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Docket No. DOI-2022-0003

August 25, 2022

Bureau of Land Management
Division of Solid Minerals
1849 C Street NW
Washington, DC 20240
Attn: Steven Feldgus, Deputy Assistant Secretary for Land and Minerals Management

RE: Request for Information to Inform Interagency Working Group on Mining Regulations, Laws, and Permitting, Docket No. DOI-2022-0003, Federal Register Volume 67, No. 62, pp. 18811 – 188112

Dear Deputy Assistant Secretary Feldgus:

I. Introduction

The Women's Mining Coalition (WMC) is a grassroots organization with members nationwide. Our members work in all sectors of the mining industry including hardrock, industrial minerals, and coal; energy generation and mining-related distribution, manufacturing, transportation, and service industries. We endeavor to meet regularly with members of Congress and their staff and federal land management and regulatory agencies to discuss issues of importance to both the hardrock and coal mining sectors.

WMC very much appreciates this opportunity to provide comments on the Interagency Working Group's (IWG's) Request for Information (RFI) to inform the U.S. Department of the Interior (DOI), the U.S. Department of Agriculture (USDA), and other IWG members on mining regulations, laws, and permitting. The IWG's evaluation of the topics listed in the RFI on mining regulations, laws, and permitting in general are of great interest to us because they include many of the issues with which we have been involved since our inception in 1993.

The RFI is seeking input on important questions about how to improve the mine permitting process, whether existing laws and regulations need to be changed and, if changes are warranted, how to implement those changes. The answers to these questions will determine the Nation's mineral future – whether we remain dangerously reliant on foreign minerals or whether we strengthen our mineral supply chains by producing domestic minerals from the cleanest and safest mines in the world.

The future of the Nation's mineral security depends on two elements: 1) maintaining access to public lands where so many of the country's important mineral deposits are located; and 2) streamlining the current protracted and costly permitting process. The permitting process is impeding exploration and development of hardrock minerals and is the principal reason our Nation must rely on foreign countries for the minerals necessary for our economy, national defense,



manufacturing sectors, transportation and communications infrastructure, and conventional and renewable energy systems.

An immutable fact that is completely absent from the public dialogue about mining is that mineral deposits are rare, difficult to find, and cannot be moved to a different location once they have been discovered. They only occur in unique locations where Mother Nature and special geologic conditions have concentrated valuable minerals, and they are only known where geologists have been smart and lucky enough to discover them. Current federal laws including but not limited to the Mining Law of 1872, the Organic Administration Act of 1897, the Federal Land Policy and Management Act of 1976, and the Materials and Minerals Policy Research and Development Act of 1980 wisely reflect these fundamental realities about mining and the spatially fixed, unmovable nature of mineral deposits.

This fact should be the foundation for all future discussions about amending the U.S. Mining Law or changing mining regulations. Unfortunately, the current dialogue about mining laws, regulations, and policies rarely considers this essential fact about mineral deposits. Instead, the discourse typically advocates for mechanisms to put more potentially mineralized lands off-limits to mining and to declare lands unsuitable for mining where mineral deposits have been discovered.

The conversation about mining “in the right places” must be defined to mean “places where mineral deposits have been, or may be, discovered.” We are fortunate that current laws thoughtfully accommodate this indisputable geologic reality. We are also fortunate that the U.S. contains a rich mineral endowment that needs to be responsibly developed to address the Nation’s critical need for domestically-mined minerals. Any future changes to the Mining Law, mining regulations, and policies must similarly carefully consider the essential facts: mineral deposits cannot be moved; they can only be mined where they have been discovered; and the country urgently needs to strengthen domestic mineral supply chains.

A thoughtful approach to these facts will be necessary for the U.S. Department of State to uphold the commitment it made in its June 14, 2022 Minerals Security Partnership¹ pronouncement supporting “...the ability of countries to realize the **full economic development benefit of their geological endowments.**” Fulfilling this commitment can only mean that “the right places to mine” are where mineral deposits have been discovered.

Unfortunately, the tenor of the three July 2022 DOI/IWG Mining Reform listening sessions was anything but thoughtful. These sessions were clearly designed to provide a forum for mining opponents to air their grievances. Because the required information about employment sector on the online listening session registration form did not include mining as one of the numerous employment sectors in the drop-down menu, the IWG sent a strong signal that input from the mining industry was not being sought.

The presentations at all three sessions were misleading and contained factual errors. The statement on Slide 6 asserting that mining is exempt from land use planning is wrong. Title II of the Federal Land Policy and Management Act (FLPMA) 43 U.S.C. §§ 1701 *et seq.*, outlines how FLPMA’s

¹ <https://www.state.gov/minerals-security-partnership/>



land use planning directives and processes apply to hardrock mining pursuant to the Mining Law. The list of the DOI's Fundamental Mining Law principles on Slide 7 is also incorrect and disingenuous because it insinuates that mining is not already carefully regulated and suffers from other inadequacies. Table 1 addresses the inaccuracies, omissions, and mischaracterizations in Slide 7.

Table 1: Comparing IWG's Mining Reform Principles (Slide 7) to Existing Laws and Regulations

IWG's Fundamental Mining Reform Principles	Existing Laws and Regulatory Framework	Discussion
Strong Responsible Mining Standards	Yes	Surface management regulations for locatable minerals and comprehensive system of federal and state environmental laws and regulations already provide strong responsible mining standards that make U.S. mines the safest and cleanest mines in the world.
Community Input & Tribal Consultation	Yes	The National Historic Preservation Act (NHPA) Section 106 creates a government-to-government tribal consultation requirement. The National Environmental Policy Act (NEPA) actively seeks public comments at least three times during the NEPA process.
Sustainable Domestic Supply of Critical Minerals	No	Current permitting delays create serious barriers to timely mineral exploration and development and are the main reason the U.S. has such a dangerous reliance on foreign minerals and does not have a sustainable domestic supply of critical minerals. The IWG must respond to the mandate in the Infrastructure Investment and Jobs Act to solve this problem.
Prioritize Recycling, Reuse, and Efficiency	Yes	The National Materials and Minerals Policy Research and Development Act supports recycling. The BLM and the Forest Service need to comply with this law. For some materials, more mineral production will be necessary before there will be sufficient feed stock that can be recycled to satisfy a portion of the nation's demand for minerals. Recycling is highly unlikely to eliminate the need for mining.

IWG's Fundamental Mining Reform Principles	Existing Laws and Regulatory Framework	Discussion
Adopt Fair Royalties	No	The mining industry has been willing to pay a fair net royalty on production from future mining claims for over 30 years.
Abandoned Hardrock Mine Reclamation Program	No	Congress should direct DOI/BLM to use excess claim maintenance fees to start immediately funding AML cleanups. ² Congress needs to pass Good Samaritan liability relief to address this problem.
Land-Use Planning	Yes	43 CFR 3809.420(a)(3) and FLPMA Section 1712(e)(3) establish how the land use planning process applies to hardrock minerals. FLPMA Section 204 (not Section 1712) governs withdrawing lands from operation of the Mining Law to prohibit mining in areas the Section 1712 land use planning process has identified as unsuitable for mining.
Permitting Certainty	Needs Improvement	In compliance with the Infrastructure Investment and Jobs Act, the IWG needs to minimize uncertainties in the permitting process which are chilling investment in mineral exploration and development and impeding the development of mineral resources – including critical minerals.
Protect Special Places	Yes	FLPMA Sections 102, 103, 201, 202, pertaining to Areas of Critical Environmental Concern (ACEC) and Section 204 (withdrawals), The Wilderness Act, the Antiquities Act, the Wild and Scenic Rivers Act and other laws provide mechanisms to protect special places.
Best Available Science & Data	Yes	NEPA already requires the use of best available science and data.
Civil Service Expertise	Needs Improvement	Agency staffing levels and training need to be improved as mandated in Section 40206(d)(2) of the Infrastructure Investment and Jobs Act.

² Based on BLM's 2021 Public Lands Statistics Report, this approach would provide roughly \$61 million for an AML reclamation fund. See: https://www.blm.gov/sites/default/files/docs/2022-07/Public_Land_Statistics_2021_508.pdf



The remainder of this letter supplements the testimony that Ms. Debra Struhsacker, WMC Cofounder and Director, presented on our behalf at the May 12, 2022 hearing before the House Subcommittee on Energy and Mineral Resources (EMR) on the 1872 Mining Law.³ Our testimony is attached as Exhibit I. The remainder of this letter provides additional responses to the following RFI questions:

- RFI Question No. 1: Eliminating Mining Claims, Substituting a Leasing System, and Land Use Planning (Section II);
- RFI Question No. 8: Could Updating the Mining Law Improve the Permitting Process (Section III);
- RFI Question No. 9: Improving the Permitting Process (Section IV);
- RFI Question No. 10: Incentivizing Domestic Critical Minerals Production (Section V); and
- RFI Question 11: Should Lands be Off-limits to Mining (Section VI).

II. RFI Question No. 1: Eliminating Mining Claims and Substituting a Leasing System

A. The Claim System Works Well, Benefits Taxpayers and Should Not Be Changed

RFI Question No. 1 asks whether alternatives to the existing claim system such as leasing would “lead to better outcomes for communities, [the] environment and a secure domestic supply of minerals?” As emphasized in our May 2022 verbal and written testimonies, the answer to this question is an emphatic NO. This section expands on the discussion presented in our written testimonies.

Replacing the mining claims and self-initiation systems with a leasing system like that in H.R. 7580, which is modeled after the 75-year old unsuccessful leasing program for hardrock minerals on acquired lands, will cause a dramatic decline in domestic mineral exploration and production and thwart the Nation’s goals to become less dependent on foreign minerals. The discovery and development histories of two of Nevada’s most prolific gold mining districts, the Carlin Trend and the Cortez District, presented below vividly show that leasing will not work because it:

- Eliminates self-initiation and security of land tenure;
- Has the wrong scale and timeframes to promote discovery of hardrock minerals;
- Contains arbitrary and impractical acreage and temporal restrictions that are incompatible with the geology of hardrock minerals and thus severely impedes mineral discovery;

³ In this document, “Mining Law” refers to the General U.S. Mining Laws as amended, also known as the 1872 Mining Law, at 30 U.S.C. §§ 21a *et seq.* These terms are used synonymously throughout this document.



- Fails to consider the amount of land and the length of time required to discover and develop hardrock minerals; and
- Discourages the enormous investments required to discover and develop hardrock minerals.

Proposals to eliminate the claims and self-initiation systems and substitute a leasing system, like that in H.R. 7580, **are a solution in search of a problem.** The claim and self-initiation systems currently authorized in the Mining Law do not create problems that need to be solved. To the contrary, these systems work well for U.S. taxpayers because they transform private investment into mineral discoveries that pay taxes, employ people in high-wage jobs with benefits, and produce the minerals essential to our economy, national defense, and way of life. Because the federal government does not know where undiscovered mineral deposits are located, self-initiation is essential to the future discovery of these deposits. Under the self-initiation and claims systems, mineral exploration and mining companies decide where and how to look for minerals, allowing taxpayers to leverage private-sector knowledge and resources to discover minerals.

In contrast, leasing puts the federal government in charge of deciding where and when companies can explore for minerals and where and for how long miners can operate a mine. The federal leasing system for hardrock minerals on acquired lands has failed to produce a meaningful volume of minerals and shows this system cannot attract the level of investment necessary to explore for and develop minerals.

The BLM does a good job of managing the claims system by maintaining up-to-date records of where mining claims are located based on the claim recordation requirements in Section 314 FLPMA. Prior to the enactment of FLPMA, the BLM did not know how many claims were on public lands subject to the Mining Law or the status of the claims. Congress solved this problem with the FLPMA Section 314 recordation provisions that require claimants to pay fees and file location notices with the BLM and the counties when they locate new claims. Additionally, the annual Claim Maintenance Fee requirement that has been in place since 1994 informs the BLM which claims are active. Failure to pay this annual fee renders a mining claim void.

The claim location fees and the annual Claim Maintenance Fee (CMF) are a revenue source for the BLM. In FY 2020, BLM collected \$69,420,974 in claim maintenance and other Mining Law holding fees. Congress has appropriated \$40,196,000 for the Mining Law Administration Program, including the cost to administer the mining claim fee program. Collections in excess of \$40,196,000 are deposited to the general fund.⁴ Similarly, in FY 2021, BLM collected hardrock mining fees of \$100,820,256 and was authorized to retain \$39,696,000 for the Mining Law Administration Program, with the excess of \$61,124,256 deposited to the general fund.⁵ As discussed in our May 2022 comments, WMC recommends that Congress earmark the excess CMF funds to establish an Abandoned Hardrock Mine Reclamation Fund. We strongly urge the IWG to include this recommendation in the November 2022 report it is preparing in response to the reporting requirement in Section 40206 of the 2021 Infrastructure Investment and Jobs Act.

⁴ <https://www.blm.gov/sites/blm.gov/files/docs/2021-08/PublicLandStatistics2020.pdf>, Table 3-32, page 158.

⁵ https://www.blm.gov/sites/default/files/docs/2022-07/Public_Land_Statistics_2021_508.pdf, Table 3-32, page 160.

B. Hidden Mineral Deposits Take a Long Time and are Costly to Discover

Unlike 1872 when most mineral deposits were exposed at the surface, today many mineral targets are hidden (i.e., buried) by hundreds to thousands of feet of unmineralized rocks. Finding these buried deposits and then doing the necessary work to determine if they can be developed into an economic mine is difficult, time-consuming and very expensive.

In order to justify the time and expense to discover a hidden mineral deposit, claim owners must know they can keep their claims for as long as it takes to find these buried deposits. The daunting one-in-one-thousand odds against discovering a single deposit that can become a mine discussed in the National Research Council's/National Academy of Science's 1999 report, *Hardrock Mining on Federal Lands*,⁶ are due in part to the hidden nature of many mineral deposits where exploration is akin to searching for the proverbial needle in a haystack.

Figure 1 on the following page illustrates the evolution from shallower to deeper discoveries in the Carlin Trend and Cortez District, two of Nevada's most important gold mining districts. Some of the most recent discoveries are buried by over 1,000 feet of rock like the Goldrush discovery, which is 400 meters (about 1,200 feet) below the ground surface and Fourmile, which is 600 meters (nearly 2,000 feet) deep.

In Nevada, some of the deep discoveries have ushered in an era of underground gold mining as the industry has evolved from open-pit mining projects into a combination of open-pit and underground mining operations. The open-pit mines have facilitated the discovery of some of the deeper, buried deposits, where many of the underground exploration workings (adits, shafts, and declines) are located within open-pit mines.

i. *Discovery Histories of Two World-Class Mineral Deposits – the Carlin Trend and Cortez Gold District in Nevada*

The discovery and development histories of the Carlin Trend and the Cortez District illustrate that it takes decades and hundreds of millions of dollars to explore mining claims that *may* contain a hidden mineral deposit before mineable discoveries are made. The gold deposits in these districts have been discovered and developed incrementally starting in the 1960s in the Carlin Trend and in the 1980s in the Cortez District. The deposits discovered early in the histories of the Carlin Trend and the Cortez District were at or near the surface as shown in Figure 1. These shallower deposits were easier to discover and develop compared to the deeper, hidden deposits that were discovered later. As both districts matured, and geologists refined their understanding of the complex geology of these areas, they began to discover the deeper, hidden deposits.

⁶ *Hardrock Mining on Federal Lands*, page 24, <https://nap.nationalacademies.org/catalog/9682/hardrock-mining-on-federal-lands>

Figure 1: Progression Through Time from Shallower to Deeper Discoveries of Gold Deposits in the Carlin Trend, the Cortez District, and Other Nevada Gold Deposits⁷

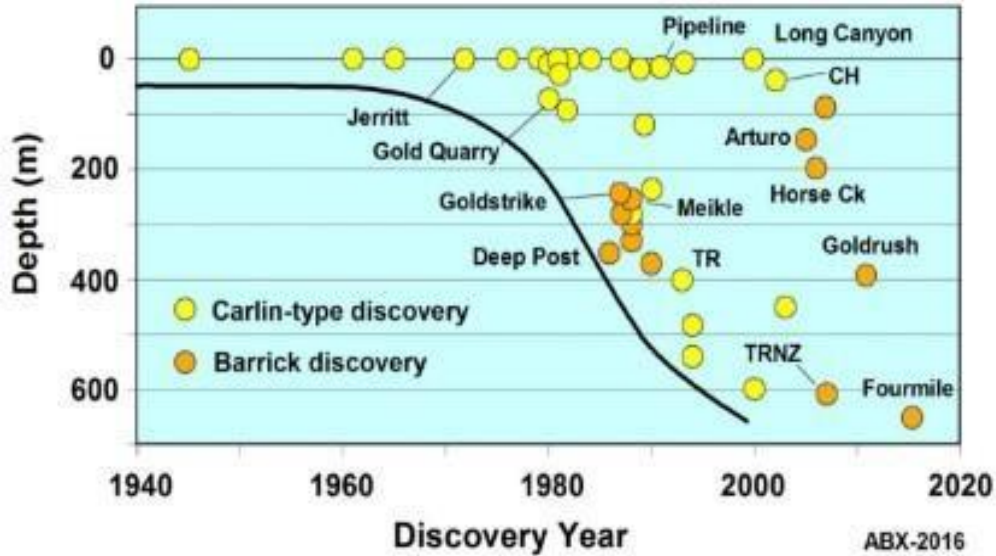


Figure 2. Goldrush-Fourmile Discovery Chronology and Expense⁸

Goldrush- Fourmile Exploration

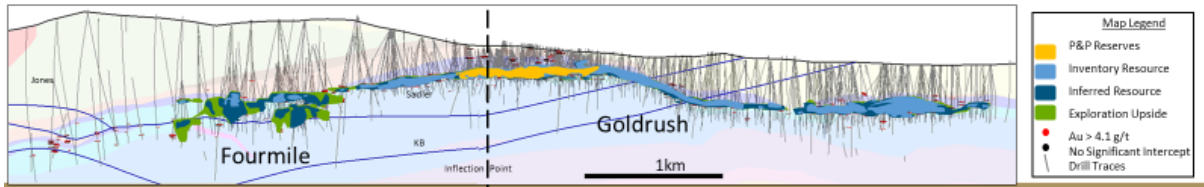
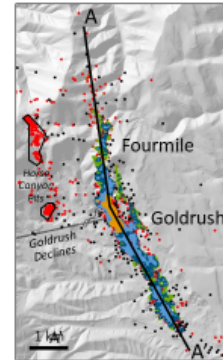


History

- Mid to late 1980's: Shallow oxide mineralization drilled (~100m depth, abandoned because it couldn't support heap leach)
- 2001 – 2004: 36 RC holes identified deeper refractory mineralization w/ 2 "discovery-quality intercepts"
- 2008: Identified Red Hill and KB w/ open-ended mineralization
- 2009: **Discovery of Goldrush**, "discover-quality intercept" 1.8km SE of Red Hill; recognized that mineralization was hosted in the same rock unit
- 2009 – 2015: Deposit continuity verified through extensive drill programs
- 2015 – Present: Infill Drilling to support Feasibility studies and Resource Conversion
 - 2015: **Discovery of Fourmile** extending deposit footprint another 1 km to the north

➤ > 1,200 holes drilled to date to discover and delineate orebodies

A ➤ >\$459M spent (drilling and technical studies)



⁷ Graph from Mr. Rich Haddock's, Barrick Gold Corporation General Counsel, October 2021 written testimony submitted to the Senate Energy and Natural Resources (SENRR) Committee. The Long Canyon and Turquoise Ridge (TR on Figure 1) deposits are located outside of the Carlin Trend and Cortez District.

⁸ Mr. Rich Haddock's October 2021 SENRR testimony, *op cit*.

As shown in Figure 2, Barrick Gold Corporation (Barrick) has been exploring the Goldrush-Fourmile project area for over 30 years and has spent over \$459 million in drilling and technical and environmental studies. The multi-decade history of discoveries in both the Carlin Trend and the Cortez District show that the mineral potential of mining claims is defined over time. Throughout this process of exploration and discovery, Barrick has relied on its Mining Law rights to keep its claims and explore them over the course of decades in order to discover the deposits in these districts. This is why the security of long-term land tenure provided in the Mining Law is essential to facilitate eventual discovery and development of difficult-to-find mineral deposits. Without this durable security of land tenure, companies would not be able to rationalize the enormous costs incurred in discovering mineral deposits, and investors would not fund their exploration efforts.

Figure 2 also provides information about the costs incurred in exploring and developing the Goldrush and Fourmile deposits. Because the Goldrush and Fourmile deposits are deep and hidden, drilling is very expensive with the cost to drill each exploration drill hole at the Fourmile deposit ranging from \$500,000 to \$1 million. The cross section at the bottom of Figure 2 shows the roughly 1,200 holes that Barrick has drilled to help discover and define the size and grade of the Goldrush and Fourmile deposits. The exploration, discovery, and development of the Goldrush and Fourmile deposits proceeded in an incremental and step-wise manner that required many years as well as significant capital. Typically, the initial couple of holes that discover minerals will lead to dozens if not hundreds of additional holes that better define and hopefully expand the initial discovery. Hence, Barrick had to drill over 1,000 holes, make a huge investment, and devote years to explore, discover, and develop the Goldrush and Fourmile gold deposits.

Information presented in Mr. Haddock's written testimony describes the footprint of the Fourmile orebody, which if projected to the surface, would cover roughly 45 acres, an area slightly larger than two unpatented mining claims. (Mining claims can cover a maximum of approximately 20 acres per claim.) To put the size of the Fourmile deposit in context, it is located within a Plan of Operations area that covers 19,895 acres of land, most of which is BLM-administered public lands.⁹ Looking for the 45-acre **needle-in-the-haystack** in the 19,895-acre project area is emblematic of the daunting nature of hardrock mineral exploration.

Mr. Haddock's October 2021 written testimony also discusses the enormous investment that Nevada Gold Mines¹⁰ has made in discovering and developing its assets in the Carlin Trend. The initial investment in the Carlin complex was about **\$7.5 billion** for the processing facilities (i.e., the mills, roasters, and autoclaves.) The investment to date at the Carlin complex is roughly **\$40 billion**. Without the long-term security of tenure under the Mining Law, no company could or would put that much money at risk.

The Carlin Trend and Cortez District exploration, development, and investment histories clearly show why the short-term prospecting permits and the time-limited minerals leases in H.R. 7580 will not work for hardrock minerals because mining companies could not and would not invest in

⁹<https://www.govinfo.gov/content/pkg/FR-2021-08-10/pdf/2021-17040.pdf>. To secure the company's land position, Barrick has over 900 unpatented mining claims on the public lands in the project area.

¹⁰ Nevada Gold Mines is a joint venture between Barrick Gold Corporation and Newmont Mining Corporation.



mineral exploration under this system. Neither the prospecting permits nor the mineral leases provide security of tenure for the length of time it takes to discover, develop, and mine locatable minerals. As discussed in Section I.B. in our May 2022 written testimony, the paucity of producing hardrock mines on acquired lands provides compelling evidence that this system is incompatible and totally mismatched with the geology, exploration realities and investment requirements for locatable minerals.

