was overseen by Richard L. Fanyo, Esq., an on-site attorney representing Colina Oro Molina.

c) The wooden bulkhead is still present within the Hazel A adit.

d) The Hazel A mine is not discharging water. Colina Oro Molina did not obtain a discharge permit.

30. Please provide a comprehensive list of the chemicals which will be used at the mill, including total volumes. In addition, provide a comprehensive inventory of all chemicals currently stored at the mill, including the volume of each chemical stored. This information is necessary to evaluate whether this operation meets the definition of a designated mining operation and to calculate the required financial warranty.

**CMC Response:** As originally permitted, the Gold Hill Mill used standard flotation reagents to process ore from the Cash Mine dump. These were pine oil, soda ash, and a xanthate. There have been many advances in the reagents used in flotation concentration since the mill was constructed in 1986-1987, and it is anticipated that different flotation reagents will be used in the future to improve recovery. Before CMC resumes processing operations in the mill, it will furnish the DRMS with a comprehensive list of the chemicals it will be using in the mill, including the total volumes that will be on hand at the beginning of milling operations.

The following chemicals are currently stored at the Gold Hill Mill in their original shipping containers: Aerofroth 68 Frother, 2,150 lbs.; Sodium Isopropyl Xanthate Aero 470, 55 gallons; Aero 3477 Promoter, 55 gallons; Sodium Isopropyl Xanthate, 55 gallons; Aero 470 Promoter, 25 gallons; 25 bags of soda Ash weighing 80 lbs. each.

**CMC Response:** The type of xanthate that will be used in the Gold Hill Mill has not yet been determined. It is anticipated that the mill will process batches of 500 tons of material from the Cash Mine stockpile to determine which combination of reagents will be used during initial

<sup>31.</sup> The approved Reclamation Permit specifies xanthate will be used in the mill. Please specify the type of xanthate which will be used.

milling operations. Once a combination of reagents that results in the best recovery has been determined from these mill tests, these reagents will be used during future processing operations. CMC anticipates that whatever flotation reagents it determines are most suitable and provides the best recovery for the various ore minerals found in the Gold Hill Mining District, that it will become a Designated Mining Operation (DMO) and require an Emergency Response Plan. Therefore, as soon as CMC begins planning to commence milling operations, it will notify the DRMS that it will be applying for DMO status for the Gold Hill Mill Permit No. M-1994-117.

#### 6.3.4 Exhibit D - Reclamation Plan

32. Section No. 1 of the Reclamation Plan references an incorrect permit number (M-1999-117). Please correct this section of the Reclamation Plan. In addition, specify where within the permit file the pertinent documents may be found. See additional comments under Item No. 4 of this letter.

**CMC Response:** The Reclamation Plan Permit Number should be Permit No. M-1994-117. The Reclamation Plan has been corrected to reflect this change. A copy of this corrected page is attached to this Response Letter.

33. The Reclamation Plan states the water pipeline within the Times Mine adit will be decommissioned by capping the pipeline to prevent water from discharging from the mine. The Division will require the pipeline to be removed or grouted for its entire length. Please revise the financial warranty estimate to account for this reclamation task.

**CMC Response:** The one-hundred (100) feet of water pipeline within the Times Mine adit will be removed up to the concrete bulkhead where it will be cemented to prevent water from discharging from the mine. The removal of this pipeline and the grouting will require five hours of labor to remove the pipeline and cement the three PVC pipes that are present in the Times Mine bulkhead. This will require 1 Miner at \$40/hour x 5 hours = \$200, plus 1 Laborer at \$18/hour x 5 hours = \$90 for a total of \$290 to cut and remove one-hundred (100) feet of pipe and cement three PVC pipes that extend through the three (3) feet of concrete bulkhead. The only supplies that will need to be purchased for this reclamation task is one bag of cement costing \$30. The total estimated cost for completing this task is \$320. This revision to the financial warranty estimate has been added to the Reclamation Cost Estimate on Exhibit D – Reclamation Plan of the Gold Hill Mill Permit Application Amendment. A copy of this corrected page is attached to this Response Letter.

<sup>34.</sup> The reclamation cost estimate is structured as an incremental acreage increase, which is based on the cost of the individual reclamation tasks applied on a per acre basis. The Division does not calculate financial warranties solely on the basis of acres disturbed, but rather on the specific reclamation task which must be accomplished. Therefore, any increase over the current financial warranty amount of \$56,200.00 must account for the full cost of the identified reclamation tasks. Please revise the financial warranty accordingly. The Division

will calculate the required financial warranty once all of the adequacy items have been addressed.

**CMC Response:** This has been revised to a reclamation task based estimate, and a corrected page is being submitted with this Response Letter.

#### 6.3.5 Exhibit E – Map

35. The Mining Plan and Reclamation Plan Maps only depict the affected area of 0.797 acres which are being added through the Amendment Application. Please revise both maps so the entire affected area of the Gold Hill Mill operation is depicted.

**CMC Response:** The Mining Plan and Reclamation Plan Maps have been revised so that the entire area of the Gold Hill Mill operation is depicted. The addition of the Gold Hill Mill Waterline to the affected land boundary of the Gold Hill Mill will increase the total permitted acreage to 9.187 acres.

36. As required by Rule 6.3.5(2)(c), the Mining Plan Map must note the location of any permanent man-made structures within 200 feet of the affected area. Please ensure the structures on the Mining Plan Map can be correlated with the description of the structure owners in Exhibit B.

**CMC Response:** The Mining Plan Map has been revised to show the location of any permanent man-made structures within 200 feet of the affected area. All of the structures on the Mining Plan Map can be correlated with the description of the structure owners on Exhibit B.

37. The Mining Plan Map does not depict the proposed footbridge. Please revise the Mining Plan Map to include an outline and label for the footbridge.

CMC Response: The Mining Plan Map has been revised to depict the proposed footbridge with an outline and label for the footbridge.

#### 6.3.6 Exhibit F – List of Other Permits and Licenses

38. The permit file for the Gold Hill Mill contains correspondence from the Bureau of Land Management (BLM) dated April 3, 2013, which ordered an immediate, temporary suspension of operations until such time as a Plan of Operations was approved. Please update the Division on the status of the Plan of Operations. If the Plan of Operations has not been approved, explain why and provide a plan for gaining compliance with the BLM.

**CMC Response:** CMC has prepared a Plan of Operation for the Gold Hill Mill and will be submitting it as soon as the Application for an Amendment to the Gold Hill Mill Limited Impact Permit Adequacy Review has been completed by the DRMS.

39. The Applicant listed a U.S. Forest Service Plan of Operations as a permit that is potentially required. Please clarify if this permit has been obtained. If so, provide a copy of the approved Plan of Operations.

**CMC Response:** CMC has prepared a Plan of Operations for the Gold Hill Mill's Left Hand Creek Pump Station and will be submitting it as soon as the Application for an Amendment to the Gold Hill Mill Limited Impact Permit Adequacy Review has been completed by the DRMS.

40. As noted under Item No. 1, the Division received comments from the Division of Water Resources (DWR) regarding the Operator's water right on Left Hand Creek. As required by DWR, provide a demonstration the 20 shares of water have been changed from the originally decreed irrigation use to allow for the proposed mining/milling use. If the appropriate approvals have not been secured to use water in the mill, then Exhibit F must be revised to list either a temporary substitute water supply plan or an augmentation plan as permits or approvals which must be obtained.

**CMC Response:** Attached is a copy of the Water Court Decree for the use of the Left Hand Creek Ditch Company shares owned for the benefit of the Gold Hill Mill.

41. Specify if the Applicant has contacted the Air Pollution Control Division to determine if an Air Pollutant Emission Notice is required.

**CMC Response:** The Applicant has not contacted the Air Control Pollution Control Division to determine if an Air Pollution Emission Notice is required, because the activities associated with the installation of the Gold Hill Mill Pipeline will not create any air pollution. The generator that will be installed to power the Bean pump has not been purchased as of this date. As soon as one has been purchased, the Air Pollution Control Division will be contacted to determine if the operation of the generator will require a permit. The DRMS will be sent copies of any correspondence between CMC and the Air Pollution Control Division.

42. Exhibit F indicates a Utility Construction Permit is required from the Boulder County Transportation Department. Please clarify why this permit is necessary.

**CMC Response:** The inclusion of the Utility Construction Permit from the Boulder County Transportation Department was included because a Permit was obtained in order to complete the rehabilitation of the Times Mine adit portal.

43. Specify if the Applicant will need a floodplain development permit to locate the pump house and attending infrastructure within the floodplain of Left Hand Creek.

**CMC Response:** The new location of the Pump House onto the Water Pipeline Easement on the Golden Gate Millsite MS No. 5149A above the Left Hand Creek floodplain has obviated the need to obtain a floodplain development permit.

# 6.3.7 Exhibit G - Source of Legal Right to Enter

44. The Reclamation Permit for the Gold Hill Mill was issued with a stipulation that no disturbance would occur on the Gold Crown Mining claim until such time as the Operator (Colina Oro Molino) demonstrated a legal right to enter the Gold Crown Mining claim. Please demonstrate Colorado Milling Company, LLC has the legal right to enter the Gold Crown Mining Claim to conduct mining and reclamation.

**CMC Response:** The Gold Crown unpatented lode mining claim is not located near the Gold Hill Mill Pipeline in Akins Gulch, or the Gold Hill Mill on Horsfal Flat. It is located more than 2,000 feet from the Gold Hill Millsite. The Gold Crown Lode is owned by the Colorado Milling Company, LLC, and as the owner of this claim it has the legal right to conduct mining and reclamation on this claim if it is permitted for those purposes.

- - -

# 6.3.8 Exhibit H - Municipalities Within a Two Mile Radius

No comment.

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# 6.3.9 Exhibit I - Proof of Filing with County Clerk

No comment.

# 6.3.10 Exhibit J – Proof of Mailing of Notices to Board of County Commissioners and Soil Conservation District

No comment.

# 6.3.12 Exhibit L – Permanent Man-Made Structures

45. The Applicant has stated there are seven permanent man-made structures located within 200 feet of the affected land. Please revise Exhibit L to include a detailed list of all permanent man-made structures for the entire affected area of the Gold Hill Mill.

**CMC Response:** Exhibit L has been revised to include a detailed list of all permanent man-made structures located within 200 feet of the affected land. There are no other additional permanent man-made structures for the entire affected area of the Gold Hill Millsite and the Waterline.

