

Dear Members of the Mined Land Reclamation Board,

We are writing to object, on multiple grounds which are detailed below, to the approval of the application for the Caribou-Cross Gold Mine, operated by Grand Island Resources LLC (GIR).

Regarding the Sufficiency of Bond, Company Management, and Compliance Issues

While GIR claims in press releases to operate in an environmentally friendly way, yet their very short and vague proposal for addressing wildlife and environmental concerns demonstrates an inability to understand the full potential impacts of their proposed mining activity and especially the tailings and environmental damage they would cause.

The GIR operation exhibited repeated violations, and other legal and compliance issues, leading up to this application, which demonstrate a considerable risk of re-offense, and suggests the company has a blatant disregard for the rule of law and the importance of the environmental protections. It also demonstrates a lack of transparency.

The bond proposed appears inadequate to cover the full cost of reclaiming a mine of this scale, particularly addressing chemical residue cleanup, and perpetual water treatment needs. Most mines all end and close due to insufficient profits. It is a convenient way to make money while you can and leave the community and county to hold the bag for all clean-up that will be required.

GIR's management practices seem questionable, and their safety and emergency planning are lacking in detail. This will pose incredible risks to the health and safety of their workers. Regarding Environmental & Public Health Concerns Generally. Coon Track Creek, Caribou Creek (which is included in the permit, yet claimed to not be at risk of any ill effect), and the surrounding watershed are multi-use recreation areas that draw activity throughout the year. The application mentions no impact to this area that is included in their application. These areas feed into the water supply for the City of Boulder, but also into habitats, soils and backyards before accumulating in Barker Reservoir. The main mine site is 2.7 miles, as the crow flies, from Nederland Elementary School. Between the mine and Nederland are several dozens of homes, watered by natural wells and springs. This proposal and large expansion of activity leaves many questions left unanswered and could

have significant detrimental impacts on the health of the environment and its inhabitants within the entire watershed downstream of the activity.

It is unclear on which areas of land different activities will take place, since the application available to the public does not include the maps for Exhibit C. If GIR is allowed to prospect, or does prospect due to lack of oversight manpower, in the 200+ acre area requested in the application, there is potential for significant detrimental impacts to not just Coon Track Creek, but also Caribou Creek and its watershed.

The application does not mention conflicts with recreational activity. Increasing mine traffic and an increased permit boundary may lead to conflict with recreators and the natural environment. This is a narrow mountain road that requires 4x4 access, and there have been several accidents and rollovers due to the steep grade and narrow width that make two-way traffic difficult at times. This affects not only the health and safety of the community, but their ability to earn a living if the road were to close for any length of time.

The application does not mention any conflicts with wildlife. It does not mention the potential for large spills to affect wildlife and further does not give consideration for other factors such as explosive activity and how it disturbs wildlife, increased truck traffic and construction noise pollution that will disturb wildlife, nor how they handle wildlife interactions with GIR employees/contractors. It is unclear if the fencing surrounding the mine site is adequate to protect wildlife from entering the area.

Regarding The Style Of Mining Proposed

This can forever alter the landscape, including but not limited to, erosion, sinkholes, soil contamination, and groundwater contamination. All of these have already happened at GIR. The method can cause land subsidence, leading to structural damage in nearby areas. The method requires large amounts of water, potentially depleting local water resources. The method can lead to long-term contamination by waste materials if not properly managed, affecting the watershed and natural inhabitants for decades or more. The method also poses health risks to workers, including exposure to hazardous substances and physical injuries. The Idaho tunnel collapse in 2019 is a testament to how quickly and unexpectedly disaster can occur at the Caribou and Cross Mine site.

While the application does mention elk, moose and other wildlife in the area, it is an

incomprehensive list sourced from government data, not actual observation and not from any environmental assessment), and it does not mention any provisions regarding calving season or other life cycle events. The application states they will not seek CPW recommendations, though it is highly encouraged.

The application only specifies one potential hazard to surface water, which is the discharge permit regulated by CDPHE. The applicant claims there is no risk of acid drainage from waste rock. It is rare for mining activity to not produce runoff, and to not affect other waters than the discharge flow. Thereby, the application is incomplete.

The environmental protection plan does not outline specific measures for protection (Especially regarding potential impacts on endangered species like the wolverine, Canada lynx or Colorado cutthroat trout) such as habitat restoration, buffer zones for operations, and long-term monitoring. I have personally witnessed both Canada lynx and wolverine around Caribou Road and FSR 505. Not evaluating these factors before approving the permit risks irreversible harm to local biodiversity.

The application mentions a paste backfill method for mine clean-up. In other areas, these encapsulated pockets of mine waste have leached into groundwater over time. Many homes are on well water within 3 miles of the mine, but the application does not mention a potential impact to these groundwater sources. The application states there has not been any site-specific study of the aquifer that feeds the area.

Understanding the full impact to the watershed would necessitate a mapping of the proposed underground and surface activity. Even then, rocks can shift and crack in surprising ways, as evidenced by the rock work in Boulder Canyon several years ago, in which much more of the rock fractured than anticipated by the professional demolition company working on Hwy 119. In many areas where mines have filled cavities with a waste slurry, the cavities open as fissures form in shifting rock, and toxic waste leaches into water sources. Regarding the mill proposed. The application states the activity will necessitate the inclusion of the milling activity, which could impact air quality, water quality, and soil quality. However, no such plans are provided here, and applicant is vague about any impacts that operation could have on the surrounding environment, especially if any endangered species, such as cutthroat trout, are found in Coon Track Creek. Milling activity could lead to even greater environmental concerns than the mine operations, with even more chemicals or other hazards present on site. When an application for this mill is received by the Division, I would ask that a public notice and public comment period be opened. The application for a mill should also include an environmental assessment,

completed by a professional third party, and should include recommendations from CPW and other relevant entities.

