




MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Agnus Dei Lode Claim	MINE/PROSPECTING ID#: M-2013-052	MINERAL: Gemstones & quartz (quartzite/quartzose sandstone)	COUNTY: El Paso
INSPECTION TYPE: Monitoring	INSPECTOR(S): Timothy A. Cazier	INSP. DATE: September 21, 2017	INSP. TIME: 11:15
OPERATOR: Jean Marie Cowman	OPERATOR REPRESENTATIVE: Jean Cowman & Rich Fretterd	TYPE OF OPERATION: 110(2) - Hard Rock Limited Impact	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Partial Bond	BOND AMOUNT: \$6,553.53	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: U.S.Forest Service	JOINT INSP. AGENCY: U.S.Forest Service	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: September 29, 2017	

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>Y</u>	(RD) ROADS----- <u>NA</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>NA</u>
(PW) PROCESSING WASTE/TAILING---- <u>Y</u>	(SF) PROCESSING FACILITIES----- <u>Y</u>	(TS) TOPSOIL----- <u>NA</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>Y</u>	(RV) REVEGETATION---- <u>Y</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN---- <u>NA</u>	(CI) COMPLETE INSP---- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>Y</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(AT) ACID OR TOXIC MATERIALS----- <u>NA</u>	(OD) OFF-SITE DAMAGE----- <u>Y</u>	(ST) STIPULATIONS----- <u>Y</u>

Y = Inspected and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

OBSERVATIONS

This was a joint inspection with the US Forest Service (USFS) and was conducted as part of the regular monitoring program. The Permittee, Ms. Jean Cowman was present along with Mr. Rich Fretterd during the inspection. Messrs. Jeff Hovermale and Sergio Perez represented the USFS. The claim site is located in the SW1/4 of Section 12 near Cameron Cone south of Manitou Springs, east of Pike's Peak. An arrangement was made with a Crystal Park resident and the USFS to access the site via Crystal Park from Manitou Springs. The Permittee actively worked the site during the inspection.

Availability of Records: Annual fees are paid through April 2017. The previous inspection was on August 1, 2013. The approved post-mine land use is forestry. There are no open infractions.

Backfilling and Grading: Sufficient backfill material appeared to be available.

Complete Inspection: The entire permit area was inspected. No problems were observed during the inspection.

Excess Spoil and Dev. Waste: The natural slope is very steep for this site. The Permittee has constructed a crib wall (see **Photo 1**) that is holding for now. However, the DRMS has concerns about the rigidity of this structure as it was not engineered. In addition, site representatives indicated claim jumpers have added to the spoil pile. Continued similar activity may overload the crib wall. The resulting failure, given the steep terrain, it is very likely to have an offsite impact. The DRMS highly recommends reinforcing the crib wall and/or reducing the volume of material it contains.

Financial Warranty: The \$6,553.53 bond held by the Division is adequate for the observed mine disturbance.

Hydrologic Balance: No standing water was observed in the pit and no exposed groundwater was observed.

Gen. Compliance with Mine Plan: The operation appeared to be in compliance with the approved mine plan. The disturbed area was estimated to be less than 0.1 acres. Highwalls were estimated to vary between 12 and 15 feet in depth (which is the permit limit) and appeared stable below the weathered Pikes Peak Granite (see **Photo 2**). The configuration of the dig at the time of the inspection ensures any weathered material that slides, will end up in the dig and should not result in any impact outside the permit boundary (see enclosed **Post Inspection Map**).

Off-site Damage: The operation appeared to be confined to the permit boundary.

Processing Waste: The spoil pile downslope of the dig site consists of overburden and discarded quartz (see **Photo 3**). The quartz has a unique hazard in that much of it contains carbon dioxide "bubbles" which when heated by exposure to the sun can cause these crystals to explode. The Operators use safety glasses on hot days.

Reclamation Success: No reclamation had been initiated at the time of the inspection.

Revegetation: No noxious weeds were observed. Ms. Cowman asked about revising the seed mix. Given the very sparse natural vegetation (see **Photo 4**), the approved seed mix is not likely to be very successful. Mr.

Hovermale agreed and the DRMS will coordinate with the USFS on reviewing and approving a change to the seed mix. Ms. Cowman pointed out what she called "Mountain Parsley" (see **Photo 5a**) that seemed in her experience to grow well on this steep slope. The DRMS could not confirm the species based on **Photo 5b** (from <https://www.swcoloradowildflowers.com/Yellow%20Enlarged%20Photo%20Pages/cymopterus%20lemmonii.htm>) and encourages the Permittee to have an expert confirm the species before including it in any seed mix change. The DRMS will require a technical revision (TR) be submitted to change the seed mix. There is no required fee for 110(2) permit TRs.

