

January 29, 2023

Kristin School
757 Klamath Ave.
Nyssa, OR 97913

To whom it may concern:

As Nyssa, Oregon resident, I am writing on behalf of my family and myself in opposition to the Grassy Mountain gold mine. Our farm, near Adrian, has stunning views of the Owyhees and the Lake Owyhee canyon and I am very concerned about the environmental impacts a cyanide-based gold mine will have on soil, water and air quality, not to mention the aesthetic degradation this mine will cause with development of an industrial processing plant, new power lines into the area, lights required to operate 24/7, and a large, permanent, toxic mine tailings site to be located on BLM ground. (And if Paramount Gold's neighboring Frost project is approved, this will prolong and exacerbate the environmental impacts since it will use Grassy's processing plant and tailings pile.)

No government organization or Paramount Gold can predict the unseen, incalculable and subtle environmental effects this mine will have, and nobody can accurately determine where compromised groundwater will flow and which bodies of water will be affected. The proximity of the operation to the headwaters of Lake Owyhee; blasting noise (disruptive to wildlife, including arthropods which are very sensitive to vibrations, people recreating in the area, and neighboring farms—one of which is only five miles from the site); 24/7 light pollution (the Owyhees have some of the darkest skies in the lower 48, and lights can negatively affect pollinator breeding cycles); dust; potential spills of chemicals hauled into and on-site, including diesel, herbicides and any other chemicals required for the operation; impacts to aquatic life and all fauna and flora (including sagebrush, which is very difficult to re-establish, and endangered Owyhee clover); and an enormous, permanent, toxic tailings dump pose risks far too great for the profits of a few.

The environmental permitting process needs to include the entire Grassy Mountain permit area, not just the processing site, in particular in regard to Greater sage-grouse that rely on sagebrush for food, cover and roosting. Since their life span is longer than most birds, and since they lay fewer eggs than other birds, they have longer recovery times from habitat damage. Factors such as mining and development have reduced the greater sage-grouse's habitat to half of its historic range and caused the bird's numbers to decline by more than 90 percent. Per the BLM, (https://www.blm.gov/sites/blm.gov/files/greater_sage-grouse_rmp_amendment.pdf), listed below are some of the major threats to sage grouse:

The major threats to GRSG or GRSG habitat on BLM-administered lands in Oregon are the following:

- Hard rock mining—fragmentation of GRSG habitat due to mineral exploration and development
- Fluid mineral development—fragmentation of GRSG habitat due to mineral exploration and development
- Infrastructure—fragmentation of GRSG habitat due to development, such as roads, pipelines, and communication towers
- Sagebrush removal—fragmentation of GRSG habitat from BLM management activities

In addition, endangered Owyhee Clover

(<https://inr.oregonstate.edu/sites/inr.oregonstate.edu/files/trifolium-owyheense-state.pdf>),

endemic to the Owyhees, is affected by the following:

- Invasive weeds can displace Owyhee clover. Ground disturbance by livestock, spraying and seeding associated with rangeland improvements, road construction, and off-road vehicle traffic can also harm this species. Potential habitat loss from development of mining claims is an additional threat.

Since drilling has been going on in the Grassy Mountain area for several years, numbers of sage grouse, burrowing owls, pygmy rabbits and other species of concern may not be in this area in great numbers due to existing noise and habitat disturbance. Sagebrush is considered a keystone species that not only supports sage grouse, but Mule deer, Pronghorn antelope, Ferruginous hawks, Loggerhead Shrike songbirds, Sagebrush sparrows, Brewer's sparrows, northern sagebrush lizards and ground squirrels. Sagebrush is also considered a nurse plant for other species of plants such as Indian Paintbrush.

If Grassy Mountain is approved it opens the door for approval of Paramount's Frost project, and it's bound to open the door for an untold number of chemical-mining permits from other companies. Per total size of the Grassy Mountain project as of 11/29/2022:

The Grassy Mountain Gold Project consists of approximately 8,200 acres located on private and BLM land in Malheur County, Oregon. The Grassy Mountain Gold Project contains a gold-silver deposit (100% located on private land) for which results of a positive Feasibility Study have been released and key permitting milestones accomplished.

Frost is comprised of 84 unpatented lode claims covering approximately 1,730 acres located 12 miles southwest of the Company's proposed high-grade, underground Grassy Mountain gold mine in Malheur County, Oregon ("Grassy"). An initial drill program is ongoing.

