




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: Cross Gold Mine	MINE/PROSPECTING ID#: M-1977-410	MINERAL: Gold, copper, silver,	COUNTY: Boulder
INSPECTION TYPE: Monitoring	INSPECTOR(S): Patrick Lennberg	INSP. DATE: June 3, 2022	INSP. TIME: 09:30
OPERATOR: Grand Island Resources LLC	OPERATOR REPRESENTATIVE: Richard Mittasch, Sergio Rivera	TYPE OF OPERATION: 110(2) - Hard Rock Limited Impact	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$528,653.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: June 9, 2022

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>N</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</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>Y</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>Y</u>	(ST) STIPULATIONS----- <u>Y</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 Cross Gold Mine was inspected by Patrick Lennberg with the Division of Reclamation, Mining and Safety (Division/DRMS). The inspection was completed as part of the Division's increased inspection frequency, the site is to be inspected on a quarterly basis, for the site. The site was previously inspected by the Division on January 11, 2022 during first quarter inspection of 2022. Richard Mittasch and Sergio Rivera representing Grand Island Resources, LLC (GIR), the permittee/operator, accompanied me during the inspection. The weather was clear.

The Cross Gold Mine is a 110(2) underground mine operation permitted for 9.9 acres for the mining of gold, silver, and other minerals. The permit area includes two discharging mine openings: the Cross Mine portal (at the Cross Mine) and the Idaho Tunnel portal (at the Caribou Mine). Discharge from these mines is directed to a series of plastic-lined ponds prior to being treated and discharged into Coon Track Creek at the permitted discharge point (CO0032751). The mine is located on land owned by the permittee. The site is located approximately 4 miles northwest of Nederland, CO in Boulder County, at an elevation of approximately 9,760 feet. Access to the site is off of Caribou Road. A separate entrance exists for each of the two mines at the site, the Cross Mine (to the south) and the Caribou Mine (to the north). The approved post-mining land use is a combination of forestry and residential.

Since the last inspection Amendment 2 (AM-2) was approved and issued, which increased the permit area by 1.04 acres for a total permit area of 9.99 acres, including the addition of the Potosi Shaft and the Caribou 300 Level Portal. It also revised the mining and reclamation plans and maps to address the addition of a new internal haul road between the Cross and the Caribou Mines, and updated ground support and reclamation plan for the Idaho Tunnel Portal at the Caribou Mine. Finally, Technical Revision 10 (TR-10) was approved in late April 2022. TR-10 modified the water management and treatment program and provide a surface water and groundwater monitoring program (in accordance with corrective action #1 of the Board Order issued for Violation No. MV-2021-017). Currently, the site is under a Cease and Desist Order that prohibits any further activities underground, except those activities approved by the Division, in writing, as necessary to comply with the conditions of the Order.

The site was not active at the time of inspection except activities related to the water treatment system. The inspection did observe the approved surface water, groundwater and effluent sampling locations associated with the approval of TR-10. The operator began collecting monthly samples in accordance with TR-10 in May to quantify baseline conditions at the site and will submit the first of five quarterly reports in August 2022.

Also observed were some road maintenance areas where imported material was placed. The imported material was hauled to the site via dump trucks and the increased in truck traffic was the subject of a brief public inquiry with the Division. One particular road maintenance item was a stretch of road along the southern access road that was usually submerged during periods of runoff. The road was upgraded to get rid of the submerge area, promote proper drainage and enable traffic to pass without getting stuck in the mud.

The Division observed the water treatment system which has been operating on site since December of 2021. The system is located inside an insulated Conex box located at the Cross Mine, and includes both filtration and heavy-metal polishing components. Discharge from the Caribou Mine is being routed via pipeline to Pond 1, after passing through Ponds 3a, 3b, and 3c located at the portal, where it combines with discharge from the

Cross Mine. Water levels in the pond are being maintained via a pump and pressure transducer system. Water from Pond 1 is pumped via pipeline to the treatment system inside the Conex box. Water entering the treatment system goes through a series of four bag filters (5-micron) before entering a vessel with adsorptive materials (MetSorb). A pipeline then routes the treated water from the Conex box to the existing monitoring shed near Pond 2, where it joins with the existing discharge pipeline to Coon Track Creek, the permitted discharge point (CO0032751). Pond 2 is not used to manage mine water under the current treatment regime. In mid-April GIR requested to install a pipeline that would convey water from the Caribou Mine before it enters Pond 1 to the Juliet Raise in the Cross Mine via a t-junction valve. The pipeline was needed to manage high flow runoff conditions. The Division approved the request and the pipeline was noted during the inspection.