Sediment Control: No erosion problems were observed and no best management practices (BMPs) beyond those installed (see **Photo 6**) were needed at the time of the inspection.

Signs and Markers: The permit sign was properly posted (see **Photo 7**) and boundary markers were observed to delineate the permit boundary (see **Photo 8**).

Permit Stipulations: There are no open permit stipulations.

Please contact Tim Cazier (303)866-3567 ext. 8169 or email at tim.cazier@state.co.us if you have any questions regarding this report.

PHOTOGRAPHS



Photo 1. Crib wall (from below).

PHOTOGRAPHS (cont.)



Photo 2. Weathered Pikes Peak Granite.



Photo 3. Overburden and discarded quartz (foreground).

PHOTOGRAPHS (cont.)



Photo 4. Very sparse natural vegetation (undisturbed area, looking south).

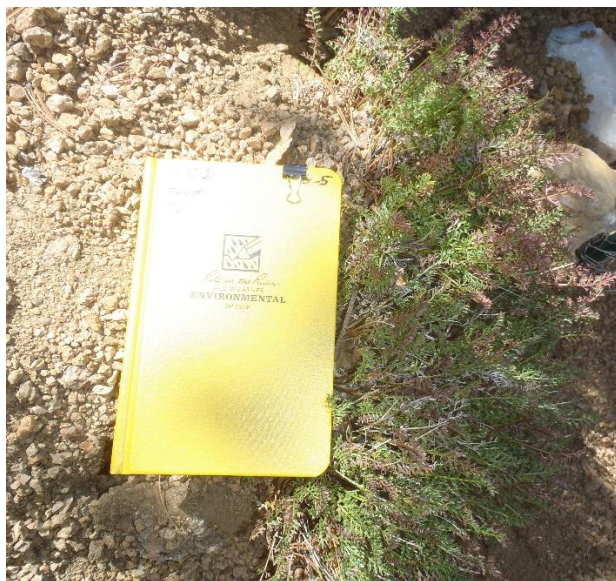


Photo 5a. "Mountain Parsley" on site.



Photo 5b. Mountain Parsley from swcoloradowildflowers.com.

PHOTOGRAPHS (cont.)

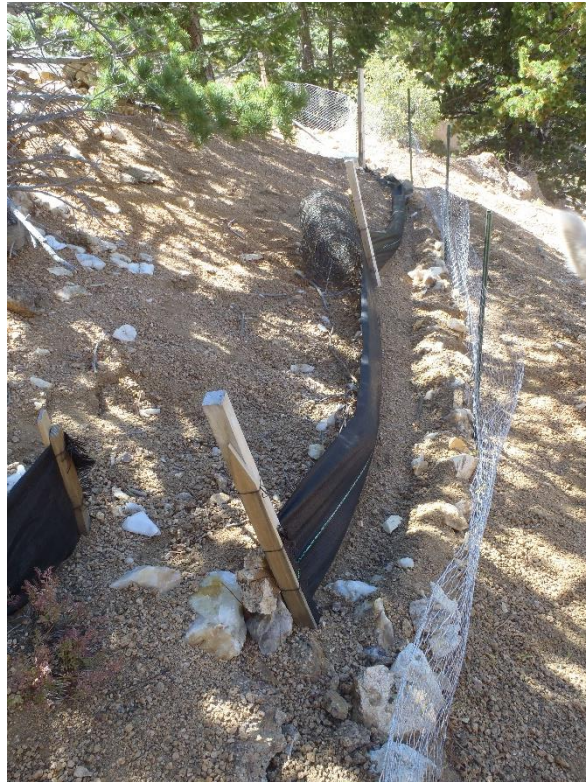


Photo 6. BMPs (silt fence) with chicken wire to catch rockfall.



Photo 7. Permit sign.

PHOTOGRAPHS (cont.)



Photo 8. Typical permit boundary marker.

Inspection Contact Address

Jean Marie Cowman
1065 Woodland Ave #1
Woodland Park, CO 80863

Enclosure

EC: DRMS file
Jeff Hovermale, USFS

M-2013-052 2017 Post Inspection Map

Satellite Imagery from 6/9/2017
GPS data collected 9/21/2017

Legend

- Boundary Corner
- Construction Fence
- M-13-52 Approx. Disturbed Area
- M-13-52 GPS Derived Permit Boundary