The current claim system guarantees an explorer can maintain a land position, if they choose to do so, by paying the annual claim maintenance fee, thus preserving their investment in exploration and encouraging investment in the future. Allowing the claimant/explorer the time necessary to evaluate the mineral potential of their claims enables exploration, which is a process that involves continually incorporating new information and new improvements in exploration techniques into an exploration plan. New techniques in drilling, geophysical methods, geochemical methods and metallurgical extraction are constantly being developed and can identify new mineral targets or positively influence the economic potential of a mineral deposit.

Additionally, many mineral deposits have more than one mineral/element contained within the deposit. New technologies like lithium-ion batteries for electric vehicles change the economics for developing a mineral deposit. For example, a boron deposit was discovered and developed in the Silver Peak Range in Esmeralda County, Nevada in the 1920s. The lithium deposit in this area was not discovered until the 1980s. However, at that time, lithium was not needed and did not add sufficient economic value to warrant mining. Today, given the demand for both lithium and boron, this deposit is being developed as an important source of these two critical minerals.

The acreage limits in the acquired lands and H.R. 7580 leasing system are just as problematic as the time limits. The 20,480-acre (1,024 mining claims) per company per state limit is completely unrealistic for locatable minerals. As described in the June 2022 Federal Register Notice of Availability for the Goldrush Mine DEIS¹¹, the proposed Goldrush Mine Plan of Operations plan boundary encompasses 19,081 acres of BLM-administered public lands. This footprint is roughly the equivalent of 956 mining claims. Under a leasing system, the Goldrush Mine footprint alone would nearly exhaust the maximum per company per state acreage limits. Barrick would not be able to explore and develop the rest of its mining claims in the remainder of the Cortez District, in the Carlin Trend, or elsewhere in Nevada. Barrick is not the only Nevada mining company with claim holdings that greatly exceed the arbitrary 1,024 per state claim limit under the leasing system. Several major mining companies that are actively exploring and mining in Nevada each have many thousands of mining claims.¹²

C. A Minerals Leasing System will Dramatically Reduce Domestic Mineral Production

On June 14, 2022, the U.S. Department of State announced the U.S. is establishing the “Minerals Security Partnership”¹³ with “key partner countries” who share the common goal to:

¹¹ <https://www.federalregister.gov/documents/2022/06/30/2022-14027/notice-of-availability-of-draft-environmental-impact-statement-for-nevada-gold-mines-llc-goldrush>

¹² Nevada has over 200,000 mining claims which is more than half of the Nation’s mining claims. BLM 2020 Public Land Statistics, *op. cit.*, page 125.

¹³ <https://www.state.gov/minerals-security-partnership/>



“...ensure critical minerals are produced, processed, and recycled in a manner that supports the ability of countries to realize the full economic development benefit of their geological endowments.”

WMC strongly supports this goal and urges the IWG to develop recommendations consistent with this goal. Many WMC members are mineral exploration geologists who have first-hand experience exploring for minerals and who can attest that the U.S. has a world-class mineral endowment. However, we are gravely concerned that the phrasing of RFI Question No. 1, which asks whether a leasing system would “lead to better outcomes for communities, the environment, and a secure domestic supply of minerals,” reflects a strong bias against the claims system and support for the minerals leasing system in H.R. 7580.

The U.S. will never be able to capitalize on the country’s mineral endowment and produce the minerals needed for clean energy equipment and infrastructure, reduce our reliance on foreign minerals, or strengthen our supply chains if a minerals leasing system modeled after the hardrock minerals leasing system for acquired lands is enacted. The H.R. 7580 leasing system would destroy the highly beneficial and productive claims and land tenure system that attracts billions of dollars of private capital needed to make mineral discoveries and enables companies to employ people, pay taxes and provide the minerals society needs.

Given the current extraordinary demand for minerals to build clean energy infrastructure, to power electric vehicles, and to electrify the Nation, **this is an exceptionally inappropriate time** to make sweeping changes to the land tenure system in the Mining Law. Recent studies predict that the demand for clean energy minerals will continue to soar in the future.¹⁴

In its role as a participating federal agency in the IWG, WMC strongly urges the Department of State to work closely with the other IWG agencies – especially the Department of the Interior – to ensure the IWG’s recommendations are fully supportive of and consistent with the Minerals Security Partnership.

D. Applicability of Land Use Planning and Resource Management Plans to Mining

In addition to asking about changing the claims system to a leasing program, Question No.1 also asks whether “adjustments to the current system, such as incorporating mining into comprehensive federal land use assessments and planning, lead to better outcomes for communities, [the] environment, and a secure domestic supply of minerals.” Just as Slides 6 and 7 in the IWG’s July 2022 virtual listening sessions are misleading and incorrect (as discussed in the Introduction to

¹⁴ See, for example: *Global Supply Chains of EV Batteries*, International Energy Agency, July 2022, <https://iea.blob.core.windows.net/assets/4eb8c252-76b1-4710-8f5e-867e751c8dda/GlobalSupplyChainsofEVBatteries.pdf>, and *China’s Role in Supplying critical Minerals for the Future*, July 2022, Brookings Institution, https://www.brookings.edu/wp-content/uploads/2022/08/LTRC_ChinaSupplyChain.pdf



this letter), Question No. 1 similarly misrepresents the *status quo* by implying that land use planning does not currently apply to mining.

This factually incorrect and disingenuous suggestion appears to be designed to create public concerns that the BLM does not have the statutory authority and regulatory tools it needs to regulate mining, with the overarching objective of building public support for the DOI officials' agenda to increase their authority to say no to mining and put lands off-limits to mining. These officials are either unaware of or dissatisfied with the authority that FLPMA already provides to withdraw lands from operation of the Mining Law and deny approvals for proposed mining Plans of Operation.

Starting first with the BLM's regulations, 43 CFR § 3809.420(a)(3) clearly explains the applicability of land use planning to mining projects:

Land-use plans. Consistent with the mining laws, your operations and post-mining land use **must comply** with the applicable BLM land-use plans and activity plans, and with coastal zone management plans under 16 U.S.C. 1451, as appropriate.

Consistent with this 3809 requirement, all BLM NEPA documents for proposed mineral exploration or mining projects include a section (usually in Chapter 1) that discusses whether a proposed project complies with the applicable BLM Resource Management Plan (RMP) and other state and local land use plans for the area where the proposed mineral project is located. Similarly, the Forest Service's NEPA documents for projects proposed on National Forest System lands must evaluate conformance with the applicable Forest Plan.

In Section 103(c), FLPMA defines "multiple use" to include minerals. The BLM's RMPs show various land use designations dictating allowable land uses and restrictions. Consistent with FLPMA's mandate at Section 102(a)(7), which directs public lands to be "manag[ed] on the basis of multiple use and sustained yield unless otherwise specified by law," the dominant land-use designation in most RMPs is multiple use. Multiple use lands are open to location under the Mining Law.

Because the land use provisions and restrictions in RMPs are subject to applicable law, including the Mining Law, some of the restrictions that govern other multiple uses do not apply to mining. It is clear that mining critics and some DOI officials are seeking ways to make all provisions and restrictions in land use plans applicable to mining. This is apparently the basis for the mischaracterization that mining is exempt from land use planning in Slides 6 and 7 from the listening sessions and RFI Question No. 1.

FLPMA Section 202(e)(3) (43 U.S.C. 1712(e)(3)) expressly prohibits using the land use planning process to withdraw lands from operation of the Mining Law:

Withdrawals made pursuant to section 204 of this Act may be used in carrying out management decisions, but public lands shall be removed from or restored to the operation of the Mining Law of 1872, as amended....only by withdrawal action pursuant to section 204 or other action pursuant to applicable law.



In other words, FLPMA Section 204 (not the Section 202 land use planning section) governs withdrawing lands from operation of the Mining Law to prohibit mining in areas the Section 202 land use planning process has identified as unsuitable for mining. Under current law, Section 202 does not give the BLM the authority to impose restrictions on mining operations through the land-use planning process that could have the *de facto* effect of withdrawing lands from operation of the Mining Law. The BLM must comply with the Section 204 withdrawal process if it determines certain lands should be reclassified from multiple use to lands where mining is not allowed.

The IWG must stop misleading the public by purposefully creating the impression that the BLM has no authority under the land use planning process to regulate mining. Assuming the IWG's real motives are to obtain the authority to withdraw lands from operation of the Mining Law under the FLPMA Section 202 land use planning process or some other law, the IWG must justify to Congress why this new authority is warranted and propose legislation to accomplish this desired objective..

III. RFI Question No. 8: Could Updating the Mining Law Improve the Permitting Process

Question No. 8 asks: "How could updates to the Mining Law of 1872, or other relevant statutes, help provide more certainty and timeliness in the permitting process?" The Mining Law does not need to be updated to achieve improved permitting certainty and timelines. However, the BLM and the Forest Service need to start complying with two statutes that already amend the Mining Law:

1. The Mining and Mineral Policy Act (MMPA) at 30 U.S.C. § 21a, which was added to the Mining Law in 1970; and
2. The 1980 Materials and Minerals Policy, Research and Development Act (MMRPDA) at 30 U.S.C. §§ 1601 – 1605), which is based on the MMPA.

For the past four decades during which the BLM and the Forest Service have largely ignored the mineral directives in both statutes, their permitting processes for mineral projects have become slower, riskier, and costlier.

The Western Governors' Association's (WGA's) June 2022 National Minerals Policy (Policy Resolution 2022-08) focused on permitting hurdles as a major impediment to timely development of the country's mineral resources:¹⁵

"A major factor contributing to the U.S. reliance on foreign sources of minerals is a duplicative and inefficient mine permitting system that discourages development of domestic resources. While processes have improved, it can take seven to 10 years

¹⁵<https://westgov.org/images/editor/WGA-PR-2022-08-National-Minerals-Policy81.pdf>. The WGA's National Minerals Policy Resolution is included as Exhibit II.



in the United States to navigate this cumbersome federal process to bring a mine into production. The same process takes approximately two years in countries that have comparable environmental standards, such as Canada and Australia. Targeted reforms to the mine permitting system are necessary to ensure a domestic supply of minerals which is sufficient to meet the rapidly growing demand.”

“Ensuring timely access to domestic minerals will strengthen our economy and keep us competitive globally as demand for minerals continues to grow, especially for manufacturing and construction. Our antiquated and duplicative permitting process discourages investment and jeopardizes the growth of downstream industries, related jobs and technological innovation that all depend on a secure and reliable mineral supply chain. Permitting delays also impede the United States’ ability to meet growing demand for consumer electronics and energy technologies – both of which require minerals and metals in their manufacture.”

The WGA’s National Minerals Policy Resolution is based on the statutory directives in the 1970 MMPA, in which Congress declared that:

“...it is the continuing policy of the Federal Government in the national interest to foster and encourage private enterprise in (1) the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries, (2) the orderly and economic development of domestic mineral resources, reserves, and reclamation of metals and minerals to help assure satisfaction of industrial, security and environmental needs, (3) mining, mineral, and metallurgical research, including the use and recycling of scrap to promote the wise and efficient use of our natural and reclaimable mineral resources, and (4) the study and development of methods for the disposal, control, and reclamation of mineral waste products, and the reclamation of mined land, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining or mineral activities.

For the purpose of this section “minerals” shall include all minerals and mineral fuels including oil, gas, coal, oil shale and uranium.

It shall be the responsibility of the Secretary of the Interior to carry out this policy when exercising his authority under such programs as may be authorized by law other than this section.” (30 U.S.C. § 21a)

To underscore the importance and relevance of the MMPA, the WGA’s National Minerals Policy Resolution states:

“Now is the time to build on the 1970 Mining and Minerals Policy Act with legislation and policies that will unlock our mineral potential to ensure access to the metals that are critical to U.S. economic and national security – providing vital base materials for electronics, telecommunications, satellites, aircraft,



manufacturing and alternative energy technologies (particularly wind, solar, and electric vehicle batteries).”

The WGA’s National Minerals Policy Resolution explicitly directs Congress to develop a National Minerals Policy to implement the principles in the MMPA to respond to the Nation’s need for minerals:

“Congress, in consultation with the states, should develop a National Minerals Policy that truly enables mineral exploration and development in a manner that balances the nation’s industrial and security needs with adequate protection of natural resources and the environment. Without reducing environmental or other protections afforded by current laws and regulations, any policy must address the length of the mine permitting process to ensure we can develop and provide the domestic resources that are critical to our national and economic security. Any policy should also take into account the potential impacts (including potential environmental effects) of mining operations and should maintain policies and procedures in place to mitigate any impacts.”

“A National Minerals Policy should address permitting delays, patenting, maintenance fees, an equitable government revenue mechanism, and the development of a clean-up fund and program for reclaiming abandoned hard rock mines. Relevant stakeholders, including the mining industry, should continue to work with Congress to determine the elements of a royalty system that is workable and fair.”

As expressly stated in WGA’s National Minerals Policy Resolution, adherence to the MMPA would significantly improve the mine permitting process by ensuring that the BLM and the Forest Service carefully consider the Nation’s needs for minerals as they evaluate Plans of Operation for mineral exploration and mine development projects and prepare NEPA documents for mineral projects. Responding to the country’s demand for responsibly sourced minerals should influence Congressional appropriations to ensure that the federal land management agencies have sufficient resources to hire staff and/or third-party contractors to complete the mine permitting process as efficiently as possible. As discussed in Section IX, agency staffing shortages are a source of permitting delays even though project proponents pay for many aspects of the permitting process through cost recovery agreements.

Secondly, in responding to the WGA’s recommendation that Congress needs to develop a National Minerals Policy, it is important that the current Congress realize that the 96th Congress determined there was a need for a National Minerals Policy over 40 years ago when it enacted the MMPA in 1980, stating:

“the United States lacks a coherent national materials policy and a coordinated program to assure the availability of materials critical for national economic well-being, national defense, and industrial production including interstate commerce and foreign trade; and notwithstanding the enactment of the Mining and Minerals



Policy Act of 1970 (30 U.S.C. § 21a), the United States does not have a coherent national materials and minerals policy.”

Today, 42 years later, the U.S. still lacks a coherent national minerals policy, which has produced the WGA’s strongly-worded National Minerals Policy Resolution directing Congress to develop such a policy.

The MMPRDA is based on the bipartisan¹⁶ November 1980 report of the Subcommittee on Mines and Mining/Committee on Interior and Insular Affairs entitled “U.S. Mineral Vulnerability National Policy Implications.” This 42-year old report, which warns of the Nation’s dangerous dependency on foreign minerals, reads as if it could have been written today. The 1980 report focuses on “the decline of America’s mineral producing capabilities and all that it portends,” and Congress’ and the Executive Branch’s failure to understand the importance of domestic mineral production.

The 42-year old directives in the MMPRDA to promote mineral research and development seem prescient in light of the Nation’s current mineral dependency on China, Russia, and other adversaries for critical minerals. The MMPRDA Section 3 directs that:

The President shall, through the Executive Office of the President, coordinate the responsible departments and agencies to:

Identify materials needs and assist in the pursuit of measures that would assure the availability of materials critical to commerce, the economy, and national security;

Establish a mechanism for the coordination and evaluation of Federal materials programs, including those involving research and development so as to complement related efforts by the private sector as well as other domestic and international agencies and organizations;

Establish a long-range assessment capability concerning materials demand, supply and needs, and provide for the policies and programs necessary to meet those needs;

Promote and encourage private enterprise in the development of economically sound and stable domestic materials industries; and

Encourage Federal agencies to facilitate availability and development of domestic resources to meet critical materials needs.

The IWG should review the Subcommittee’s November 1980 report on U.S. minerals vulnerabilities to gain a historical perspective on the problems identified in 1980 because many of

¹⁶ Congressman Mo Udall (D-AZ) chaired this committee, which was comprised of 28 Democrats and 15 Republicans. Congressman James Santini (D-NV) chaired this subcommittee, which was comprised of nine Democrats and five Republicans.



these problems remain unresolved today.¹⁷ Even more alarming, some of the problems have worsened, like the shocking increase in the Nation's reliance on foreign minerals and the substantial number of acres of public lands that have been placed off-limits to mining since 1980. The following excerpts from the November 1980 report are presented below to provide a partial overview of this report:

“Congress has failed to provide oversight, has not sought to understand how legislation negatively affects the production of minerals, and has failed to check executive initiative oriented only toward other, and often conflicting, policy goals.

...any group of actions that by cumulative impact weaken America's ability to produce its minerals will exact a price that the citizens of this country may well not want to pay.

Interior has a long record of benign neglect regarding the mining and minerals industry.

In the face of an unequivocal Congressional directive to do so [e.g., the MMPA], the Interior Department has made no effort to develop a system for identifying, quantifying, and evaluating the impact of proposed Federal actions on the Nation's nonfuel minerals resources. The result is that minerals now stand alone as the most neglected U.S. renewable and nonrenewable resources not to mention national policies.

Over the past decade the development of ore deposits in the United States has become increasingly dependent upon decisions of government – a government increasingly opposed to such development.

Good mineral policy should not be a policy of reaction, but rather the product of a steady commitment that recognizes the indispensability of minerals to the Nation's industrial base and its national security.

The most debilitating element of the process now unfolding is that while government planners expect industry to solve the problems, government pursues a course that make[s] solutions increasingly difficult if not impossible to achieve.

The Federal Government, as a fundamental aspect of national minerals policy, must seek balance between the environmental, health and safety statutes and regulations on the one hand, and the need to ensure the reliable availability of strategic and critical minerals on the other.

¹⁷ The Subcommittee's November 1980 report is attached as Exhibit V.



The flaw most obvious in the executive mechanism...lies in the total absence of a responsible official to advocate balance, or at a minimum, one who understands and shows an interest in the essential need for a strong U.S. mineral posture.

The most precious asset and the most fundamental requirement, access to land – primarily the mineral-rich public land – in which to search for minerals could well become the scarcest component in America's mineral supply future.

There are extremely serious security implications currently being ignored in the Federal Government's inconsistent approach to mineral adequacy. Minerals, essential to the production of military hardware, and its industrial base, are of vital importance to the Nation, not merely in times of international tension but at all times so as to minimize existing vulnerabilities and to forestall crisis provocations. This is particularly true if the source nations for such materials are either potential adversaries or politically unstable. The United States will be incapable of fulfilling mutual security commitments if a significant part of its energies must be expended to guarantee the flow of critical mineral resources essential to mere national survival.”

Despite the fact that both the BLM and the Forest Service have largely ignored the MMPA and the MMRDA for decades, compliance with these laws is not discretionary; the BLM and the Forest Service have statutory obligations to comply with the MMPA and the MMRDA to address the Nation's mineral needs. A thorough analysis of how agencies' decisions about proposed mineral projects conform with these laws is necessary and would help the public understand the scope of the BLM's and the Forest Service's authority to approve, modify, or reject a proposed mineral project.

Responding to the following recommendations in the Subcommittee's November 1980 report could significantly improve the permitting process:

1. Congress should specifically require compliance with the MMPA; and
2. The President should require executive agencies to adhere to the MMPA in administering their programs – just as they are required to adhere to the National Environmental Policy Act.¹⁸

Putting the MMPA and NEPA on equal footing as recommended in the 1980 Report would be a significant step in improving the permitting process because it would help the public understand the importance of mineral development projects needed to satisfy the Nation's demand for minerals. Increasing public awareness of the requirement for minerals during project permitting would stimulate a more informed discussion of how to balance our need for minerals and at the same time protect the environment and achieve conservation goals. The current public discourse during the mine permitting process nearly always lacks balance and is severely biased to favor conservation and non-development.

¹⁸ Subcommittee report, *op cit.*, page 10.



A section in NEPA documents that describes the agencies' statutory obligations under the MMPA and the MMRDA would produce a more useful, thoughtful, and balanced analysis that would improve the public's evaluation of proposed mining projects. Most NEPA documents describe the BLM's and the Forest Service's decision space as being defined by the property rights that the U.S. Mining Law grants to claim owners. The statutes governing the BLM's and the Forest Service's decisions about proposed locatable minerals projects also include the MMPA and the MMRDA, which obligate the agencies' project permitting decisions to respond to the Nation's minerals needs. Of course, the agencies' regulatory decisions must also be consistent with the environmental protection mandates in statute and in their surface management regulations.

The following are some suggestions for ways the BLM and the Forest Service could place equal importance on complying with NEPA, the MMPA, and the MMRDA during project permitting:

- Establish NEPA timelines specific to mineral projects consistent with directives in the MMRDA and MMPA;
- Expand the Purpose and Need statements in NEPA documents analyzing proposed mineral projects to include compliance with the MMRDA and the MMPA;
- Add the MMPA and the MMRDA to the list of supplemental authorities that must be evaluated in NEPA documents;
- Require NEPA documents to evaluate and disclose the extent to which the Proposed Action and project alternatives comply with the objectives and mandates in the MMRDA and MMPA;
- Identify an MMRDA- and MMPA-preferred alternative in NEPA documents that describes whether a project addresses the Nation's needs for minerals; and
- Include a robust discussion of how the No Action alternative would affect the Nation's domestic mineral supplies and reliance on foreign minerals.

There is no need to change the Mining Law to improve the permitting process. In enacting the MMPA in 1970 and the MMRDA in 1980, Congress has spoken clearly on the need for minerals. The federal land management agencies should be administering their locatable minerals programs to respond to the directives in these laws to help achieve the proper balance between mineral production, environmental protection, and conservation. Framing the need for mineral projects in response to the mineral directives in the MMPA and the MMRDA would put mine permitting in the proper context that acknowledges the urgent need for domestically produced minerals. Creating broader public awareness of the need for minerals and the agencies' marching orders to respond to this need would likely accelerate the permitting process.

IV. RFI Question No. 9: Improving the Permitting Process

Question No. 9 asks: “What improvements can be made to the mine permitting process without reducing opportunities for public input or limiting the comprehensiveness of environmental reviews?” Decreasing the Nation’s reliance on foreign minerals and strengthening our domestic mineral supply chains cannot be achieved without improving the permitting process, which the WGA’s National Minerals Policy Resolution correctly describes as “antiquated and duplicative.”

Permitting a mining project requires a constructive interaction between the project proponent and the agencies throughout the permitting process. During this process, project proponents have an obligation to provide the agencies with comprehensive environmental baseline studies covering their project areas and Plans of Operation based on well-designed mine plans and engineering studies. The agencies have an obligation to have a staff of well-trained mining professionals and resource specialists who can review baseline studies, Plans of Operation, and mine plans in a timely fashion.

With these fundamental concepts in mind, the permitting process must include the following elements:

- Project proponents must provide technically complete and scientifically sound site-specific environmental baseline studies covering all of the environmental resources at a proposed project location;¹⁹
- Project proponents must develop and submit state-of-the-art mine plans and engineering designs for all mining and mineral processing facilities that are custom-tailored for the project area and the specific mineral deposit;
- Agencies must have experienced and well-trained staff who can provide careful and thorough reviews of the environmental baseline studies, mine plans, and engineering designs;
- Agencies must have appropriate budgets to ensure staffing levels of mining professionals, resource specialists, and other subject-matter experts are sufficient to perform the necessary technical and environmental reviews in a timely matter;
- Agencies must seek and encourage public involvement as required during the NEPA process and the Section 106 tribal consultation process under the NHPA;
- Project proponents should likewise actively seek public input during the permitting process;²⁰

¹⁹ These studies typically include but are not limited to: air quality, biology, cultural resources, environmental justice, geology and minerals, livestock grazing, Native American religious concerns and traditional values, noise, paleontology, recreation, social and economic values, soils, special status species, waste characterization (geochemistry), visual resources, vegetation, water resources (surface water and groundwater hydrology), and wildlife.