46. As required by Rule 6.3.12, the Applicant shall provide information sufficient to demonstrate that the stability of any structures located within 200 feet of the affected land will not be adversely affected. A statement that mining/milling activities and reclamation will have 'no negative effect' on the permanent man-made structures is not sufficient to demonstrate the stability of the structures will not be adversely impacted.

**CMC Response:** After the Gold Hill Mill Pipeline is restored, it will only be used for pumping water from Left Hand Creek to behind the bulkhead located in the Times Mine. There will not be any mining conducted on the property associated with the Gold Hill Mill Waterline. The Gold Hill Mill Pipeline access road will be maintained to provide access to the Water Pipeline Easement. The only other activity associated with the use of this Waterline Easement that is within 200 feet of any structure is foot traffic along the lowermost portions of the Gold Hill Mill Pipeline. The replenishment of the fuel for the generator will not require anything more than a pump and a hose and the use of an ATV to transport the fuel. None of these activities will adversely affect the stability of any of the permanent man-made structures identified on the Mining Plan and Reclamation Plan Maps.

Please contact me at (303) 651-2985 in Longmont if you have any questions regarding this Response Letter. Thank you and Michael Cunningham for your assistance with this Application for an Amendment to the Gold Hill Mill Limited Impact Permit.

Sincerely,

mark A Stree

Mark A. Steen For: Colorado Milling Company, LLC

As required by Rule 1.6.2(d) and 1.6.5(2) CMC is submitting Proof of Publication in the Boulder Daily Camera of the Legal Notice as required by Rule 1.6.2(1)(c):

Daily

Camera January 14, 2018 - 1412398

#### Prairie Mountain Media, LLC

PUBLISHER'S AFFIDAVIT

County of Boulder State of Colorado

The undersigned, <u>Terry Love</u>, being first duly sworn under oath, states and afilrms as follows;

- 1. He/she is the legal Advertising Reviewer of Prairie Mountain Media LLC, publisher of the Daily Camera.
- The Delly Camera is a newspaper of general circulation that has been published continuously and without interruption for at least fifty-two weeks in Boulder County and meets the legal requisites for a legal newspaper under Colo. Rev. Stat. 24-70-103.
- The notice that is attached hereto is a true copy, published in the *Daily Camera* in Boulder County on the following date(s):

<u>Jan 14, 2018</u>

Signature orn to me before me this Notary Public 1. 20 . . SHAYLA NAJERA **NOTARY PUBLIC STATE OF COLORADO** - NOTARY ID 20174031965 (SEAL) MY COMMISSION EXPIRES JULY 31, 2021

Account: 1075816 Ad Number: 1412398 Fee: \$219,44

1.3

As required by Rule 1.6.2(e), CMC is submitting proof that notices to all owners of record of surface and mineral rights of the affected land and the owners of record of all land surface within 200 feet of the boundary of the affected land including all easements holders located on the affected land and within 200 feet of the boundary of the affected land. Proof that the owners of record received the notices with return receipts of the Certified Mailing are attached to the following three pages.

SENDER: COMPLETE THIS SECTION COMPLETE THIS SECTION ON DELIVERY Signature Complete Items 1, 2, and 3. " int < Print your name and address on the reverse Х so that we can return the card to you. Π, 8. Received by (Ednted Name) C. Date ( Attach this card to the back of the maliplece, or on the front if space permits. DAM Likksson 밁 1. Article Addressed to: D. Is delivery address different from item 1? if YES, enter delivery address below: US Dept. of Interior Bim reldoffice Vain St. Royal Corge 3028 Eai onyon City, Co. 81212 3. Service Type Adult Signature Certified Mail Restricted Delivery Certified Mail Restricted Delivery Collect on Delivery Collect on Delivery Collect on Delivery Insured Mail Insured Mail Restricted Delivery (over \$500) Priority Mail E
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Attached to this page is a copy of the revised page 3 of the Application Form with the Latitude and Longitude of the primary entrance of the Gold Hill Mill.

|     |   | - 3 -                 |            |  |  |  |
|-----|---|-----------------------|------------|--|--|--|
|     |   |                       |            |  |  |  |
| 10. | Location information: The center of the area where the majority of mining will occur lies in:   |                       |            |  |  |  |
|     | COUN<br>PRINCIPAL MERIDIAN (check one):   | TY: Boulder           |            | 10th (New Mexico) Ute                          |  |  |
|     | SECTION (write number):   | <u> </u>              |            | Toth (New Mexico) Ute                          |  |  |
|     | SDC FIOR (write number).       S </td |                       |            |  |  |  |
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|     |   |                       |            |  |  |  |
| 11. | Primary Mine Entrance Location (repor   | t in either Latitude  | a/Longitur |  |  |  |
|     | Latitude/Longitude:   | t in entier isatitude | anongnut   |  |  |  |
|     | Example: (N) 39° 44' 12.98"   |                       |            |  |  |  |
|     | (W) 104° 59' 3.87"  |                       |            |  |  |  |
|     | Latitude (N): deg 40 min 03   | sec 55                | 74         | (2 dagima) places)                             |  |  |
|     | Latitude (N): deg <u>40</u> min <u>03</u><br>Longitude (W): deg <u>105</u> min <u>24</u>  | sec                   | 12.1       | (2 decimal places)                             |  |  |
|     | OR  | Sec                   |            | _ (2 decimal places)                           |  |  |
|     | Example: (N) 39.73691°  |                       |            |  |  |  |
|     | (W) -104.98449°   |                       |            |  |  |  |
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|     | Easting   |                       |            |  |  |  |
|     | Northing  |                       |            |  |  |  |
| 12. | Primary future (Post-mining) land use (c  | <u>check one</u> ):   |            |  |  |  |
|     | Cropland(CR)  | Pastureland           |            | General Agriculture(GA)                        |  |  |
|     | Rangeland(RL)   | Forestry(Fl           |            | Wildlife Habitat(WL) Industrial/Commercial(IC) |  |  |
|     | Developed Water Resources(WR)   |                       | (ne)       | Solid Waste Disposal(WD)                       |  |  |
| 13. | Primary present land use (check one):   |                       |            |  |  |  |
|     | Cropland(CR)  | Pastureland           |            |  |  |  |
|     | Rangeland(RL)   | Forestry(FI           | R)         | General Agriculture(GA)                        |  |  |
|     | Residential(RS)<br>Developed Water Resources(WR)  | Recreation            | (RC)       | Industrial/Commercial(1C)                      |  |  |
|     |   |                       |            | Mining(MN)                                     |  |  |

Attached to this page is **EXHIBIT A – LEGAL DESCRIPTION AND LOCATION** showing the addition of the Gold Hill Mill in SE ¼ NW ¼ Section 12, Township 1 North, Range 72 West to the Amended Permit Area Boundary.

# **EXHIBIT A – LEGAL DESCRIPTION AND LOCATION**

The legal description of the proposed (amended) Permit Area is provided as follows, and is based upon field confirmation/location of the permit area boundary as performed by a registered Colorado land surveyor. All locations are described with respect to the 6th Principal Meridian, Boulder County, Colorado.

Gold Hill Mill

SE 1/4 NW1/4 Section 12 Township 1 North Range 72 West

SE 1/4 Section 2 Township 1 North Range 72 West

Left Hand Creek Pump Station

Gold Hill Mill Pipeline

SE 1/4 Section 2 NE 1/4 NE 1/4 Section 11 NW 1/4 Section 12 Township 1 North Range 72 West

Times Mine Adit Portal

SW 1/4 SE 1/4 NW 1/4 Section 12 Township 1 North Range 72 West

The general site location for the Gold Hill Mill project area is depicted in Figure 1, following.

Exhibit A

1

Attached to this page are copies of the following maps:

Location Map – Figure 1 – Showing the Gold Hill Mill, Left Hand Creek Pump Station, Gold Hill Mill Pipeline, and the Times Mine adit.

Map E - 1 Mine Plan & Permit Area Map – Showing the location of the Footbridge, the Pump Station and Fuel Tank, and the location of Permanent Man-Made Structures within 200 feet of the Mammoth Millsite MS No. 17576 and the Eureka Millsite MS No.601B.

Map E - 2 Gold Hill Mill Pipeline & Surface Ownership Map – Showing Surface ownership and Lower Permit Area, including permanent Man-Made Structures, the location of the Left Hand Creek Pump Station, the Gold hill Mill Pipeline (with the location of 4 control check valves), and the Waterline Easement from Left Hand Creek to the Times Mine adit portal.

Map E - 3 Mine Reclamation Map – Showing the surface Ownership and Upper Permit Area, including the Gold Hill Mill Building, Millsite Permit Area, and the Upper Waterline Easement.

# EXHIBIT E – MAPS

The following exhibits (maps) are provided as part of this Application for an Amendment to the Gold Hill Mill, Boulder County, Colorado—MLRD Limited Impact 110(2) Permit No. M-1994-117.

