

Department of Natural Resource 1313 Sherman Street, Room 215 Denver, Colorado 80203

May 31, 2017

Jeffery S. Forrest Amazonite Mining, LLC 8057 S. Vermejo Peak Littleton, CO 80127

RE: Adequacy Review; 110(2) Hardrock Application Forrest Mining Project; File No. M-2017-012

Dear Mr. Forrest,

The Division of Reclamation, Mining, and Safety (Division) has reviewed the content of your 110(2) Limited Impact Operation Reclamation Permit Application for the Forrest Mining Project, File No. M-2017-012, and submits the following comments. **The Division is required to make an approval or denial decision no later than June 3, 2017; therefore, a response to the following adequacy review concerns should be submitted to the Division as soon as possible.** In order to allow the Division adequate time to review your responses to any adequacy issues, please submit your adequacy responses to the Division no later than three days prior to the decision date. Please respond to this Adequacy Review with a letter summarizing each response, to the numbered items below, in a cover letter titled "Adequacy Review Response; M-2017-012".

The review consisted of comparing the application content with specific requirements of Rules 1, 3, 6.1, 6.2, and 6.3 of the Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock/ Metal, and Designated Mining Operations. Any inadequacies are identified under the respective exhibit heading.

GENERAL APPLICATION PROCEDURES

- 1. As required by Rule 1.6.2, please submit proof of publication in a newspaper of general circulation in the locality of the proposed mining operation. Please note, the proof of publication submitted on May 2, 2017, does not sufficiently provide proof of publication. The Division has enclosed an acceptable example for a proof of publication for your reference. *Proof of publication received on May 24, 2017 is adequate no further response needed.*
- 2. As required by Rule 1.6.2, please also 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; this includes 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.

 Proof of notice received on May 24, 2017 is adequate no further response needed.



3. The Division received a comments from Division of Water Resources, Colorado Parks and Wildlife, Teller County, and History Colorado regarding the application. The letters are attached for your review. Please acknowledge and address any comments noted in the letters and make changes to the application as necessary.

6.3 SPECIFIC PERMIT APPLICATION EXHIBIT REQUIREMENTS –110 LIMITED OPERATIONS

EXHIBIT C - Mining Plan (Rule 6.3.3)

- **4.** Within Exhibit C, under the heading 6.3.3(1)(e), the application states that the operation is not intended to be an intermittent operation. After further discussions with Mr. Otten and an understanding of the proposed operation, please revise this too allow the flexibility of being intermittent should activity levels reduce.
- 5. Please provide the estimated depth to which soil, suitable as a plant growth medium, will be salvaged for use in the reclamation process, as required by Rule 6.3.3(1)(b). The Exhibit E Reclamation Plan Map states the average thickness of replaced topsoil will be .25 inches. Salvaging .25 inches of topsoil appears to not be feasible nor appropriate. The Division requires salvaging more growth medium and recommends proposing a range to allow flexibility on site conditions. For example, proposing to salvage 4-8 inches of growth medium will help facilitate better reclamation results. Even though this increased amount of growth medium will mainly be compromised of decomposed granite, it should contain an appropriate amount of organic matter. The Division recommends you contact the Forest Service and/or the local office of the Natural Resource Conservation Service to help provide you with a recommended depth of growth medium to be salvaged for use during reclamation. Please note, if you revise the depth of salvaged growth medium, the Exhibit E map will need to be revised accordingly.
- **6.** Please clarify if growth medium will be salvaged in the area of the proposed overburden stockpiles.
- **7.** Please elaborate on which kind of efforts will be made to prevent the stockpiled overburden material from moving down slope, e.g berms, silt fencing, etc, as discussed in Exhibit C, under the heading 6.3.3(1)(c).
- **8.** Within Exhibit C, under the heading 6.3.3(1)(e), the application states there will be 3-6 pit excavations with access routes. The Exhibit E Mining Plan Map Detail 1 map also identifies a permit area roads, totaling 530 feet. Please discuss the construction and reclamation details of the access roads and provide the maximum width of the roads.
- **9.** Within Exhibit C, under the heading 6.3.3(1)(f), the application states the work area around the excavation will be benched to accommodate overburden. Please provide further details clarifying this statement. A cross-sectional diagram may be needed to depict the proposal.
- **10.** Additionally under the heading 6.3.3(1)(f), the application states sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer. In

- accordance with Rule 6.5(2), please provide engineering stability analyses for these slopes. Please also discuss the mining slope configurations and details for excavations less than 20 feet deep.
- 11. Please confirm you are proposing to have six dig sites, a maximum of 875 square feet and up to 30 feet deep, open at one time and backfilling the dig sites before moving onto more dig areas. Please also confirm you are proposing to have no more than five acres disturbed at any one time. Note, for the Division to approve a five acre phased mining plan and bond, you must commit to contacting the Division prior to advancing the operation beyond a total of five acres, and request a release or request a financial warranty reduction on at least the equivalent size of reclaimed land OR post the Division's calculated additional financial warranty for the proposed advancement. Both options above will require written approval from the Division prior to disturbing more than a total of five acres.