²⁰ Although this cannot be mandated under the agencies’ surface management regulations, proponent-driven stakeholder engagement programs are almost always advisable and warranted.



- Agencies and project proponents must be able to talk to each other and coordinate closely throughout the permitting process;
- Agencies must coordinate with and seek the involvement of other federal and state regulatory agencies and area tribes as cooperating agencies or in some other capacity during the NEPA process;
- Agency personnel who work in BLM field offices, district offices and state offices and Forest Service personnel who work in the District Ranger and Forest Supervisors' offices should be the primary decisionmakers about a proposed project because these officials have familiarity with the project area as well as first-hand expertise and understanding;
- The hands-on involvement of agency officials in Washington, DC should focus primarily on projects with significant policy implications. Projects involving decisions that are clearly within the ambit of the BLM's and the Forest Service's longstanding surface management regulatory programs should not require detailed headquarters scrutiny; and
- The process for publishing EIS Notices of Intent and Notices of Availability in the Federal Register should be streamlined so that it does not become a source of significant delays.

Having defined the key elements of the permitting process, the analysis must next focus on how to work through this process as efficiently and quickly as possible without compromising the technical integrity of the resulting NEPA document and associated permits, shortcutting any of the required steps in the NEPA process, diminishing public involvement, or overlooking other governing laws. Although improving the timeliness of the permitting process is a key objective, limiting the vulnerability of NEPA documents and permit decisions to appeals and litigation is an equally important goal.

The multi-step process described below that the BLM in Nevada uses for mineral exploration and mining projects subject to the 43 CFR Subpart 3809 surface management regulations is a good template for how to achieve the above-listed key permitting elements, and produce technically-sound and comprehensive NEPA documents that have the best chances of avoiding appeals and litigation, and withstanding them if they arise. As discussed below, increased staffing levels would improve this process by eliminating or minimizing delays due to agency staffing shortages.

A. Nevada BLM's Pre-Plan of Operations Process and Project Management Flowchart

The Nevada BLM's procedures start at the pre-Plan of Operations stage and focus on early and frequent coordination between the project proponent, the BLM, and other key federal and state regulatory agencies. This coordination, which is voluntary, gives all parties important insights into the site-specific environmental baseline and engineering studies that will be needed to support the permitting and NEPA analysis processes for that project. Although project proponents are not required to participate in this pre-Plan of Operations process, they are strongly encouraged to do so to minimize the potential for substantial permitting delays attributable to incomplete or inadequate environmental baseline studies to support the mine plan.



This pre-Plan of Operations process is described in Nevada Instruction Memorandum NV-IM-2019-014 entitled “Guidance for Permitting 3809 Plans of Operation – Pre-Planning”²¹ and is comprised of seven steps:

Step 1: The project proponent (operator) contacts the BLM

The project proponent contacts the applicable BLM Field Office once they have a conceptual mine plan, drawings, and maps for a new mining project or a major modification to an existing authorized mining project.²²

Step 2: Initial Project Presentation

The project proponent, along with any technical contractors, makes a presentation to the BLM describing the proposed mine plan. The BLM typically invites the Nevada Division of Environmental Protection/Bureau of Mining Regulation and Reclamation (NDEP/BMRR) and other key Nevada state regulatory agencies to this meeting. The purpose of this meeting is to introduce the conceptual project to the BLM’s managers and interdisciplinary team so they can begin to identify issues, concerns, and the environmental baseline studies that will be needed for the NEPA analysis. During or shortly after this meeting, the BLM will provide recommendations for the baseline studies that will be required to develop a complete Plan of Operations submittal package that can support the NEPA analysis.

Step 3: Pre-Plan of Operations Kick-Off Meeting.

Soon after the initial presentation, the project proponent, the BLM, and the NDEP/BMRR meet to review the project proposal, review the BLM and the NDEP/BMRR permitting requirements, recommend use of the Voluntary Plan of Operations Outline/Format, determine information needs for the permitting and environmental analyses, and review the applicable agency policies and requirements for mine permitting.

Step 4: Documentation of Information Needs.

The BLM provides the project proponent a documented summary of the relevant known resource issues that are present as well as the baseline studies required per 43 CFR § 3809.401(b) to support the future mine plan submittal and subsequent NEPA environmental analysis.

Step 5: Pre-Plan of Operations Project Schedule.

²¹ This IM remains in effect until September 30, 2022. WMC recommends that it be extended beyond that date.

²² Elements of this process are also applicable to exploration Plans of Operation.



The project proponent is encouraged to coordinate with the BLM and the NDEP/BMRR to develop a project schedule for the submittal and review of the baseline reports, applications for Nevada State permits, and the Mine Plan of Operations .

Step 6: Development of the Plan of Operations.

Experienced BLM mine professionals including mining engineers, geologists and hydrologists may offer advice to improve the mine plan submittal; potentially minimizing the need for more information and for questions to arise later during project permitting that could cause delays.

Step 7: Submittal of the Plan of Operations.

The operator submits a mine plan to the BLM with all baseline reports and related information, which may include preliminary environmental impact analyses. The BLM determines if the mine plan is complete. At that point, the BLM's regulatory policy and NEPA guidance will govern the remainder of the mine plan review and approval process. Coordination with the BLM, the NDEP/BMRR, and any other appropriate federal or state agencies throughout this process is essential.

Project proponents are encouraged to enter into a cost recovery agreement with the BLM that is applicable to the above-described pre-Plan of Operations steps. This agreement gives the BLM sufficient resources to hire a third-party contractor that can assist the BLM in reviewing the environmental baseline studies and to reimburse the BLM for the time that its project managers and resource specialists devote to reviewing the project proponent's environmental baseline studies, mine plan, and Plan of Operations. This cost recovery agreement is also used to cover the BLM's costs to prepare the NEPA document, including the third-party EIS contractor costs.

There is ongoing coordination following the project proponent's submittal of the environmental baseline studies and the Mine Plan of Operations to develop Supplemental Environmental Reports (SERs) and a Supplemental Information Report (SIR) that discuss the affected environment for each resource to be evaluated in the NEPA document, the environmental consequences associated with the development of the Proposed Action and Project alternatives, cumulative impacts, and any required mitigation measures to avoid, minimize, or mitigate project impacts. The SIR provides a detailed discussion of the project alternatives considered but eliminated from detailed analysis, the project alternatives that are selected for thorough evaluation in the NEPA document, and the Applicant Committed Environmental Protection Measures.

The SERs and SIR are a key component of the Nevada BLM's permitting process. The BLM and project proponents work closely together along with other involved regulatory agencies during preparation of these documents. This coordination ensures the SERs and the SIR are accurate, comprehensive, and based on the best available science. The project proponent's participation in developing the SERs primarily focuses on ensuring that the BLM's environmental consequences and cumulative impact analyses are based on a thorough understanding of the project proponent's mine plan, Plan of Operations, and Applicant Committed Environmental Protection Measures. The SERs and the SIR are made available to the public on the BLM's ePlanning website when the Draft EIS is published.



Exhibit III presents a NEPA Project Management Flowchart used by the BLM in Nevada that illustrates the steps discussed above. Although the Nevada BLM process produces technically complete and comprehensive NEPA documents, each step in the Nevada BLM process is potentially the source of delays due to agency staffing shortages. Addressing the staffing shortage problem would be a significant way to improve the permitting process.

In the Infrastructure Investment and Jobs Act of 2021 (also known as the “Bipartisan Infrastructure Law”), Congress acknowledged the critical role that qualified mineral professionals play in the permitting process and directed the Biden Administration to improve the permitting process. Section 40206(d)(2) of this law directs the DOI and USDA to prepare a report within one year of the date of enactment²³ that:

“Identifies options, including cost recovery paid by permit applicants, for ensuring adequate staffing and training of Federal entities and personnel responsible for the consideration of applications, operating plans, leases, licenses, permits, and other use authorizations for critical mineral-related activities on Federal land”

Because responding to Congress’ demand for the November 2022 Report is one of the drivers for the IWG’s RFI, it is imperative that the IWG take a close look at ways to solve the minerals professionals staffing shortages, which are a significant source of permitting delays – especially in the BLM district and field offices where multiple mineral projects are located.²⁴

The BLM and the Forest Service need to substantially increase the number of qualified mineral professionals including but not limited to mining engineers, economic geologists, mineral examiners, hydrologists, air quality specialists, and geochemists who are qualified to evaluate environmental baseline studies and mining Plans of Operation. These professionals should provide fact-based and unbiased analyses of the information presented in a project proponent’s Plan of Operations and environmental baseline and engineering studies, and serve as resource specialists and subject-matter experts during the permitting process. Increasing agency staffing levels in districts with high levels of mineral exploration and development activities would help reduce the agency review times that are currently contributing to permitting delays.

The reference to “cost recovery paid by permit applicants” in Section 40206(d)(2) of the Infrastructure Investment and Jobs Act is an especially important element of Congress’ directive to the Secretaries to improve the permitting process. The BLM and the Forest Service should consider a range of ways to address the current staffing problem by using contractors as well as employees. In addition to hiring permanent staff, the agencies could also develop a group of third-party mining professional contractors whose expertise would be available to all BLM districts and National Forests on an as-needed, project-by-project basis. The contractors’ role would be

²³ Congress enacted the Infrastructure Investment and Jobs Act on November 15, 2021. Consequently, this report is due on November 15, 2022, henceforth referred to as “the November 2022 Report”

²⁴ Increasing staffing levels could be especially important in Nevada where roughly half of the country’s Notices and Plans of Operation are filed each year, with many Notices and Plans of Operations being located in just two BLM district offices – Battle Mountain and Winnemucca.

restricted to providing expert review and advice to the agencies, analogous to a peer review. The contractors would not have any decision-making authority; that authority would remain solely with the agencies.

There would be several advantages to developing a centralized core of expert contractors to augment the BLM's and the Forest Service's permanent mineral staffing levels. First, project applicants would pay for the costs associated with retaining these contractors, which would reduce taxpayer costs that would otherwise be incurred by hiring full-time personnel. Secondly, the contractors' technical input and expertise would provide agency personnel with an opportunity to work with and learn from other experts in their fields, functioning as a professional development and training program. Third, the involvement of third-party expert contractors working for the BLM or the Forest Service would help ensure that the NEPA document sections on the affected environment, environmental consequences, and mitigation measures are based on a state-of-the-art, technically complete, and thorough analysis of an applicant's baseline data, mine Plans of Operations, and environmental protection and mitigation measures. Developing technically unassailable NEPA documents is one way to limit appeals and litigation challenging the agencies' Records of Decision.

To respond to Congress' directive to address staffing issues in the November 2022 report, the IWG's report should recommend streamlining federal contracting procedures in order to facilitate the development of a central core of expert contractors. The federal contracting procedures should include an efficient process that the BLM field and district offices and the National Forest ranger districts and supervisors' offices could readily use to enter into professional services contracts to retain contractors to assist with a specific project.

V. RFI Question No. 10: Incentivizing Domestic Critical Minerals Production

Question No. 10 asks: "What types of incentives would be appropriate to encourage the development of critical minerals, and what is the proper definition of a "critical mineral mine"?"

A. Eliminating Existing Disincentives Would Facilitate Critical Mineral Development

The answer to the first question about how to incentivize critical minerals development is quite straightforward. The best incentives to stimulate the development of critical minerals – and all other minerals that are not on the official critical minerals list – would be to eliminate the disincentives that currently obstruct timely mineral exploration and development projects and chill investment in the Nation's mineral resources. These disincentives include but are not limited to the following:

- The protracted, risky, and costly permitting process for projects located on public lands;
- The decades-long legislative debate about overhauling the Mining Law to:
 - Eliminate security of tenure by upending the claims and self-initiation systems and substituting an unworkable leasing program;
 - Impose a confiscatory gross royalty;



- Charge mine waste disposal fees;
- Give project opponents new tools to put lands with proposed mining projects off-limits to mining; and
- Create new unworkable regulatory procedures and standards.
- The decades-long history of using administrative measures to try to change the Mining Law without legislation to amend the Mining Law. Examples include:
 - Rulemakings – including the possible rulemaking that may evolve from this RFI – to implement administrative changes to the agencies’ administration of the Mining Law by modifying the 43 CFR Subpart 3809 regulations for projects on BLM-administered lands and the 36 CFR Subpart 228A regulations for projects on National Forest System lands; and
 - Reoccurring and new Solicitors Opinions that attempt to change the Mining Law administratively by advancing novel and incorrect interpretations of rights under the Mining Law.
- Continual proposals to put lands with important mineral resources off-limits to mining; and
- Laws that encourage and subsidize litigation, like the Equal Access to Justice Act, which enable NGO-sponsored lawsuits challenging agencies’ NEPA decisions.

These disincentives hang like a dark cloud over the U.S. mining industry and make it difficult for some companies, particularly companies in the minerals exploration sector, to secure project financing. Investors prefer to fund projects in jurisdictions with business climates that are perceived to be more stable and mining friendly.

As discussed in our supplementary response to Question No. 11 pertaining to putting more lands off-limits to mining, it is essential that lands with critical minerals remain open to mineral exploration and development under the Mining Law. (See Section VI below.)

B. Critical Minerals List

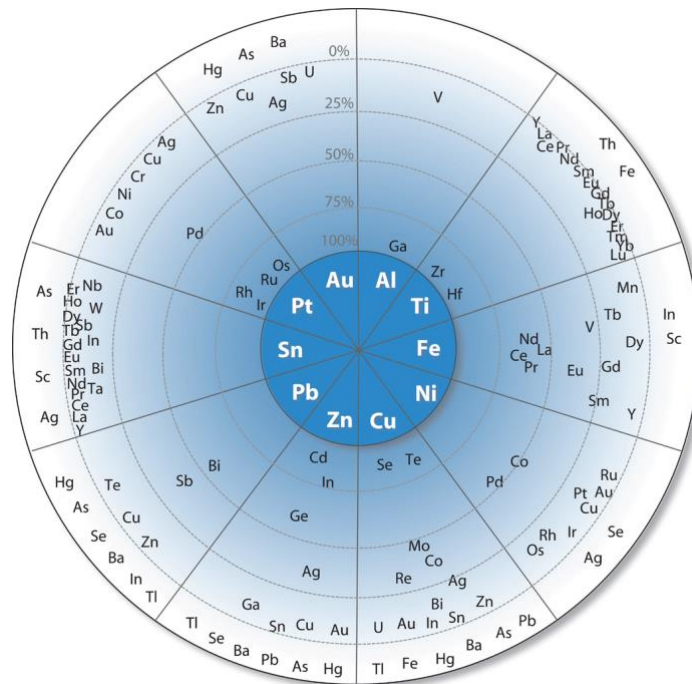
As discussed in WMC’s testimony, the official list of critical minerals needs to be expanded to include the host minerals in which critical minerals typically occur. This expansion must include the precious metals, especially gold, and base metals, especially copper, that are host minerals to many critical minerals. Section 40206(b)(2) of the recently enacted Infrastructure Investment and Jobs Act recognizes that “many critical minerals are only economic to recover when combined with the production of a host mineral.” Unfortunately, the U.S. Geological Survey’s (USGS’) 2022 list of critical minerals does not adequately recognize this fact.

We draw the IWG’s attention to the Wheel of Metals Companianality included as Figure 5 in our May 2022 testimony and shown on the following page as Figure 1 for the IWG’s convenience.

This wheel was published in a 2015 study from the Center for Industrial Ecology at Yale University²⁵ and shows that many critical minerals mainly occur in deposits of other more common minerals as by-product minerals in primary mineral deposits. As described in the Yale study, the principal host metals form the inner, darkest blue circle. Companion elements appear in the outer circles at distances proportional to the percentage of their primary production (from 100 to 0 percent) of the host metal indicated. The companion elements in the white region of the outer circle are elements for which the percentage of their production from the host metal indicated has not been determined.

The Wheel of Metals Companionality illustrates there are many primary metal deposits that have significant potential to produce important critical minerals as by-products or co-products. Development of the primary host-mineral deposit is typically the economic driver that enables co-production or by-product production of the critical mineral(s). In many cases, producing the critical mineral as a stand-alone operation is not feasible or economic.

Figure 1. Wheel of Metals Companionality



Except for aluminum (Al), the U.S. has significant mineral deposits of all of the host metals shown in the inner, dark-blue circle of the wheel: titanium (Ti); iron (Fe); nickel (Ni); copper (Cu); zinc (Zn); lead (Pb); tin (Sn); platinum (Pt); and gold (Au). Critical mineral production could be incentivized by policies that encourage development of host-mineral deposits where critical minerals can be produced as co-products and by-products.

²⁵ <https://advances.sciencemag.org/content/1/3/e1400180>

The protocols the USGS used to develop its critical minerals list need to be more flexible and responsive to change. Updating the list every five years may not be frequent enough to reflect current market demands or how unpredictable events like the COVID pandemic or the Ukraine war can influence critical minerals supply and demand. New and emerging technologies that use different minerals, which may not be on the critical minerals list, could also merit changing the list more frequently than every five years. Also, if the U.S. is successful in producing more critical minerals domestically, some minerals may eventually warrant removal from the list from a supply and demand perspective.

VI. RFI Question 11: Should Lands be Off-limits to Mining

A. Placing More Lands Off-Limits to Mining will Increase the Nation's Reliance on Foreign Minerals

Shrinking the available land base where mineral exploration and mining are allowed would reduce the number of future mineral discoveries that can become mines. This would ultimately increase the Nation's reliance on foreign minerals and thwart the country's goals to increase domestic production and become more mineral independent. The 1980 House Subcommittee report discussed in Section VIII recognized that removing lands from operation of the Mining Law was a serious threat to mineral security:

“The most precious asset and the most fundamental requirement, access to land – primarily the mineral-rich public land – in which to search for minerals could well become the scarcest component in America's mineral supply future.”²⁶

Rather than asking whether additional lands need to be withdrawn, it would be more appropriate to ask whether some previously withdrawn lands with high mineral potential should once again become available for mineral exploration and development to address current critical minerals availability challenges. This reevaluation should include all Wilderness Study Areas (WSAs) that represent *de facto* withdrawals – especially those WSAs that BLM has determined are unsuitable for designation as a wilderness area. In light of our untenable and dangerous reliance on foreign minerals, it would be in the public's best interests to determine whether certain withdrawn lands that are not part of the National Park System are more valuable for their mineral resources compared to scenic, cultural, recreational or other land uses. This evaluation should determine how the modern environmental protection standards that would apply to potential mineral development would minimize environmental impacts, maximize protection of cultural resources and scenic landscapes, require reclamation when mining is complete, and enable multiple uses on these lands for mining and nearby recreational uses both during and after mining.

B. BLM Should Not Withdraw the Sagebrush Focal Areas From Mineral Entry

BLM's current re-evaluation of whether to withdraw the 10-million acre Sagebrush Focal Areas (SFA) from operation of the Mining Law is ill-considered and must exclude lands with critical minerals potential. Some of the SFA have lands with significant to moderate critical minerals

²⁶ 1980 Subcommittee Report, *op cit.* page xv.



potential. Our comments focus on the SFA in the McDermitt Caldera area, which straddles the north-central Nevada – southeast Oregon border, but extend to the other SFA.

In its 2016 Mineral Potential Report, the USGS identified the McDermitt Caldera area as having high mineral potential for lithium, uranium, zeolites, specialty clay, and gemstones.²⁷ Chapter B of this USGS report gives the McDermitt Caldera area the highest ranking possible (H/D) in terms of “Level of Resources Potential” and “Level of Certainty” for lithium resources, designating the area as having “high potential with abundant direct and indirect evidence” of mineral potential. The 2016 Mineral Potential Report also identified other areas in the 10-million acre SFA in Idaho, Montana, elsewhere in Nevada, Oregon, Utah, and Wyoming with mineral potential, including potential for critical minerals.

It is absolutely essential that these mineralized areas remain open to location under the Mining Law. They do not need to be withdrawn from mineral entry in order to protect Greater Sage-grouse or their habitat in these areas. The Resource Management Plans (RMPs) for the SFA include the numerous requirements to minimize and mitigate impacts to Greater Sage-grouse that are specified in the 2015 Greater Sage Grouse Approved Resource Management Amendments. For lands like the SFA that are designated as Priority Habitat Management Areas, these measures are quite stringent and protective.

Categorical withdrawal of the SFA from mineral entry would not achieve the necessary balance mandated in the MMPA and MMPRDA and would dramatically interfere with President Biden’s directives to build resilient supply chains for critical minerals like lithium. Putting the lithium deposits in the McDermitt Caldera SFA off-limits to mining, or imposing land use restrictions that impede exploration and development would directly conflict with the Biden Administration’s explicit policy to strengthen critical minerals domestic supply chains. The President’s June 2021 supply chain report directs federal agencies to identify potential U.S. producing and processing locations for critical minerals:²⁸

“We recommend that federal agencies, led by the Department of Interior with the support of the White House Office of Science and Technology Policy,...identify potential sites where critical minerals could be sustainably and responsibly produced and processed in the United States while adhering to the highest environmental, labor, community engagement, and sustainability standards.” (Page 15)

²⁷ Mineral resources of the Sagebrush Focal Areas of Idaho, Montana, Nevada, Oregon, Utah and Wyoming, Scientific Investigations Report 2016-5089, <https://pubs.er.usgs.gov/publication/sir20165089>, BLM is in the process of updating this report.

²⁸ Building resilient supply chains, revitalizing American manufacturing, and fostering broad-based growth, <https://www.whitehouse.gov/wp-content/uploads/2021/06/100-day-supply-chain-review-report.pdf>



In June 2021, the Federal Consortium for Advanced Batteries (FCAB)²⁹ documented the critical commercial and defense demands for lithium-ion batteries and published its “National Blueprint for Lithium Batteries 2021- 2030.”³⁰ This blueprint states:

“To establish a secure battery materials and technology supply chain that supports long-term U.S. economic competitiveness and job creation, enables decarbonization goals, and meets national security requirements, the FCAB will:

- **Secure U.S. access to raw materials for lithium batteries** by incentivizing growth in safe, equitable, and sustainable domestic mining ventures while leveraging partnerships with allies and partners to establish a diversified supply.”

In the foreword to the Blueprint, U.S. Department of Energy Secretary, Jennifer Granholm, explains the importance of lithium-ion batteries:

“Lithium-based batteries power our daily lives from consumer electronics to national defense. They enable electrification of the transportation sector and provide stationary grid storage, critical to developing the clean-energy economy.”

Management measures that eliminate or restrict access to and development of the lithium deposits in the McDermitt Caldera SFA would obstruct the Biden Administration’s clean energy policies and objectives. Therefore, it is inappropriate to withdraw this SFA from operation of the Mining Law.

