Nevada Mineral Exploration Coalition
The "Voice" of Nevada Exploration

Submitted Electronically To:

https://cara.ecosystem-management.org/Public/CommentInput?Project=50516

October 27, 2020

U.S. Forest Service, Payette National Forest
Attn: Linda Jackson, Payette Forest Supervisor
500 North Mission Street
McCall, ID 83638

RE: Comments on the Payette and Boise National Forests' Draft Environmental Impact Statement for the Stibnite Gold Project

Dear Ms. Jackson:

Introduction

The Nevada Mineral Exploration Coalition (NMEC) is submitting these comments on the August 2020 Draft Environmental Impact Statement (DEIS) for Midas Gold Idaho Inc.'s (Midas Gold's) Stibnite Gold Project (SGP) near McCall, Idaho. As a group of geoscientists involved with mineral exploration and development, we appreciate this opportunity to share our perspective on this very interesting and worthwhile project.

Our comments focus on how the SGP will become the Nation's only domestic mine that produces antimony. A number of NMEC members have expertise with gold deposits that contain antimony. However, most of us have not been fortunate enough to work on a gold deposit like Stibnite that has sufficient antimony grade and size to make it feasible to recover the antimony as a byproduct of a gold processing operation.

The NMEC is a grassroots coalition of individuals and small businesses engaged in or in support of mineral exploration which is the research and development segment of the mining industry. Our mission is to preserve and promote the mineral exploration industry of Nevada. NMEC members use state of the art science and technology to search for and develop the natural resources of the state and beyond. We have a very small environmental impact when compared to other industries such as gaming and construction. We generate jobs, economic activity and considerable tax revenues in the jurisdictions in which we work. We bring new capital which is all spent locally. We find the mines of the future, ensuring the long term economic well-being of our country as a whole.

Antimony is a Critical Mineral

In 2018, the U.S. Geological Survey (USGS) published a list of 35 critical minerals that designates antimony as a critical mineral[1]. According to the USGS' 2020 Mineral Commodity Summaries[2], the U.S. imported the 84 percent of the antimony we used in 2019. Over half of these imports came from China. When the SGP goes into production, the antimony that will be produced as a byproduct of the gold production will make it the Nation's only antimony mine and will reduce our reliance on China and other countries as our primary sources of antimony. According to Midas Gold, the SGP will produce roughly 100 million pounds of antimony during the life of the mine. This production represents about 30 percent of the U.S. annual demand for antimony.[3]

On September 30, 2020, President Trump issued Executive Order (EO) 13953 entitled, "Addressing the Threat to the Domestic Supply Chain from Reliance on Critical Minerals from Foreign Adversaries." In this EO, the President declares the Nation's reliance on countries like China for critical mineral is creating a national emergency:

> I…determine that our Nation's undue reliance on critical minerals…from foreign adversaries constitutes an unusual and extraordinary threat…to the national security, foreign policy, and economy of the United States. I hereby declare a national emergency to deal with that threat.

This critical minerals national emergency elevates the importance of the antimony that will be produced at the SGP and creates urgency for antimony production from the SGP to begin as soon as possible. The Forest Service must respond to this national emergency by expediting the completion of the permitting process for the SGP.

The Stibnite Deposit is the Only Identified U.S. Antimony Deposit that can Reduce the Country's Import Reliance in the Foreseeable Future

Chapter3.2 of the DEIS provides an acceptable overview of the geology of the Stibnite project area, however, its discussion of the Stibnite gold-antimony deposit is insufficient because it completely overlooks the importance of the Stibnite deposit as a unique domestic antimony resource.

Chapter C on antimony in the 2017 U.S. Geological Survey (USGS) publication entitled: "Critical Mineral Resources of the United States – Economic and Environmental Geology and Prospects for Future Supply" (USGS Professional Paper 1802)[4] describes the Yellow Pine/Stibnite deposit as the largest antimony resource in the United States.[5] Page C2 of this report shows the Yellow Pine/Stibnite gold-antimony deposit on a map of worldwide antimony deposits that illustrates

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[1] https://www.federalregister.gov/documents/2018/05/18/2018-10667/final-list-of-critical-minerals-2018

[2] https://pubs.er.usgs.gov/publication/mcs2020

[3] https://www.midasgoldcorp.com/site/assets/files/2422/2020-10-20_midas_gold_presentation-full.pdf

[4] Schulz, K.J., DeYoung, J.H., Jr., Seal, R.R., II, and Bradley, D.C., eds., 2017, Critical mineral resources of the United States—Economic and environmental geology and prospects for future supply: U.S. Geological Survey Professional Paper 1802, 797 p., https://doi.org/10.3133/pp1802.