GIR has been monitoring the outfall in accordance with their approved WQCD permit. In March there was a problem that was encountered during sampling and caused an exceedance for lead. GIR reported the problem was related to sampling procedures and has been corrected for future sampling. Since that time they have been in compliance.

During the inspection four items were discussed that the operator would like to begin this year. They are as follows;

1. Where the water treatment conex box is located the operator would like to expand the parking lot to alleviate a congested area and make the area safer for equipment and personnel. Additionally, expanding the parking area would allow for better stabilization of the elevated discharge pipeline and prevent snow sloughing into the pipeline foundations resulting in damage of the pipeline.
2. Fill in a depression, old vent raise(?), to prevent runoff following the preferential pathway and draining into the workings creating a water management issue. This particular item was requested to be completed earlier this year but it was denied by the Division. In part, the denial was because the requested additional information was not provided and it is unclear if reclamation of the vent is already approved in AM-2 and if the new plan deviates from the approved plan.
3. Remove and replace the snow shed that is located at the Cross Mine Portal. The current snow shed needs to be painted with fire proof paint in order to comply with MSHA standards and the wooden timbers that make up the shed are 50+ years old and may need replacing to maintain structural integrity. The operator would be proposing to replace the current snow shed with modular conex boxes that meet MSHA standards.
4. Begin work at the Caribou Mine (Idaho Tunnel) entrance to reclaim the hillside to 2H:1V or match the existing slope contours by installing a shed over the portal entry that would also allow for the ability to control air-flow in and out of the mine entrance. Being able to control air flow into the mine will help eliminate ice build-up in the mine making it a safer work environment. Work in the area would ensure long-term stability and water management of the mine effluent to be routed to a discharge shed before entering Pond 3a where parameters would be continually monitored. The shed will also reclaim the area to a more aesthetically pleasing condition for the public passing along the adjacent Caribou Road.

The Division recommends the operator discuss the each item individually, outside of an inspection, to better determine what permitting actions, if any, need to occur for the items to take place.

With the approval of TR-10 the Division issued Surety Increase 5 (SI-5) for the site an increase of \$18,098. The increase in bond amount is due June 27, 2022.

Photographs taken during the inspection are attached.

Please contact Patrick Lennberg (303)866-3567 ext. 8114 or email at patrick.lennberg@state.co.us if you have any questions regarding this report.

Inspection Contact Address

Richard Mittasch, Sergio Rivera
Grand Island Resources LLC
4415 Caribou Rd
Nederland, CO 80466

Attachment: GoogleEarth Map of Permit Area

cc: Jared Ebert, DRMS

ec: Richard Mittasch, GIR, LLC, rmittasch@nedmining.com

PHOTOGRAPHS



Photo 1: Upgradient surface water sampling location, adjacent to Caribou Road



Photo 2: Looking upstream at the upgradient surface water sampling location



Photo 3: Looking down to the Caribou Mine (Idaho Tunnel) entrance from Caribou Road. Ponds 3a, b and c center of picture



Photo 4: Road repair, yellow outline, along the southern access road



Photo 5: Downgradient surface water sampling location



Photo 6: Elevated pipeline that goes from the water treatment to the discharge shed then to the WQCD discharge point to Coon Track Creek



Photo 7: Elevated pipeline, water treatment conex to the right of photo



Photo 8: Permitted discharge point to Coon Track is at the outfall from the white PVC pipe



Photo 9: Pond 2



Photo 10: Pond 1 showing the outfall from Pond 3c, the T-fitting directs flow to Juliet Raise during high runoff



Photo 11: Cross Well, groundwater sampling location, near the water treatment conex



Photo 12: Cabin Well, groundwater sampling location, near the southern permit boundary



Photo 13: Caribou Well, groundwater sampling location, near the main mine offices



Photo 14: Caribou Mine (Idaho Tunnel) entrance



Photo 15: Mine effluent coming from the Caribou Mine



Photo 16: Pond 3a, first settling pond receiving effluent from the Caribou Mine



Photo 17: Aerial image of the main mine area showing the ponds and other features.