Additionally, the BLM should not propose any mineral withdrawals in the other SFAs throughout the planning area. The BLM’s 2016 SFA Withdrawal Draft EIS clearly demonstrates mining in the 10-million acre proposed SFA mineral withdrawal would have a miniscule impact on Greater Sage-grouse and its habitat.

VII. Conclusions

Sweeping changes to the Mining Law or to mining regulations will delay and potentially prevent responsible development of the domestic clean energy minerals needed to support the Biden Administration’s goals to reduce carbon emissions, phase out fossil fuels, and shift to carbon-free energy systems. Although there would never be a right time to enact the draconian measures in H.R. 7580 or to import aspects of H.R. 7580 into new mining regulations, this is an especially bad time to make radical changes to the Mining Law and mining regulations that will make mining clean energy minerals more difficult if not impossible.

²⁹ The FCAB is led by the U.S. Departments of Energy, Defense, Commerce, and State.

³⁰https://www.energy.gov/sites/default/files/2021-06/FCAB%20National%20Blueprint%20Lithium%20Batteries%200621_0.pdf



Given the exponential demand for the hardrock minerals needed to power the clean and renewable energy systems to help the Nation achieve its goals for national electrification and to meet the targeted 2030 reductions in greenhouse gas emissions, Congress and this Administration should focus on reducing the barriers to mineral exploration and development that have produced our current reliance on foreign minerals.

The War in Ukraine demonstrates the dangers of relying on adversaries like Russia and China for minerals. Observing the precarious situation in Europe, Senator Joe Manchin recently warned that China and Russia are poised to weaponize critical minerals against the U.S. – just as Russia is doing by limiting natural gas supplies to Europe.

Since 1995, the U.S. reliance on foreign minerals has nearly doubled. In 1995 we imported 100 percent of just eight minerals and 50 percent or more of 16 minerals. Today, we import 100 percent of 17 minerals and 50 percent or more for another 30 minerals. This growing reliance on foreign minerals is not for lack of domestic mineral resources. The minerals on America's public lands are a precious endowment that could provide domestic sources of most of the minerals needed to strengthen domestic supply chains and achieve our clean energy objectives. Obtaining minerals from domestic mines would ensure our minerals come from the cleanest and safest mines in the world because the existing comprehensive federal and state environmental laws and regulations that govern mining ensure a clean and safe environment at America's mines.

As the IWG prepares its report to make recommendations for changing the Mining Law and mining regulations, WMC strongly recommends that the following key elements of the current law and regulations be preserved to encourage development of the mineral resources on our public lands:

- **Maintain the existing mining claims system which provides the security of land tenure necessary to attract investment in mineral exploration and development.**
Do not jettison the claims system and substitute the impractical leasing system in H.R. 7580, which has a 75-year history of failure to produce minerals and generate royalties from hardrock mining operations on acquired lands.
- **Keep lands open to mineral exploration and development.**
Do not put more lands off-limits to mining as proposed in H.R. 7580 and as being evaluated for the 10-million acre SFA potential withdrawal.
- **Preserve the Plan of Operations permitting system for life-of-mine permits that comply with environmental protection standards and provide reclamation bonds.**
Do not adopt the impractical and unworkable permitting process in H.R. 7580 that is based on the federal hardrock leasing procedures that have a long history of discouraging mineral exploration and mining on acquired lands.
- **Require compliance with the existing framework of federal and state environmental protection regulations that effectively prohibit unnecessary impacts, safeguard all aspects of the environment, and mitigate mining impacts.**



Do not create the unworkable environmental standards in H.R. 7580 that fail to recognize that mining creates some impacts that are unavoidable and necessary and gives regulators the discretion to deny projects that create unavoidable impacts.

- **Retain current financial assurance requirements to guarantee reclamation.**
The U.S. EPA's CERCLA 108(b) final rule found that existing financial assurance requirements guarantee reclamation of modern mines and will prevent today's mines from becoming tomorrow's environmental problems.
- **Streamline the mine permitting process to minimize delays and uncertainties that chill minerals investment.**
Enact the streamlining measures directed in Section 40206 of the Infrastructure Investment and Jobs Act.
- **Use the Mining Law holding fees not needed to administer the BLM's Mining Law Program to establish a federal fund to reclaim abandoned hardrock mines on public lands.**
Based on FY 2021 statistics, roughly \$61 million per year could be used for this purpose.

As stated in the Federal Register notice for this RFI, the September 2021 petition for a rulemaking to change the BLM's 43 CFR Subpart 3809 surface management regulations for locatable minerals is one of the drivers for this RFI. The requested changes in the redlined version of the regulations attached to the rulemaking petition would severely inhibit mining on public lands and represent a back-door attempt to amend the Mining Law through an administrative rulemaking. Therefore, one of the most important recommendations the IWG should make is to strongly advise the BLM to reject this petition because it is contrary to existing law, would thwart the country's clean energy objectives, and make the U.S. even more reliant on foreign minerals.

As discussed above, the Infrastructure Investment and Jobs Act of 2021 requires the DOI/BLM and the USDA/Forest Service to take immediate and constructive actions to increase domestic mineral production from the Nation's public lands. In addition to the directives in this 2021 law, the 1980 MMPDA and the 1970 MMPA include explicit language on the need for reliable sources of domestic minerals and direct the DOI to respond to this need. The DOI cannot ignore these statutory mandates. Acquiescing to the demands in the redlined version of the 3809 regulations attached to the rulemaking petition would be flagrantly inconsistent with these Congressional directives.

Thirty years ago, the WMC started working with the 103rd Congress on proposed legislation to amend the Mining Law. Many aspects of the Mining Law debate have not changed much in the past thirty years.

Today, we stand ready to work with the IWG and Congress with the sincere hope that we can have a thoughtful dialogue about the Mining Law and mining regulations that focuses on enacting policies that will reverse the current decline in mineral production and encourage mineral exploration and development to strengthen domestic supply chains for minerals – especially the minerals that are crucial for the clean energy revolution.



We are truly fortunate to live in a country with an exceptional mineral endowment and a system of laws and regulations that guarantee these minerals can be produced from mines that are designed, operated, closed, and reclaimed with state-of-the-art environmental safeguards. Under this system, we can responsibly produce the minerals that are essential to our economy and national security, reduce our reliance on foreign countries for critically important minerals, create family-wage jobs, and provide long-lasting benefits to the areas in which mines are located.

WMC very much appreciates this opportunity to provide these comments to the IWG. Please do not hesitate to contact us if you have any questions.

Respectfully,

A handwritten signature in blue ink that reads 'Debra W. Struhsacker'.

Debra Struhsacker
Cofounder and Director, Women's Mining Coalition
debra@struhsacker.com

Attachments:

- Exhibit I WMC May 12, 2022 Written Testimony Presented to the House Subcommittee on Energy and Mineral Resources
- Exhibit II Western Governors' Association June 2022 Mineral Policy Resolution
- Exhibit III Nevada BLM NEPA Flowchart

For more information about WMC, please visit our website at: www.wmc-usa.org

Exhibit I
WMC May 12, 2022 Written Testimony Presented to the House Subcommittee
on Energy and Mineral Resources



Legislative Hearing
Reforming the Mining Law of 1872

Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
U.S. House of Representatives
May 12, 2022

Testimony of Debra W. Struhsacker
On behalf of
The Women's Mining Coalition

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LIST OF EXHIBITS

- Exhibit I** **July 2021 Testimony of Mr. Jim Cress, House Energy & Mineral Resources Subcommittee**
- Exhibit II** **January 2007 Testimony of Mr. Jim Cress, Senate Energy and Natural Resources Committee**
- Exhibit III** **July 2017 Testimony of Mr. Jim Cress, House Energy & Mineral Resources Subcommittee**
- Exhibit IV** **October 2021 Testimony of Mr. Rich Haddock, Senate Energy and Natural Resources Committee**
- Exhibit V** **October 2021 Testimony of Ms. Katie Sweeney, Senate Energy and Natural Resources Committee**
- Exhibit VI** **American Exploration & Mining Association Mining Law Fifth Amendment Takings Analysis**
- Exhibit VII** **Nevada Division of Environmental Protection - Bureau of Land Management - U.S. Forest Service Memorandum of Understanding**



**Legislative Hearing:
Reforming the Mining Law of 1872
Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
U.S. House of Representatives
May 12, 2022**

**Testimony of Debra W. Struhsacker
On behalf of
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**Introduction: Congress Needs to Wait for the Public Input Requested by President Biden's
Interagency Working Group Before Considering H.R. 7580 to Gut the Mining Law**

In June, 2021, the White House released the 100-Day review entitled "Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth" that directed the Federal government to establish an interagency team:

"...with expertise in mine permitting and environmental law to identify gaps in statutes and regulations that may need to be updated to ensure new production meets strong environmental standards throughout the lifecycle of the project; ensure meaningful community consultation and consultation with tribal nations, respecting the government-to-government relationship, at all stages of the mining process; and examine opportunities to reduce time, cost, and risk of permitting without compromising these strong environmental and consultation benchmarks.¹"

On March 31, 2022, this Interagency Working Group (IWG)² published a Federal Register Request for Information (RFI) asking the public to comment on important questions about the Mining Law, mining regulations and permitting (FR Vol 87, No.62, pp. 18811-18812.) The public comment deadline is July 31, 2022.

As explained in the RFI, the IWG is seeking this public input in order to:

"assess the adequacy of existing laws, regulations, and permitting processes, determine whether changes to those are necessary to meet the goals laid out in the recommendations from E.O. 14017 100-Day reviews, and if it concludes that changes are

¹ <https://www.whitehouse.gov/wp-content/uploads/2021/06/100-day-supply-chain-review-report.pdf>, page 14. This team was developed in response to President Biden's February 24, 2021 Executive Order 14017, "America's Supply Chains."

² The Department of the Interior chairs the IWG. The other federal IWG agencies include the Department of Agriculture through the Forest Service; the Environmental Protection Agency; the Army Corps of Engineers; the Departments of Commerce, Energy, and State; the Council on Environmental Quality; and the National Economic Council.

necessary, make recommendations to the appropriate Federal agencies or Congress on how to implement those changes.” (emphasis added)

Congress must not ignore the RFI’s explicit request for public input on *whether* existing laws and regulations need to be changed and *if* changes are warranted, *how* to implement those changes. Initiating the legislative debate about Chairman Grijalva’s new bill, The Clean Energy Reform Act, H.R. 7580, is premature without first obtaining the public’s input on *whether, if, and how* laws and regulations should be changed. This hearing has put the cart before the horse and signals the House Subcommittee on Energy and Mineral Resources is not interested in and does not value the public’s perspectives on mining. Congress should table H.R. 7580 until it has received the public comments in response to the IWG’s RFI . The public’s comments must be considered as part of the legislative debate whether to functionally gut the Mining Law by enacting H.R. 7580.

The following sections provide the Women’s Mining Coalition’s preliminary responses to the RFI questions that are directly relevant to Congress’ evaluation of H.R. 7580.

I. RFI Question 1: Eliminating Mining Claims and Substituting a Leasing System

“Would alternatives to the existing claim system, such as leasing, or adjustments to the current system, such as incorporating mining into comprehensive federal lands use assessments and planning, lead to better outcomes for communities, environment and a secure domestic supply of minerals? If so, how should such an alternative or adjusted system be structured?”

A. *The Mining Claims System*

The Mining Law governs land tenure, authorizes citizens to obtain mineral rights on certain western public domain lands, and gives claim owners the necessary security of land tenure to justify the enormous investments required to explore for minerals and develop mines. Substituting the leasing system proposed in H.R. 7580 will eliminate land tenure security, significantly reduce mineral exploration and development on public lands, and increase U.S. reliance on foreign minerals. H.R. 7580 upends the mining claims system by requiring mandatory conversion of life-of-mine claims to time-limited leases. This ill-conceived, impractical, and unworkable proposal will substantially interfere with the Biden Administration’s policies to increase domestic mineral production in order to strengthen domestic supply chains and provide the minerals needed to build clean energy infrastructure. It will also precipitate Fifth Amendment takings claims against the federal government.

The current mining claims system is an effective way for the public to benefit from private-sector investment in mineral exploration and development projects. Under current law, U.S. citizens can take the initiative to locate claims based on preliminary concepts about where minerals may be located and then make substantial investments of time, knowledge, and money to test these concepts to explore for minerals on their claims with the hope of discovering a mineral deposit that can be developed into a mine. This process, which is known as self-initiation, greatly benefits our Nation because it effectively leverages private-sector investment that transforms undeveloped federal land into mining operations that create jobs, pay taxes, and provide the minerals the country needs – at no risk or expense whatsoever to U.S. taxpayers.

Self-initiation gives prospectors and geologists the opportunity to pursue their ideas about where mineral deposits may be located and identify promising mineral targets. Finding a mineral deposit is a daunting task that takes a lot of skill – as well as luck. According to the National Research Council/National Academy of Science 1999 report³, 1,000 mineral targets must be identified and evaluated to discover a single deposit that can become a mine.

Another benefit of the claims system is that it generates modest revenue for the Treasury. Mine claimants pay the U.S. Bureau of Land Management (BLM) annual claim maintenance fees to keep their claims in good standing. The current claim maintenance fee is \$165 per claim⁴. The claim maintenance fee amount is indexed to the Consumer Price Index adjusted accordingly every five years. In FY 2020, BLM collected over \$69.4 million in claim maintenance and other Mining Law holding fees⁵.

B. The Minerals Leasing System for Hardrock Minerals

The leasing system proposed in H.R. 7580 replicates the 75-year old hardrock minerals leasing program applicable on acquired lands⁶, which has a proven track record of being impractical and unproductive in terms of producing minerals and generating royalty payments. If this unsuccessful leasing program is imposed upon locatable minerals on western public domain lands, it will completely destroy self-initiation by putting the federal government in charge of deciding where and when geologists can look for minerals and where and for how long miners can operate a mine. These harsh land tenure restrictions will severely compromise the Nation's ability to capitalize on private capital to discover and develop domestic mineral deposits. The net result will be significantly diminished domestic mineral production and increased reliance on foreign minerals.

In marked contrast to the federal mineral leasing system for hardrock minerals on acquired lands, the federal mineral leasing system for oil, gas, and coal works for these energy commodities. Leasing is suitable for oil, gas, and coal deposits because private industry and the federal government already know where oil, gas, and coal deposits are located prior to leases being offered and issued on public lands. Oil, gas and coal occur in well understood sedimentary basins where geophysical surveys can identify targets with a high likelihood of success. Once an oil or gas well is drilled, it can readily be modified into a production well.

The geology of most hardrock mineral deposits is quite different than oil, gas, and coal deposits. Most hardrock mineral deposits occur in areas with much more complex and diverse geology and typically have unique geologic, geochemical, and metallurgical characteristics that make each hardrock mineral deposit unique and therefore difficult to find. Consequently, neither the federal government nor mineral prospectors know with certainty where hardrock mineral deposits are located. This is one of the main reasons the hardrock minerals leasing program applicable to acquired lands (as well as on public domain lands on national forests in Minnesota and in some Eastern states) does not work for hardrock minerals and is failing to generate meaningful mineral production and federal royalty payments, despite the highly prospective geology on acquired lands in Minnesota and Missouri.

³ Hardrock Mining on Federal Lands, page 24.

⁴<https://www.blm.gov/programs/energy-and-minerals/mining-and-minerals/locatable-minerals/mining-claims/fees>

⁵ <https://www.blm.gov/sites/blm.gov/files/docs/2021-08/PublicLandStatistics2020.pdf>, Table 3-32, Page 158.

⁶ The Minerals Leasing Act for Acquired Lands of 1947, 30 U.S.C. §§ 351-359

Discovering a hardrock mineral deposit requires extensive exploration and development drilling because the location, depth, mineral grade, and economic viability of hardrock mineral deposits is generally unknown. Once drilling has sufficiently defined the deposit to support a decision to develop it into a mine, huge investments on the order of many hundreds of millions to more than a billion dollars are typically required to build the mine and processing facilities.

Exhibit I, the July 2021 testimony from Mr. Jim Cress before this Subcommittee, provides a detailed and informative discussion of the many reasons why the federal hardrock mineral leasing program on acquired lands is a failure. As discussed in Mr. Cress' testimony, some of the reasons why the federal hardrock leasing program is a failure include the following:

- It was not designed to promote discovery and development of hardrock minerals;
- It contains no rights of self-initiation or rights to mine any discovered minerals;
- Prospecting licenses or permits require prior consent from the surface management agency, are limited to two years with a maximum four-year discretionary extension, and are restricted to 2,560 acres per permit and a 20,480-acre per person/company per state limit; and
- Hardrock mining leases are limited to a primary term of 20 years, which may not be long enough to develop and mine some deposits. This artificial time constraint is not in the public's best interest. A mining lease must provide security of tenure for as long as it takes to develop and mine a deposit.

The leasing acreage and time limits in H.R. 7580, which are identical to those in the hardrock minerals leasing program applicable on acquired lands, are a proven impediment to mineral exploration and development of hardrock minerals on these lands. The acreage and time limits in H.R. 7580 will be similarly unsuccessful in producing minerals or generating royalty payments from mining operations on public domain lands.

Imposing the 20,480-acre (1,024 mining claims) per company per state limit in H.R. 7580 will require the forfeiture of the private property rights on thousands of mining claims located within the boundaries of currently producing mining properties⁷. This private property seizure will completely disrupt active mining operations and precipitate numerous Fifth Amendment takings claims as the government forces the premature closure of viable mining operations or the divestiture of lands that are part of productive mining operations. Then the government will have to expend taxpayer funds to satisfy taking claims without the benefit of any mineral production.

The temporary (two to six year) and spatially constrained (2,560-acre, 128 claim maximum) prospecting license in H.R. 7580 is completely unworkable for hardrock minerals. To put these limits into perspective, most promising mineral exploration projects are typically comprised of several hundred to several thousand claims to give the owner the ability to conduct mineral exploration over a broad area with mineral potential. It is not uncommon for exploration activities to take a decade or longer to discover and then define the size and grade of a mineral deposit. Additionally, Title I Section 105 of H.R. 7580 is a

⁷ For example, Nevada mining companies operate multiple mines and own thousands of mining claims that cover their active mining operations throughout the state.

disincentive to small miners, who after prospecting and finding a mineral deposit, cannot legally transfer their lease to a development company, but can only sell or transfer to a spouse or dependent.

The mine leasing provisions in H.R. 7580 are equally problematic. Companies with a mineral discovery may apply for a 20-year non-competitive mining lease if the surface management agency (e.g., BLM or the USFS) consents to issuing the lease. Giving BLM or the USFS the discretionary authority to decide whether to issue a mining lease puts a company's entire exploration investment at risk and creates uncertainty that will completely chill mineral exploration and development in the U.S. Companies will not be able to justify to their shareholders expenditures of the tens to hundreds of millions of dollars required to discover a valuable mineral deposit if there is no guarantee that they will have the right to develop those minerals.

The Biden Administration's recent decision to cancel the Twin Metals mineral leases in the Superior National Forest in Minnesota vividly illustrates the extent of the government's discretionary authority to deny or cancel mining leases after a company has invested hundreds of millions of dollars to explore and develop its leases⁸. The government's cancellation of the Twin Metals mining leases clearly demonstrates that mineral lessees have absolutely no security of tenure under the federal hardrock minerals leasing program on acquired lands. The adoption of this program in H.R. 7580 on western public domain lands and the requirement that mining claims be converted into mineral leases will similarly eliminate security of tenure on western public domain lands.

The 20-year primary term for a mining lease is another serious barrier to mineral investment because it is not unusual for mines to operate for longer than 20-years. This is often essential to generate a satisfactory, long-term return on investment that is needed to take a project forward. Without the assurance that a mine can continue to operate after 20 years, companies will be very reluctant to make the enormous investment required to develop a mine.

Statistics about the hardrock minerals leasing program for acquired lands available from BLM and the Government Accountability Office (GAO) clearly show this program fails to generate meaningful royalties from the small volume of hardrock minerals produced on acquired lands. According to the BLM⁹, there are 56 hardrock minerals leases covering a miniscule 43,804 acres nationwide on acquired lands. With 36 leases, Missouri is the state with the most leases where leases cover 33,623 acres located in the Mark Twain National Forest. The GAO¹⁰ reports only 20 hardrock mineral leases nationwide have operating mines, just seven of which pay federal royalties. In fiscal year 2018, these seven operations paid a meager \$8.7 million in federal royalties¹¹. It is likely that the six operating leases at Missouri lead, zinc, and copper mines paid most of this royalty.

The fourteen other hardrock mineral leases with active mining cover an aggregate of only 2,304 acres and include mostly small mines located in the following states: Arkansas (quartz and gemstones, 457 acres); California (gold, 41 acres); Idaho (gemstones and gold, 121 acres); Minnesota (limestone, 5 acres);

⁸ Twin Metals Minnesota has invested over \$500 million to develop a world-class critical minerals deposit containing nickel, cobalt, copper, platinum, and palladium, <https://www.mprnews.org/story/2022/02/15/mn-dnr-suspends-environmental-review-of-controversial-twin-metals-mine-proposal>

⁹ BLM 2020 Public Land Statistics, *op. cit.*, page 115.

¹⁰ Mining on Federal Lands, GAO-20-461R, May 28, 2020, <https://www.gao.gov/products/gao-20-461r>

¹¹ GAO May 2020, *op. cit.*, page 10.

Montana (gold, 57 acres); North Carolina (olivine, 158 acres); South Carolina (gold, 1,109 acres); and Virginia (limestone, 355 acres.)

The proposal in H.R. 7580 to replicate the unsuccessful hardrock minerals leasing program on acquired and Eastern States lands and unwisely impose it on western public domain lands is neither justified nor rational. Based on the documented failure of the hardrock mineral leasing system for acquired lands, it is definitely not in the public's interest to replace mining claims with mineral leases. Besides increasing the country's reliance on foreign minerals and exposing the federal government to substantial takings litigation, this baseless extinguishment of private property rights will destroy the economic engines that sustain rural mining communities. Forced mine closures will kill high-paying mining jobs and deprive states and local communities of the tax revenues and other substantial economic benefits that the mines generate.

Given the current extraordinary demand for minerals to build clean energy infrastructure, to power electric vehicles, and to electrify the Nation, this is an exceptionally inappropriate time to make sweeping changes to the land tenure system in the Mining Law. Even if H.R. 7580 were proposing a satisfactory leasing scheme that provided security of tenure, this is the wrong time to make such a change because the transition from claims to leases would dramatically slow down mineral exploration and development. The net result would be reduced mineral production during a multi-year transition period and increased reliance on foreign minerals.

Western mining states with mineral leasing programs on state lands or trust lands work well because the lessor and lessee have the common goal of finding a mineral deposit that can become a mine that pays royalties to the lessor. In marked contrast, in H.R. 7580, the lessor (e.g., the federal government) is a hostile landlord that creates barriers to mineral exploration and development.

For example, the Utah School and Institutional Trust Lands Administration (SITLA)¹² is a successful and productive minerals leasing program. SITLA's goal is to enter into exploration leases that may discover mineral deposits that can be developed into royalty-generating mines. SITLA issues exploration and mining leases to fulfill its fiduciary duty to its Utah school system beneficiaries to support exploration leading to development and generation of a royalty aimed towards a beneficiary.