- (1) Map E-1: Mine Plan and Permit Area at Left Hand Creek Map
- (2) Map E-2: Gold Hill Mill Pipeline From Left Hand Creek Pump Station to Times Mine Adit Portal Showing Property Ownership Map
- (3) Map E-3: Mine Reclamation Plan Map
- (4) Map E-4: Surface Ownership and Gold Hill Mill Permit Area

#### **OWNERS OF RECORD**

All owners of record of surface land immediately adjacent to the Pump Station, the Gold Hill Mill Pipeline, and the Times Mine adit portal are shown on Map E-2 and listed below:

1. Patented Comet Lode, MS 318; Gold View No. 2 unpatented lode mining claim, CMC-209848; Gold Gulch No. 1 unpatented lode mining claim, CMC-210863; Gold Gulch No. 2 unpatented lode mining claim, CMC-210864; Gold Gulch No. 3 unpatented lode mining claim, CMC-210865. With the exception Gold Gulch No. 3 lode mining claim, all of these unpatented mining claims are located on U.S. Bureau of Land Management property. The Gold Gulch No. 3 is located on U.S. Forest Service land managed by U.S. Bureau of Land Management. Owner:

Colorado Milling Company, LLC 50 West 100 South Moab, Utah 80342

2. Patented Golden Gate Lode, MS No. 5149-A; Paris Lode, MS No. 5149-A; Mucho Lode, MS No. 5149-A; Minnie Lode, MS No. 466; Sadie Lode, MS No.18056; Lillie Lode, MS No. 18056; Cold Spring Lode, MS No. 363-A; Mystic Lode, MS No. 317; Gay Deceiver Millsite, MS No. 6336-B; Hog Back Lode, MS No. 4559-E; and the Alamakee Lode, MS No. 111. Owner:

Boulder County Parks and Open Space Department 5201 St. Vrain Road Longmont, Colorado 80503 3. Patented Keystone Millsite, MS 69B, and New Discovery Millsite, MS 585B. Owners:

James and Julie Rouse 6861 South Clayton Way Centennial, Colorado 80122

4. Patented Mammoth Millsite, MS No. 17576. Owners:

James K. Macumber Amy Fortunato 4891 Lick Skillet Road Boulder, Colorado 80455

5. Patented Eureka Millsite, MS No. 601 B, and Paris Millsite, MS No. 5149B. Owners:

Gene Sapp Dene Sapp 4801 Lick Skillet Road Boulder, Colorado 80455

6. Patented Iron Lode, MS No. 390, and Cohen Lode, MS No. 300. Owners:

Finlandia Minerals, LLC 960 Pine Street Gold Hill, Colorado 80302

7. U.S. Bureau of Land Management property:

U.S. Department of the Interior Bureau of Land Management Royal Gorge Field Office 3028 East Main Street Canon City, Colorado 81212

All owners of record of surface land immediately adjacent to the Gold Hill Mill Permit boundary are shown on Map E-4 and listed below:

 Patented Eugene Lode, MS 101; Fitzsimmons Lode MS 16075; Good Enough Lode MS 15838; Hazel A Lode MS 15825B; Hercules Lode MS 5604; John G Lode MS 15825; Lillie Of The West Lode MS 327; Oscar Lode MS 17992; Time Lode MS 6034; Trumbo Lode MS 589; White Cloud Lode MS 107; Wynona Lode MS 112; and the JoAnne unpatented Lode mining claim. Owner:

Colorado Milling Company, LLC 50 West 100 South Moab, Utah 80342

7. U.S. Bureau of Land Management property:

U.S. Department of the Interior Bureau of Land Management Royal Gorge Field Office 3028 East Main Street Canon City, Colorado 81212

8. Alamakee Lode MS 111; Comet Lode MS 318; Star Lode MS 4559A. Owner:

Rene Murphy 3914 Orchard Court Boulder, Colorado 80304










Attached to this page is a copy of the revised **EXIBIT B** – **SITE DESCRIPTION** to include additional information about the Vegetation, Soils, Man-Made Structures near Permit Area, Water Resources and Wildlife Habitat and Species present in the area.

# **EXHIBIT B – SITE DESCRIPTION**

The following site description information is contained within the original Application for a Mining and Reclamation Limited Impact Permit for the Cash Mine under Exhibit D, that was approved by the Mined Land Reclamation Board on September 7,1983. Additional information can be found in the Application for an Amendment to the Cash Mine Limited Impact Permit under Exhibit D, that was approved by the Mined Land Reclamation Board on September 26,1985.

### (1) Vegetative Cover and Soils Description

### **Vegetation**

The native vegetation found in the Juget-Rock Outcrop is mainly Ponderosa pine, Douglas fir, Blue spruce, and Rocky Mountain juniper trees, which are growing along with scattered scrubs and a sparse understory of grasses. Juget soils have a rapid permeability, a low available water capacity, and a shallow effective rooting depth. Because of these soil characteristics, and the granite rock outcrops, the Soil Conservation Service has classified the vegetation growing on the Juget-Rock Outcrop Complex as being native woodlands suitable for wildlife habitat.

No rare, threatened, or endangered plant species have been identified on or near to any of the Permit Area(s) or in the Gold Hill area in general. The existing vegetation has been classified as a coniferous forest consisting of mixed cone-bearing trees of the pine family, including various species of pines (pinus), and Douglas for (pseudotsuga). These trees are resinous evergreens, with a straight axis and a narrow crown, and are characteristically present in acidic soils, often sprouting after fire. The coniferous forest is widespread and extensive throughout the general area, and can be found throughout the general area, and can be found at elevations between 6,000 and 10,000 feet. It encompasses the lower and upper montane zones, and includes Lodgepole and Ponderosa pine. Engelmann and Blue spruce, Douglas fir, and thickets of broad-leaved trees (i.e., aspen, alder, and maple) and shrubs along stream banks. These zones are often referred to as the transitional zone between the foothill and sub-alpine zones. These zones overlap and telescope into each other, and one zone may be present on a south slope while another will be found across the valley on the opposite (north) slope at the same elevation. Plants that are characteristically found in one zone can sometimes be found in favorable areas in the neighboring zone above or below their usual habitat.

Douglas fir, Lodgepole pine, and Engelmann spruce are found at higher elevations, while Ponderosa pine are generally found at lower elevations scattered stands of pure and mixed trees. Douglas fir is considered the climax or original forest type present in this area before the boom days of mining in the 1870s, when the trees were either extensively cut or destroyed by forest fire. The present stands of Ponderosa and Lodgepole pine as well as the Engelmann and Blue spruce generally came in after 1900. The pine trees in this area are greatly overgrown, with as many as five and six hundred Ponderosa and Lodgepole pine trees per acre on most of the southern hillsides of Left Hand Creek.

Limber pine and Blue spruce are also present in isolated trees or in small stands. Scattered stands Rocky Mountain juniper and Quaking Aspen can be found in the areas between Left Hand Creek and the Times Mine. Quaking Aspen, Narrowleaf cottonwood, Mountain Alder, and Rocky Mountain maple are found along the banks of Left Hand Creek and Akins (Lick Skillet) Gulch.

In addition to the trees found in this area of the Gold Hill Mining District, various species of grasses are present, including Slender Wheat-grass, Mountain Mulhy, Parry Oat-grass, and Thurber fescue. A complete listing of the native vegetative species — grasses, forbs, and shrubs — known to exist in the Gold Hill area is contained within the Permit No. M-1983-141 file. The present surface vegetation at or near the Gold Hill Mill Pipeline is relatively undisturbed, aside from several relatively small areas where trees have been cut for forestry management near the access road to the Alamakee Mine.

### <u>Soils</u>

The U.S. Department of Agriculture's Soil Conservation Service has mapped this area as the Junget-Rock Outcrop Complex. Small areas of Peyton soils near drainage-ways and a few small areas of Allens Park soils are included in this soil series and rock outcrop complex. A detailed description of the Juget-Rock Complex and the Peyton and Allens Park soils was contained within the previously submitted application for a limited impact permit for the Cash Mine operation. The majority of the land surface affected by the Gold Hill Mill Pipeline consists of Juget-Rock Outcrop Complex on gentle to steep mountain slopes.

# (2) Man-Made Structures near Permit Area

There are three small wooden frame structures located on the Mammoth Millsite MS No.17576, 4591 Lickskillet Road, Gold Hill, Colorado 80302. One of these is apparently an outhouse. The Mammoth Millsite is owned by James K. McCumber and Amy Fortunato, P.O. Box 1927, Boulder, Colorado 80306. There is a single family residence, a storage shed, a small barn and an unused corral located on the Eureka Millsite MS No. 601B, 4801 Lickskillet Road, Gold Hill, Colorado 80302. The owners of the Eureka Millsite are Gene L. Sapp and Dene F. Sapp. There are no other man-made structures within two hundred (200) feet of the proposed amended permit area boundaries other than these seven structures.

### (3) Description of Water Resources of Area

### Surface Water Resources

The surface water drainage on the affected lands is generally ephemeral, consisting almost entirely of runoff originating as rainfall and/or melting snow which flows into Akins (Lick Skillet) Gulch. Most of the year this flow is intermittent, and it only reaches Left Hand Creek during the spring runoff and periods of high precipitation. There is a difference in altitude of 737 feet between the Times Mine portal and Left Hand Creek. Any intermittent surface water flowing from the Times Mine area must progress a distance of at least 4,627 feet to reach Left Hand Creek.

Left Hand Creek is the only significant perennial water feature in the Gold Hill area.

Water quality sampling and analytical data from sampling the water in Left Hand Creek is contained within the MLRD Permits No. M-1994-117 and No. M-1983-141.

### Groundwater Resources

Groundwater present in the Gold Hill area of Boulder County is typified by fracture zone occurrences. Due to the crystalline nature of the Boulder Creek granite, groundwater is found only in bedrock areas where the granite has been fractured. Generally, the openings of these fractures (joints and faults) decrease in size with increasing depth, and the probability of encountering significant water bearing zones is greatly reduced at depths generally in excess of 300 feet.

The crystalline bedrock has a very limited storage capacity, and most of the water that is received through precipitation is returned to the atmosphere through evapotranspiration. The groundwater that is present within the Boulder Creek granite tends to migrate downward and laterally through a northeast to southwest trending fracture system towards the general area north of Akins (Lick Skillet) Gulch. Nothing associated with the installation of the Left Hand Creek Pump Station, Gold Hill Mill Pipeline, or the Times Mine adit portal will affect the groundwater resources in this area.

### (4) Wildlife Habitat and Species

No rare, threatened, or endangered wildlife species have been identified in the surrounding area or on the land that will be affected by the installation of the Pump Station, Gold Hill Mill Pipeline, or the use of the Times Mine portal site. The major wildlife habitat in the general area is that of a coniferous forest wildlife habitat. The most common mammalian species that can be observed in the area are mule deer, cottontail rabbits, squirrels, and chipmunks. Raccoons, skunks, foxes, black bear, mountain lions, and bobcats are also known to inhabit the Gold Hill area. The occurrence of these species is generally year-round, with some seasonal migration of mule deer down from the mountainous areas during periods of heavy snowfall accumulation. Lists of the mammal and bird species that have been identified in the Gold Hill area were included in the previously submitted Cash and Who Do Mine Permit Application No. M-1983-141, which was approved by the Mined Land Reclamation Board on September 26,1985.

The general effect of the proposed operations on the existing wildlife in the area is not expected to be significant or permanent. The coniferous forest wildlife habitat is widespread and extensive throughout the general area, and none of the wildlife presently inhabiting the areas where the Pump Station, Gold Hill Mill Pipeline, and Times Mine portal will be located are expected to suffer a permanent loss of food or habitat. Perhaps the best proof of this assertion is that the Gold Hill Mill Pipeline was first installed in 1987, and it has remained in place since that time without any noticeable effect on the wildlife species found in this area.

