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Stibnite Gold Project SDEIS

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Linda Jackson-

I appreciate the opportunity to comment on the Stibnite Gold Project supplemental draft EIS document (SDEIS), as prepared by the USFS. I am generally supportive of the project for the suite of restoration and economic benefits it offers and commend your agency on preparation of a comprehensive and balanced SDEIS document. As end users of raw materials, it is important that the US embrace domestic mining as an alternative to outsourcing our environmental impacts to countries with less stringent environmental and worker safety measures. The comprehensive analysis conducted for the Stibnite Gold Project by your agency exemplifies the effectiveness of the permitting process in the US in ensuring protection of the environment.

I am a property owner in McCall and lived in the community for five years while working for what was then Midas Gold in various geoscience positions. I am an ID Professional Geologist (PG), and Registered member of SME. I am currently self-employed as an independent consultant and Perpetua Resources is one of my clients. I hope that you find the following comments objective, unbiased and constructive in preparation of the final EIS document for the Stibnite Gold Project.

The more of the SDEIS document I read, the more I appreciate the factual disclosure of environmental effects associated with the proposed project and the great job done by your agency in preparing the analysis document. The potential impacts of the project are very clearly disclosed and are generally accurate and well supported. The executive summary doesn't really do a good job of outlining any of the potential benefits of the project – chiefly site restoration or jobs created, but these aspects are mostly all clearly disclosed in somewhere in the SDEIS, even if they are buried in data tables.

I can appreciate how difficult it is for the forest to prepare a document for such a controversial mining project, and the tightrope that must be walked to not come across as pandering to one side or the other. I assume that the deficiencies of the executive summary and poor disclosure of the key net-environmental benefits of the project (restoration anyone?) was an intentional editing choice to somehow mitigate potential for litigation or prevent the forest from appearing overly supportive of mining. Some of the most positive impact statements in the document are actually found in sections related to other subjects – the surface water quality improvements are best described in the recreational impacts section with regard to river users; the social and community benefits of good-paying jobs are best described in the public health and safety section; and the restoration and stream enhancement benefits are best described in the fisheries section but are notably absent from the wetlands impacts section. I can only guess that

someone edited out much of the discussion of key benefits from impact analysis sections but never went back and removed similar text in other subject area sections. Clearer discussion of project benefits can be easily incorporated into the final document and its executive summary to better inform the reader.

SDEIS meets the requirements of NEPA

Despite the editing issues, generally the document does a great job of keeping the narrative factual and accurate in most of the effects analysis subject areas and meeting the requirements under the National Environmental Policy Act. As required in Section 1502.1 of the CEQ NEPA regulations, an EIS shall “provide full and fair discussion of significant environmental impacts and shall inform decision makers and the public of reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the human environment. Agencies shall focus on significant environmental issues and alternatives and shall reduce paperwork and the accumulation of extraneous background data. Statements shall be concise, clear, and to the point, and shall be supported by evidence that the agency has made the necessary environmental analyses.”

The environmental issues identified and analyzed in the document are comprehensive. The SDEIS is more than adequate in disclosure and discussion of negative environmental and social impacts resulting from the project and potential benefits of the project are also presented, although less clearly, thereby meeting the full and fair requirement. Minor editing will address these minor issues.

The environmental analyses are extremely comprehensive and are supported by reams of technical and scientific reports employing best practices analysis and modeling conducted by competent professional scientists, engineers and environmental professionals. The list of consulting firms involved in the DEIS and the SDEIS – BC, TetraTech, SRK, Arcadis, Stantec, RioASE, HDR, etc. - is a who's who of the environmental consulting world. This doesn't even include the engineering firms contracted for Perpetua's Feasibility Study (FS), on which the 2021 Modified Mine Plan is based.

Geochem and Hydro Modeling

Water quantity, quality and management were among the most significant and contentious environmental issues associated with the Stibnite project in the DEIS comment period. The complete revision of the hydrological model for the SDEIS, and the additional aquifer pumping test completed by Perpetua are key examples of how the current SDEIS is improved in its impacts assessment. The USFS deserves credit for requiring these additional data collection activities and analyses. Clearly, there were issues with the old DEIS hydrological model, especially the giant fractured bedrock zone in the original model. For the SDEIS, the groundwater modelers worked with Perpetua's geologists (myself included) to revise the updated conceptual model to honor actual site geology. The current model is a much better representation of site geology than the prior hydrologic framework. Other modeling updates completed for the SDEIS also improve the overall accuracy and precision of the environmental analysis including revisions to the water chemistry model to incorporate groundwater-surface water interactions, use of location specific adjustment factors for water chemistry and, discretizing the meteoric water balance to account for physiographic and subsurface heterogeneity across the watershed.