II. RFI Question 2: Mining Best Practice Standards

“Are there international mining best practices or standards that the United States should consider adopting, or encouraging the U.S. mining industry to adopt? If so, which practices or standards and what improvements or benefits would they provide?”

A. *Overview of International Mining Standards*

There are three types of international standard: country requirements; investor standards; and voluntary standards.

Country standards are created based on the laws and specific context of each country. While most standards of developed nations share intent and content, they also include country-specific requirements that would not be applicable elsewhere due mainly to differences in site characteristics. Many countries

¹² <https://trustlands.utah.gov>

have based their programs on the laws, regulations, and standards developed and improved in the U.S. over the last 50 years. The legal framework and guidelines governing the responsible development of mineral resources of the U.S. are more comprehensive and rigorously tested than in any other country in the world.

Investor standards are developed by organizations that dictate minimum requirements for financing projects. Organizations such as the World Bank, the International Finance Corporation (IFC), the Equator Principles (EP) Association, the Organisation for Economic Co-operation and Development (OECD), and the European Bank for Reconstruction and Development (EBRD) have developed minimum environmental and social standards and guidelines for various industries including mining. These are intended as risk management frameworks for financial institutions to identify, assess and manage environmental and social risks when financing projects, particularly for projects in countries with limited governance frameworks.

The U.S. is classified as an Equator Principles Designated Country because it is a member of the OECD and is a World Bank High Income Country. The Equator Principles define Designated Countries, such as the U.S. as “*those countries deemed to have robust environmental and social governance, legislation systems and institutional capacity designed to protect their people and the natural environment*¹³.” This acknowledges that the legal framework for the protection of the environment and people in the U.S. meets or exceeds the Equator Principles standards for environmental and social performance.

Voluntary standards from organizations such as the International Council on Mining and Metals (ICMM), the International Cyanide Management Institute (ICMI), the International Union for Conservation of Nature (IUCN), and others provide international standards and guidance on specific environmental or social aspects affecting the environmental and social performance of mining operations. These standards and guidance protocols tend to be either topic specific or general in nature and acknowledge the importance of considering country- and site-specific context in the application of the standards and guidelines. Some of these standards, such as the ICMI Cyanide Code were based entirely or primarily on the standards and guidelines developed in the U.S. Other voluntary standards that guide the mining international mining industry are internal corporate standards that are used to guide the governance of their operations in countries without robust environmental and social government and legal frameworks. These are often based on the requirements applicable to mining operations in the U.S.

B. Nevada has the Gold Standard of Mining Regulation and Financial Assurance Programs

Congress does not need to look to other countries for mining best practices and standards that should be imported into the U.S. because other countries typically look to the U.S. for guidance when establishing their mineral regulatory and financial assurance programs. In particular, the Nevada Division of Environmental Protection/Bureau of Mining Regulation and Reclamation’s (NDEP/BMRR’s) regulations governing hardrock mineral exploration, development, mine closure, and financial assurance requirements, coupled with the federal land management agencies’ (e.g., BLM and the U.S. Forest Service, USFS) are widely considered to be the “gold standard” of modern regulations for hardrock minerals. Many foreign countries have sought NDEP/BMRR’s advice when establishing or updating their mining regulatory programs.

¹³ The Equator Principles: EP4. July 2020. Pg. 24.

In Nevada, the BLM, USFS, and NDEP/BMRR have a Memorandum of Understanding (MOU) that governs how these federal and state regulatory agencies seamlessly integrate and coordinate their respective regulatory and financial assurance requirements. Title III of H.R. 7580 would dismantle this arrangement, reinvent the wheel, and add some corners to what is currently a smoothly-running program that provides comprehensive environmental protection during and after mine operation and closure and highly successful reclamation results.

C. Overview of Environmental Regulatory Programs for Modern Mines

Modern U.S. mines must comply with the same environmental laws and regulations as other manufacturing facilities and industrial projects. Additionally, surface management and reclamation laws govern mineral exploration and mining projects. Unlike many other industries, miners must reclaim the land when mining is completed and provide state and federal regulators with reclamation bonds and other forms of financial assurance to guarantee the mine will be properly reclaimed. The financial assurance amount is calculated on the basis of what it would cost the government to reclaim the mine as well as providing for long-term and care maintenance as necessary.

In 2018, the U.S. Environmental Protection Agency (EPA) issued a final rulemaking for Section 108(b) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly called the “Superfund,” that determined EPA did not need to develop a separate financial assurance program for the hardrock (metals) mining industry. Instead, EPA found that BLM’s, the USFS’, and the states’ environmental regulations and financial assurance requirements effectively protect the environment at modern mining operations and guarantee that taxpayers will not have to pay to reclaim mines.

EPA’s conclusions about modern mining practices disproves mining critics’ perennial distortions that modern mines are not safe for the environment. As EPA recognized, the environmental laws and regulations enacted since the late 1960s have had an enormous impact in changing how modern mines operate. Prior to about 1960, there were no state or federal environmental rules governing mining or other industries. Mining started in the western U.S. in the mid-1800s and was completely unregulated for more than a century. Congress enacted the country’s first environmental laws in the late 1960s. Most states did not start passing environmental laws until the 1970s and 1980s.

During the era of unregulated mining, gravity was the miner’s best friend. Miners typically deposited mine wastes (mill tailings, waste rock, and smelter slag) directly on the ground in the nearest valley or low area. Once the ore was exhausted or falling metal prices made mining unprofitable, miners commonly moved on to the next prospect and abandoned the old one, giving no thought to reclaiming the land.

While this lack of environmental protection and reclamation is unacceptable when viewed through the lens of our modern-day commitment to protect the environment, it is important to understand that mines of the past were no different than other contemporaneous industries that operated without any environmental controls. Past mining and industrial practices did not use environmental safeguards because protecting the environment was not on anyone’s radar screen. Back then, society did not consider the long-term consequences of mining or other industrial and manufacturing activities.

Pre-regulation mines produced the metals that helped build America, tell the story of the development of the West, and helped win two world wars. Although we recognize the important history and heritage these mines represent, we are now left to deal with a difficult legacy of the safety hazards and environmental problems left behind.

The 1970s began a new era of environmental awareness as America celebrated the first Earth Day on April 22, 1970. In response to the country’s new commitment to clean-up the environment and minimize the potential for future environmental pollution, Congress enacted numerous environmental laws in the 1970s and 1980s shown in Table 1. States quickly followed suit, enacting state laws to implement or complement the federal environmental statutes. Depending on the environmental site conditions at a given site, most or all of these laws govern modern mining operations.

Table 1
Chronology of Enactment of Federal Environmental Protection Laws

Decade Enacted	Partial List of Federal Environmental Laws
1960s	National Historic Preservation Act Air Quality Act National Environmental Policy Act Wilderness Act Solid Waste Disposal Act
1970s	Federal Water Pollution Control Act Amendments Clean Air Act Clean Water Act Endangered Species Act Marine Protection, Research and Sanctuaries Act Federal Land Management and Policy Act Uranium Mill Tailings Radiation Control Act Safe Drinking Water Act Resource Conservation and Recovery Act Toxic Substances Control Act
1980s	Safe Drinking Water Act Amendments of 1986 Comprehensive Environmental Response, Compensation, and Liability Act Superfund Amendments and Reauthorization Act Archaeological Resources Protection Act Emergency Planning and Community Right to Know Act Water Quality Act Amendments to the Clean Water Act
1990s	Oil Pollution Act Hazardous Waste and Solid Waste Amendments Act Clean Air Act Amendments Safe Drinking Water Act Amendments of 1996
2000s	Small Business Liability Relief and Brownfields Revitalization Act

In 1974, the USFS enacted surface management regulations for locatable minerals at *36 C.F.R. Part 228 Subpart A* to protect the environment at hardrock mineral exploration and mining projects on National Forest System lands. The USFS regulations provide comprehensive environmental protection and require mine operators to minimize adverse environmental impacts whenever possible, and provide substantial financial assurance (reclamation bonds) to guarantee that mines will be reclaimed when mining is completed.

In 1980, BLM enacted surface management regulations for hardrock mining at 43 C.F.R. Subpart 3809 that require mineral exploration and development activities to prevent unnecessary or undue degradation.

BLM significantly updated the 3809 regulations in 2001, adding more detailed financial assurance requirements, establishing environmental performance standards that must be followed to comply with the mandate to prevent unnecessary or undue degradation, and providing authority for enforcement actions against non-compliant operators.

Prior to approving mineral activities on public lands, BLM and USFS must comply with the National Environmental Policy (NEPA) requirement to prepare either an Environmental Assessment or an Environmental Impact Statement (EIS)¹⁴. Most mining proposals require the agency to prepare an EIS; many exploration projects can be authorized with an Environmental Assessment.

Generally speaking, there are more hardrock mining operations on BLM-administered lands compared to National Forest System lands. Over one-half of the country's 390,595¹⁵ active mining claims are located in Nevada. BLM and the USFS have authorized under 200,000 acres of surface disturbance for mineral exploration and development activities in Nevada, which is less than 0.32 percent of the roughly 60 million acres of Nevada's federal minerals estate and clearly demonstrates mining is a minor use of public lands in Nevada.

Despite being the country's largest mining state, there are only 30 active metal mines in Nevada¹⁶. These operations are fully bonded with over \$3.4 billion in financial assurance instruments provided to BLM, USFS, and the NDEP/BMRR to guarantee Nevada's mineral exploration and mine sites will be reclaimed. The evolution of Nevada's mining regulations and financial assurance program since 1980 when the State's reclamation law was first enacted illustrates a 40-year history of continuous improvement to refine the program based on cooperation and collaboration between state and federal regulators and Nevada's mining industry.

Current federal and state environmental regulations require mines to be designed, built, operated, and closed using effective environmental safeguards that provide comprehensive protection for all environmental resources and minimize the potential for environmental problems to develop during mining and after mining is completed. In order to comply with these regulations, mines use state-of-the-art environmental protection technologies including liners, water treatment facilities, air emission control equipment, and environmental monitoring systems. Mine operators are required to routinely monitor the performance of these systems to verify they are functioning properly, the mine is complying with its permit requirements, and environmental protection is ensured.

In striking contrast to old mining practices, modern U.S. mines carefully manage mine wastes and use liners and covers to isolate these materials from the environment. Whereas waste rocks and tailings at old mines were typically deposited directly on the ground or into streams and rivers, tailings and waste rock storage facilities at modern mines are designed to be stable and minimize seepage and interaction of the mine wastes with surface water and groundwater resources.

¹⁴ Initial exploration projects that disturb fewer than five acres of BLM-administered lands can typically qualify for a Notice that does not require BLM to prepare a NEPA document. However, BLM reviews Notice applications to ensure that sensitive resources will not be impacted and to establish the financial assurance (reclamation bond) amount that the applicant must provide before any surface-disturbing activities commence.

¹⁵ BLM 2020 Public Land Statistics, *op. cit.*, page 125.

¹⁶ <https://pubs.nbmng.unr.edu/The-NV-mineral-industry-2020-p/mi2020.htm>

The powerful combination of comprehensive and effective environmental regulations and financial assurance requirements is what led the EPA to conclude in 2018 that the environmental regulations and financial assurance requirements for mining fully protect the environment and that a new EPA program would be duplicative and unnecessary. EPA based its decision on a detailed analysis of the scope and effectiveness of federal and state environmental protection and financial assurance rules for hardrock mining:

“EPA has analyzed the need for financial responsibility based on risk of taxpayer funded cleanups at hardrock mining facilities operating under modern management practices and modern environmental regulations...[T]he degree and duration of risk associated with the modern production, transportation, treatment, storage or disposal of hazardous substances by the hardrock mining industry does not present a level of risk of taxpayer funded response actions that warrant imposition of [additional EPA] financial responsibility requirements for this sector¹⁷.”

EPA’s decision distinguishes between problematic past mining practices that are no longer lawful and modern practices, stating that legacy contamination at sites operated before the development of modern environmental regulations are not relevant in assessing the potential for environmental risks at existing and future mines. EPA’s rulemaking explains that it is inappropriate to point to environmental problems at historical, pre-regulation facilities and assert that modern, heavily regulated mines pose similar risks – because they do not:

“...the primary determinant of risk is how current operations at the mine are conducted, including the current regulatory regime under which they operate...EPA has determined that modern regulation of hardrock mining facilities...reduces the risk of federally financed response actions to a low level such that no additional financial responsibility requirements for this industry are appropriate¹⁸.”

EPA’s 2018 final rulemaking has withstood judicial review. In *Idaho Conservation League et al versus Andrew Wheeler and the U.S. Environmental Protection Agency*¹⁹, the U.S. Court of Appeals for the District of Columbia agreed with EPA’s findings and upheld the agency’s decision that a new financial assurance program for the hardrock mining industry was unwarranted. In July 2019, the Court denied the Petitioners’ request for the Court to vacate EPA’s final rulemaking.

D. The Unworkable Provisions in H.R. 7580 Title III are Designed to Curtail Mining on Public Lands

The performance track record of modern, highly regulated mines clearly demonstrates that Title III of H.R. 7580, “Environmental Considerations of Mineral Exploration and Development” is completely unnecessary to ensure that future mines are safe for the environment. The unworkable environmental

¹⁷ U.S. EPA Financial Responsibility Requirements Under CERCLA Section 108(b) for Classes of Facilities in the Hardrock Mining Industry, Federal Register, Vol. 83, No. 35, February 21, 2018, pp. 7556 – 7588, at p. 7556. <https://www.govinfo.gov/content/pkg/FR-2018-02-21/pdf/2017-26514.pdf>

¹⁸ Federal Register Vol. 83, No. 35, pp. 7564 - 7565.

¹⁹ USCA Case # 18-114,

[https://www.cadc.uscourts.gov/internet/opinions.nsf/EE3F3054B78C5C228525843C0051989A/\\$file/18-1141.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/EE3F3054B78C5C228525843C0051989A/$file/18-1141.pdf)

standards and duplicative permitting process for mineral exploration and operations will guarantee mineral production will decline. Title III imposes a new environmental performance standard that will be impossible for mining projects (or any other public land uses) to meet and creates a complex regulatory review that adds another layer of bureaucracy designed to make mineral projects more difficult to permit and develop. The Title III environmental standards and permitting processes are intended to advance the overarching purpose of H.R. 7580 to reduce mining.

The most troubling aspect of Title III is its proposal to amend the undue and unnecessary degradation (UUD) environmental protection mandate in Section 302(b) of the Federal Land Policy and Management Act of 1976 (FLPMA, 43 U.S.C. §§ 1701 *et seq*) that currently applies to all activities on BLM-administered public lands. H.R. 7580 Section 301 would change this mandate for hardrock mineral projects to “undue degradation” (UD) and prohibit degradation that is necessary in order to mine. Because mining cannot occur without causing some unavoidable changes to the land due to excavating pits, storing mine wastes, and building other facilities, eliminating the concept of necessary impacts from UUD and changing it to UD makes mining impossible if future BLM regulators have the discretionary authority to deem unavoidable and therefore necessary impacts undue. This impossible-to-achieve standard is clearly designed to eliminate future mining on federal lands. Section 301 of H.R. 7580 makes similar changes to the current environmental performance standard for mineral activities on National Forest System lands.

Changing the FLPMA 302(b) standard from UUD to UD for hardrock mining projects would create a different environmental performance standard for hardrock mining than all other multiple use activities on public lands. Recognizing that all human activities create impacts, some of which are unavoidable, the FLPMA 302(b) UUD standard accommodates this reality while giving BLM the authority to prohibit impacts that go beyond what is necessary and are therefore excessive, unnecessary, and undue. H.R. 7580 Section 301 eliminates this practicality for hardrock minerals and potentially sets a precedent that could be applied in the future to other multiple uses of public lands. Changing UUD to UD sets the multiple use principle that is the core of FLPMA’s management directive for public lands on a dangerous course towards zero-impact management of the Nation’s public lands.

The Title III permitting processes in H.R. 7580 replace the comprehensive and effective BLM, USFS, and state regulatory requirements and permitting processes that currently govern mineral exploration and development with the unworkable prospecting permits and mineral leases discussed in Section I for hardrock mineral exploration and development on acquired lands. The unsuccessful 75-year old hardrock minerals permitting and leasing system for hardrock minerals on acquired lands is a completely impractical template for hardrock minerals exploration and development. The fact there are only seven operating mines on acquired lands that pay federal royalties clearly demonstrates this system is unsuitable for discovering and producing hardrock minerals.

However, if the objective of a minerals leasing program is to discourage and prevent mineral activities on federal lands, the hardrock minerals leasing program on acquired lands will accomplish this goal. Because the purpose of H.R. 7580 is to curtail hardrock mining on public domain lands, it is not surprising that this bill seeks to replicate the many barriers to mineral exploration, discovery, and development in the hardrock minerals program for acquired lands and apply them to western public domain lands currently governed by the Mining Law.

III. RFI Question 3: Hardrock Production Royalty Program

“If the U.S. were to place royalties on hardrock minerals produced from public domain lands, what factors should be considered and what structures would best protect the interests of the taxpayer while responsibly incentivizing production? In addition, if royalties were collected, how should those revenues be allocated?”

A. *Congress Does Not Have the Necessary Data to Make Informed Decisions about a Royalty*

Congress does not have correct information about the size of the hardrock mining industry or the level of minerals production to know whether there is sufficient hardrock mining on lands subject to the Mining Law to warrant adding a federal hardrock royalty to the Mining Law or to predict revenues from a future royalty program. The information the GAO has recently provided to Congress is inaccurate because the GAO misinterpreted data that the BLM and USFS provided on the number of Plans of Operation. The GAO’s May 2020 report to Chairman Grijalva²⁰ incorrectly states there are 728 hardrock mining operations. The report should have said there are 728 hardrock *mineral* Plans of Operations, with most Plans being for mineral exploration – not for mining. Relying on this incorrect GAO report, Congress likely believes the U.S. mining industry is much larger than it really is.

Knowing the number of active locatable mineral mines on lands subject to the Mining Law is a critical piece of information that lawmakers must have in order to make informed decisions about whether to enact the major changes proposed in H.R. 7580 to overhaul this law. Unfortunately, the information that BLM, USFS, and GAO have provided is insufficient to assess mineral production and the number of active metal mines operating under the Mining Law nationwide.

Fortunately, the geological surveys and taxation departments in the western mining states typically maintain accurate information about the number of operating mines in their state and the level of production from each mine that is subject to state taxes and/or royalties. This state data should be used to inform the Mining Law dialogue.

For example, the Nevada Bureau of Mines and Geology (NBMG), which is the State’s geological survey tasked with researching Nevada mineral deposits, seismic hazards, flood zones, and landslide dangers, compiles detailed information about mining in Nevada. NBMG’s data show there were only 30 operating metal mines in Nevada in 2020²¹, despite the fact that Nevada was the country’s largest mining state in 2020²². The Nevada Department of Taxation’s annual Net Proceeds of Minerals (NPOM) Bulletin is another source of useful information about Nevada mineral production. The 2020-2021 NPOM Bulletin lists 30 mineral producers/NPOM taxpayers. Twenty-nine represent gold and silver mines; the other mine produces copper. The Nevada Department of Taxation collected roughly \$189 million in NPOM taxes from these producers during calendar year 2020. According to the Nevada Division of Minerals (NDOM), roughly 52 percent of the gold produced in Nevada during 2021 came from mines located on public lands subject to the Mining Law; the rest of the gold was produced from mines on private lands²³.

²⁰ May 2020 GAO Report, op.cit.

²¹ <https://pubs.nbmg.unr.edu/The-NV-mineral-industry-2020-p/mi2020.htm>

²² U.S. Geological Survey, 2021, Mineral commodity summaries 2021: U.S. Geological Survey, 200 p., see Table 3 and Figure 4, which show Nevada as the largest mining state, <https://doi.org/10.3133/mcs2021>.

²³ https://minerals.nv.gov/uploadedFiles/mineralsnvgov/content/home/features/RP/RP_GSN_20220502_NDOM%20Mike%20Visher.pdf, Slide 7

As shown in Table 2, Nevada is by far the largest public lands mining state with over half of the country's active mining claims and nearly half of the Plans of Operation submitted and reviewed in FY 2020. If the ten other western Mining Law states had a combined total of another 30 active mining operations on public lands, there might be on the order of 60 operating mines subject to the Mining Law nationwide. This is a sharp contrast to the 728 mining operations misidentified in the May 2020 GAO report discussed above. Lawmakers should consider whether it makes sense to establish and administer a federal royalty program for such a limited number of mining operations.

Table 2
FY 2019²⁴ Active Mining Claims, Plans of Operation Reviewed* and
Acres of the Federal Mineral Estate²⁵

State	Active Mining Claims	Plans of Operation Reviewed *	Federal Mineral Estates (Millions of Acres)
Alaska	6,229	8	218.6
Arizona	44,605	3	33.9
California	17,667	3	50.9
Colorado	9,912	3	29.6
Idaho	23,574	7	37.0
Montana	18,282	1	39.4
Nevada	200,652	40	60.3
New Mexico	9,268	1	35.9
Oregon	9,319	5	33.9
Utah	21,185	3	54.3
Wyoming	29,899	13	41.1
Totals	390,595	87	634.9

*The Plans of Operation numbers include Plans for both mineral exploration and mining projects. Most of these Plans of Operation are for exploration projects.

The Nevada mining statistics clearly show that the outcome of the debate about changing the Mining Law will have the biggest impact in Nevada, the state where most of the mining on public lands occurs.

The size of mining's footprint on public lands subject to the Mining Law is another statistic that lawmakers should consider when assessing if the Mining Law should be amended to include different environmental and reclamation requirements. The GAO's May 2020 report shows the BLM and USFS have authorized a total of 317,783 acres of mineral-related surface disturbance for exploration and mining throughout the eleven western Mining Law states, which is a miniscule 0.05 percent of the 635 million acres (Table 2) of the federal mineral estate subject to the Mining Law²⁶.

²⁴ <https://www.blm.gov/sites/blm.gov/files/PublicLandStatistics2019.pdf>, Tables 3-22 and 3-23.

²⁵ <https://www.blm.gov/sites/blm.gov/files/PublicLandStatistics2019.pdf>, Table 1-3.

²⁶ The actual surface disturbance associated with mineral exploration and mining is less than the acres of authorized surface disturbance in these Plans of Operations. Mineral activities typically occur on only a portion of the authorized surface disturbance acres because the entire Plan of Operations project area is not mineralized.

The limited number of mines and the small footprint of mining activities signals the Mining Law debate is about a minor use of the Nation’s public lands. The small amount of public lands being used nationwide under the Mining Law coupled with the dwindling mineral production statistics described below should establish the contours of future legislative debates about changing this law – especially in light of the urgent and growing demand for critical minerals for the clean energy revolution. Finding ways to reverse this decline by increasing mineral exploration and production should be the focus and purpose of any future legislation to amend the Mining Law. H.R. 7580 will do just the opposite; it will discourage mineral exploration and mining.

B. The U.S. Hardrock Mining Industry is Declining

For the past 40 years, the amount of mineral production has steadily decreased. As discussed above, Nevada, the largest public lands mining state, has only 30 operating metals mines. Nevada’s gold production has dropped from a high of about 9 million ounces in 1998 to less than 5 million ounces in 2020²⁷ as shown in Figure 1.