Copies of **EXHIBIT D**: Wildlife, Water Resources, Vegetation, and Soils Information from the Cash Mine Application for a Mining and Reclamation Permit approved by the Mined Land Reclamation Board on September 7, 1983, is attached to this Application for an Amendment to the Gold Hill Mill Permit No. M - 1994 - 117.

#### EXHIBIT D:

### Wildlife, Vegetation and Soils Information

### Wildlife Information

No rare, threatened, or endangered wildlife species have been identified in the surrounding area or on the land that will be affected by the activities of the Gold Hill Mining Company. The major wildlife habitat in this general area has been recognized as a coniferous forest wildlife habitat.

The most conspicuous mammalian species that can be observed in the area are mule deer, cottontail rabbits, squirrels and chipmunks. Raccoons, skunks, foxes, and bobcats are also known to inhabit the Gold Hill area. The occurrence of the mammalian species is year round with some seasonal migration of the mule deer down from the mountainous areas during periods of heavy snowfall. A list of the mammal species that have been identified in the area is shown below.

| Long-legged Myotis             | (Myotis    |
|--------------------------------|------------|
| Hoary Bat                      | (Lasiuru   |
| Nuttall's Cottontail           |            |
| Least Chipmunk                 | (Sylvila   |
| Colorado Chipmunk              | (Eutamia   |
| Rock Squirrel                  | (Eutamia:  |
| Colden mathe                   | (Sparmop)  |
| Golden-mantled Ground Squirrel | (Spermop)  |
| Abert's Squirrel               | (Sciurus   |
| Red Squirrel                   | (Tamiasc   |
| Yellow-bellied Marmot          | (Marmota   |
| Northern Pocket Gopher         | (Thomomy   |
| Deer Mouse                     | (Domonity) |
| Bushy-tailed Woodrat           | (Peromys)  |
| Porcupine                      | (Neotoma   |
| Red Fox                        | (Brethize  |
|                                | (Vulnas )  |

(Myotis volans) (Lasiurus cinereus) (Sylvilagus nuttallii) (Eutamias minimus) (Eutamias quadrivittatus) (Spermophilus variegatus) (Spermophilus lateralis) (Sciurus aberti) (Tamiasciurus hudsonicus) (Marmota flaviventris) (Thomomys talpoides) (Peromyscus maniculatus) (Neotoma cinerea) (Erethizon dorsatum) (Vulpes vulpes)

Gray Fox Coyote Raccoon Marten Long-tailed Weasel Striped Skunk Bobcat Mule Deer

(Urocyon cinerecargenteus) (Canis latrans) (Procyon lotor) (Martes americana) (Mustela frenata) (Mephitis mephitis) (Felis rufus) (Odocoileus hemionus)

None of the many bird species that can be observed in the surrounding area or on the land that will be affected by the activities of the Gold Hill Mining Company are classified as a threatened or endangered species. The passerines or "Perching Birds" are popularly referred to as the songbirds, and they compose the largest group of birds observed in this area. Most of the birds in this habitat are migratory birds, and they are most likely to be found here during the spring and summer months. A list of the bird species that have been identified in the Gold Hill area is shown below, with the more popular names of several species in brackets.

Goshawk Red-tailed Hawk American Kestrel Great Horned Owl Common Crow Common Raven Clark's Nutcracker Steller's Jay Brewer's Blackbird Black-billed Magpie Western Bluebird Mountain Bluebird Blue Grouse Lesser Goldfinch Broad-tailed Hummingbird Downy Woodpecker Hairy Woodpecker Williamson's Sapsucker Common Flicker American Robin Pygmy Nuthatch Red-breasted Nuthatch (Sitta canadensis) White-breasted Nuthatch Brown Creeper Yellow-rumped Warbler (Dendroica coronata) Red Crossbill Townsend's Solitaire Grey-headed Junco Ruby-crowned Kinglet Hermit Thrush House Wren Rock Wren Canyon Wren Mountain Chickadee Western Tanager Western Wood Peewee Solitary Vireo Pine Siskin Lark Sparrow Chipping Sparrow Violet-green Swallow Tree Swallow

(Accipiter gentilis) (Buteo jamaicensis) (Falco sparverius) (Bubo virginianus) (Corvus brachyrhynchos) (Corvus corax) (Nucifraga columbiana) (Cyanocitta stelleri) (Euphagus cyanocephalus) (Pica pica) (Sialia mexicana) (Sialia currucoides) (Dendragapus obscurus) (Carduelis psaltria)

(Selasphorus platycercus) (Picoides pubescens) (Picoides villosus)

(Sphyrapicus thyroideus) (Colaptes auratus) (Turdus migratorius) (Sitta pygmaea)

(Sitta carolinensis) (Certhia familiaris) (Loxia curvirostra) (Myadestes townsendi) (Junco caniceps) (Regulus calendula) (Catharus guttatus) (Troglodytes aedon) (Salpinctes obsoletus) (Catherpes mexicanus) (Parus gambeli) (Piranga ludoviciana) (Contopus sordidulus) (Vireo solitarius) (Carduelis pinus) (Chondestes grammacus) (Spizella passerina) (Tachycineta thalassina) (Iridoprocne bicolor)

[Blue Jay] [Magpie]

[Sparrow Hawk]

[Woodpecker] [Woodpacker] [Robin]

The general effect of the proposed operation on the existing wildlife in the area is not expected to be significant or permanent. Because of its inability to support much vegetation and its compacted, fine grained nature, the Cash mine dump is not a favored location for wildlife habitation. Since most of the land surface that will be affected by this proposed operation encompasses the Cash mine dump, the directly affected wildlife habitat is considerably less than the total

land surface included in this permit application. While some burrowing rodents may be displaced during the rehabilitation and construction of the mine access road and the construction of the hoist and compressor house, none of the larger mammal species will be permanently dislocated during the actual min-ing operation. All of the bird species found in this area are extremely adaptable and capable of leaving their nesting habitat when conditions there change. The Colorado Division of Wildlife has identified the grouse strutting grounds in the Gold Hill area, and the proposed mining operation is not expected to have an adverse impact on the life cycle of this game species. Several of the animal species listed above quickly become accustomed to the presence of human beings, and no decrease in the wildlife population was noticed during or after previous operations at this mine. The coniferous forest wildlife habitat is widespread and extensive throughout the general area, and none of the wildlife presently inhabiting the proposed mine site will suffer a permanent loss of food or habitat.

#### Vegetation

2

No rare, threatened, or endangered plant species have been identified in the Gold Hill area or on the proposed mine site. The existing vegetation has been classified as a coniferous forest consisting of mixed cone-bearing trees of the Pine family including pines (Pinus), spruces (Picea), and Douglas-fir (Pseudotsuga). These trees are resinous evergreens, with a straight axis and a narrow crown and are characteristic of acidic soils, often sprouting after fire. The coniferous forest is widespread and extensive throughout the general area, and can be found at altitudes between 6,000 feet and 10,000 feet. It encompasses the lower and upper montane zones which includes Lodgepole and Ponderosa pine, Engelmann and Blue spruce, Douglas-fir, and thickets of broad-leaved trees and shrubs along streambanks. These zones are often referred to as the transitional zone between the foothill and subalpine zones. These zones overlap and telescope into each other, and one zone may be present on a south slope while another will be found across the valley on the north slope at the same alti-tude. Plants which are characteristically found in one zone, can sometimes be found in favorable areas in the neighboring zone above or below their usual habitat.

Douglas-fir, Lodgepole pine, and Engelmann spruce are found at higher elevations and Ponderosa pine at lower elevations scattered in stands of pure and mixed trees. Douglas-fir is considered the climax, or original, forest type in this area before the boom days of mining in the 1800's, when these trees were cut or destroyed by forest fires. The present stands of Ponderosa and Lodgpole pine and Engelmann spruce came in after 1900.

Limber pine and Blue spruce are also present as isolated trees and in small stands. Rocky Mountain juniper and Quaking aspen can be found in the area between the Hazel A mine portal and the Cash and Who Do mine portals. Quaking aspen, Narrowleaf

cottonwood, Mountain alder, and Rocky Mountain maple are found in Cash, McKnight (Blackcloud), and Aikens (Lick Skillet) Gulches, and along Gold Run Creek.

A list of the trees found in this area and on the mine site is given below, along with a description and remarks about various characteristics of the trees and their place in the environment. The measurements for height and diameter are for mature specimens growing under favorable conditions.

#### Vegetation

2

No rare, threatened, or endangered plant species have been identified in the Gold Hill area or on the proposed mine site. The existing vegetation has been classified as a coniferous forest consisting of mixed cone-bearing trees of the Pine family including pines (Pinus), spruces (Picea), and Douglas-fir (Pseudotsuga). These trees are resinous evergreens, with a straight axis and a narrow crown and are characteristic of acidic soils, often sprouting after fire. The coniferous forest is widespread and extensive throughout the general area, and can be found at altitudes between 6,000 feet and 10,000 feet. It encompasses the lower and upper montane zones which includes Lodgepole and Ponderosa pine, Engelmann and Blue spruce, Douglas-fir, and thickets of broad-leaved trees and shrubs along streambanks. These zones are often referred to as the transitional zone between the foothill and subalpine These zones overlap and telescope into each other, and zones. one zone may be present on a south slope while another will be found across the valley on the north slope at the same altitude. Plants which are characteristically found in one zone, can sometimes be found in favorable areas in the neighboring zone above or below their usual habitat.

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cottonwood, Mountain alder, and Rocky Mountain maple are found in Cash, McKnight (Blackcloud), and Aikens (Lick Skillet) Gulches, and along Gold Run Creek.

A list of the trees found in this area and on the mine site is given below, along with a description and remarks about various characteristics of the trees and their place in the environment. The measurements for height and diameter are for mature specimens growing under favorable conditions.

Rocky Mountain Douglas Fir (Pseudotsuga menziesii var. glauca)

- Description: A medium-sized to large evergreen with a narrow, pointed crown of slightly drooping branches.
- Height: 80-100 feet.

Diameter: 2-5 feet.