[5] Id., Page C8.

the scarcity of antimony resources. This map shows only three antimony "deposits, mines and major occurrences" in the U.S.: 1) Yellow Pine/Stibnite; 2) the Coeur d'Alene district in Idaho, and 3) the McLaughlin Mine in California. The map also shows that the world's most significant primary antimony deposits are located in China.

Of the three U.S. antimony resources, the Yellow Pine/Stibnite resource is the only deposit currently being proposed for development. The report describes the Sunshine silver deposit in the Coeur d'Alene district as "a potentially important byproduct source of antimony" but notes that when the Sunshine Mine closed in 2001, antimony mining in the United States stopped. (the Sunshine Mine produced Antimony as a byproduct of silver production[6].) Similarly, the McLaughlin Mine in California is a past gold producer that is currently closed. Neither mine is expected to be reopened in the foreseeable future.

The NMEC suggests that the Final EIS should put the Yellow Pine/Stibnite antimony deposit into the proper context by explaining that development of this deposit is the country's *only identified opportunity* in the foreseeable future to have a domestic source of mined antimony. This important fact means the Forest Service should expedite its approval of Midas Gold's proposed Stibnite Gold Project.

As described above, the country is in a current state of emergency due to our reliance on China and other foreign adversaries for critical minerals like antimony. Therefore, it is critically important for the Forest Service to approve the Stibnite Gold Project *because it is the country's only viable antimony deposit.* The antimony that will be domestically produced from the Stibnite Mine represents the only way to reduce our reliance on China and other countries for the antimony we need.

Host and Byproduct-Companion Minerals

Another shortcoming of the geology discussion in Section 4.2 of the DEIS is the failure to explain the host mineral and byproduct-companion relationship between the gold and antimony mineralization in the Stibnite deposit. Nassar et al define "mineral companionality" as

> "…the degree to which a metal is obtained largely or entirely as a by-product of one or more host metals from geologic ores. The dependence of companion metal availability on the production of the host metals introduces a new facet of supply risk to modern technology."[7]

Most Critical Minerals are only economic to develop as byproduct production of another primary mineral like gold, silver, or base metals. This host and byproduct-companion mineral relationship is shown on Figure 1, which illustrates the percentage of each metal's primary

[6] Id., Pages C4, C8.

[7] N. T. Nassar,* T. E. Graedel, E. M. Harper, By-product metals are technologically essential but have problematic supply, 3 April 2015, https://advances.sciencemag.org/content/1/3/e1400180.

production as a byproduct-companion from production of a host mineral. As shown, antimony has a byproduct-companion index of around 80 percent, meaning that roughly 80 percent of the world's antimony is produced as a byproduct of mining a host mineral.[8]

As Nassar et al explain:

> "Unlike the major metals, these minor metals are typically found in relatively low concentrations of less than about 0.1%, in which case these metals seldom form viable deposits of their own, and instead occur interstitially in the ores of metals with similar physical and chemical properties. These minor metals are thus often recovered only as by-products during the processing of the major metals, their "host(s)." The availability of these "by-product" or "companion" metals is thus dependent not only on the mining production of their host metal(s) but also on whether the companion metals are recovered rather than being discarded without having been processed. This raises concern regarding their availability…"[9]

The USGS report presents a similar finding specific to antimony:

> "Antimony resources that may be mined in the future are likely to be those tied directly to deposits of precious metals, copper, lead, and (or) zinc, similar to those from which most domestic antimony has historically been recovered as a byproduct or coproduct. Gold is an important joint product with antimony, but gold-antimony veins are commonly mined just for their gold."[10]

Figure 2 from Nassar et al shows gold, lead, and tin as host minerals for antimony, with lead accounting for roughly 50 percent of antimony production. These authors note that recent reductions in the demand for lead acid batteries, which are out of favor due to concerns about lead toxicity and the development of new battery technologies that do not use lead for electric vehicles, "imperils supplies of antimony…for which lead is the main host."11