The U.S. Center for Disease Control and Prevention (CDC) compiles information on the number of U.S. metal mines based on mine employment data from the Mine Safety and Health Administration (MSHA) from mines at all mine-life stages. The CDC’s data thus include many mines that are no longer producing minerals but still employ caretakers and other personnel. The CDC data that are shown in Figures 2 and 3 document a precipitous decline in mining since 1983; they do not paint a picture of a thriving industry.

The Mining Law debate should focus on reversing this downward trend and developing policies that encourage mineral exploration and development of more mines that can generate future royalty payments. The 30-year controversy over a gross versus net royalty is at this point a distraction. Congress must look to the future to increase mineral production to support a future hardrock royalty program. The documented decline in the U.S. mining industry also raises questions about whether Congress should spend taxpayer resources to enact and administer a federal royalty program for a shrinking industry.

²⁷ NBMG, op. cit.

Figure 1: Gold Production is Declining in Nevada²⁸

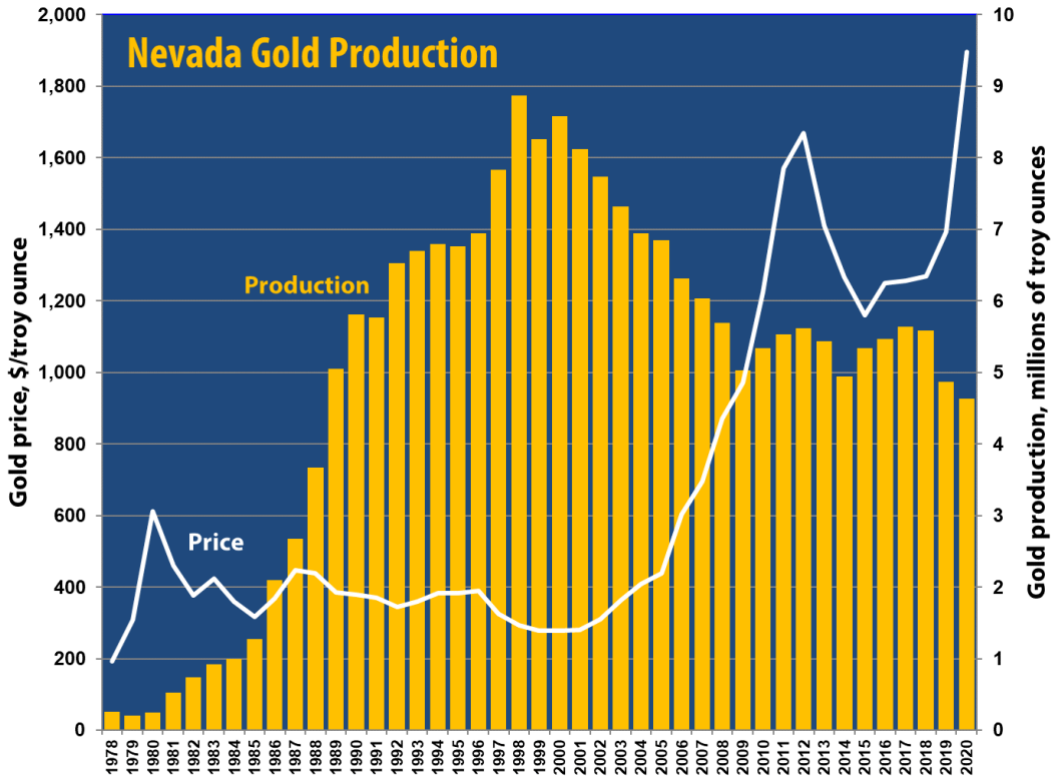
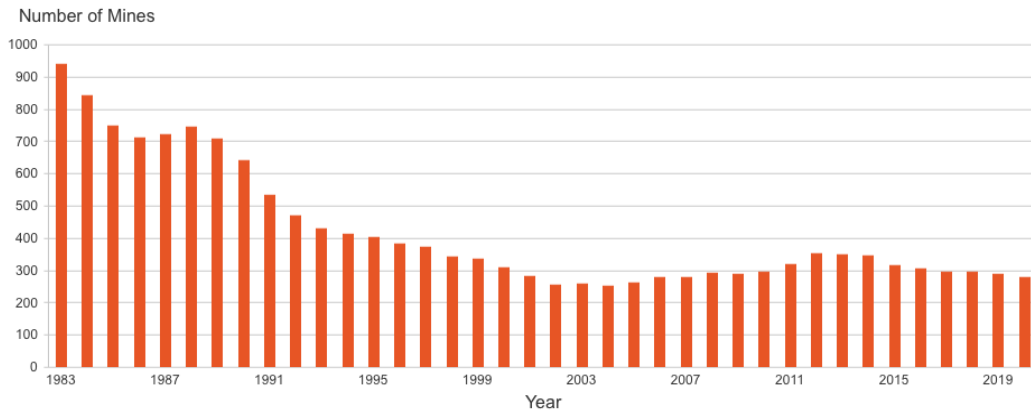


Figure 2. CDC Data Show a Significant Decline in U.S. Metal Mining Since 1983

Number of active metal mines by year, 1983 - 2020

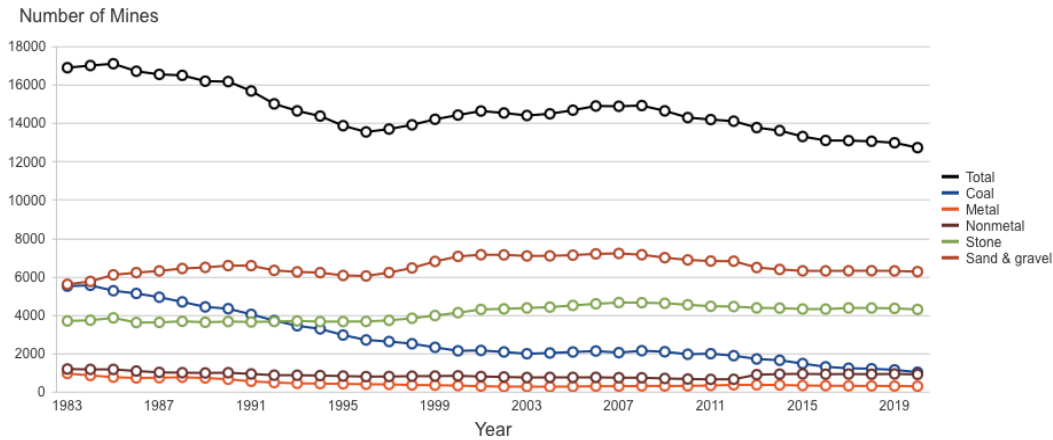


Note: Active mines are those mines that reported any employee hours during the year. Data Source: MSHA

²⁸ NV Bureau of Mines & Geology, The Nevada Mineral Industry 2020, Special Publication MI-2020

Figure 3. CDC Data Show that U.S. Metal Mining Is Not a Growing Industry²⁹

Number of active mines by sector and year, 1983 – 2020



Note: Active mines are those mines that reported any employee hours during the year. Data Source: MSHA

C. *Why the Oil and Gas Royalty Program will not Work for Hardrock Mining*

H.R. 7580 proposes a royalty of not less than 12.5% of the gross value of the minerals or mineral products derived from the lease. For producing mines that are forced to convert to a lease, the proposed legislation would charge a minimum gross royalty of 8%. For many years, the mining industry has presented testimonies in hearings before House and Senate committees and subcommittees explaining why a gross royalty structure bootstrapped from the oil and gas royalty program, like the royalty proposed in H.R. 7580, is unworkable for hardrock minerals and will lead to significantly less mining on federal land. (See, for example Exhibits II and III.) These testimonies demonstrate that using the coal, oil, and gas royalty programs as a template for a hardrock royalty is ill-conceived and impractical due to the substantially different geologic characteristics of oil, gas, and coal compared to hardrock minerals.

As discussed in Section 1, oil, gas, and coal are more abundant than hardrock mineral deposits, making these energy minerals easier to find than hardrock minerals. Consequently, discovering and developing a hardrock mineral deposit takes much longer and requires a much larger investment compared to oil and gas.

Unlike oil, gas, and coal operations, the raw minerals produced at most hardrock mines are not salable; they must undergo costly processing steps to produce a product that can be sold. Although federal royalties for oil, gas, and coal are called gross royalties, this is a misnomer. The federal oil, gas, and coal royalties are in reality comparable to a net royalty because they are based on the value of the marketable products from an oil and gas well or a coal mine. (See Exhibit III, at 5).

²⁹ The decline in mineral production and the number of mines shown in Figures 1 - 3 is one of the reasons the Nation's reliance on foreign minerals has steadily increased over the last several decades.

A workable federal hardrock minerals royalty must be assessed at the same point in the value-added steps that produce the first marketable product from the mine. Therefore, the costs the mine operator must incur to produce a salable product from raw, unrefined minerals should be deducted from the royalty base on which a federal royalty is calculated.

D. Net versus Gross Royalties

Royalty payments to the United States should be based on the value of the federal government's ownership interest in the minerals, which is limited to the raw minerals in the ground, and allow the mine operator to deduct the costs associated with the value-added mineral processing steps that are necessary to produce a salable mineral product. The H.R. 7580 royalty is unfair and confiscatory because it is calculated on the gross value of mineral products that includes the value added by the operator to process, refine, and produce a salable mineral product from the raw minerals removed during mining.

A hardrock royalty must not be paid on the hundreds of millions of dollars of value added to the raw minerals that mining companies must routinely spend to find, produce, process, and sell the mineral products. Although under the Mining Law, the U.S. makes land available for mineral exploration, it does not contribute anything to the enormous costs and efforts required to find, produce, and process minerals. Without relying on any federal subsidies, mining companies' investments of private-sector capital is a unique and advantageous aspect of the Mining Law that already benefits U.S. taxpayers. Despite the costs and daunting odds against making a discovery of an economic mineral deposit that can be developed into a mine, the Mining Law stimulates private-sector investment that transforms undeveloped federal land into mining operations that create jobs, pay taxes, and provide the minerals the country needs – at absolutely no cost to U.S. taxpayers.

Exploring for minerals and developing a discovery of a valuable mineral deposit into a mine takes a mammoth investment of capital. As described in Mr. Rich Haddock's³⁰ October 2021 testimony before the Senate Energy and Natural Resources (SENR) Committee (see Exhibit IV), companies made an initial investment of \$7.5 billion to develop the mines and processing facilities in Nevada's famous Carlin Gold Trend in Eureka County. The investment to date in the Carlin Complex is \$40 billion, with substantial annual investments required to maintain the mining and mineral processing facilities. For example, replacing one of the roasters or autoclaves in the complex would cost at least \$1 billion.

The amount of investment and length of time required to discover a mineral deposit are also staggering. Mr. Haddock's testimony states that it has taken Barrick Gold Corporation over twenty years and \$459 million to define the Goldrush ore body which is currently in the mine permitting process and therefore still several years away from starting production.

Because commodity price cycles are variable and cyclical, a gross royalty has a very different effect on mining investment compared to a net royalty. Royalties assessed on gross income discourage investment by increasing economic risks. Consequently, projects subject to a gross royalty will require a higher pretax and after-tax rate of return to accommodate the increased risk. In contrast, a net royalty has a smaller effect on the variability of after-tax rates of return and is less of a deterrent to investment. When commodity prices decrease, the rate of return required to justify a mining investment increases more dramatically under a gross royalty than under a net royalty. Because most mine operating costs are

³⁰ Mr. Haddock is General Counsel of Barrick Gold Corporation.

relatively fixed, a gross royalty takes a bigger piece out of the mine's reduced income during periods of low commodity prices.

A gross royalty is especially problematic during industry downturns due to low commodity prices because they cause a greater reduction in cash flow during periods when profits are already low. A gross royalty can functionally reduce the portion of the ore deposit that remains economic to mine. During low commodity price cycles, low-grade ores may become uneconomic to mine and process and become low-grade waste materials that are not processed or not mined at all, which shortens the life of the mine and reduces the total amount of mineral that will be produced from the mine. Gross royalties may thus contribute to premature mine closures with the concomitant loss of jobs; reduced local, state, and federal tax revenues and/or royalty payments; and business losses for the mine's vendors and suppliers.

A net proceeds or net income royalty, in contrast, does not cause mines to operate at a loss because the royalty owed is automatically reduced during periods of low prices, and increases again when prices are higher. A net royalty thus allows mining operations to continue to operate during periods of low commodity prices and also enables maximum recovery of low-grade ore during high commodity prices. Because mineral demand is cyclical and commodity prices fluctuate, a net royalty provides the best incentive to explore for minerals on federal lands in spite of variable mineral demand and commodity price cycles. A net royalty thus minimizes volatility in the mining industry which helps keep the domestic industry viable and the nation's mineral supply secure.

Testimony from Ms. Katie Sweeney³¹ at the October 2021 SENR hearing discusses another important aspect of assessing a federal royalty on hardrock mineral production. (See Exhibit V.) In determining an appropriate royalty structure and rate, Congress should consider the total government "take," defined as the aggregate of federal, state, and local royalties, taxes, and fees, and compare that take to what mineral producers pay in other countries. In order to reduce the Nation's reliance on foreign minerals and strengthen our mineral supply chains, a future federal hardrock royalty must not make the total government take so high that U.S. mines become uncompetitive compared to mines in other countries.

As explained in Ms. Sweeney's testimony, the existing government take affecting U.S. hardrock mining operations is close to 40 percent for most NMA members, which is close to the top range for other cost-competitive mining countries. The 8 percent gross royalty on new mining operations and the 4 percent on existing operations that were being considered last fall in the Budget Reconciliation Bill would have increased the total government take to over 50 percent and would have made the U.S. an uncompetitive country for mineral investment and mining. The higher (8 to 12.5 percent) royalty rates proposed in H.R. 7580 would increase the total government take for U.S. mines making them even less competitive.

Mr. Haddock's testimony compares the total government take in the U.S. compared to Australia or Canada, our two most important mining allies. Currently, the three countries have about the same total government take ranging from 38 to 39 percent. Adding a 2 percent net royalty to hardrock mineral production on federal land would increase the total take on U.S. hardrock mining operations to roughly 41 percent. At this rate, U.S. mines would not be cost competitive with mines in Australia or Canada. Obviously, imposing the 8 to 12.5 percent royalties in H.R. 7580 would make U.S. mines even less competitive with mines in Australia and Canada – especially in light of the far more reasonable two- to three-year permitting timeframes in these countries.

³¹ Executive Vice President and General Counsel of the National Mining Association (NMA).

E. Takings Implications of a Retroactive Royalty

Assessing a retroactive royalty on existing claims, as proposed in H.R. 7580, runs the risk of exposing the federal government to takings claims. If a mineral production royalty or additional fees are enacted in the future, they should only apply to post-enactment mining claims to minimize the potential for takings claims against the federal government. Exhibit VI is an American Exploration & Mining Association July 2021 white paper entitled “Mining Law Fifth Amendment Takings Analysis” that discusses the protected rights and interests held by U.S. citizens who have invested their time, effort, and capital to explore for, identify, and develop hardrock minerals under the Mining Law. This white paper describes how these rights and interests are protected by the Fifth Amendment of the U. S. Constitution. It also presents the history of past Congressional amendments and attempted changes to the General Mining Law which explicitly preserved claim owners’ property rights and successfully avoided exposing taxpayers to unconstitutional takings claims.

F. Creating a Royalty Program that Incentivizes Production

“...What factors should be considered and what structures would be best [t] responsibly incentivize production?”

The Administration’s RFI question about how to charge a royalty and at the same time incentivize production is especially important in light of the skyrocketing demand for the minerals needed to build clean and renewable energy systems, essential infrastructure, and President Biden’s directives to strengthen U.S. mineral supply chains by increasing domestic mineral production. Policies to incentivize hardrock mineral production must consider more than just the royalty issue and must also focus on security of land tenure, permit streamlining, and creating a positive business climate that can attract private-sector investment in the Nation’s mineral resources on public lands.

The following are the Women’s Mining Coalition’s preliminary suggestions for a fair and affordable royalty and other Mining Law elements designed to incentivize and increase mineral production on public lands subject to the Mining Law:

- Improve the business investment climate by ending the uncertainty engendered by the 30 year-long debate over mining royalties and other elements of the Mining Law that has significantly chilled investment in the U.S. mining industry and diminished discovery of mineral deposits that can be developed into profitable mines.
- Enact a prospective net royalty at a rate that keeps U.S. mines cost competitive with mines in Canada, Australia, and other countries. As discussed above, it appears that U.S. mines cannot support a net royalty that exceeds about 2 percent and remain cost competitive.
- Eliminate all consideration of a retrospective royalty that would be applied to claims in existence on the date of enactment, which would expose the federal government to Fifth amendment takings claims.
- Maintain self-initiation and the existing mining claims land tenure systems and do not replicate the unworkable and failed 75-year old federal hardrock leasing system applicable to acquired lands on public domain lands.

- Keep lands open to mineral exploration and development.
- Recognize that the significant differences in the geology and business profiles for oil, gas, and coal, compared to hardrock minerals make the oil, gas, and coal royalty programs inappropriate and infeasible for hardrock minerals. Stop trying to force-fit the oil, gas, and coal royalty structure on to hardrock minerals.
- Allow claims maintenance fees and other fees to be credited against future royalty payments.
- Consider flow-through investment arrangements similar to those in some Canadian provinces and other incentives to stimulate mineral investment.

IV. RFI Question 4: Financial Assurance

“What changes to financial assurance requirements for mining should be considered?”

The short answer to this question is there are no changes required to the BLM’s or the USFS’ financial assurance/reclamation bonding requirements because the current requirements provide regulators with funds to reclaim a mine in the event the operator goes bankrupt or fails to properly reclaim a mine site. After conducting an in-depth evaluation of the financial assurance requirements for hardrock exploration and mining, the EPA concluded in 2018 that the existing programs under the federal land management agencies’ surface management regulations, (e.g., BLM’s 43 CFR Part 3809 regulations and the USFS’ 36 CFR Subpart 228A regulations) provide comprehensive environmental protection and financial assurance:

“EPA has determined that modern regulation of hardrock mining facilities...reduces the risk of federally financed response actions to a low level such that no additional financial responsibility requirements for this industry are appropriate³².”

The environmental problems at some legacy mines are attributable to bankrupt operators who did not reclaim their mines. Today’s financial assurance requirements for mines completely eliminate a bankrupt mine from creating future environmental problems because state and federal regulators (e.g., BLM and USFS) have the necessary funds to reclaim a mine if the operator goes bankrupt or for other reasons fails to reclaim the site. As EPA found in its 2018 CERCLA 108(b) final rulemaking, problems due to operator bankruptcies are a relic of unregulated and, in some cases, inadequately bonded mines in the past.

As explained in EPA’s final rulemaking, federal and state regulators currently have adequate reclamation bond funds if a mine operator goes bankrupt. The amount of required financial assurance is based on what it would cost BLM, USFS, or the state agency to hire third-party contractors to reclaim the site in accordance with the site’s approved closure and reclamation plans. Each mine’s closure and reclamation plan and financial assurance requirement are based on a detailed and site-specific evaluation of the closure, reclamation, and post-cost closure care and maintenance costs for that site. The sufficiency of reclamation bonds must be reviewed and adjusted on a regular basis to make sure the required financial assurance amount keeps pace with inflation and on-the-ground conditions.

³² Federal Register Vol. 83, No. 35, pp. 7564 - 7565.

EPA's final rulemaking determined that the Standardized Reclamation Cost Estimator (SRCE) software developed in Nevada provides a robust methodology for calculating the cost for the BLM, USFS, or a state agency to step in and reclaim a mine³³. Because a SRCE-calculated Reclamation Cost Estimate assumes that the reclamation work is being conducted by a federal or state governmental agency, it generates very comprehensive financial assurance requirements that include the following:

- Third-party contractor costs based on Davis-Bacon prevailing wage rates established by the U.S. Department of Labor for the area in which the mine is located;
- Indirect agency costs including a surcharge of approximately 40 percent on top of the direct costs to cover the agency's costs to manage the third-party contractors' reclamation work;
- Costs to manage the process fluid inventory (i.e., fluids in ponds and tailings storage facilities) that must be dealt with before a site can be closed and reclaimed;
- Costs to perform regular monitoring, sampling, and inspection throughout the mine closure and reclamation phases of the mine life, which may last several decades; and
- Long-term financial assurance requirements if site-specific conditions require long-term operation of water treatment systems, other environmental controls, or site monitoring. At sites where long-term financial assurance mechanisms are needed, they are designed to provide the funding necessary for perpetual care and maintenance of the reclaimed mine site.

Based on these assumptions, EPA found that reclamation bond amounts calculated with a SRCE or a comparably robust reclamation cost estimating protocol eliminate the concern that taxpayers will be responsible for paying reclamation costs.

V. RFI Question 5: AML Reclamation

“How might the U.S. best support reclamation of existing AML sites including the development of meaningful good Samaritan proposals as well as remining and reprocessing of mine tailings and waste, where feasible?”

Developing a funding mechanism to pay for reclaiming Abandoned Mine Lands (AMLs) that were created before the enactment of laws and regulations to protect the environment is one of the drivers of the Mining Law debate. Many of the Mining Law bills that Congress has considered for the past 30 years have included an AML reclamation program to be funded by hardrock royalties, fees, and taxes.

However, amending the Mining Law is not the only way to create an AML reclamation fund. Recognizing the importance of developing a funding source to reclaim hardrock AMLs sooner rather than later, the Women's Mining Coalition suggests the annual Mining Law holding fees and service fees paid by mining claim holders in excess of the amount the BLM requires to administer its Mining Law Program could be used for AML reclamation. These excess funds currently vanish into the ether of the Treasury's general fund, with no directive to use them for public land management.

³³ Federal Register Vol. 83, No. 35, p. 7573.

BLM's 2020 Public Lands Statistics Report shows BLM collected \$69,420,974 in Mining Law holding fees in Fiscal Year 2020 and states Congress has appropriated \$40,196,000 for Mining Law Administration program operations, including the cost to administer the mining claim fee program. Collections in excess of \$40,196,000 are deposited to the general fund³⁴.

Assuming these statistics are a reasonable estimate of future Mining Law holding fees and Mining Law program administrative costs, approximately \$29 million per year could be earmarked in future appropriations measures for AML reclamation without amending the Mining Law.

Abolishing mining claims and substituting a leasing system, as proposed in H.R. 7580, would obviously eliminate the possibility of using a portion of future claims maintenance fees to fund AML reclamation. A future Mining Law bill that retains the mining claims system but includes the other onerous provisions in H.R. 7580 would reduce investment and the number of claims and leave less funding available for AML cleanups.

For nearly three decades, the mining industry has advocated for bi-partisan legislation to enable AML cleanup consisting of two key elements: 1) creating a hardrock AML fund using proceeds from a workable and prospective net royalty assessed on mineral production from future mining claims; and 2) addressing the Clean Water Act and Superfund liability issues that are a serious barrier to third-party Good Samaritan AML cleanup efforts.