As a member of the project development engineering team for multiple years, I can state that our team's goal was always to deliver un-biased and accurate information for strategic planning and decision making. This included ensuring that Perpetua's consultants were developing accurate conceptual models and reasonable numerical models supported by site-specific data. With respect to construction of the groundwater model and geochemical conceptual models, I believe the current SDEIS models are generally accurate assessments of water quality and quantity and are sufficient for their intended purpose. Models can always be made more complex, but with additional detail comes the risk of further compounding errors.

It can be expected that project opponents will hire consultants to submit comment letters criticizing modeling assumptions and demanding additional site characterization data. Rather than request additional analyses and further defer the permitting process, the forest should acknowledge that there will always be uncertainty in trying to model complex environmental systems. This is especially true at Stibnite where subsurface heterogeneity of the site (complex faulting, altered rocks, valley glacial deposits and mining related disturbances) will always prevent construction of locally accurate 3D models no matter how much drilling has been done, especially across the entire study area. This is an accepted practice in geostatistical modeling of ore-deposits where despite hundreds of drillholes, local accuracy is sacrificed to reduce conditional bias. The sensitivity analyses included in the current SDEIS generally show that the models are relatively insensitive to varying key parameters (i.e. PAG proportion/metal release rates, hydraulic conductivity, water balance assumptions, etc). At the end of the day, the water management plan has enough flexibility to either pump more or less water and treat or store excess water where required such that the project can effectively manage contact and dewatering water and meet the water quality improvements predicted in the environmental analysis.

One area exemplifying the full and fair disclosure in the SDEIS are statements regarding the potential for the project's waste rock dumps to impact groundwater. The document makes it extremely clear that seepage through the waste dumps or out of the pit backfill won't do anything good for local groundwater quality, as in the executive summary which states that the "2021 MMP would have direct, permanent impacts on water quality, as it would contribute new sources of mine waste material to the EF SFSR drainage." The SDEIS does a great job of communicating potential impacts on groundwater to the public, which could have been lost in the details of the water modeling report. What is less well disclosed is that despite further degrading groundwater, water chemistry modeling actually predicts significant improvements to surface water quality. This is shown in the tables and on the map in section 4.9, and also described narratively in the fisheries section table on water quality in section 4.12. I can understand that the forest may choose not to highlight these projections but describing a 57% reduction in antimony as "comparable" seems a bit of an understatement. The projected overall benefits to water quality are an important outcome of the project and might be worth highlighting in the final EIS.

The SDEIS correctly notes that most of the mercury leaving the stibnite site is sourced up-gradient in Cinnabar, upper West End and upper East Fork SFSR drainages. The mercury reduction in West End Creek is attributed in the SDEIS to a "naturally occurring mechanism [which] reduces mercury concentrations in the creek between the sample locations upstream and downstream of the pit area" (4-251). This "mechanism" is the upper west end waste rock dump and French drain system, which apparently filters out mercury from the upper watershed

(where there are mercury mines) and results in an increase in arsenic. Whether the conservative assumption applied in the modeling, that upper reach concentrations will persist in lower West End creek, is valid, remains to be seen, but it is unlikely that methylation will occur to the extent predicted in the document. The SDEIS applies a methylation ratio from Sugar Creek to West End Creek to predict potential for methylation. Other than being in close proximity, these creeks have little in common in terms of morphology and riparian habitat. West End creek is super steep, incised, rocky and has minimal vegetation, significantly different Sugar Creek's morphology and habitat. Use of the Sugar Creek methylation ratio is therefore highly conservative but is still an effective means to assess the "worst case" scenario for mercury methylation in fish bearing streams. This analysis thereby effectively addresses comments on the DEIS regarding potential for methylation.

Public Access and Recreation

When it comes to recreating in the Payette, alpine lakes, peaks hot springs and even dusty ATV roads are popular attractions. I'm hard pressed to think of ever proposing, "Hey, lets go hike around on a steep hillside out in the middle of nowhere with no lakes or trails" Anyone who complains about the project limiting public access to the area within the operational boundary doesn't understand that they won't be missing out on much. My first year working up at Stibnite involved walking all over the site mapping geology and collecting rock samples. The steep forested slopes covered in downed, burnt logs are not the kind of place anyone would actually choose to recreate in. Hunters avoid the area due to private property holdings. The only people I've ever seen up there looking to go hiking are out-of-state mushroom hunters who got confused and thought they were near Riordan lake. The Payette forest has much better recreational opportunities than the area within the mine-site; there's even hiking trails and roads that are still maintained in some places! These are the actual recreational areas and opposition groups complaining about loss of access to the 14k acres are grasping at straws. Even if it further restricts public access, the placement of the operational boundary at the ridgetop surrounding the watershed is an ideal location as it will allow the public to turn around before dropping all the way into the valley and finding a fence line.

Concerns over air quality while using the public access road are similarly misguided given the proclivity of ATV enthusiasts to ride in each other's arsenic-laden dust clouds through the site. Intentional construction of public access and mine roads with clean-ish road capping materials combined with dust suppression measures will significantly improve upon the existing conditions for recreationalists and should not be a cause for additional project modifications.