Per the mine tailings, from the following 2019 Oregon DEQ memorandum (https://www.oregon.gov/deq/EQCdocs/ItemK_CalicoMineJan2019.pdf):

- The operations would require a disposal facility for up to 3.2 million tons of tailings over approximately eight years of mining. These tailings would include heavy metals and some level of residual weak acid dissociable cyanide. Oregon EQC meeting, **3.2 million tons of tailings over approximately 8 years of mining**. These would include heavy metals and some level of residual weak acid dissociable cyanide.
- In addition to the mine, mill, processing plant, and tailings disposal facility, the project includes many accessory facilities including waste rock storage areas, **a small industrial solid waste landfill**, offices, showers, water storage, and lavatories.
- The remaining tailings and process water are then pumped to an engineered tailings storage facility (“TSF”) for final disposal. The TSF will be an approximately **102-acre impoundment**, which will be located entirely on federal land.

What is Paramount Gold’s current estimate of mine tailings? Since the tailings will remain for perpetuity, what will be the long-term effects of these toxic tailings?

What will the small industrial solid waste landfill contain? Leaching of chemicals (oil, grease, solvents, diesel, gas, herbicides, pesticides, etc. are a concern) into the air, soil, and ultimately groundwater is concerning. Wastewater from the truck wash, sewer waste and gray water are other concerns.

Per the following document,

<https://www.malheurco.org/wp-content/uploads/Departments/Planning/Documents/Calico/Grassy-Mountain-App.pdf>:

1. Noise, dust, traffic and visual screening. RESPONSE: Project construction **will** create a substantial amount of noise and minor dust due to blasting for the mine portal, noise from construction machinery, and dust created by both. However, the nearest population center, Vale, is approximately 22 miles to the north, and the nearest cultivated farmland, outside of Owhyee, is approximately 10 miles to the east. A single small farm is located approximately **five miles** away, on the other side of Grassy Mountain. These substantial distances will prevent nuisances to occupied properties caused by noise and dust.

Understandably the permit process is very rigorous and dust is accounted for during construction and operation; however, we have very high winds in this area, particularly during our long, hot summers (last year was the hottest summer on record), so it’s inevitable a certain amount of dust, to include offgassing of chemical fumes, particularly after the operation ceases, will pose a health hazard due to residual heavy metals whether from the mine tailings, evaporating ponds or the processing area itself, even after dismantling.

Per water use:

1. How many billions of gallons of water will the mine use over the entire course of the operation?
2. How many wells are permitted over the life of the operation?

<https://www.malheurco.org/wp-content/uploads/Departments/Planning/Documents/Calico/Grassy-Mountain-App.pdf>:

4.6 Water Rights - Paramount holds a water right granted by the Oregon Water Resources Department to Calico Resources USA Corp. The water right was issued on April 5, 1990 through State of Oregon Water Rights Application G-11847 and Permit G-10994. Use is limited to not more than 2.0 cubic feet per second (**897.6 gallons per minute**) measured at the well.

16.6.3 Dewatering (lowering the shaft water table) is planned to a target elevation of approximately 3,100 feet, from approximately 500 to 700 feet beneath the surface, as per the expected hydrologic conditions (Section 16.3)

3. What impact will water drawdown have on neighboring watersheds?

Per the application permit: **'Post-mining ground water quality** will be monitored according to the requirements established by the ODEQ upon approval of the Chemical Mining Permit the goal of demonstrating the site poses no potential to degrade waters of the state through the successful implementation of the detailed Final Plan for Permanent Closure. The Reclamation Cost Estimate will contain costs **for five years of ground water monitoring.**'

The tailings will remain for perpetuity, so only five years of ground monitoring seems insufficient. What areas of water will be tested? Will this include the tailings site which will be on BLM ground and other areas of water in proximity to the site?

Per Paramount documentation regarding tailings: An underdrain collection system consisting of perforated piping will be located within the drainage layer to promote **drainage** of the tailings. The upstream slope of the embankments will utilize the same composite lining system, but without the overlying piping, drainage and filter layers. A **reclaim pond**, located north of the TSF, will capture all process solution collected in the underdrain collection system.

1. How toxic will the tailings drainage be, and how will wildlife be prevented from accessing the reclaim pond?

Per this link, http://info.malheurco.org/gis/Maps/MalheurCounty_Summit%20&%20Reservoir.pd, there are numerous reservoirs in the Grassy Mountain area, including #592 on the map, Grassy Mountain reservoir. All these bodies of water have the potential to be contaminated by heavy metals and this affects all species, in particular insects, amphibians and all aquatic life these bodies of water support. (And the map shows how relatively close the mining operation is to Adrian and numerous residents and farms in the area, including our home on Klamath Ave.)