- Habitat: Chiefly found on rocky soils of mountain slopes, in pure and mixed stands.
- Remarks: Important timber species; the foliage is consumed by deer; birds and mammals eat the seeds. Grows moderately fast and is fairly free of disease.

Lodgepole Pine (Pinus contorta var. latifolia)

| Description: | A tall evergreen with a narrow, dense, conical crown.   |
|--------------|---|
| Height:      | 20-80+ feet.  |
| Diameter:    | 1-3 feet.   |
| Habitat:     | Mountainous, well drained, fairly dry<br>soils; prefers cool eastern or northern<br>slopes; in pure and mixed stands. |
| Remarks:     | This variety of Pine is adapted to forest fires, with cones that remain tightly                                       |

closed on the tree for many years until a fire destroys the forest. When the heat causes the cones to open, the seeds fall to the ground to start a new forest. It can tolerate poor soils and harsh conditions.

Limber Pine (Pinus flexilis)

ï

Description: A medium-sized evergreen with a short trunk and a broad, rounded crown of annual rows of stout branches that nearly reach down to the ground.

Height: 20-40 feet.

Diameter: 1-2 feet.

Habitat: Dry, rocky eastern slopes and ridges, often

in pure stands. Remarks: On exposed ridges these trees are shaped by

the wind into stunted shrubs with crooked or twisted branches that are bent over and longer on one side. The large seeds attract songbirds, game birds, mammals and browsers.

Ponderosa Pine (Pinus ponderosa var. scopulorum)

Description: A large everyreen with a broad, open, conical crown of spreading branches.

Height: 60-100+ feet.

Diameter: 25-4 feet.

Habitat: Mountainous areas in pure stands and mixed coniferous forests.

Remarks: A valuable timber tree; squirrels and chipmunks and many other kinds of wildlife consume the seeds.

Engelmann Spruce (Picea engelmanni)

Description: A large evergreen with dark or blue-green foliage and a dense, narrow, conical crown of short branches spreading in close rows.

Height: 70-100+ feet.

Diameter: 14-24 feet.

Habitat: High forest environment in mixed stands; on humid and moderately deep soils.

Remarks: Seeds attract chipmunks and rodents; ideal for nesting, roosting, and winter cover.

#### Blue Spruce (Picea pungens)

| Description: | A large evergreen with blue-green foliage<br>and a conical crown of stout, horizontal<br>branches in rows.  |  |
|--------------|---|--|
| Height:      | 60-100 feet.  |  |
| Diameter:    | 1½-3 feet.  |  |
| Habitat:     | Narrow bottom lands along mountain streams;<br>often in pure stands.  |  |
| Remarks:     | Grows quickly, provides nesting, roosting,<br>and winter cover and food for songbirds,<br>squirrels and other mammals; popular<br>Christmas tree; often used in shelter<br>helts. |  |

Rocky Mountain Juniper (Juniperus scopulorum)

Description: An evergreen with a straight trunk, narrow, pointed crown and slender branches with gray-green foliage.

Height: 20-50 feet.

Diameter: 15 feet.

Habitat: Rocky soils in open woodlands.

Remarks: Used for fuel; helps control erosion; wildlife eat the berrylike cones.

Narrowleaf Cottonwood (Populus angustifolia)

| Description: | A member of the deciduous willow family,<br>this tree has a narrow, conical crown of<br>slender upright branches and a foliage of<br>shiny green leaves that turn a dull yellow<br>in autumn. |
|--------------|---|
|              |   |

Height:

40 feet.

Diameter: 14 feet.

Habitat:

. . .

Remarks: An abundant wild cottonwood, its root system makes it suitable for erosion control.

Moist soils along streams in mountains with willows and alders in coniferous forests.

Quaking Aspens (Populus tremuloides)

Description: A member of the willow family, this tree has a narrow, rounded crown of thin foliage of shiny green leaves that turn a goldenyellow in autumn before shedding.

Height: 40-70 feet.

Diameter: 1-14 feet.

1.10

Habitat: Found in many soil types, especially on moist sandy and gravelly slopes; often in pure stands.

. . .

Remarks: A pioneer tree after fires and logging, it is often short-lived and replaced by conifers. The twigs and foliage are browsed by deer. Rabbits and other mammals eat the bark, foliage and buds, and grouse feed on the winter buds.

# The following forbs exist in the Gold Hill area:

| Common Name  | <u>Scientific Name</u>   | Family   |
|--|--|--|
| Buckwheat<br>Common Lupine<br>Alipine Milk Vetch<br>Loose-flowered   | Fagopyrum esculentum<br>Lupinus argenteus<br>Astragalus alpinus  | Polugonaceae<br>Leguminosae<br>Leguminosae   |
| Milk Vetch<br>Wiry Milk Vetch<br>Loco-weed<br>Blue-eyed-grass<br>Wyoming Paintbrush<br>Scarlet Paintbrush<br>Aster<br>Pussytoes<br>Arnica<br>Thistle<br>Cutleaf Daisy<br>Showy Daisy<br>Mountain Gumweed<br>Hawkweed | Astragalus tenellus<br>Astragalus flexuosus<br>Oxytropis deflexa<br>Sisyrinchium montanum<br>Castilleja linariaefolia<br>Castilleja miniata<br>Aster porteri<br>Antennaria<br>Arnica parryi<br>Cirsium centaureae<br>Erigeron compositus<br>Erigeron speciosus<br>Grindelia subalpina<br>Hieracium gracile | Leguminosae<br>Leguminosae<br>Leguminosae<br>Iridaceae<br>Scrophulariaceae<br>Scrophulariaceae<br>Compositae<br>Compositae<br>Compositae<br>Compositae<br>Compositae<br>Compositae<br>Compositae<br>Compositae<br>Compositae<br>Compositae<br>Compositae |
| False Dandelion<br>Yarrow<br>Fireweed<br>Common Harebell   | Agoseris<br>Achillea lanulosa<br>Chamerion angustifolium<br>Campanula rotundifolia   | Compositae<br>Compositae<br>Onagraceae<br>Companulaceae  |

The following shrubs exist in the Gold Hill area:

Common Juniper Oregon-grape Twinflower Redberried Elder Mountain Sagebrush Prairie Sage Rabbitbrush Pinedrops Kinnikinnik Myrtle Blueberry Wax Currant Common Gooseberry Sticky-laurel Native Rose Choke Cherry Thimbleberry Wild Raspberry Serviceberry Bitterbrush Woolly Cinquefoil

Common Name

Scientific Name Juniperus communis Mahonia repens Linnaeaborealis Sambucus racemosa Artemisia tridentata Artemisia ludoviciana Chrysothamnus nauseosus Pterospora andromedea Arctostaphylos uva-ursi Vaccinium myrtillus Ribes cereum Ribes inerme Ceanothus velutinus Rosa woodsii Prunus virginiana Rubus parviflorus Rubus idaeus Amelanchier alnifolia Purshia tridentata

#### Family

Gymnosperms Berberidaceae Caprifoliaceae Caprifoliaceae Compositae Compositae Compositae Ericaceae Ericaceae Ericaceae Grossulariaceae Grossulariaceae Resedaceae Rosaceae Rosaceae Rosaceae Rosaceae Rosaceae Rosaceae Rosaceae

The present vegetation on the land surface that will be affected by the reopening of the Cash mine is very limited and sparse. Because of its acidic nature and poorly developed soil profile, less than 5% of the Cash mine dump has any vegetation. On the steeper portions of the mine dump, this vegetation consists of a few small stands of Ponderosa pine on the eastern and southern faces of the dump. Since the top of the dump has been used as an ore stockpile area and roadway, only

Potentilla hippiana

a few individual pines and small shrubs have grown on a thin soil base around the edges of the mine dump. In the area between the Jonathan mine and the Cash mine, vegetation is estimated to cover approximately 60% of the south facing land surface. Several small stands of pine and aspen trees and numerous juniper trees can be found here in a meadow composed of native grasses. These grasses are predominantly a mixture of Slender Wheat-grass, Mountain Muhly, and Parry Oat-grass with bunches of Thurber Fescue.

#### Soils Information

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The U. S. Department of Agriculture's Soil Conservation Service has mapped the soils covering this area as the Juget-Rock Outcrop Complex. This rock complex is composed of about 50% vary gravelly, sandy loam, about 30% rock outcrop, and small areas of soils near drainageways that can make up to 20% of each mapped area.

The Juget Complex consists of shallow, somewhat excessively drained soils that have formed on mountain slopes and ridges in a sandy residium weathered from granite. It is found on slopes with a gradient of between 9% to 59%, and at elevations between 6,300 to 8,200 feet. A representative profile of the Juget Complex reveals a six inch surface layer of dark gray, very gravelly, sandy loam and an underlying layer about five inches thick of brown, very gravelly, loamy material on a granite surface. The soil reaction of the Juget Complex is slightly acid. The Juget soils have rapid permeability and a low available water capacity.

The major rock outcrop in the Juget-Rock Outcrop Complex in this area is the Boulder Creek granite. The Boulder Creek granite ranges from a very coarse-grained pink and black mottled biotite granite to a medium-grained quartz monzonite gneiss. It is commonly a dark gray color and forms prominent outcrops.

The small areas of soils near drainageways are classified as either Peyton or Allens Park soils. The Peyton soils are formed on upland hills and valley side slopes in well-drained, weathered, loamy and sandy material that has been locally transported. It is found on slopes with a gradient of between 5% and 20%. A representative profile of this soil reveals a surface layer of dark gray, very gravelly, loamy sand about eleven inches thick. The subsoil is about thirty-two inches thick and is a brown, gravelly, sandy, clay loam that grades into a gravelly, coarse, sandy loam. The substratum extends to a depth of sixty inches or more and is a pale brown, gravelly, sandy loam. A moderate permeability and water capacity and a neutral soil reaction characterize the Peyton soils.

The Allens Park soils are formed on mountain slopes in loamy colluvium and residium weathered from granite. These are moderately deep, well-drained soils found on slopes with gradients of between 15% and 60% at elevations between 6,300 feet to 8,200 feet. A representative profile of this soil exposes a surface layer about two inches thick composed of a dark gray, gravelly, sandy loam. The subsurface layer is about eight inches thick and is a light brownish-gray colored, gravelly, sandy loam. A light grayish-brown, gravelly, sandy loam that has seems and nodules of brown, gravelly, sandy loam that has seems and nodules of brown, gravelly, sandy, clay loam in the lower part is found below this subsurface layer. A brown, gravelly, sandy, clay loam about nine inches thick forms the subsoil. Partly weathered Boulder Creek granite underlies the subsoil at a depth of about twenty-six inches. The surface layer has a neutral soil reaction, while the subsoil is slightly acid. The Allens Park soils have a moderate permeability and a low water capacity.