Hazardous Materials

The selection of the 2021 MMP alternative by the forest is a no-brainer for reducing likelihood of spills impacting surface waters and avoiding community impacts to the town of Yellow Pine and camping areas along Johnson Creek. Perpetua has long understood that a major spill could shut down the project and has taken significant measures to mitigate this risk –not only are the practices good business but the employees actually care about clean water and healthy fish. They have the successful track record to prove it. I believe that the corporate culture of doing things the right way currently ingrained in the employees will persist even as the company grows or changes ownership/leadership. The SDEIS correctly points out that the greatest risk for a spill is likely to occur on the highway, not on the access road to the site. Most industrial operations have minor, non-reportable spills which can be readily cleaned up. Minor spills are

likely to occur associated with the Stibnite Project, but adoption of protective safety measures for storage, handling and transport of fuel will mitigate risks of minor and major spills.

I've heard people in McCall demanding that Perpetua take responsibility for fuel being transported to the logistics facility by third party contractors in the event of a spill on highway 55, or elsewhere. Requiring end-users of a product to be responsible for its safe delivery is completely ridiculous! I don't want to bear responsibility for Maverick's fuel delivery just because I buy my gas there, nor do I want to be responsible if a FedEx truck carrying my package hits your dog. As a rural community with long commutes and a lot of energy intensive recreation (i.e. wake surfing), Valley county uses a lot of fuel already on a per-capita basis. Additional heavy truck traffic is unlikely to be noticeable on the highways and is shown to constitute only a modest increase over existing traffic in the SDEIS. On the other hand, traffic increases on the warm lake road are likely to be noticeable and the forest should carefully consider the concerns of warm lake road residents.

Social and Economic Impacts

The forest should continue to rely on the existing IMPLAN economic analysis in the SDEIS. The estimate that about a third of mine employees will live in local communities is consistent with the breakdown of shift vs non-shift and logistics facility employees proposed for the mine in the feasibility study. This study makes reasonable assumptions about local vs regional spending and materials procurement, with most of the local economic impacts associated with wages rather than mine-purchasing. As identified in the SDEIS, migration of workers away from existing jobs to better paying mine jobs is likely, and will result in additional pressures on the labor market. However, this is likely to result in overall increases in wages across the community, as is already happening and occurs in other resort communities with tight housing and labor markets. Employers who pay a living wage should not be criticized by business owners who can no longer rely on cheap labor.

The Power Consulting Economic study: *An Evaluation of the Potential Socio-Economic Impacts of the Proposed Stibnite Mine on Valley County, Idaho*, is likely to be submitted as a comment letter or referenced by other commenters on the SDEIS. The report fails to consider the non-shift positions proposed at the mine and employees based in the Stibnite Gold Logistics facility. The report also asserts that Perpetua's property taxes won't be sufficient to cover the cost of employee's children to attend school. This argument is ridiculous; it is not expected that other industries or employers pay property taxes sufficient to offset provision of social services used by their employees. Personal property taxes (mostly second home owners), not business property taxes fund local school districts. Confounding this basic principal demonstrates either 1) non-independence of the study, or 2) gross incompetence of the authors.

One thing that the Power Consulting report gets correct is that income growth in Valley County is associated with non-wage income – i.e. rich retired people moving to the area with pensions/investments/second home rental income. This has the effect of increasing income inequality in a community, driving housing un-affordability, and increasing cost of goods and services. Given the preponderance of low-income households in Valley County, I am surprised that Section 4.22 Environmental Justice, did not identify or acknowledge potential benefits to these community members associated with the Stibnite project.

The document appropriately discusses impacts to tribes but surprisingly omits any discussion of benefits to the working class. When I worked on the site in 2010-2013, one of the best things

was the socio-economically diverse work force employed by Midas Gold. I had the pleasure to work with lots of different people from all sorts of backgrounds. Pretty much everyone was white, but class is arguably more important than race in identifying disadvantaged communities in Idaho.

Section 4.18 notes that “The economic benefits associated with increased employment opportunities and tax revenues could lead to continued or improved access to health services, better nutrition, and better overall well-being for the local community. Also, if the new fulltime positions include health insurance and improved access to health care, this may have a positive effect on chronic and infectious disease and injury categories for both the employees and their families.” Lower income individuals in Valley County are likely to be attracted to lucrative mining jobs thereby realizing the economic and health benefits noted in Section 4.18. These factors should be better considered in the Environmental Justice analysis.

Concluding Remarks

I appreciate the opportunity to comment on the SDEIS document and applaud the Forest for its publication, and for driving the much-improved analysis therein. The permitting process for this project demonstrates that modern mining can be done right and the Forest deserves credit for all of the environmental and restoration measures currently included in the Modified Mine Plan. I urge prompt publication of a Final EIS, and subsequent Record of Decision authorizing the project.

Sincerely,



Austin Zinsser,
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