The Women's Mining Coalition thus strongly supports S. 3571, "The Good Samaritan Remediation of Abandoned Hardrock Mines Act of 2022" that Senators Heinrich and Risch introduced earlier this year in the SENR Committee. The fifteen Abandoned Mine Land (AML) remediation pilot projects authorized in this bipartisan bill will begin to pave the way towards addressing the liability issues at AML sites that do not have complex water quality issues. We strongly urge this subcommittee to consider and support a similar bill.

Virtually everyone who has evaluated AML policy issues has recognized and documented the legal impediments to voluntary cleanup of AMLs with complex surface water and groundwater contamination issues due to contact with mine wastes and/or seepage from old underground workings. Policymakers and independent researchers like the NRC/NAS and the Western Governors' Association have urged Congress to eliminate the liability exposure that thwarts parties that have no previous involvement with a mine from undertaking voluntary reclamation and remediation activities.

The Biden Administration's 100-day supply chain report directs evaluating reprocessing mine wastes as a viable source of critical minerals. Mine wastes at previously mined and now abandoned mines should be included in this evaluation. To stimulate public- and private-sector reprocessing and reclamation of AML sites containing critical mineral resources, Congress should exempt Good Samaritan³⁵ re-mining and reprocessing proposals at AML sites with critical minerals from Clean Water Act and CERCLA liability, if the Good Samaritan can demonstrate the site will be re-mined and/or reprocessed in a responsible manner in compliance with permitting requirements and applicable regulatory standards.

³⁴ <https://www.blm.gov/sites/blm.gov/files/PublicLandStatistics2019.pdf>, Table 3-32, Page 158

³⁵ As used here, "Good Samaritan" refers to a public- or private-sector entity who had no prior involvement with or ownership interest in the AML site.

Perpetua Resources' mining and remediation proposal for the Stibnite Mine in central Idaho is a pioneering example of a private-sector proposal to remediate an AML site to recover gold and the critical mineral, antimony. In World War II, when Japan invaded China and cutoff antimony supplies needed to build war munitions, the U.S. federal government started producing antimony and tungsten from an emergency mining operation at the Stibnite Mine. This wartime mining supplied the U.S. with the raw materials needed to fight the war and was credited with saving one million American soldiers' lives and shortening the war by at least one year.

But this accomplishment came with a serious environmental cost. The urgent need for minerals eclipsed any concerns about the environment and created an environmental mess that continues to impact water quality, wildlife habitat, local residents, and Native American ancestral lands. Although modern state and federal environmental laws and regulations would prevent this from happening today, there is no easy solution to cleaning up the complex and costly historical environmental problems.

Because significant gold and antimony reserves remain at Stibnite, Perpetua Resources is proposing to spend \$1 billion of private-sector capital to redevelop Stibnite into a modern, environmentally sound mining operation that will remediate the World War II-vintage environmental impacts by reprocessing some of the old mine wastes and building modern facilities that include environmental safeguards. Perpetua Resources has spent years permitting this project, which is in its sixth year of the NEPA analysis process.

Congress could expedite critical minerals reprocessing/AML remediation projects by directing the federal land management agencies to expedite the permitting process for projects proposing to remediate AML sites by reprocessing old mine wastes to recover critical minerals. Although Perpetua Resources' mine and restoration plan does not rely on Good Samaritan liability relief, granting some measure of relief based on a site-by-site evaluation could encourage remediation of other sites.

Perpetua Resources' leadership at the Stibnite Mine could be a model applicable to other AML sites. Expediting the permitting process for this type of AML mine remediation project and evaluating the appropriateness of some liability relief on a project-by-project basis could stimulate other companies' involvement with other AML mine restoration projects. Obtaining critical minerals from existing mined materials would accelerate acquiring critical minerals from domestic sources because recovering minerals from existing mine wastes could probably be accomplished faster than exploring for, discovering, and developing new mineral deposits. Secondly, it would result in meaningful source reduction of the metals that may be leaching from old mine wastes and impacting surface water and groundwater quality at AML sites. Thus, a federal program to reprocess AML sites that contain critical minerals would have many public benefits.

The 10-year time limit in H.R. 7580 Section 304 for water treatment facilities is an ill-considered impediment to both new project development and AML restoration. Water treatment facilities built to support a new mining project can become a valuable long-term asset that may facilitate a wide range of post-mining redevelopment projects that can use the treatment plant infrastructure for other industrial or municipal purposes that will benefit local communities long after mining is completed.

The prohibition in Section 304 of H.R. 7580 against water treatment projects lasting longer than 10 years is especially problematic in the context of AML remediation. Some AML projects are likely to require long-term water quality treatment to successfully improve and maintain water quality. The investments made in water treatment facilities create valuable infrastructure. Financial assurance requirements for both new

projects and AML restoration projects requiring long-term water treatment facilities can (and already do) include long-term funding mechanism to operate and maintain these facilities.

VI. RFI Question 6: Successful Mine Reclamation

“What would a successful mine reclamation program include? Are there existing programs that the U.S. should adopt? “

As described above in Section IV, Congress should rely on EPA’s 2018 conclusions regarding the scope and success of existing reclamation programs under the BLM’s and the USFS’ surface management regulations. Both the BLM’s 43 CFR Subpart 3809 and the USFS’ 36 CFR Subpart A regulations include comprehensive mine reclamation and financial assurance requirements that ensure that all mineral exploration projects and mining operations will be completely reclaimed.

The Women’s Mining Coalition suggests that Congress consider the MOU included as Exhibit VII between BLM, the USFS, and NDEP/BMRR as an example and possible template for how a state regulatory agency coordinates with the federal land management agencies to provide comprehensive regulation, reclamation, and financial assurance for hardrock mineral projects on federal lands.

Section II of the Nevada MOU lists the following state and federal statutes and regulations that are the foundation of the MOU:

- The General Mining Law of 1872 as amended;
- The Organic Administration Act of 1897;
- Title 36 Code of Federal Regulations, Part 228, Subpart A as amended;
- Title 30 U.S.C. Section 612;
- Title 36 Code of Federal Regulations, Part 219, as amended
- Title 36 Code of Federal Regulations, Part 261, as amended
- Sections 102(a)(12), 302, 303, and 603 of The Federal Land Policy and Management Act of 1976
- Title 43 U.S.C. Sections 1201 and 1457
- Title 43 Code of Federal Regulations, Subparts 3802, 3809, and 3715

It’s important to note that this successful reclamation program is accomplished under the existing statutory and regulatory framework, clearly demonstrating the overhaul of the Mining Law proposed in H.R. 7580 is completely unnecessary and unwarranted.

Title III of H.R. 7580 essentially guts the laws and regulations listed above. These draconian changes are not designed to improve mining on federal lands. To the contrary, H.R. 7580 has just one purpose – to substantially reduce mining on federal lands. This ill-considered bill would increase the Nation’s reliance on mineral imports, weaken our mineral supply chains, and jeopardize national security by putting Russia, China, and other adversaries in charge of our mineral future.

VII. RFI Question 7: Tribal and Community Engagement

“How can Tribes and local communities be effectively engaged early in the process to ensure that they have meaningful input into the development of mine proposals?”

Numerous mining companies are making a concerted effort to contact tribal communities near their operating or proposed mines to try to establish meaningful dialogues about how mine development can be respectful of tribes' ancestral lands and at the same time find ways to develop long-term, collaborative and mutually-beneficial working relationships. Some larger mining companies have established policies for working with indigenous communities based on their worldwide mining operations. These policies are premised on companies' respect for the deep and special relationships that indigenous people have with their ancestral lands and the companies' sincere desire to build a better awareness and sensitivity to tribes' concerns about how mining impacts their ancestral lands.

The success of the communication and relationship building that are the objectives of these corporate outreach efforts depends significantly on the willingness of tribal communities to engage with companies in a meaningful way. When viewed with an open-minded perspective, a company's efforts to engage a tribe can evolve into significant opportunities for tribal communities

Generally speaking, modern mining companies are committed to working collaboratively with community and tribal stakeholders to make a proposed mine the best possible project for the area's environment and people. Stakeholder engagement dialogues between mining companies, communities, and tribes are already achieving productive and collaborative outcomes. There is no need for the bureaucratic and cumbersome government-to-government consultation provisions in H.R. 7580 Title II that duplicate many of the requirements under the National Historic Preservation Act (NHPA) and NEPA, and would serve very little purpose except to slow down the permitting process.

The Women's Mining Coalition understands that many tribes may be frustrated with the government-to-government consultation process pursuant to Section 106 of the NHPA that federal agencies must conduct during development of a NEPA document. Hopefully tribal communities will respond to the IWG's RFI with suggestions on how to obtain more meaningful results from the Section 106 consultation process. Based on our experience with the mine permitting process and NEPA, starting the consultation process earlier at the project planning and development stage might elicit a better response from tribal participants. Starting consultation earlier would give agencies, companies and tribes opportunities to share information about a proposed project, learn about the tribes' values, concerns, and goals for their future, and look for common ground.

The company-driven stakeholder engagement and outreach efforts underway at mines that are currently in the permitting process and at operating mines clearly demonstrate the mining industry's commitment to work with a broad array of stakeholders to listen to their suggestions for and concerns about a proposed project. There are many examples of how working collaboratively with stakeholders has resulted in important improvements and refinements to a project proponent's proposed mining Plan of Operations to reduce project impacts, preserve public access, enhance environmental outcomes, and identify ways to benefit local communities.

Stakeholder engagement lasts for the duration of the permitting process and continues once a mine is operating. It is not unusual for mining companies and community and tribal leaders to establish formal advisory groups that meet on a regular basis to focus on addressing community concerns about a proposed or operating project and identify mutually beneficial opportunities for sustainable development measures to repurpose project infrastructure (e.g., roads, transmission lines, pipelines, water treatment facilities, etc.) to provide jobs and tax revenues to local communities after mining is completed. A commitment from all parties to frequent collaboration and communication often solves problems and develops initiatives that bring long-term benefits to communities and tribes.

These stakeholder engagement efforts are a business standard for today's mining companies and executives who realize building and operating a hardrock mine today is about more than creating shareholder value by excavating rocks and producing metals. It involves an equally important focus on creating benefits for the communities where mines are operated, which requires a strong commitment to Environmental, Social, and Governance (ESG) values. ESG accountability starts with C-Suite corporate executives and directors. Chief Executive Officers and Boards of Directors take responsibility for developing, implementing, and overseeing ESG programs and corporate social responsibility initiatives.

Shareholder ESG demands and expectations partially drive companies' focus on ESG programs. But the commitment to ESG goes far beyond responding to shareholders and extends to the needs of the communities where a mine's workforce lives. Mines must be able to attract a qualified workforce to live in nearby communities that are safe and welcoming places to raise a family and that offer good schools, medical and emergency services, adequate shopping, recreational opportunities, and other public services and amenities.

Because many metal mines are located in rural and remote areas with limited job opportunities and public services, a mining operation can become a community's and even a region's best opportunity to improve the quality of life for everyone. Many mining companies make substantial financial investments in their local communities to build or improve schools, upgrade roads and Internet services, subsidize medical services, offer vocational training to prospective employees, and provide scholarships and other educational opportunities for their workforces. These investments represent voluntary donations in addition to the state and local taxes the mines pay.

It must be emphasized that the value of these corporate outreach efforts to area tribes and communities depends largely on the level of stakeholder participation. Ongoing and collaborative dialogues between companies and stakeholders typically produce the best results based on finding synergies between the company, local communities, and the tribes who are an important part of these communities.

Many mining companies make a special effort to engage tribes in early and frequent dialogues with the objective of addressing tribal concerns and finding common ground to work together on programs to benefit tribes. Examples of beneficial outcomes from dialogues with Native American communities include:

- Workforce development initiatives
- Training facilities
- Environmental restoration projects
- Environmental and cultural resources monitoring programs
- Ethnographic and ethnohistory research projects
- Business arrangements and agreements
- Education funding and scholarship programs
- Culture and language preservation programs.

Table 3 lists examples of the many positive outcomes resulting from mining company stakeholder engagement programs with communities and tribes and demonstrates that the consultation requirements proposed in Chairman Grijalva's Mining Law reform principles would create a superfluous process that would delay, duplicate, and complicate the permitting process.

Table 3
Examples of Mining Company - Stakeholder Engagement Results

Partial List of Benefits Resulting From Community and Tribal Engagement
<p><u>Education:</u> Scholarships and educational benefits and assistance Partnerships with K-12 schools, universities, and community colleges Teacher technical and leadership training STEM (science, technology, engineering and math) recruitment and educational programs Support for at-risk students Inclusive education initiatives to ensure educational equity for women, girls, and people of color Summer youth employment programs for Native American teens to learn workforce skills Student internships and job shadowing Academic assistance to high school students</p> <p><u>Employment:</u> Local and tribal employment commitments Job and occupational training</p> <p><u>Environment:</u> Conservation easements Environmental restoration and improvement projects Company-funded independent community environmental sampling and monitoring programs</p> <p><u>Community:</u> Community Advisory Boards Good Neighbor Agreements Community improvement grants Community foundations COVID 19 response measures to provide PPE, food assistance, and cash donations Small business grants and loans to support economic development and diversification Profit-sharing agreements so to benefit communities during and after mining</p>

The H.R. 7580 consultation process ignores and duplicates the NEPA requirement to carefully and thoroughly evaluate alternatives to a mining company’s proposed project in the Environmental Impact Statement (EIS) that federal agencies must prepare for the project. The public plays a pivotal role in evaluating alternatives during the NEPA analysis process by providing comments on a proposed project during scoping for the EIS and public comment periods for the draft and final documents. NEPA also requires evaluating the impacts that the proposed project and project alternatives would have on environmental justice.

It is not uncommon for the NEPA alternatives analysis process to identify different locations for project facilities and operating procedures that could reduce a project’s environmental impacts, and to develop measures to address community concerns about preserving public access; reducing traffic, noise, and visual impacts; maintaining dark skies; managing demands on emergency services and schools; selecting access routes to avoid environmentally and culturally sensitive areas; and many other issues identified as important to the public.

Because public involvement is at the heart of the NEPA process, the public is engaged in every step of this process starting with project scoping, which is one opportunity for the public to suggest project alternatives, to reviewing the draft and final EIS documents. This commitment to public involvement guarantees a transparent permitting process that gives the public full access to the environmental baseline studies and other relevant information.

VIII. RFI Questions 8 and 9: Streamlining Permitting

“How could updates to the Mining Law of 1872, or other relevant statutes, help provide more certainty and timeliness in the permitting process?”

“What improvements can be made to the mine permitting process without reducing opportunities for public input or limiting the comprehensiveness of environmental reviews?”

A. *Permitting Delays and NEPA*

Permitting hurdles are a substantial contributing factor in the declining gold production in Nevada shown in Figure 1 and the plummeting number of metals mines shown in Figures 2 and 3. Permitting delays are impeding clean energy mineral projects across the country: important Nevada lithium projects are facing litigation and regulatory delays; in Idaho, the proposed Stibnite gold-antimony mine is in its sixth year of permitting and a cobalt mine has taken more than a decade to permit; and the permitting process for a proposed Arizona copper mine, where permitting started in 2013, is undergoing additional scrutiny. Permitting adds investment-killing uncertainties for would-be mine developers and investors and harms communities that must wait years for the jobs, tax revenues, and other socioeconomic benefits mining brings to rural communities.

There is growing concern among elected officials about the protracted permitting process for mineral exploration and development projects. U.S. Energy Secretary, Jennifer Granholm, recently said “it takes forever to get a new permit – how crazy is that?” – and committed to a take a whole-of-government approach to streamlining permitting. Unfortunately, the mineral exploration and mine development permitting processes in H.R. 7580 Title III are a whole-of-government approach that transforms Secretary Granholm’s “takes forever, crazy” permitting process into Mission Impossible.

President Biden’s March 31, 2022 Memorandum on Presidential Determination Pursuant to Section 303 of the 1950 Defense Production Act, as amended, seeks to facilitate and expedite domestic production of critical minerals. Unfortunately, these important objectives cannot be accomplished without also streamlining the permitting process.

The NEPA process is the primary reason that permitting takes so long for any type of project requiring a federal permit. There is no such thing as a “shovel-ready” project to construct infrastructure, build new clean energy facilities and transmission lines, or develop a mine due to NEPA. NEPA appeals and litigation create uncertainties that wreak havoc on businesses, and cause massive cost overruns. Project opponents are experts at weaponizing NEPA by using appeals and litigation to challenge agencies’ decisions to purposefully create these lengthy and costly delays. Consequently, NEPA has a long history of obstructing new projects and proposals to expand existing projects. For example, the infrastructure construction projects that were part of the 2009 stimulus bill took years to build – if they were ever built at all – due to permitting barriers. In a 2010 New York Times interview, President Obama admitted there’s no such thing as shovel-ready projects.

Although NEPA provides important environmental information about a project's impacts and seeks valuable public input, it's a paper tiger that does not directly protect the environment. That protection comes from the Clean Water Act, the Clean Air Act, and other federal environmental laws that require permits with stringent environmental protection standards that make U.S. mines the cleanest and safest in the world.

In considering updates to the Mining Law of 1872, Congress could amend NEPA to establish reasonable timelines and page limits and reduce project opponents' currently unfettered abilities to challenge agency NEPA decisions. By distinguishing between the environmental review and disclosure requirements in NEPA and the environmental protection requirements in the Clean Air Act, Clean Water Act, Endangered Species Act, and other environmental protection laws, Congress could enact streamlining measures to the NEPA process without diminishing any environmental protection measures.

A streamlined NEPA process could retain the existing public review process that provides the public with opportunities to participate in public scoping at the earliest stages of project permitting and then review and comment upon draft and final NEPA documents. The public review timelines for reviewing draft and final documents currently specified in NEPA are reasonable. However, federal agencies should be instructed to limit the use of extensions to established comment periods to mollify project opponents. The most important change Congress could make to the NEPA process would be to reduce the frequency and duration of litigation challenging agencies' NEPA decisions by requiring NEPA litigants to post bonds in order to sue and limit cost recovery of attorneys' fees under the Equal Access to Justice Act.

Another way to streamline the NEPA process would be to make better use of activity-specific and/or region-specific programmatic NEPA documents for exploration drilling or other projects involving a limited range of routine actions such as building temporary exploration roads and drill sites and reclaiming these features when the project is completed. Programmatic NEPA documents could establish Best Management Practices (BMPs) for mineral exploration activities. Projects that adhere to the BMPs could then be evaluated using a Categorical Exclusion or a Determination of NEPA Adequacy. This would save time and agency resources.

Reinstating the 2020 NEPA regulations would also help streamline permitting. The thoughtful changes made in the 2020 NEPA rule reflected decades of experience with the NEPA process. These changes improved the practicality of the NEPA analysis process, the readability of NEPA documents, and facilitated better interagency coordination.

B. Permit Streamlining Measures in the Infrastructure Investment and Jobs Act

In evaluating ways to improve and streamline the permitting process to provide more certainty and timeliness, the IWG does not have to create a permit improvement process out of whole cloth because Congress recently enacted a program to improve the permitting process for critical minerals in Section 40206 of the recently enacted Infrastructure Investment and Jobs Act (also known as President Biden's "Bipartisan Infrastructure Law"). The IWG should recommend the permit streamlining measures in Section 40206 to Congress as a template for updating the Mining Law with a permitting process that would provide more certainty and timeliness. Updating the Mining Law with the permit streamlining provisions in Section 40206 would help alleviate some of the roadblocks currently standing in the way of efficiently developing the country's mineral resources.

The Section 40206 permit streamlining provisions should be applied to: 1) the hardrock minerals subject to the Mining Law (also called “locatable minerals”); 2) the 50 minerals on the USGS 2022 Critical Minerals list; and the host minerals shown on the inner circle on the Wheel of Metals Companionality in Figure 5. As discussed in Section IX, many critical minerals are only economic to produce as by-products and co-products of other minerals (e.g., aluminum, titanium, iron, nickel, copper, zinc, lead, tin, platinum, and gold.)

The Infrastructure Investment and Jobs Act establishes a key principle for securing our mineral future in Section 40206(b)(3): “...to the maximum extent practicable, the critical mineral needs of the United States should be satisfied by minerals responsibly produced and recycled in the United States,” and correctly finds in Section 40206(b) (4) that the current permitting process is a problem: “the Federal permitting process has been identified as an impediment to mineral production and the mineral security of the United States.”

The “Federal Permitting and Review Performance Improvements” in Section 40206(c), direct the Secretaries of the Interior and Agriculture to improve the quality and timeliness of Federal permitting and review processes and to the maximum extent possible require completing the process with maximum efficiency and effectiveness, while supporting vital economic growth by:

- (1) establishing and adhering to timelines and schedules for the consideration of, and final decisions regarding, applications, operating plans, leases, licenses, permits, and other use authorizations for critical mineral-related activities on Federal land;
- (2) establishing clear, quantifiable, and temporal permitting performance goals and tracking progress against those goals;
- (3) engaging in early collaboration among agencies, project sponsors, and affected stakeholders—
 - (A) to incorporate and address the interests of those parties; and
 - (B) to minimize delays;
- (4) ensuring transparency and accountability by using cost-effective information technology to collect and disseminate information regarding individual projects and agency performance;
- (5) engaging in early and active consultation with State, local, and Tribal governments—
 - (A) to avoid conflicts or duplication of effort;
 - (B) to resolve concerns; and
 - (C) to allow for concurrent, rather than sequential, reviews;
- (6) providing demonstrable improvements in the performance of Federal permitting and review processes, including lower costs and more timely decisions;
- (7) expanding and institutionalizing Federal permitting and review process improvements that have proven effective;
- (8) developing mechanisms to better communicate priorities and resolve disputes among agencies at the national, regional, State, and local levels; and

(9) developing other practices, such as preapplication procedures.

The Women’s Mining Coalition supports these directives and believes their implementation would substantially improve and streamline the permitting process. We also support the reporting requirements in Section 40206(d) that direct the Secretaries to develop a report to Congress within one year that identifies additional measures, including regulatory and legislative proposals that would increase the timeliness of permitting activities for the exploration and development of domestic critical minerals.

The provision in Section 40206(d)(2) that authorizes BLM and USFS to accept cost recovery payments from permit applicants to pay for federal agency staffing and training to facilitate agency reviews of permit applications is another excellent suggestion for streamlining the federal permitting process. Agency staffing shortages can be a source of delay in the permitting process. Cost recovery arrangements could be especially important in Nevada where roughly one-half of the country’s Notices and Plans of Operation are filed each year³⁶, with many Notices and Plans of Operations being located in just two BLM district offices: Battle Mountain and Winnemucca. The Battle Mountain and Winnemucca BLM District Offices regulate many of Nevada’s largest mining operations; their jurisdictions cover several of Nevada’s most important mineral districts.

The performance metric established in Section 40206(e) and the annual reports in Section 40206(f) are important tools for monitoring and disclosing the agencies’ permitting timelines and track records. They will function as a continuous improvement mechanism to determine if certain steps in the permitting process are contributing to unnecessary delays. Together, these provisions should lead to further refinements and time-savings procedures.

IX. RFI Question 10: Incentivizing Domestic Critical Minerals Production

“What types of incentives would be appropriate to encourage the development of critical minerals, and what is the proper definition of a “critical mineral mine”?”