At lower elevations, the native vegetation found in the Juget-Rock Outcrop Complex is mainly Ponderosa pine and, at higher elevations, it is Douglas-fir and Engelmann spruce. A sparse understory of grass is usually found in the Juget Complex because their roots can only penetrate this soil to a depth of less than twenty inches. Since roots can penetrate to a depth of forty to sixty inches in the Peyton series soils, this soil's vegetation is characterized by taller grasses. The Allens Park soils support an intermediate understory of grass with roots penetrating this soil to a depth of between twenty and forty inches.

Most of the affected land surface subject to this application for a mining permit is composed of waste dump material from previous mining operations dating back to the 1870's. None of the land surface disturbed by these earlier operations was reclaimed. No soil has developed on the steep portions of the Cash mine dump or on the top of the dump which has been used as an ore stockpile area and roadway. The area surrounding the margins of the mine dump and the mine buildings has a soil cover that varies from zero to a maximum of four or five inches in and among numerous outcrops of Boulder Creek granite. The upper Cash Gulch area contains small areas of Peyton series soils in the drainage way between the Hazel A mine and the southwestern portion of the Cash mine. Below the Cash mine portal, in Cash Gulch, a narrow band of Allens Park soils has formed from weathered Boulder Creek granite and transported material. Attached to this page is a copy of **EXHIBIT D – RECLAMATION PLAN** that has been changed to show the correct Permit Number M-1994-117 for the Amended Gold Hill Mill Permit.

# EXHIBIT D - RECLAMATION PLAN

### (1) RECLAMATION PLAN

Permit No. M-1994-117 already has an approved reclamation plan for areas of disturbance associated with the original permit area of the Gold Hill Milling facility. Reclamation of the subject incremental surface disturbances will be consistent with the approved plan at the Gold Hill Mill.

# Left Hand Creek Pump Station

The Left Hand Creek Pump Station will consist of a foot bridge across the creek and a metal "conex" containing the Bean pump and the generator to power the pump. Both of these structures can be moved with a fork lift and transported on a flatbed truck or trailer. Neither of these structures will be placed on a permanent concrete foundation, so there will not be any excavation involved in the final reclamation of this site. Removing the foot bridge and the "conex" will involve an equipment operator and two workers to guide and assist the equipment operator. This can be accomplished in one working day.

### Gold Hill Mill Pipeline

Removing the Gold Hill Mill Pipeline will involve two workers cutting the two (2) inch pipeline into manageable lengths, and hauling these sections to a vehicle for removal to a licensed disposal site. The disposal of the pipeline using a flatbed truck will require four roundtrips to the Boulder disposal site per day for three days. This will involve an additional worker driving to and from the disposal site for three days.

### Times Mine Adit Portal

The Times Mine adit portal culvert has a secure metal door that is locked to prevent unauthorized access. The five (5) foot diameter galvanized steel culvert will not collapse from the weight of the overlying material, and the mine workings do not produce any acid mine drainage. When the Gold Hill Mill Waterline is decommissioned the pipeline into the Times Mine adit will be capped to prevent water flowing from the mine workings. Other than permanently securing the metal door on the culvert, there is nothing that will need to be reclaimed at this site. This work can be accomplished in less than two hours. Attached to this page is a copy of the Water Court Decree for 20 shares in the Left Hand Ditch Company dated October 2, 1985. It changes the use of the water rights represented by these shares from irrigation to mining, milling, and commercial and all uses thereto, including the storage in underground mine workings.

FILED IN DIGTOROT COURT

DISTRICT COURT, WATER DIVISION NO. 1, COLORADO

CASE NO. 85CW117

05 0 CT 2 PI: 52

FINDINGS AND RULING OF THE REFEREE AND DECREE OF WHY COURT

CONCERNING THE APPLICATION FOR WATER RIGHTS OF MARK A. STEEN IN BOULDER COUNTY

THIS MATTER, having come on for consideration upon the Application of Mark A. Steen for a change of water right, and the Referee being fully advised in the premises does hereby find:

#### FINDINGS OF FACT

1. The Application in this matter for change of water right was filed with the Water Clerk, Water Division No. 1 on April 30, 1985. Applicant's address is: POB 1523, Longmont, CO 80501.

2. All notices required by law of the filing of the Application have been fulfilled. The water rights involved are outside the boundaries of any designated groundwater basins. The Referee has jurisdiction over this matter and over all parites affected hereby, whether they have appeared or not.

3. Timely Statements of Opposition were filed by the Left Hand Ditch Company and the St. Vrain and Left Hand Water Conservancy District. No other Statements of Opposition have been filed and the time for filing such Statements has expired.

4. All matters contained in the Application have been reviewed, testimony has been taken where such testimony is necessary and corrections have been made as indicated by the evidence.

5. Applicant has under option to purchase 20 shares of the 16,800 outstanding shares of stock in the Left Hand Ditch Company. Ownership of said stock entitles Applicant to a pro rata share of the water available to the following water rights:

A. Priority rights to irrigation water from Left Hand Creek and James Creek for direct irrigation in the amount of 283.62 cubic feet of water per second, with decrees granted to various ditches taking water from Left Hand Creek which were built by community ditches and by individuals, with priorities numbered 1 to 31, dated from September 1, 1860 to May 3, 1879. (Decrees entered December 2, 1882, in District Court, Boulder County, Colorado.)

B. Priority No. 15-1/2, dated June 1, 1863, for 40.77 cubic feet of water per second for direct irrigation purposes out of the South St. Vrain Creek. (Decree entered June 2, 1882, in District Court, Boulder County, Colorado.)

C. Priority No. 41, dated June 1, 1870, for first enlargement for an additional amount of 685.23 cubic feet of water per second for direct irrigation purposes out of the South St. Vrain Creek. (Decree entered June 2, 1882, in District Court, Boulder County, Colorado.)

D. The Left Hand Park Reservoir, located in the Southeast Quarter of the Northeast Quarter (SE 1/4 NE 1/4) of Section 9, and in the Southwest Quarter of the Northwest Quarter (SW 1/4 NW 1/4) of Section 10, Township 1 North, Range 73 West, Boulder County, Colorado:

Priority No. 28, New Series, as of date August 5, 1891, for filling right of water for storage or reservoir purposes, out of Left Hand Creek in the amount of 8,070,026 cubic feet, or 185.2 acre feet. (Decree entered March 13, 1907, in District Court, Boulder County, Colorado.)

E. The Gold Lake Reservoir, located on the Keystone Placer Mining Claim in Sections 3 and 4, Township 1 North, and in Sections 33 and 34, Township 2 North, All in Range 72 West, Boulder County, Colorado:

Priority No. 6, New Series, as of date September 1, 1879, for water for storage and reservoir purposes out of the South St. Vrain Creek and James Creek, to the capacity of 15,419,360 cubic feet or 354 acre feet, to cover 31.43 acres of land. (Decree entered March 13, 1907, in District Court, Boulder County, Colorado.)

Priority No. 54, New Series, for a second right to water for storage and reservoir purposes also out of the South St. Vrain Creek and James Creek to fill Gold Lake, as of date May 18, 1904, for an additional 3,550,483 cubic feet of water, or 82 acre feet. (Decree entered March 13, 1907, in District Court, Boulder County, Colorado.)

F. Allens Lake Reservoir, located on the South Half of the Northeast Quarter (S 1/2 NE 1/4) and the North Half of the Southeast Quarter (N 1/2 SE 1/4) of Section 13, Township 2 North, Range 71 West, Boulder County, Colorado:

Priority No. 19A, 3rd Series, for 134.2 acre feet, Priority No. 22, 3rd Series, for 569.5 acre feet, Priority No. 23C, 3rd Series, for 134.2 acre feet (refill) and Priority No. 23W, 3rd Series, for 569.5 acre feet (refill), all awarded by decree entered July 3, 1951, in District Court, Boulder County, Colorado.

G. The Lake Isabelle Reservoir (also spelled Lake Isabel Reservoir) situated in the West Half of the Northwest Quarter (W 1/2 NW 1/4) of Section 7, Township 1 North, Range 73 West, and in the South Half of the Northeast Quarter (S 1/2 NE 1/4) and the Northeast Quarter of the Northeast Quarter (NE 1/4 NE 1/4) and the North Half of the Southeast Quarter (N 1/2 SE 1/4) of Section 12, Township 1 North, Range 74 West, Boulder County, Colorado:

Priority No. 7, New Series, for water for storage and reservoir purposes out of the South St. Vrain Creek, to fill Lake Isabelle, a natural lake, to be taken out by means of a tunnel, which priority is of date September 15,1907, for a total capacity of 35,274,888 cubic feet, or 809.8 acre feet, as set forth in decree granted January 9, 1935.

6. The historic use of water in the Left Hand Ditch Company system has been for irrigation, domestic, and stock watering purposes. During the irrigation season, The Left Hand Ditch Company takes virtually all the water in Left Hand Creek, except at times of extreme flood.

7. The subject 20 shares have historically been utilized for the irrigation of lands located in the SE 1/4 of Section 26, Township 2 North, Range 70 West, 6th P.M. in Boulder County.

8. Applicant intends to change the use of said water rights represented by the subject 20 shares to mining, milling, commercial and storage in addition to the historic uses in the Left Hand Ditch Company system listed above.

9. Applicant's mining and milling operations will be located on patented mining claims owned by Applicant in Sections 6 and 7, Township 1 North, Range 71 West, Section 31, Township 2 North, Range 71 West, and Sections 1, 2, 12 and 13, Township 1 North, Range 72 West, 6th P.M. in Boulder County.

10. The applicant's operations will utilize a gravity and flotation concentration mill wherein the majority of the water will be recycled. The operations will initially be capable of processing 50 tons of ore per day on a year round basis, and that capacity may be expanded in the future.

11. Water requirements for the applicant's milling operations are projected to be four tons of water per ton of ore. The mill will recycle as much water as possible, either directly or after water treatment.