Conclusions

Just as NMEC members bring capital that is invested in mineral exploration and development, Midas Gold has brought its capital to Idaho, where it has been invested in developing the SGP. According to the Company, it has already invested $180 million to study, plan, design, and permit the SGP, and to repair some of the environmental damage at the site.[12]

Although the Stibnite Mine was a significant antimony mine during government-supported wartime mining campaigns to support the military's needs in World War II and the Korean War,

[8] Id., Page 2.
[9] Id., Page 1.
[10] Op.cit., Page C9.
[11] Op. cit., Page 6.
[12] https://www.restorethesite.com/wp-content/uploads/2020/08/MGI_-SG-Project-One-Pager.pdf

it is doubtful that the Stibnite deposit would be economic today as a free-standing, primary antimony mine owned and operated by a private-sector company. Gold production is the economic driver that makes it feasible to recover antimony as a byproduct at the SGP. Put in another way, the *only way* the Nation can benefit from the production of antimony at the Stibnite Mine, is to have a company like Midas Gold develop and produce the gold in this deposit.

The NMEC believes the Forest Service has a duty to complete the permitting process for the SGP as quickly as possible to respond to the critical minerals national emergency by authorizing development of *the Nation's only opportunity for* a domestic antimony mine. NMEC urges the Forest Service to do its part to reduce our reliance on China for this critical mineral.

Sincerely yours,

David R. Shaddrick
NMEC President

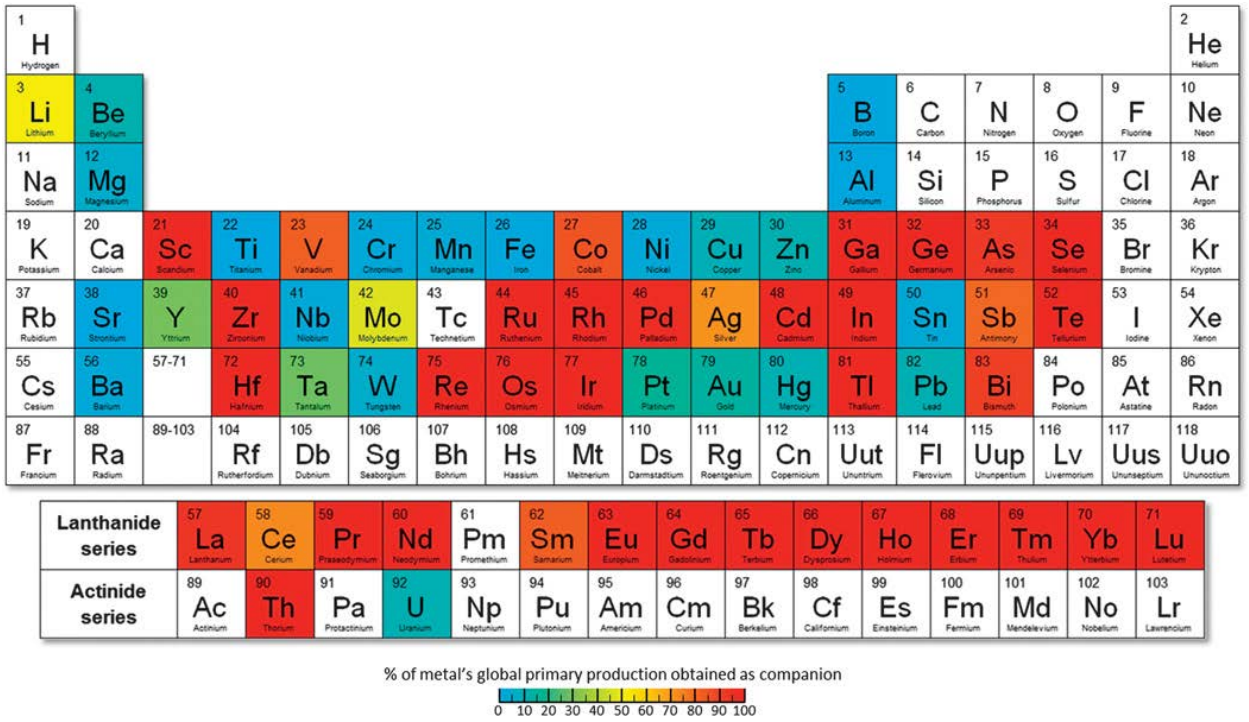

Figure 1. Period Chart of the Elements Showing Roughly 80% of the World's Antimony (Sb) is produced as a Companion (Byproduct) from Host Mineral Production[13]