EXHIBIT D - Reclamation Plan (Rule 6.3.4)

- **12.** As required by Rule 6.3.4(1)(c)(i), please state the thickness of plant growth medium to be replaced.
- **13.** As required by Rule 6.3.4(1)(c)(ii), please state at when seeding will occur at the site. Additionally, please explain how the seedbed will be prepared. Furthermore, state the type, application rate, and soil incorporation methods of fertilizer application, if any.
- **14.** The seed mixture provided in Exhibit D identifies eight species with a percent of each in the mixture and a statement that the mixture will be broadcast seeded at 50 lbs./acre. As required by Rule 6.3.4(1)(c)(iii), please state seeding rate for each grass and forb species as pounds of pure live seed per acre (PLS/acre). Please identify if the 50 lbs./acre has already been double to account for the broadcast seeding method. The Division recommends you contact the Forest Service and/or the local office of the Natural Resource Conservation Service to help provide you with a recommended seed mixture and seeding rates.
- **15.** The seed mixture provided in Exhibit D is categorized as an example. Please either commit to seeding with the example provided or submit the actual seed mixture intended to be used. Please note, if the seed mixture recommended by the Forest Service changes in the future, you will need to submit the revised seeded mixture as a Technical Revision to the approved reclamation plan for review and approval by the Division.
- **16.** Please clarify if the broadcast seeded areas will be raked or harrowed to help incorporate the seed into the soil.
- 17. As required by Rule 6.3.4(1)(c)(ii), please clarify if mulch will be used. If so, please specify the kind to be used, the crimping method, and the rate of application.
- **18.** The proposed post mining land use is forestry. Please clarify if shrubs or trees will be planted as a part of the reclamation plan to achieve the post mining land use. If so, please provide the rate, species, and the planting type/size.

19. The cost estimate provided in Exhibit E states there will be six pit excavations which will be 25 feet by 35 feet by 6 feet deep. Information provided in Exhibit C states the maximum depth of a pit will be 30 feet deep as well as the engineering comments regarding 20 feet deep. Please clarify this discrepancy.

The Division will calculate a cost estimate based on the responses to this adequacy letter. You will be provided copy of that reclamation cost estimate for review before the decision date.

EXHIBIT E - Map (Rule 6.3.5)

- 20. The Exhibit E Mining Plan Map Detail 1 map depicts the permit boundary as well as a 3.5 acre area identified as Permit Affected Area Boundary. Please note, in accordance with Rule 6.3.5(2)(a), the Division considers the area bounded by the permit boundary to be analogous to the affected area for all 110 Limited Impact Operations. Please discuss this Permit Affected Area. This line will need to be renamed or removed to reduce confusion because affected area is a defined term in the Rules. Please also discuss the discrepancy between the 3.5 acres identified on the map and the 5 acres of maximum disturbance at one time as discussed in the Exhibit C Mining Plan.
- 21. The Exhibit E Mining Plan Map Detail 1 map depicts areas where excavations, topsoil, and overburden will be located. The Planned Disturbance list on this map shows each dig area will be 875 square feet and each associated spoil area will be 650 square feet. Please clarify how the proposed spoil areas will be smaller than the size of the dig area. In addition, please provide the maximum area of the topsoil stockpile areas.

EXHIBIT G – Source of Legal Right to Enter (Rule 6.3.7)

- **22.** The application referenced a Forest Service Mining Plan of Operations approval letter as being attached to the application materials, however, this was not attached. Please submit the approved Mining Plan of Operations for compliance with Rule 6.3.7.
- 23. The application lists Jeffery S. Forrest & Betsy C. Forrest as the owners of the subsurface rights of the affected land. In accordance with Rule 6.3.7, please provide a description of the basis for legal right of entry for Amazonite Mining, LLC to conduct mining and reclamation for the owners of the mineral rights of the affected land. This may be a copy of access lease or a signed and notarized statement that Amazonite Mining, LLC has the right to enter.

EXHIBIT I - Proof of Filing with County Clerk (Rule 6.3.9)

24. Any changes or additions to the application on file with the Division, must also be reflected in the public review copy. Please submit proof that the public review copy has been updated or a copy of the response to this adequacy letter has been added to it.

This concludes the Division's adequacy review of this application. This letter shall not be interpreted to mean that there are no other technical deficiencies in your application; other issues may arise as

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additional information is supplied. Please be advised the Forrest Mining Project permit application may be deemed inadequate, and the application may be denied on June 3, 2017, unless the above mentioned adequacy review items are addressed to the satisfaction of the Division. If more time is needed to complete the reply, the Division can grant an extension to the decision date. This will be done upon receipt of a written waiver of the Applicant's right to a decision by June 3, 2017, and the request for additional time. This must be received no later than the deadline date.

If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at **303-866-3567 x8132**, or by email at elliott.russell@state.co.us.

Sincerely,

Elliott R. Russell

Environmental Protection Specialist

Enclosure: Division of Water Resources comment letter M2017012

Colorado Parks and Wildlife comment letter M2017012

Teller County comment letter M2017012 History Colorado comment letter M2017012

Cc: Jeffery L. Otten, Amazonite Mining, LLC, 4175 County Road 5, Divide, CO 80814

Wally Erickson, Division of Reclamation, Mining & Safety