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Organization:

Title:

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Linda Jackson, Forest Supervisor

USDA Forest Service, Payette National Forest

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Dear Linda Jackson,

I am opposed to the reopening and expansion of the Stibnite mining area proposed by Perpetua Resources to extract gold, antimony and tungsten. The extraction of gold at the cost of destruction of any land - uplands, riparian and aquatic habitat - belonging to the people of the United States has never and never will be of any value to the long term sustainable health and prosperity of this nation. Gold required for technology is already available stockpiled enough to last for millennia. Gold extraction for pure profit for a few at the cost of environmental damage is unacceptable. Antimony processed and sold from this ore would never be profitable in today's market and using our perceived / politicized need to be self-sufficient as a nation in our production of strategic elements is unattainable, delusional, and with such insignificant amounts in this deposit not worth the destruction of headwater ecosystems of the South Fork Salmon River.

I am disappointed by the 25 million dollar Critical Minerals Award given under the Department of Defense Title III of the Defense Production Act directly to Perpetua Resources without any public debate and vote, far prior to this company even having received the final approval for this project let alone having even produced a single ounce of profitable and proven necessary antimony ore. Yet I am not surprised, given that approximately 74% of our Department of Defense budget now goes to private contractors. I am 100% behind our support of Ukraine in its defense against Russia but the Department of Defense use of this reason for reopening and expansion of the Stibnite Mine for antimony in production of ammunition is unrealistic and misleading. It is not based on logic according to current global economics of antimony production and use and is more suggestive of political posturing in support of Ukraine's defense and in support of conservative leaning ambitions to resurrect the historic gold mining boom days. I believe the Department of Defense action will in the end simply green-light an unnecessary gold mining operation.

According to the United States Geological Survey Mineral Commodity Summary for antimony in 2021, no marketable antimony was mined in the United States. China produced 60,000 metric tons of antimony and still leads the world in production of antimony by a very wide margin, 55%, making its price, as with cobalt, almost impossible to compete with by any mine within the United States. The United States is the largest importer of China's antimony at 23%, or 13,800 metric tons. In 2021 the United States consumption of antimony was approximately 28,000 metric tons; 36%, or 10,800 metric tons of that was used for metal products, including antimonial lead and ammunition (USGS 2022a). "The most important use of antimony metal is as a hardener in lead for storage batteries" (USGS 2022b). The Stibnite Mine areas strategic reserve of antimony is currently estimated by Perpetua Resources and reported by USGS at a total of 60,000 metric tons (USGS 2022a). This amount represents approximately two years' worth of antimony consumption by the United States, and is as of 2021 China's annual production. Averaged out over Perpetua's Stibnite Mine life expectancy of 15 years this will produce approximately 4000 metric tons of antimony per year, and fulfill about 14% of our current annual consumption needs. In 2021 recycling of antimony from spent lead-acid batteries supplied 15%, or 4100 metric tons, to the domestic annual consumption of antimony (USGS 2022a). If we were to double our current recycling industry of batteries we would be providing as much or more of the antimony needed annually for domestic consumption as what could be provided by the Perpetua Resources mine proposal, and it would be an industry that would last longer than 15 years.

Antimony from the Stibnite Mine deposit will likely be produced at a higher cost than antimony attained from imports and recycling. The United States government under the Department of Defense Critical Minerals Strategic Reserve development strategy via our tax money has already begun and will likely continue to subsidize the extraction of our antimony reserves, thus the gold mining that is integral to it, and in that process the impairment of the South Fork Salmon River headwater ecosystem.

Mining historically has often been about the attainment of wealth by a few at the front and peripheral investment-ends of the industry, as it was with the incorrectly assayed gold Grouse Creek Mine in the Yankee Fork watershed of the upper Salmon River, and now with the knowingly outpriced cobalt Jervois Mine in the Panther Creek watershed, also in the upper Salmon River watershed. Both of these "mines" cleared acres of land of timber and vegetation, removed overburden, filled in wetlands including Pinyon Lake at the Grouse Creek project, built infrastructure, all funded by investments, neither having produced an ounce of profitable ore, and will be unnecessary permanent damaged rehabilitation and water treatment sites.

Although Stibnite has a proven reserve of gold how much will it cost Perpetua Resources to build the infrastructure for this project, follow it through the actual mining phase and then do complete rehabilitation with long term maintenance and water treatment? Is it the gold in the long run that will produce the profit or is it the short term investments, subsidies and temporary offshoot industries along the way under the guise of mining that produce the profit? In other words the value of the gold will have been spent by the time it all comes out of the ground in 15 years. We dig a big hole, pull out gold that is not actually needed because we have enough stockpiled along with an unmarketable token amount of antimony, and then we fill in that hole. Gold mining does not provide long term sustainable industries for future generations. In today's modern world of ever increasing human crowding and its impacts on our environment is this really the type of industry we want to invest in and value? I believe the majority of Americans would say no. I believe strongly that the United States should invest in and rebuild its industries of high quality finished products. In 2021 the United States exported 2511 metric tons of antimony as ore, concentrates, oxide, unwrought, powder, waste and scrap (USGS 2022a), with the largest share sold to Canada at 53%, followed by Mexico at 32% (TrendEconomy 2022). We should keep this antimony

at home and build our own products essential to our infrastructure.