Heavy metals are also a concern due to potential contamination of soil, surface and ground water from leaching and into the air from evaporation. Naturally-occurring arsenic and mercury will also be disturbed during the process.

Per cyanide, when it's trucked into the area, what if there's an accident and a consequent spill? Per the following document:

<https://www.malheurco.org/wp-content/uploads/Departments/Planning/Documents/Calico/Grassy-Mountain-App.pdf>:

- After construction is completed, vehicle trips will consist of... approximately three to five material and chemical trucks per week,
- A single double-walled steel tank will be used for diesel storage. There will be one 8,200-gallon tank for mobile mining equipment. The fuel will be used by both underground and surface mobile equipment. The surface equipment will primarily be fuelled at a fuel island near the storage tanks. The underground-mining equipment includes a fuel truck that will be used to fuel underground equipment as required
- 20.7 Mine Closure A closure plan has not yet been completed and there are no current estimates for the reclamation bond. Closure costs are estimated in Section 21.3.1. The anticipated closure scenario would include plugging the mine portal, while for the tailings closure the approach would consist of fluid management through evaporation, covering the tailings with an operational layer of waste rock or approved closure material, a synthetic liner and growth media, and then revegetation. **The process of managing the solutions from Exhibit 1 Page 105 of 107 the tailings drain-down would require multiple years. Residual tailings drainage would likely be managed with evaporation ponds/cells.** The waste-rock dump would be moved to the tailings facility, although no waste rock is envisioned to exist at the end of mining operations in this PFS. Other facilities would be regraded, covered with growth media, and revegetated. **The closure scenario for the tailings would likely result in conditions that require long-term management of the evaporation ponds/cells and associated ancillary facilities at the site**, which will require a financial instrument to cover those cost into the future.

Will wildfires near the tailings site create toxic fumes?

Past Grassy Mountain Wildfires:

8/7/2013 - https://www.blm.gov/or/districts/vale/plans/files/20130823_GrassyMtnESRDNA.pdf:

The Grassy Mountain fire was started on 8/07/2013 by lightning and was contained on 8/09/2012 after burning a total of 15,721 acres. The location of the fire is identified on Map 1.

7/23/2019 - Vale – Thunderstorms lit up the local skies Monday afternoon and continued overnight, sparking six wildfires in the southern part of the county, the Bureau of Land Management said today. The Vale District of the BLM dispatched eight engines as well as aviation resources to the fires this morning. The fires are burning near **Grassy Mountain, Owyhee Dam**, Arock, Antelope Canyon, Corbin Creek south of Rome and Basque Flats.

In closing, introducing extremely toxic cyanide isn't in the best long-term interest of Malheur county residents. And for those of us who have properties we'd like our children to inherit, they deserve to have the same quality of soil, water and air we currently have. (And for the record, the water in the area isn't very clean to begin with, so let's not compromise it further.)

Thank you for your time and consideration of my concerns,

Kristin Schoolr

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JOHNSON Becky * DGMI

From: joanie fauci <joanie4c@yahoo.com>
Sent: Sunday, January 29, 2023 7:43 AM
To: Grassy Mtn. Information * DGMI; Grassy Mtn. Information * DGMI
Cc: Joanie Fauci
Subject: Grassy Mountain Mine comments

Dear Sirs,

Please accept these comments for the current Grassy Mountain Mine application near Vale, Oregon.

It is my understanding that the current proposal involves a cyanide pond. Wouldn't that go against the Oregon Chemical Mining Rules? I do not understand why this is even be considered. No cyanide usage should be allowed anywhere in Oregon, no matter what mitigation they say they will do. We all know accidents happen, especially with mining.

There is also a tailing pond in this proposal. Yes, they plan to encapsulate it (or what ever they're calling it). But they also need to quarry for new rock, more disturbance to the land. What type of bond are they putting up to ensure long term mitigation, into perpetuity. The bonds never seem to be enough, so I ask that the State require 10 times the amount. This bond would cover accidents and the likelihood that the State gets left with the site after the mining company declares bankruptcy. The company should also be required to reclaim all the land they disturb.

There is a requirement for a wildlife protection/mitigation plan. I hope this includes bird species and protection to keep them out of any pond, not just at the end of the project but throughout.

Thank you for your time, please hold them accountable if you approve this project, Joanie Fauci
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