12. Consumptive use of water will only occur as a result of water retained in the concentrates produced by the mill, and evaporation from a tailings pond with a projected surface area of two acres. The following formula shall be utilized to calculate consumptive use from the concentrates: Tons of Ore Processed x  $1/8 \times 0.10 \times 0.000735 = acre feet of water retained in the concentrates.$ 

This formula is based upon assumptions that one ton of concentrates will be obtained for every eight tons of ore processed, and that the water retained within the concentrates will be 10% by weight. 0.000735 is the amount of water, in acre feet, in a ton of water. The following formula shall be utilized to calculate the annual consumptive use due to evaporation from the tailings pond:

Surface acres x 2 feet = evaporation from tailings pond (acre feet).

This formula assumes that two feet of water will evaporate from each surface acre of water each year. Pursuant to these formulas, the total consumptive use is estimated to be 4.17 acre feet per year for the proposed 50 ton per day mill operating year round, 24 hours per day. Applicant reserves the right to minimize or prevent evaporation from the tailings ponds in the future.

13. Applicant may increase the capacity of said operations. Water usage shall be calculated pursuant to the formulas in paragraph 12 (E) for any such increases.

14. Diversions made by the Left Hand Ditch Company in a dry year have been approximately 0.74 acre feet per share with an annual depletion to the South Platte River System of approximately 0.52 acre feet per share. Diversions and depletions were about twice as much in years of above average precipitation. Therefore, the Applicant's pro rata share of historic diversions based upon said 20 shares in a dry year is approximately 14.8 acre feet per year with historic stream depletions of 10.4 acre feet per year. In a wet year, Applicant's pro rata share of historic diversions is approximately 32.18 acre feet per year with stream depletions of 22.53 acre feet per year.

15. Applicant intends to divert the water associated with said 20 shares at an alternate point of diversion located on the south bank of Left Hand Creek at a point whence the Southeast corner of Section 2, Township 1 North, Range 72 West, 6th P.M. bears S 34° 45'E, a distance of 1,590 feet, Boulder County.

16. Diversions at this alternate point of diversion will be made at a maximum rate of 50 gpm and only during the historic irrigation season of the Left Hand Ditch Company (April 1 to October 31). Applicant intends to store this water in presently unused underground mine workings owned by Applicant located in Section 12, Township 1 North, Range 72 West, 6th P.M., Boulder County.

17. The Applicant intends to divert water at the alternate point of diversion under one of the two following alternatives:

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A. If the underground mine workings referenced in Paragraph 16 are not subject to significant amounts of seepage loss, as anticipated, Applicant intends to divert only the historic stream depletions associated with the said 20 shares. Under this alternative, that amount of water historically diverted but not consumed will be left in the stream. Applicant shall be entitled to divert a minimum of 10.4 acre feet per year. A formula which may be used to determine the total amount of water which Applicant may divert including the 10.4 acre feet minimum in any one year under this alternative is as follows: 0.70 times the number of Left Band shares owned by Applicant times the amount of water actually diverted per share by the Left Hand Ditch Company. If Applicant elects to use this formula, he will have a duty to see that diversions under the Left Hand Ditch Company system are measured on a monthly basis and reported to the Division Engineer for use in the application of the formula. Since all diversions under this alternative will be historic stream depletions, Applicant may use, reuse, successively use, or dispose of all such water to extinction.

B. If the underground mine workings are subject to significant amounts of seepage loss, applicant intends to divert his full pro rata share of diversions at the alternate point of diversion. Any and all return flows from the milling operations will be adequately treated, and all seepage and return flows will return to Left Hand Creek. Under this alternative, no more than 70% of the amount diverted shall be consumed by Applicant.

18. The lands historically irrigated by said 20 shares will no longer be irrigated by said shares. (See Exhibit A.)

19. Applicant reserves the right to lease any excess water to the Left Hand Ditch Company or third parties until needed for the subject mining operations. Said water will be made available through the Left Hand Ditch Company's present points of diversion.

20. Applicant will install a continuous recording measuring device at the alternate point of diverson and will provide necessary access as required by the Left Hand Ditch Company and the water officials of the State.

21. Applicant will remain a shareholder in the Left Hand Ditch Company and pay all shareholder assessments on his 20 shares in the future.

22. No material injury to vested water rights will occur by virtue of this change of water rights.

#### CONCLUSIONS OF LAW

23. The Application in this matter was filed with the Water Clerk, Water Division No. 1, pursuant to C.R.S. .37-92-302, On April 30, 1985.

24. Statements of Opposition were filed by the parties listed in paragraph 3. As is specified in C.R.S. § 37-92-302(1)(c), the time for filing additional statements of opposition has expired.

25. The change of water right proposed by Applicant is one contemplated by law and if administered in accordance with this decree, will permit the diversion of the subject Left Hand Ditch water at Applicant's alternate point of diversion for use in Applicant's mining and milling operations. The change of water right will not injuriously affect the owner of or persons entitled to use water under a vested water right or decreed conditional right. C.R.S. § 37-92-305.

26. The State Engineer and his agents may lawfully be required to administer this change of water right in the matter set forth herein.

NOW, THEREFORE, IT IS HEREBY ORDERED, ADJUDGED AND DECREED:

27. The change of water right proposed by the Applicant is approved.

28. Each of the findings of fact and conclusions of law are incorporated by reference herein and are to be considered a part of the decretal portion hereof as though set out in full.

29. The type of use of the water associated with Applicant's 20 shares in the Left Hand Ditch Company shall be changed to mining, milling, and all uses incidental thereto including storage, in addition to the historic uses in the Left Hand Ditch Company system.

30. The place of use of the water associated with Applicant's 20 shares in the Left Hand Ditch Company shall be changed to Applicant's mining and milling operations located on patented mining claims owned by Applicant in Sections 6 and 7, Township 1 North, Range 71 West, Section 31, Township 2 North, Range 71 West, and Sections 1, 2, 12 and 13, Township 1 North, Range 71 West, 6th P.M. in Boulder County, subject to paragraph 36 hereof.

31. The point of diversion of the water associated with Applicant's 20 shares in the Left Hand Ditch Company shall include an alternate point of diversion located on the south bank of Left Hand Creek at point whence the Southeast corner of Section 2, Township 1 North, Range 72 West, 6th P.M., bears S 34° 45' E, a distance of 1,590 feet, Boulder County.

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32. Applicant shall be entitled to divert his pro rata share of water at this alternate point of diversion at a maximum rate of 50 g.p.m. and only during the historic irrigation season of the Left Hand Ditch Company (April 1 to October 31). Applicant shall be entitled to store this water in presently unused underground mine workings owned by Applicant located in Section 12, Township 1 North, Range 72 West, 6th P.M., Boulder County.

33. The consumptive use associated with Applicant's mining and milling operations shall be calculated in accordance with paragraph 12 of this decree.

34. The Applicant is entitled to divert water at the alternate point of diversion under one of the two following alternatives:

If the underground mine workings referenced in Paragraph 16 are not subject to significant amounts of seepage loss, as anticipated, Applicant intends to divert only the historic stream depletions associated with the said 20 shares. Under this alternative, that amount of water historically diverted but not consumed will be left in the stream. Applicant shall be entitled to divert a minimum of 10.4 acre feet per year. A formula which may be used to determine the total amount of water which Applicant may divert including the 10.4 acre feet minimum in any one year under this alternative is as follows: 0.70 times the number of Left Hand shares owned by Applicant times the amount of water actually diverted per share by the Left Hand Ditch Company. If Applicant elects to use this formula, he will have a duty to see that diversions under the Left Hand Ditch Company system are measured on a monthly basis and reported to the Division Engineer for use in the application of the formula. Since all diversions under this alternative will be historic stream depletions, Applicant may use, reuse, successively use, or dispose of all such water to extinction.

B. If the underground mine workings are subject to significant amounts of seepage loss, applicant intends to divert his full pro rata share of diversions at the alternate point of diversion. Any and all return flows from the mining and milling operations will be adequately treated, and all seepage and return flows will return to Left Hand Creek. Under this alternative, no more than 70% of the amount diverted shall be consumed by Applicant.

35. The lands historically irrigated by said twenty shares shall no longer be irrigated by said shares. (See Exhibit A.)

36. Applicant shall be entitled to lease any excess water to the Left Hand Ditch Company or third parties until needed for the subject mining operations. Said water shall be made available through the Left Hand Ditch Company present points of diversions.

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37. Applicant shall install a continuous recording measuring device at the alternate point of diversion and shall provide necessary access as required by the Left Hand Ditch Company and the water officials of the State.

38. Applicant shall remain a shareholder in the Left Hand Ditch Company and pay all shareholder assessments on his 20 shares in the future.

39. This matter shall be subject to the continuing jurisdiction of the court on the question of injury to vested water rights of the Objectors in this matter for a period of three years from the date of entry of this decree. If any Objector wishes to invoke this continuing jurisdiction, said Objector shall file a petition with the court with notice to all other parties alleging the specific grounds and extent of the injury claimed.

Dated this 2nd day of October, 1985.

RD.

Water Referee Water Division No. 1

THE COURT DOTH FIND: NO PROTEST WAS FILED IN THIS MATTER.

THE FOREGOING RULING IS CONFIRMED AND APPROVED, AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

Dated: DEC 2 6 1985

ROBERT A. BEHRMAN, WATER JUDGE Water Division No. 1 State of Colorado

#### APPROVED AS TO FORM AND SUBSTANCE:

VRANESH AND RAISCH

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By Alla mmm Michael D. Shimmin (#9182) Paul J. Zilis (#12582)

P.O. Box 871 Boulder, CO 80306 303/443-6151

ATTORNEYS FOR CLAIMANT

GRANT, BERNARD and LYONS

By Way14 fe H/ Grant (#1554 Jet frey J. Kahn (#6894) P.O. Box 978 (#1554) Longmont, CO 80501

303/571-5506 (Denver) 303/776-9900 (Longmont)

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ATTORNEYS FOR ST. VRAIN AND LEFT HAND WATER CONSERVANCY DISTRICT

HUTCHINSON, BLACK, HILL & COOK

By Heather Ryan (#9940)

Clark G. Edwards (#11642) 1215 Spruce Street P.O. Box 1170 Boulder, CO 80306 303/442-6514

ATTORNEYS FOR LEFT HAND DITCH COMPANY



#### IN THE WATER COURT DIVISION I STATE OF COLORADO

October 2, 1985

TO:

Paul J. Zilis, Esq. Michael D. Shimmin, Esq. Vranesh & Raisch POB 871 Boulder, CO 80306 Heather Ryan, Esq. POB 1170 Boulder, CO 80306

st/Div W/84 CW 038

Jeffrey J. Kahn, Esq. POB 978

Longmont, CO 80501

The Water Court Referee for Division I has instructed me to forward you this copy of his Ruling in Case No. 85CW117

Please check your Ruling very CAREFULLY! If any errors are found, notify the Water Court IMMEDIATELY.