Regarding Reclamation Plans

The plans provided are insufficient for exploring the full range of potential detrimental impacts to the environment and the public. The aquifer referred to in the application that would potentially be impacted, “has a refill rate of 1-500 years”. This wide range indicates GIR lack of interest in preserving the aquifer. Mining requirements include that the applicant must thoroughly understand the waters they may impact and return the land to a natural state after activity ceases. The application also states the reclamation plan is for within 5 years, then purports that it will only take 3 years. This is because the plans are very basic in nature. They claim no need for remediation of any site, simply grade, cover with topsoil, and plant. This is perhaps sufficient rehabilitation of land for a road, rock pile, or other areas, but this does not feel sufficient for closing mineshafts.

The vegetation plans are lacking in biodiversity. The plan states the operator will purchase a bulk grass seed mix and add in some yarrow. This is a good start to a vegetation plan but is not by any means sufficient to reclaim almost 10 acres (or more if activities occur on the 200+ acres requested).

Surface water diversion methods are to be left in place to deteriorate, including buried water lines that discharge from the mine. This does not seem sufficient to restore the land to a natural state.

Rock shifts and moves over time, meaning closed entryways can re-open, as well as new cracks can open in areas expected to be contained. The paste backfill method mentioned could be a huge risk to groundwater if rock were to shift and dislodge any toxic material into nearby water sources. Regarding this “pilot project” operation. Furthermore, A GIR representative stated, when referencing a new ore processing facility, a septic system, and a road to connect the two mines “that the mines were to be GIR’s “pilot project,” to serve as a template for their future business operations.” If any approval were to occur, it should be only under strict and frequent monitoring for impacts to the environment!

They are currently testing the efficacy of their wastewater treatment method. The plan mentions “periodic” testing of water and wastewater, yet it is unclear how often it will occur. Testing should occur whenever there is an out-of-ordinary incident, and at least weekly if not more frequently to ensure any hazards are identified and

remediated as quickly as possible. If they cannot guarantee reasonably clean water discharge, operations should not be allowed to continue. Further, testing should occur on multiple places on the property to ensure that no other contamination is occurring, such as oil leaking from parked equipment or ore storage containers.

The rock currently on-site is non-acidic, however it does not seem the plan includes any methods for further monitoring/testing of ore to determine its acidic nature. Given the long-standing history of the environmental hazards produced by stoping in other areas of Colorado, operations should not be allowed to continue without stringent monitoring efforts to ensure all water coming from mine activity (including but not limited to waste piles, settling tanks, container facilities, sheds and buildings, parking lots, water flowing from mineshafts) is reasonably clean.

They are currently testing their paste backfill method, which seems to be crucial to some of their reclamation plans to stabilize and fill underground cavities. If they cannot guarantee their reclamation and backfill efforts are sufficient, they should not be allowed to continue mining activity.

They give no clear explanation for the reason for the expansion of permit activity and “affected land,” and purport future constructed capabilities as part of the plan, without any detailed plans for such facilities (the mill and wastewater facilities). If such facilities are so crucial to the mining plan, these should be included in the application. If the applicant cannot acquire the funding to put up a sufficient bond for mining without these facilities, these should be included in application.

Before The Application Is Further Considered

The applicant obtains a new letter from the EPA and Army Corp of Engineers assessing the expanded area and re-assuring no further permits or approvals from their offices are necessary, given that the permit area has significantly expanded to include Caribou Creek and its wetland watershed. (The letter provided in application is dated 2021)

After a hearing on this application, open another public comment period to ensure a robust and transparent communication with the public.

A public notice be posted to all homes/homeowners with well water along Caribou Rd. between the mine discharge and Barker Reservoir of the application.

The public be made aware of a more specific map detailing mining, milling, road, and other activities.

The public be made aware of any potential impacts to recreational access on CR505 and it's connected trails.

The applicant be made to publish a statement that outlines the significant changes to their operations in the local news outlets. The public notice printed did not include any information about the expanded acreage nor the inclusion of a mill.

The applicant's Reclamation plan should be revised to include alternative shaft stabilization methods that don't include pumping waste rock into the ground, soil remediation and especially clean-up of the ponds, and a 20-50 year plan of monitoring to ensure contamination does not occur post-closure.

If Approved To Move Forward

More stringent third-party monitoring of wastewater into Coon Track Creek, at the burden of the applicant, be continued until the 'pilot project' can demonstrate it is not creating a significant hazard.

A more thorough, and site-specific, third-party environmental assessment be provided by the applicant, including potential impacts to - specifically the wetlands along Caribou Creek, and other areas designated in the application - that are not monitored under a discharge permit.

A more thorough third-party assessment of the hydrology of the area proposed for mining activity be provided by the applicant that shows all potential entry points into the aquifer that feeds the homes along the Coon Track Creek watershed.

Area of activity reduced to little more than the fenced areas, limiting activity to the actual 9-10 acres impacted, rather than the over 200+ requested.

The Wastewater Treatment Facility plans be due ASAP for the site, and before any commencement of increased activity, planning or approval for increased production, and planning or approval for a mill site.

The Mill Facility application, when submitted by Operator, should be noticed to the public, and an opportunity for comment and objection be available before a decision is made to permit such a facility.