




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

The Division of Reclamation, Mining and Safety 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: Phoenix Mine	MINE/PROSPECTING ID#: M-1982-075	MINERAL: Gold and silver	COUNTY: Clear Creek
INSPECTION TYPE: Monitoring	WEATHER: Clear	INSP. DATE: June 15, 2023	INSP. TIME: 10:00
OPERATOR: Mosch Exploration & Mining, LLC	OPERATOR REPRESENTATIVE: David Mosch	TYPE OF OPERATION: 110(2) - Hard Rock Limited Impact	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Partial Bond	BOND AMOUNT: \$8,750.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
INSPECTOR(S): Peter Hays	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: June 26, 2023	

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

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

OBSERVATIONS

The Phoenix Mine was inspected by Peter Hays with the Division of Reclamation, Mining and Safety (Division/DRMS) as part of the Division's monitoring inspection program. The site was previously inspected by the Division on September 11, 2020. Mr. David Mosch with Mosch Exploration & Mining, LLC was present during the inspection.

The Phoenix Mine is located 2 miles west of Idaho Springs, CO in Clear Creek County. The site is a 110(2) Hard Rock Limited Impact operation. The permit boundary is composed of two (2) polygons for a total permit area of 0.44 acres. The approved post-mining land use is recreation. The Phoenix Mine is an underground mine. The primary commodities mined are gold and silver. In addition, the Operator runs a tourist business which takes people through portions of the underground mine. A tourist mine permit is issued for the site by the Mine Safety and Training Division. The tourist business accounts for the primary activity at site. Tours were being conducted at the time of the inspection.

The surface facilities for the mine are situated west of Trail Ridge Road and include a mill building and several equipment storage areas. The 2023 Annual Report states the site was last active on September 15, 2019 and the site operates less than 180 days per year. Based on discussions with the Operator, the mine and mill have not been active since the early 1990's.

The Phoenix Mine operates under a 110(2) Hard Rock Limit Impact Reclamation Permit. During a previous inspection, the Operator informed the Division the ore within the Phoenix Mine contains sulfide minerals and has the potential to generate acid.

Pursuant to Rule 1.1(20), a Designated Mining Operation (DMO) is a mining operation at which:

- a) designated chemicals used in metallurgical processing are present on-site; or
- b) toxic or acid-forming materials will be exposed or disturbed as a result of the mining operations; or
- c) acid mine drainage occurs or has the potential to occur due to mining or reclamation activities.

The implementation of the Hard Rock Rules pertaining to DMO's did not take effect until after the Reclamation Permit for the Phoenix Mine was issued. Therefore, the Division did not account for the potential use of designated chemicals at the mill or the potential of the ore to be acid-generating.

As required by Rule 7.1.4, all DMO Operators shall submit to the Office an Environmental Protection Plan (EPP) which addresses the protection of human health, property or the environment in conformance with the duties of Operators as prescribed by the Act and Rules. Based on the conversation with the Operator and knowledge of the composition of ore deposits in this mining district, the Division has reason to believe the Phoenix Mine meets the definition of a DMO. Any determination of DMO status will follow the process outlined in Rule 7.2. In order to make a determination, the Operator will be required to perform a geochemical evaluation of any material that will be exposed by mining, placed in on-site solution containment systems or facilities, stockpiled or disposed of on the affected land that has the potential to cause acid mine drainage or to release designated chemicals or toxic or acid-forming materials. The Operator will be required to perform an acid base accounting (ABA) analysis to calculate the net acid-generating potential of on-site materials. Prior to performing an ABA analysis, the Division will require the Operator to submit a sampling plan, as a Technical Revision, which ensures the collected samples are representative of the diverse lithology, mineralogy and ore grade of all material that is subject to the provisions of Rule 6.4.21(14).

The sampling plan shall specify the following: a) Total number of samples to be collected, b) Locations of collected samples, c) Sample collection methodology, d) Analytical method to be used for acid-base accounting test and e) The accredited laboratory use to analyze samples

The lack of detail in the Mining Plan in regards to the acid-generating potential of the mined material was cited as a problem in 2016. In response to the problem, the Operator agreed to complete final reclamation of the site by June 1, 2017. The final reclamation has not been completed by the Operator to date. During this and the previous inspections, the Operator stated they intend to rehabilitate the mine and mill facilities to operate the site to add to the tourism aspects of the site. The Operator is aware of the requirement to submit and obtain approval of a 110(d) Reclamation Permit prior to conducting mining and/or milling activities at the site.

The Division holds a financial warranty in the amount of \$4,475.00. The financial warranty amount will be evaluated during the permitting process to convert the site to a DMO operation. The mine sign and boundary markers were observed as required by Rule 3.1.12.

The inspection focused on the surface facilities at the site. The underground portions of the mine were not inspected by the Division. All mine entrances are secured with steel doors with locks. The mill building houses a jaw crusher, a ball mill, a bank of float cells and a shaker table. According to the Operator, the mill building has not been operational for decades. The bank of float cells were not hooked up to the milling circuit. The mill would require some additional work to be fully functional, which the Operator intends to perform to operate the mill. The milling process currently does not use chemicals in metal recovery and relies on gravity concentration. The Division found no evidence of chemicals being stored or used in the mill. A variety of spare parts and tools are stored in the mill building. The Operator stated they intend to clean up the mill building as time allows. The upper level of the mill is accessed by way of a cat-walk which connects to the hillside above the mill building. The upper level of the mill building contains an office area and the jaw crusher. The current Mining Plan does not contain any details about how the mill will be operated. The pending conversion to a DMO operation must include a complete explanation of all processing facilities, including the mill, as part of an updated Mining Plan.

Photographs taken during the inspection are attached. If you need additional information or have any questions, please contact me at the Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at 303.866.3567 x 8124, or by email at peter.hays@state.co.us.

Inspection Contact Address

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Ec: Jared Ebert, DRMS

PHOTOGRAPHS



Phoenix Mine sign



View from the southeast corner of the southern permit polygon looking northwest



View from the northeast corner of the southern permit polygon looking southwest



View of the mill building in the northern permit polygon



View of the mill building in the northern permit polygon