

# Daniel S. Kline

Boise, Idaho

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United States Forest Service, Payette National Forest  
Attn: Linda Jackson, Payette Forest Supervisor  
500 North Mission Street  
McCall ID 83638

January 6, 2023

## **RE: Comments on the Stibnite Gold Project Supplemental Draft Environmental Impact Statement**

Dear Ms. Jackson,

The October 28, 2022, publication of the Stibnite Gold Project (SGP) Supplemental Draft Environmental Impact Statement (SDEIS) is a culmination of a great amount of study, analysis and documentation. I would like to take this opportunity to provide comments and requests regarding this SDEIS.

### **Overall SGP**

Before elaboration into details, I will state that I am in favor of the SGP. It has many win-win components for the environment, local communities, national critical mineral supply, restoration of historic mining impacts and for Perpetua Resources. The SGP is a unique project in that a mining company has incorporated restoration of historic mining impacts into a new mine plan which alleviates taxpayers from the burden of costs to restore the site. Opponents of the SGP may say restoration of the site can happen without a new mining project. I would respond, if that were the case it would have already happened. Some minor cleanup and restorative actions have occurred on the site since the last mining activities in the 1990's but the East Fork of the South Fork of the Salmon River (EFSFSR) still cascades over the Yellow Pine Pit wall blocking anadromous fish passage, historic mine overburden waste piles still discharge metals into surface and ground water, and historic mill tails still leach metals into Meadow Creek valley water. It has been over 80 years since these impacts occurred. If another source of funding for restoration were available, it would have already taken place. Therefore, it is an environmental advantage for a mining company to restore the site at no expense to the local communities or federal coffers. Additionally, many rural areas in Idaho have struggled over the last century to find a balance of growth, living wage jobs, environmental protection and revenue generating diversity to maintain economic stability. Along with tourism, recreation, forest and agriculture industries, projects such as the SGP bring economic diversity to rural areas. Revenue derived from each of these types of industries add value and diversity for a rural economic portfolio. A win for the local economies and a win for each industry. Typically, when local communities have strong economic stability, they tend put more effort into environmental compliance and protection...another win-win. As one investigates the SGP they will find more win-win components such as increases in public safety and infrastructure.

### **Soils and Reclamation Cover Materials**

Total Soil Resource Commitment (TSRC) as defined in the Payette Forest Plan (Forest Service 2003a) and Boise Forest Plan (Forest Service 2010a), is the conversion of a productive site to an essentially non-productive site for a period of more than 50 years<sup>1</sup>. Regarding soil productivity the SDEIS makes the following statement.

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<sup>1</sup> SDEIS Section 4.5.1

*“As a rule, the processes responsible for restoration of soil productivity occur over a very long timeframe (centuries to millennia) and do not directly correlate to successful reclamation, which is mainly oriented to short-term objectives. The short timeframe for achievable reclamation measures (e.g., 5 to 10 years) would not be sufficient to establish trends in soil resources and productivity that would take many centuries to millennia to develop within the conditions that pertain to the activity area, especially with respect to the short growing season and harsh winters. Important measures of long-term soil productivity would include: development of a litter layer, biotic crust and/or A horizon (organic matter-enriched surface layer); development of soil structure to support water and air movement; physical and chemical weathering of coarse fragments to add soil fines and nutrients; and development of the soil food web, nutrient cycles, and microbial community, especially the mycorrhizal network. Thus, the recovery of greater than 40 percent soil productivity within a 50-year timeframe is unlikely (Forest Service 2022c).<sup>2</sup>”*

*“To conservatively address uncertainty in reclamation success, this analysis of TSRC assumes that all SGP-related disturbances in the PNF activity area would be considered TSRC due to the site-specific challenges and the duration and nature of soil disturbance to support the mining activities.<sup>2</sup>”*

*“...recovery of soil productivity to 40 percent of natural background would be on a much longer timescale (e.g., likely hundreds to thousands of years) such that they would be considered permanent TSRC.<sup>2</sup>”*

These statements imply Perpetua’s reclamation, restoration and rehabilitation plans will not be effective in establishing soil productivity within centuries to millennia let alone the 50-year allocation of the TSRC definition. In conflict with the Payette National Forest (PNF) Land and Resource Management Plan (LRMP) definition of soil productivity, the SDEIS defines measures of soil productivity as:

*“...development of a litter layer, biotic crust and/or A horizon (organic matter-enriched surface layer); development of soil structure to support water and air movement; physical and chemical weathering of coarse fragments to add soil fines and nutrients; and development of the soil food web, nutrient cycles, and microbial community, especially the mycorrhizal network.<sup>2</sup>”*

While these (and other) metrics are important to assess the capacity of soil to “...support the growth of specified plants, plant communities, or a sequence of plant communities.”, they are not contemplated in the PNF-LRMP as measures of soil productivity. PNF-LRMP defines soil productivity as:

*“Soil productivity includes the inherent capacity of a soil under management to support the growth of specified plants, plant communities, or a sequence of plant communities. Soil productivity may be expressed in terms of volume or weight/unit area/year, percent plant cover, or other measures of biomass accumulation.”<sup>3</sup>*

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<sup>2</sup> SDEIS Section 4.5.2.2

<sup>3</sup> USDA- Forest Service, Payette National Forest, 2003, Amended 2010

This more appropriate definition of soil productivity is exemplified in PNF Huckleberry Landscape Restoration Project (HLRP) FEIS<sup>4</sup>. The HLRP FEIS recognizes the value of restoration, reclamation, and rehabilitation in analyzing TSRC as illustrated from the following excerpts.