The United States Department of Agriculture, Payette National Forest is currently conducting NEPA analysis on this project while at the same time the United States Department of Defense is giving money directly to this project sending a confusing message by our government to the people of the United States and calling into question the integrity of this analysis.

When I worked as a Biological Science Technician in Fisheries for the USDI BLM Challis Field Office I opposed the land exchange between BLM and the Thompson Creek Mining Company and in questioning our BLM Geologist who was writing the EIS for the expansion and exchange as to the details I found out that in fact that this geologist, working as a government employee, was actually funded by Thompson Creek Mining company itself. I was amazed at this information and was not surprised that he was in support of the exchange. At that same time I knew of a geologist working for the Salmon Challis National Forest who moved to McCall after attaining a job with the Payette National Forest, funded by Midas Gold Corporation (later Perpetua Resources), with her main responsibility to do NEPA on the reopening and expansion of the Stibnite mine area. It would be hard to argue these appointments are unbiased and do not present a conflict of interest, and do not lead to a mistrust of the NEPA process.

The environmental damage expected to occur with this project, carefully detailed in the Payette and Boise National Forest Draft Environmental Impact Statement, are classic of the open pit gold mining history and we have numerous examples of how that will turn out. Among many issues, this project will destroy rehabilitated habitat, expand the disturbance area, impact water quality, fill in yet more wetlands of which historically over half are now estimated by EPA to be destroyed within the United States. It will permanently bury 2 miles the Meadow Creek valley floor with tailings. The Tailings Storage Facility embankment dam crest expected to reach 7080 ft. with a drop of approximately 580 feet on its face to the existing Meadow Creek valley floor, similar to the headwall up Thompson Creek for the Thompson Creek Molybdenum Mine in central Idaho, has the potential to fail in a catastrophic earthquake, or storm event which is ever becoming more probable and violent due to climate change. The low permeability geosynthetic liners and covers which will be used for rehabilitation contain petrochemical-based polymers, i.e. plastics that although are resistant will eventually decompose but remain biologically inert, unable to biodegrade, thus adding to our newly discovered ever growing plastic waste environmental disaster. The use of geosynthetic textiles should no longer be considered in any rehabilitation work.

This project is expected to permanently destroy aquatic, riparian and wetland habitat essential to ESA listed Bull trout, Chinook salmon and Steelhead which is in direct violation of the Endangered Species Act. The people of the Pacific Northwest, the states and Tribes of Idaho, Montana, Washington and Oregon, through billions of mitigation moneys from Bonneville Power Administration Columbia River Hydropower System have been struggling for over 3 decades in efforts to recover our anadromous runs of Chinook salmon and Steelhead trout, and we are losing them. We do not need yet one more action on public land adding to the cumulative impacts already jeopardizing the survival of these fish.

This project is situated in the middle of one of the most profoundly and truly wild areas left untrammled by humans left in the lower 48. Although not within the boundary line of the huge Frank Church River of No Return Wilderness Area, it is, being right on the edge, most definitely within the "Greater Frank Church River of No Return Wilderness Area Ecosystem". An ecosystem as intricately connected and as vital to that wilderness areas' survival as is recognized with the areas surrounding Yellowstone National Park, called the "Greater Yellowstone Ecosystem".

The South Fork of the Salmon River headwaters are, as are all the headwaters of the Salmon River and Columbia River watersheds, incredibly beautiful, sacred, and profoundly important to me to protect as an Idahoan and as a Fisheries Technician/Biologist having worked 30 years towards the recovery of anadromous fisheries in the upper Salmon River basin.

Thank you and Sincerely,

Julia Markham

#### References:

USGS 2022a. U.S. Department of the Interior, U.S. Geological Survey Mineral Commodity Summaries 2022: U.S. Geological Survey, 202 p., <https://doi.org/10.3133/mcs2022>. Manuscript approved for publication January 31, 2022

<https://pubs.usgs.gov/periodicals/mcs2022/mcs2022-antimony.pdf>

USGS 2022b. U.S. Department of the Interior, U.S. Geological Survey, National Minerals Information Center, Antimony Statistics and Information, Statistics and information on the worldwide supply of, demand for, and flow of the mineral commodity antimony. Contacts

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<https://www.usgs.gov/centers/national-minerals-information-center/antimony-statistics-and-information>

TrendEconomy 2022. TrendEconomy, Annual International Trade Statistics by Country (HS), Publication date:

2022-11-14, Reporting period: 2002 - 2021, USA | Imports and Exports | World | Antimony and articles thereof, including waste and scrap | Value (US\$) and Value Growth, YoY (%) | 2010 - 2021

<https://trendeconomy.com/data/h2/UnitedStatesOfAmerica/8110>