[13] Ibid

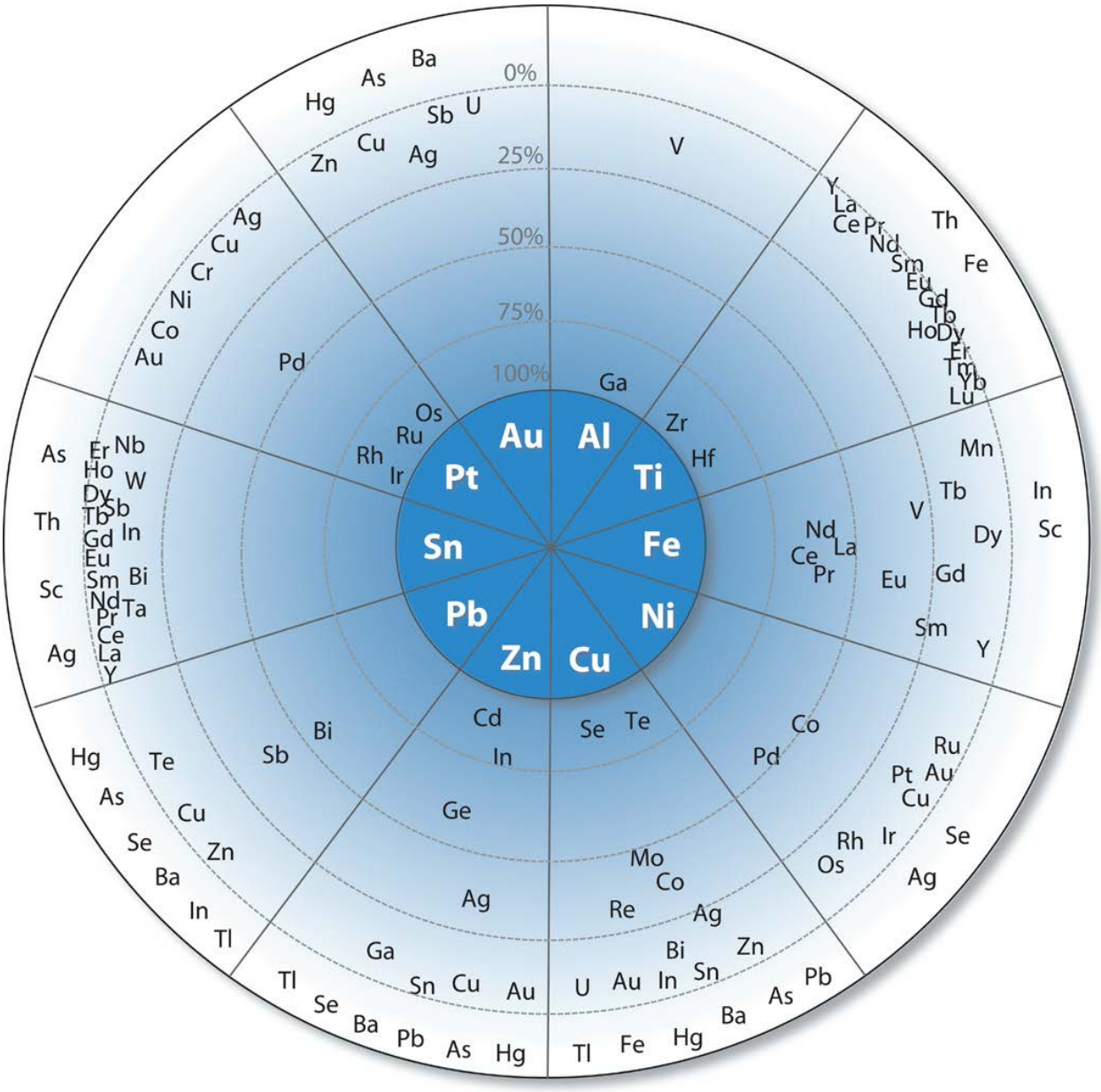

Figure 2. The wheel of metal companionality showing the principal host minerals in the inner circle with the companion metals in the outer circles at distances proportional to their primary production.[14]

[14] Id., Page 3.