*“These effects do not completely recover through natural processes, but soil productivity and hydrologic function can be recovered with the implementation of physical treatments, such as decompaction, recovery of topsoil, placement of organic material and revegetation.”<sup>4</sup>”*

*“Alternative 2 proposed activities would initiate recovery of soil productivity and reduce TSRC on 371 through obliteration of unneeded system and nonsystem roads, which accounts for a 0.74% reduction in TSRC within the analysis area. The construction of landings, primary skidtrails and new temporary roads (up to 34 miles, approximately 100 acres, 0.2% TSRC) associated with vegetation treatment activities would result in short-term increases in TSRC (<15 years). The required rehabilitation following use of these areas should result in no net gain in long-term TSRC. Additional reductions in TSRC would occur when existing skidtrails, landings, and roads in a TSRC condition are reused and then rehabilitated. New permanent road construction and road reroute construction totaling 17 acres would represent a 0.034% increase in TSRC within the analysis area. The proposed trail reroutes would include stabilization and rehabilitation of the existing trail areas following new construction, thus no net change in TSRC.”<sup>4</sup>”*

*“Restoration of existing roads, skid trails, and landings through obliteration would directly reduce TSRC (and DD) and improve soil conditions, processes, and functions in the harvest or fuels units by decompacting soils and adding CWD and other organic matter to the surface. Lloyd et al. (2013) observed improved infiltration rates and soil bulk densities on obliterated roads recover to values similar to never-roaded areas at 1, 5, and 10 years following obliteration. In this same study and time frame, soil organic matter, total carbon, and nitrogen pools and processes increased to levels similar to never-roaded surfaces. Road, skid trail and landing obliteration following reuse are expected to produce similar beneficial results and would also improve slope stability and decrease long-term erosion.”<sup>4</sup>”*

Given the SGP reclamation and closure plan utilizes very similar and arguably more aggressive soil restoration and rehabilitation techniques than described in the PNF’s HLRP, the SGP SDEIS should recognize soil rehabilitation efforts as part of the TSRC analysis. Without recognition of the SGP reclamation and soils rehabilitation in the TSRC analysis there would appear to be a negative bias towards the SGP compared to the similar impacts and rehabilitation efforts recognized in the HLRP. Therefore, I request the FEIS TSRC analysis be revised to recognize all applicable aspects of the SGP restoration and reclamation plans. In doing so the PNF may find the SGP will be compliant with existing forest management plan TSRC thresholds of less than 5% and thus avoid a forest management plan amendment.

Regarding reclamation cover material quantities, the SDEIS notes the following.

*“The GM deficit is thus estimated at approximately 797,702 BCY (Tetra Tech 2021a). Options being considered by Perpetua for developing additional GM for the SGP include: utilizing materials from off-site borrow areas and supplementing additional salvage of GM through composting.”<sup>2</sup>”*

The 2021 SGP Reclamation and Closure Plan (RCP) states that Yellow Pine Pit (YPP) glacial till will be used to offset the deficit along with growth media amendment of chipped wood and compost. The 2021 RCP also discredits utilizing offsite soils borrow sources. SDEIS Section

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<sup>4</sup> Huckleberry Landscape Restoration Project FEIS (Feb 2020) Section 3.7

2.4.7.12 and Table 2.4-12 (pg 2-113) also notes the same YPP till source. Therefore, I request the Reclamation and Cover Materials section of the FEIS be revised to describe the correct proposed soils deficit offset found in the RCP and Section 2.4.7.12.

## **Wildlife**

The SDEIS analysis for Wolverine concludes the following but does not include an impact intensity as for other species. Therefore, I request the FEIS include an intensity level (Minor or Moderate) for Wolverine impacts.

*“Therefore, based on the impact analysis for the wolverine and its habitat, the 2021 MMP would result in localized and long-term impacts to the wolverine, particularly the local population (part of larger Central Idaho sub-populations)”<sup>5</sup>.*

As stated in Section 4.1.2 (Table 4.1-1) of the SDEIS, Moderate intensity “affects a large percentage of a population” and lead to reduction in “productivity in the overall population”. The SDEIS concludes impacts intensity for Rocky Mountain Bighorn Sheep are Moderate as stated here.

*“Therefore, based on the impact analysis for the bighorn sheep and its habitat, the 2021 MMP would result primarily in localized, short-term, long-term, and permanent, moderate impacts to the bighorn sheep”<sup>5</sup>.*

The SDEIS follows this declaration with the following contradictory statement.

*“Rocky Mountain bighorn sheep are very mobile and able to avoid localized direct threat of injury or mortality”<sup>5</sup>.*

Similarly, the SDEIS declares a Moderate impact intensity for Big Game.

*“Therefore, based on the impact analysis for big game species and their habitat, the 2021 MMP would result primarily in localized, short-term, long-term, and permanent, moderate impacts to big game species”<sup>5</sup>.*

And follows with:

*“However, given the relatively small size of the mine site in context of the region and available habitat, any direct effect on survival or productivity would likely be small”<sup>5</sup>.*


The SDEIS analysis for Rocky Mountain Bighorn Sheep and Big Game does not provide the evidence to support a Moderate impact intensity. Effects on individuals as described in the SDEIS more appropriately fall under the definition of Minor intensity. Therefore, I request the FEIS be revised to either show appropriate science-based evidence of a Moderate classification for Rocky Mountain Bighorn Sheep and Big Game or change the classification to a Minor intensity as supported by the SDEIS impact descriptions.

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<sup>5</sup> SDEIS Section 4.13.2.2

In summary I support the 2021 Modified Mine Plan (MMP 2021) alternative as presented in the SDEIS and believe the SGP will bring multiple aspects of positive effects to the local communities as well as to the environment through the restoration work incumbent in the project. I believe my requested revisions will make the FEIS a better, more defensible, impact assessment document which can then be used for an informed decision making process.

Sincerely



Daniel S. Kline

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