You have within twenty (20) days after the above date of mailing to file with the Water Clerk any Protest to the Referee's Ruling. Any protest to the Referee's Ruling must be filed on or before <u>October 22, 1985</u>, plus any additional time allowed by Rule 6(e), CRCP. In the absence of any Protest being received, the Judge of the Water Court will incorporate the Referee's Ruling into the Decree which will be entered after October 22 \_\_\_\_\_, 1985\_.

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Marcie E. Spelts Water Clerk, Division No. I POB "C" Greeley, CO 80632 Attached to this page is a copy of Russell R. McLellan's geologic map of the Times Mine.

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Attached to this page is a drawing of the Times Mine bulkhead, showing the three PVC pipes that were installed in 1987 when the bulkhead was constructed.



Concrete Buckhead

Attached to this page is a copy of a map of the underground mine workings in the Wynona Mine.

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Attached to this page is a copy of the **Reclamation Cost Estimate** that has been revised to include the cost of removing and cementing the three PVC pipes that are present in the Times Mine adit and bulkhead, and recalculating the financial warranty estimate to reflect specific reclamation tasks.

# (2) Reclamation Cost Estimate

# Left Hand Creek Pump Station

| Fork Lift Rental - \$350/day x 1 day                      | \$350        |
|---|--------------|
| Flat Bed/Trailer Rental - \$50/hour x 8 hours/day x 1 day | \$400        |
| Operator - \$65/hour x 8 hours/day x 1 day                | \$520        |
| 2 Laborers - \$18/hour/laborer x 8 hours                  | <u>\$288</u> |
| Cost Estimate Based on Previous Experience                | \$1,558      |

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# Gold Hill Mill Pipeline Removal

| 2 Laborers - \$18/hour/laborer x 8 hours/day x 5 days      | \$1,440        |
|--|----------------|
| Flat Bed/Trailer Rental - \$50/hour x 8 hours/day x 5 days | \$2,000        |
| Operator - \$20/hour x 8 hours/day x 3 days                | \$480          |
| Landfill Disposal Charges - \$150/load x 12 loads          | <u>\$1,800</u> |
| Cost Estimate Based on Previous Experience                 | \$5,720        |

# **Times Mine Adit Portal**

| Metal Door Welding to Prevent Entry - \$65/hour X 2 hours | <u>\$130</u> |
|---|--------------|
| Cost Estimate Based on Previous Experience                | \$130        |

# Times Mine Water Pipeline Decommissioning

| 1 Miner - \$40/hour x 5 hours              | \$200 |
|--|-------|
| 1 Laborer - \$18/hour x 5 hours            | 90    |
| Supplies – Cement to Close 3 PVC Pipes     | 30    |
| Cost Estimate Based on Previous Experience | \$320 |

| SUBTOTAL                             | \$7,728  |
|--------------------------------------|----------|
| Additional Estimated Expenses        | •        |
| Engineering – 10% of Subtotal        | \$772    |
| Contract/Overhead - 20% of Subtotal  | \$1,546  |
| Administration Cost – 5% of Subtotal | \$386    |
| Estimated Expenses                   | \$2,704  |
| GRAND TOTAL                          | \$10,432 |

Attached to this page is a revised copy of **EXHIBIT L – PERMANENT MAN-MADE STRUCTURES** 

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# **EXHIBIT L - PERMANENT MAN-MADE STRUCTURES**

There are seven (7) permanent man-made structures located within two hundred (200) feet of the operation or affected land, as well as an Excel Energy Corporation pole-mounted utility line extending east-west along the northern boundary of the Pump Station area. These are shown on Map E-1 Mine Plan and Permit Area Map-Gold Hill Mill Waterline Located in Sections 2/11/12, T-1-N, R-72-W of the Sixth P.M.

The Gold Hill Mill Waterline's installation, operation and reclamation activities are anticipated to have "no negative effect" on these man-made structures.

### **Colorado Milling Company, LLC**

Mark A. Steen P.O. Box 1523 Longmont, Colorado 80502

December 22, 2017

Kristin Cannon District Wildlife Manager Boulder North District 4207 West County Road 16E Loveland, Colorado 80537

### **RE: Gold Hill Mill Waterline**

Kirstin Cannon:

The Colorado Milling Company, LLC has filed an Amendment to its Colorado Division of Reclamation, Mining and Safety Limited Impact 110 (2) Permit No. 1994-117. The Hard Rock/ Metal Mining Rules for filing a 110 (2) Limited Impact Permit or an Amendment to a 110 (2) Permit do not actually require a Wildlife Statement prepared by the Colorado Division of Wildlife. However, in the interest of insuring that no critical or important wildlife habitats or wildlife species will be impacted by our proposed operation, we would appreciate your inspecting the site of our Gold Hill Mill Waterline. I am attaching a copy of the Application to Amend our Permit No. 1994-117 for you to familiarize yourself with the area and our project.

If you can be available on January 2, 2018, I can meet you at the Gold Hill Millsite at 9145 Sunshine Canyon Drive above Gold Hill. Please contact me to make sure that this date will be good for you, and what time you would like to meet at the site. Thank you for your attention to this request.

Sincerely, ark A Steen

Mark A. Steen For: Colorado Milling Company, LLC



# COLORADO

# Parks and Wildlife

Department of Natural Resources Area 2 - Lon Hagler 4207 W CR 16E Loveland, CO 80537 P 970.472.4460 | F 970.472.4468

January 10, 2018

Mark Steen Colorado Milling Company, LLC P.O. Box 1523 Longmont, CO 80502

Re. Gold Hill Mill Waterline

Dear Mr. Steen,

Thank you for the opportunity to review the proposed new waterline from Left Hand Creek to the Gold Hill Mill at 9145 Sunshine Canyon Drive. You are seeking an amendment to your mining permit, Permit Number M-1994-117, for this activity from the Colorado Division of Reclamation, Mining, and Safety. The project will replace a 3-inch pipeline originally installed in 1987, the lower portion of which was since replaced with a 2-inch pipeline, with 4,699 feet of a 2-inch diameter High Density Polyethhylene pipeline. A small pump house will also be built adjacent to Left Hand Creek. The pipeline will be above ground and will cross Boulder County Open Space property for which you have an easement.

District Wildlife Manager, Kristin Cannon, did a site visit with you on 01/02/2018 and observed the pathway of the pipeline. There will be some minor impacts to wildlife during construction but it is not anticipated that this project will negatively impact rare, threatened, or endangered wildlife species. As the pipeline will cross open space property it is understood that the county will monitor for impacts to wildlife and will advise you on mitigating those impacts.

If you have any questions please contact Kristin Cannon at 303-291-7117 or kristin.cannon@state.co.us.

Sincerely

Larry Rogstad Area Wildlife Manager

CC: M. Leslie, T Kroening, L Rogstad, K Cannon



### **Colorado Milling Company, LLC**

Mark A. Steen P.O. Box 1523 Longmont, Colorado 80502

December 22, 2017

Kristin Cannon District Wildlife Manager Boulder North District 4207 West County Road 16E Loveland, Colorado 80537

### **RE: Gold Hill Mill Waterline**

Kirstin Cannon:

The Colorado Milling Company, LLC has filed an Amendment to its Colorado Division of Reclamation, Mining and Safety Limited Impact 110 (2) Permit No. 1994-117. The Hard Rock/ Metal Mining Rules for filing a 110 (2) Limited Impact Permit or an Amendment to a 110 (2) Permit do not actually require a Wildlife Statement prepared by the Colorado Division of Wildlife. However, in the interest of insuring that no critical or important wildlife habitats or wildlife species will be impacted by our proposed operation, we would appreciate your inspecting the site of our Gold Hill Mill Waterline. I am attaching a copy of the Application to Amend our Permit No. 1994-117 for you to familiarize yourself with the area and our project.

If you can be available on January 2, 2018, I can meet you at the Gold Hill Millsite at 9145 Sunshine Canyon Drive above Gold Hill. Please contact me to make sure that this date will be good for you, and what time you would like to meet at the site. Thank you for your attention to this request.

Sincerely, ark A Steen

Mark A. Steen For: Colorado Milling Company, LLC



# COLORADO

# Parks and Wildlife

Department of Natural Resources Area 2 - Lon Hagler 4207 W CR 16E Loveland, CO 80537 P 970.472.4460 | F 970.472.4468

January 10, 2018

Mark Steen Colorado Milling Company, LLC P.O. Box 1523 Longmont, CO 80502

Re. Gold Hill Mill Waterline

Dear Mr. Steen,

Thank you for the opportunity to review the proposed new waterline from Left Hand Creek to the Gold Hill Mill at 9145 Sunshine Canyon Drive. You are seeking an amendment to your mining permit, Permit Number M-1994-117, for this activity from the Colorado Division of Reclamation, Mining, and Safety. The project will replace a 3-inch pipeline originally installed in 1987, the lower portion of which was since replaced with a 2-inch pipeline, with 4,699 feet of a 2-inch diameter High Density Polyethhylene pipeline. A small pump house will also be built adjacent to Left Hand Creek. The pipeline will be above ground and will cross Boulder County Open Space property for which you have an easement.

District Wildlife Manager, Kristin Cannon, did a site visit with you on 01/02/2018 and observed the pathway of the pipeline. There will be some minor impacts to wildlife during construction but it is not anticipated that this project will negatively impact rare, threatened, or endangered wildlife species. As the pipeline will cross open space property it is understood that the county will monitor for impacts to wildlife and will advise you on mitigating those impacts.

If you have any questions please contact Kristin Cannon at 303-291-7117 or kristin.cannon@state.co.us.

Sincerely

Larry Rogstad Area Wildlife Manager

CC: M. Leslie, T Kroening, L Rogstad, K Cannon