A. *Eliminating the Current Disincentives Would Incentivize Critical Minerals Production*

The most effective way to incentivize critical minerals production is to eliminate the two major disincentives listed below that are currently obstructing mineral exploration and development:

1. Bills like H.R. 7580 that are hostile legislative proposals to overhaul the Mining Law that are perennially introduced in this subcommittee and in the SENR Committee; and
2. The protracted mineral exploration and mine permitting processes that are fraught with uncertainties, take too long, and cost too much.

H.R. 7580 and its predecessor versions considered in earlier sessions of Congress send a strong and continual signal that mining is not welcomed in the U.S. These bills chill investment in U.S. mineral exploration and development that adversely affects critical minerals projects. Even if H.R. 7580 is not enacted, it and previous bills have cast a dark shadow on the future of mining on U.S. public lands because these unfavorable legislative proposals create concerns that the U.S. does not have stable mining policies.

³⁶ BLM 2020 *op. cit.* Table 3-23

This perceived instability makes companies reluctant to invest the hundreds of millions of dollars necessary to explore for minerals and develop mines.

The importance of keeping public lands open to mining by maintaining the current mining claim system and eliminating the other uncertainties created by H.R. 7580 and similarly hostile legislative proposals cannot be overstated. As shown on Figure 4 on the following page, data from the Nevada Division of Minerals show that Nevada hosts deposits of 33 of the 50 minerals on the U.S. Geological Survey's 2022 list of critical minerals.³⁷ Many of these minerals are located on the 60 million acres of federal minerals estate subject to the Mining Law in Nevada (see Table 2.)

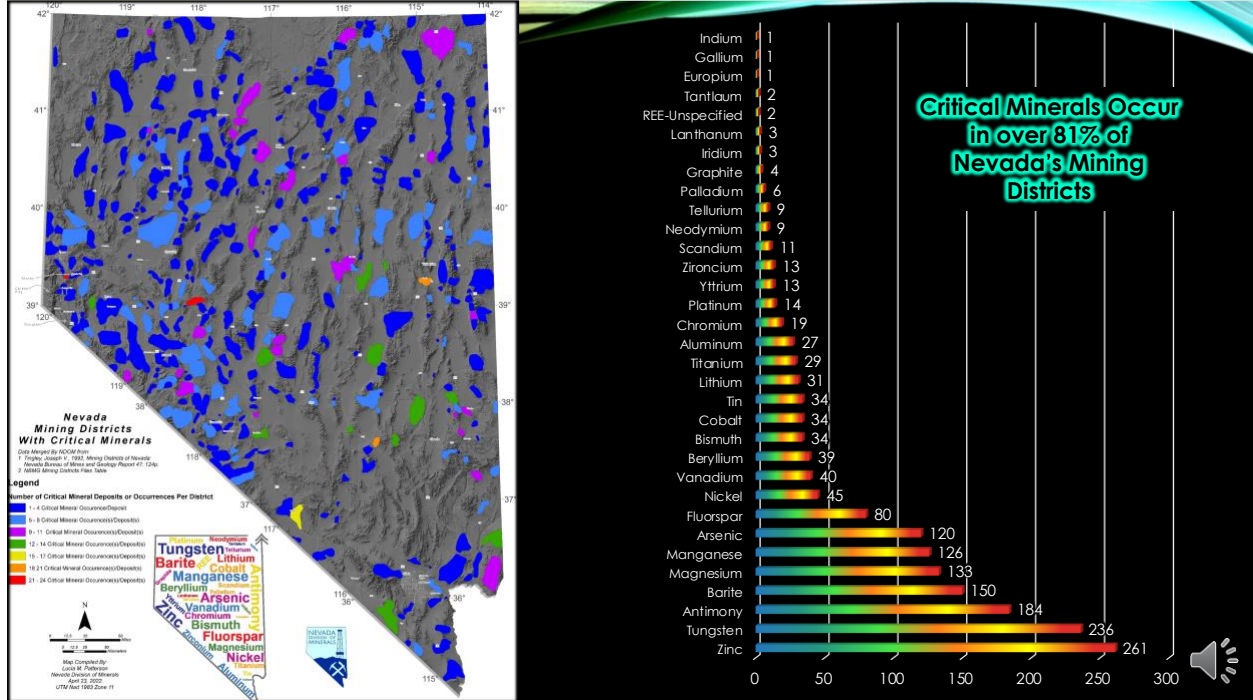
Because Nevada is the country's largest public lands mining state, with over one-half of the nation's active mining claims, Nevada stands poised to become an important future source of domestic critical minerals. In the foreseeable future, Nevada is likely to become a major source of domestic lithium production from the numerous lithium claystone deposits that have recently been discovered and are in various stages of exploration and development. There are several sizeable, advance-stage lithium claystone deposits in the following Nevada counties: Humboldt, Nye, and Esmeralda. Southeastern Oregon also contains a known, large lithium claystone deposit.

Adopting the royalty incentives discussed in Section III would also incentivize critical mineral exploration and development. Exploration and development of domestic mineral deposits would increase if companies were confident that critical mineral production would be assessed a fair and workable net royalty at a reasonable royalty rate, that claims maintenance fees and other fees could be credited against future royalty payments, and that flow-through investment incentive similar to those in Canada were applicable to critical mineral investments.

The permit streamlining measures described in Section VIII would also incentivize exploration for and development of critical minerals. The current lengthy permitting process is a significant disincentive that makes it less attractive for companies to pursue U.S. critical minerals projects when similar projects can be permitted in Australia and Canada for a fraction of the time (two to three years) compared to U.S. projects, which take seven to ten years, or longer.

³⁷ <https://www.usgs.gov/news/national-news-release/us-geological-survey-releases-2022-list-critical-minerals>

Figure 4: Distribution of Critical Mineral Deposits in Nevada



B. Expanding the Definition of Critical Minerals would Increase Critical Minerals Production

Section 40206(b)(2) of the recently enacted Infrastructure Investment and Jobs Act/Bipartisan Infrastructure Law recognizes that “many critical minerals are only economic to recover when combined with the production of a host mineral.” Unfortunately, the U.S. Geological Survey’s 2022 list of critical minerals does not adequately recognize this fact.

A 2015 study from the Center for Industrial Ecology at Yale University³⁸ substantiates that many critical minerals mainly occur in deposits of other more common minerals and illustrates the occurrence of by-product minerals in primary mineral deposits in the “Wheel of Metals Companiability” shown on Figure 5. As described in this study, the principal host metals form the inner, darkest blue circle. Companion elements appear in the outer circles at distances proportional to the percentage of their primary production (from 100 to 0 percent) of the host metal indicated. The companion elements in the white region of the outer circle are elements for which the percentage of their production from the host metal indicated has not been determined.

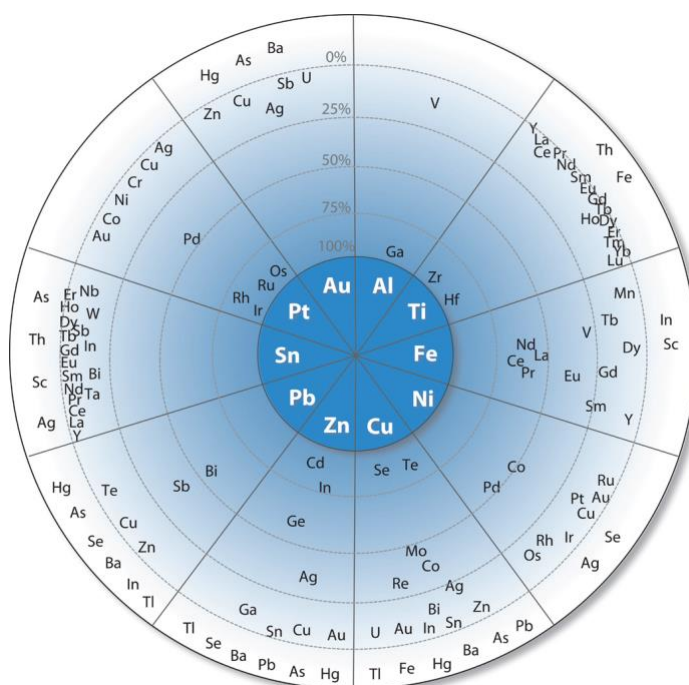
The Wheel of Metals Companiability illustrates there are many primary metal deposits that have significant potential to produce important critical minerals as by-products or co-products. For example, antimony (Sb), is shown in association with primary (host) mineral deposits of gold, (Au), and lead (Pb). Copper (Cu) deposits are a host metal for several critical minerals including tellurium (Te), rhenium (Re), tin (Sn), cobalt (Co), bismuth (Bi), uranium (U), indium (In), barite (Ba), and arsenic (As).

³⁸ <https://advances.sciencemag.org/content/1/3/e1400180>

Development of the primary host-mineral deposit is typically the economic driver that enables co-production or by-product production of the critical mineral(s). In many cases, producing the critical mineral as a stand-alone operation is not feasible or economic. The antimony that will be produced as a co-product of gold production at the Stibnite Mine discussed in Section V is a good example of how the economics of host-mineral production facilitates critical minerals production.

Except for aluminum (Al), the U.S. has significant mineral deposits of all of the host metals shown in the inner, dark-blue circle of the wheel: titanium (Ti); iron (Fe); nickel (Ni); copper (Cu); zinc (Zn); lead (Pb); tin (Sn); platinum (Pt); and gold (Au). Critical mineral production could be incentivized by policies that encourage development of host-mineral deposits where critical minerals can be produced as co-products and by-products.

Figure 5. Wheel of Metals Companianility



X. RFI Question 11: Should Lands be Off-limits to Mining

“Are there areas that should be off-limits from mining, and if so, how should those be identified?”

There can be no doubt that putting more lands off-limits to mining would increase the Nation’s reliance on foreign minerals. Knowing with some precision the amount of federal land that remains open to location under the Mining Law should inform Congress’ and the Administration’s deliberations about how much land should remain subject to the Mining Law and whether more lands should be put off limits.

Unfortunately, Congress and the federal land management agencies do not have this essential data. According to the GAO’s May 2019 letter report to U.S. Senator Tom Udall entitled *Hardrock Mining:*

*Availability of Selected Data Related to Mining on Federal Lands*³⁹, BLM and USFS do not know the percentage of the federal mineral estate that has already been withdrawn from mineral entry under the Mining Law. It is inappropriate to consider the land withdrawal provisions in H.R. 7580 without obtaining this information.

NDOM's data show roughly 19.5 percent of Nevada's public lands are designated for conservation or preservation purposes, making them partially or completely off-limits to mineral activities. Congress must not develop additional legislative or administrative ways to set aside more western public lands from operation of the Mining Law without first knowing how much of the federal mineral estate in the Mining Law states is already unavailable for mining.

Former DOI Solicitor, John Leshy, recently presented data showing that out of the 600 million acres of reserved public lands, roughly 400 million acres are set aside for conservation and preservation purposes and are thus functionally off-limits to mining. According to Professor Leshy, during the period from 1980 to 2020, the acres of conservation and preservation lands grew from 250 million to 400 million⁴⁰. These statistics show that existing land withdrawal and conservation measures are effective in setting aside lands, calling into question why the new mining-specific tools in H.R. 7580 are warranted. Before inserting land withdrawal provisions into the Mining Law, Congress should evaluate whether additional land withdrawal tools are necessary and if it is sound public policy to bar mining on additional lands, keeping in mind that mining has impacted just 317,783 acres (roughly 0.05 percent) of the Nation's federal mineral estate subject to the Mining Law.

It is not necessary to withdraw lands in order to protect the environment at future mine sites. As described in Section II, the existing regulatory requirements and environmental performance standards applicable to mining effectively safeguard the environment at today's mines. Modern mining regulations prohibit approving a project that would create unnecessary or undue degradation on BLM-administered lands (43 C.F.R. § 3809.5) or that fails to minimize adverse environmental impacts on National Forest surface resources (36 C.F.R. § 228.8). In addition to these surface management regulations, the numerous federal environmental laws listed in Table 1 and state laws and regulations also protect the environment at mining operations.

There are existing statutory and administrative tools for withdrawing truly exceptional lands where there is a compelling and demonstrable public interest in barring mining on these lands despite the need for minerals. H.R. 7580 essentially jettisons the existing rigorous land withdrawal processes that appropriately consider broad public interests in determining whether lands are more valuable for their mineral resources or for scenic, cultural, recreational or other land uses.

The suitability determination provision in Title I, Section 112 gives the Secretary a mine veto without any attempt to balance the need for minerals and other uses of public lands as is currently mandated under FLPMA Section 102(a)(12). The laundry list of "Special Characteristics" that make lands unsuitable for mining will put broad swaths of land off-limits to mineral development. Widespread site characteristics including the presence of water resources and aquifers, lands eligible for the National Register of Historic

³⁹ <https://www.gao.gov/products/gao-19-435r>. This GAO investigation asked the Department of the Interior (DOI)/Bureau of Land Management (BLM) and the Department of Agriculture (USDA)/U.S. Forest Service (USFS), for information on 16 hardrock mining data elements and found the agencies had no information on six elements.

⁴⁰ John D. Leshy, *America's Public Lands – A Look Back and Ahead*, 67th Annual Rocky Mountain Mineral Law Institute, July 19, 2021.

Places, lands with critical habitat, and the “adjacent lands” buffer zone in Title I, Section 112, will be used to withdraw large blocks of land from mining. Even more problematic is the vague, catch-all provision in Section 112 (b)(2)(F) that authorizes the Secretary to designate “the presence of other resource values as the Secretary concerned may by rule specify, determined based upon field testing, evaluation, or credible information that verifies such values.”

Given our urgent need for domestic sources of critical minerals, it would be unwise to create a new process for designating lands that contain valuable critical minerals like lithium, copper, antimony, nickel, cobalt, rare earths and others off limits to mining without giving equal consideration to the country’s needs for these minerals.

XI. Conclusions

Despite its title, “The Clean Energy Minerals Reform Act,” H.R. 7580 will not promote the development of domestic clean energy minerals to support the Biden Administration’s goals to reduce carbon emissions, phase out fossil fuels, and shift to carbon-free energy systems. Although there would never be a right time to enact the draconian measures in H.R. 7580, this is an especially bad time to make radical changes to the Mining Law that will make mining clean energy minerals more difficult if not impossible.

Transitioning from the claims system to a leasing system is especially inappropriate right now given the exponential demand for the hardrock minerals needed to power the clean and renewable energy systems to help the Nation achieve its goals for national electrification and to meet the targeted 2030 reductions in greenhouse gas emissions. The one-year timeframe for the Secretary of the Interior to write the claim conversion regulations after the date of enactment is completely unrealistic. Once the regulation has been written, it will require at least several years to implement. This timeline will be a serious impediment to achieving the 2030 carbon emission reduction goals and will contribute to further weakening of our mineral supply chains.

H.R. 7580 is diametrically at odds with the Administration’s clean energy policies, including President Biden’s recent declaration to use the Defense Production Act to increase critical minerals production. It flagrantly ignores the President’s directive to form the IWG with the express purpose of seeking public comments on the Mining Law, mining regulations, and permitting. While the IWG is asking the public for suggestions on how to incentivize critical minerals production, enact a royalty that encourages production, and ways to streamline and improve the permitting process, the sponsors of H.R. 7580 are simultaneously trying to take the country in an entirely different direction that will substantially reduce domestic mineral production.

Because H.R. 7580 is designed to reduce and even eliminate mining on public lands, its sponsors did not need to do the hard work of creating thoughtful and practical land tenure, royalty, or environmental provisions suitable for hardrock mining. To the contrary, they have cobbled together policies developed for other commodities and imposed them on hardrock minerals. The royalty proposed in H.R. 7580 is borrowed from the oil, gas, and coal program, energy minerals that occur in substantially different and much simpler geologic settings than hardrock minerals. The leasing and permitting procedures in H.R. 7580 are imported from the 75-year old unsuccessful federal hardrock leasing program for acquired lands.

The War in Ukraine demonstrates the dangers of relying on adversaries like Russia and China for minerals. Since 1995, the U.S. reliance on foreign minerals has nearly doubled. In 1995 we imported 100 percent of

just eight minerals and 50 percent or more of 16 minerals. Today, we import 100 percent of 17 minerals and 50 percent or more for another 30 minerals. This growing reliance on foreign minerals is not for lack of domestic mineral resources. The minerals on America's public lands are a precious endowment that could provide domestic sources of most of the minerals needed to strengthen domestic supply chains and achieve our clean energy objectives. Obtaining minerals from domestic mines would ensure our minerals come from the cleanest and safest mines in the world because the existing comprehensive federal and state environmental laws and regulations that govern mining ensure a clean and safe environment at America's mines.

As Congress contemplates amending the Mining Law, the Women's Mining Coalition strenuously opposes H.R. 7580 and strongly recommends that the following key elements of the current law be preserved to encourage development of the mineral resources on our public lands:

- Maintain the existing mining claims system which provides the security of land tenure necessary to attract investment in mineral exploration and development.
Do not jettison the claims system and substitute the impractical leasing system in H.R. 7580, which has a 75-year history of failure to produce minerals and generate royalties from hardrock mining operations on acquired lands.
- Keep lands open to mineral exploration and development.
Do not put more lands off-limits to mining as proposed in H.R. 7580.
- Preserve the Plan of Operations permitting system for life-of-mine permits that comply with environmental protection standards and provide reclamation bonds.
Do not adopt the impractical and unworkable permitting process in H.R. 7580 that is based on the federal hardrock leasing procedures that have a long history of discouraging mineral exploration and mining on acquired lands.
- Require compliance with the existing framework of federal and state environmental protection regulations that effectively prohibit unnecessary impacts, safeguard all aspects of the environment, and mitigate mining impacts.
Do not create the unworkable environmental standards in H.R. 7580 that fail to recognize that mining creates some impacts that are unavoidable and necessary and gives regulators the discretion to deny projects that create unavoidable impacts.
- Retain current financial assurance requirements to guarantee reclamation.
The U.S. EPA's CERCLA 108(b) final rule found that existing financial assurance requirements guarantee reclamation of modern mines and will prevent today's mines from becoming tomorrow's environmental problems.
- Streamline the mine permitting process to minimize delays and uncertainties that chill minerals investment.
Enact the streamlining measures in Section 40206 of the Infrastructure Investment and Jobs Act.
- Use the Mining Law holding fees not needed to administer BLM's Mining Law Program to establish a federal fund to reclaim abandoned hardrock mines on public lands.
Based on FY 2020 statistics, roughly \$29 million per year could be used for this purpose.

Thirty years ago, Women’s Mining Coalition started working with the 103rd Congress on proposed legislation to amend the Mining Law. Many aspects of the Mining Law debate have not changed much in the past thirty years.

Today, we stand ready to work with the 117th Congress on this issue with the sincere hope that we can have a thoughtful dialogue about the Mining Law that focuses on enacting policies that will reverse the current decline in mineral production, encourage mineral exploration and development to strengthen domestic supply chains for minerals – especially the minerals that are crucial for the clean energy revolution, and enable reprocessing and reclamation of previously mined materials that contain critical mineral resources by exempting these sites from Clean Water Act and CERCLA liability.

The Women’s Mining Coalition appreciates this opportunity to testify.

The Women’s Mining Coalition (WMC) is a non-profit organization advocating for today’s modern mining industry, which is essential to our Nation. Our grassroots organization has over 200 members nationwide who work in all sectors of the mining industry including hardrock and industrial minerals, coal, energy generation, manufacturing, transportation, and service industries.

Exhibit I

July 2021 Testimony of Mr. Jim Cress, House Energy & Mineral Resources Subcommittee

Oversight Hearing: "The Toxic Legacy of the 1872 Mining Law "

Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
U.S. House of Representatives

Statement of James F. Cress

July 27, 2021

Mr. Chairman, Ranking Member and Members of the Subcommittee,

My name is Jim Cress. I am testifying today at the request of the Subcommittee and not on behalf of any organization. I am a mining lawyer in private practice at Bryan Cave Leighton Paisner LLP in Denver, Colorado. I have specialized for more than 30 years in U.S. and international mining law. I have represented mining companies and landowners, including Alaskan Native corporations, in negotiating royalties, leases and other agreements for numerous minerals. I have worked extensively with Federal mineral leases for coal, potash and sodium, and I am an author of the American Law of Mining treatise chapter on "Non-Coal Federal Mineral Leasing,"¹ including the hardrock mineral leases used on certain federal lands that are the basis for this Committee's prior mineral leasing proposal, H.R. 2579. I have advised clients on royalty compliance for private, federal and state royalties and mineral severance taxes. In my international mining practice, I have evaluated foreign mining laws, mining agreements and mining royalties and taxes, and I have negotiated royalty and mining agreements with governments and third parties in a number of countries in Asia, Europe, South America and Africa. I have advocated for local and indigenous communities to obtain more equitable participation in the benefits of natural resources development as a board member of the non-profits Sustainable Development Strategies Group and RTC Impact Fund, and helped draft the International Bar Association Mining Law Committee's Model Mine Development Agreement, an example template for a mining agreement between a developing country government and mining company that includes provisions for community and indigenous peoples' consultation. I also frequently lecture in international and domestic mining law, communities and sustainable development, including at the University of Denver Sturm School of Law and Western Colorado University. I am currently on the board of directors of Merica Singapore, a privately-owned holding company with rooftop solar energy and sustainable plantation forestry subsidiaries in three Asian countries.

Thank you for the opportunity to appear and speak on the future of the U.S. Mining Law.² Although the title of the hearing suggests a more backward look, I would like to address my comments today to the future of the Mining Law, under

¹ 1 American Law of Mining, 2nd Ed. Ch. 20 (Rocky Mountain Mineral Law Foundation ("RMMLF") 2021), originally authored by my colleague Thomas F. Cope.

² 30 U.S.C. §§ 21(a) et seq. (I will refer to the existing U.S. mining claim location system as the "Mining Law" in my testimony).

the assumption that the Committee is working on legislation to amend the Mining Law similar to the bill it reported out in the 116th Congress, H.R. 2579.³

I would like to address primarily two issues, the proposal to convert the mining claim system to a mineral leasing system and the imposition of a gross royalty of 8% to 12-1/2% on existing and future hardrock mining operations on federal lands. Both of these proposals would have an extremely negative impact on mineral production from federal lands, imposing years or decades of transition delays we cannot afford at a time when increasing exploration for and production of minerals is critical to the transition to a low-carbon, clean energy future.

The leasing system proposed in H.R. 2579 is borrowed from a portion of the U.S. mineral leasing system that is designed for large, already-identified mineral deposits. This system, especially when combined with other provisions of H.R. 2579, is unworkable for scarce and difficult to locate hardrock mineral deposits, and contains none of the title-protecting attributes of the current Mining Law or the leasing and mineral concession systems used by the Western states and leading mining countries.

A. The Present Context: Increased Production of Critical Minerals is Needed to Meet Clean Energy and De-Carbonization Goals

The context for the Committee's review of the Mining Law has changed dramatically over the last 20 years as the U.S. has become more and more dependent on foreign sources for certain critical minerals and materials that hold the key to our future, particularly the ongoing and accelerating transformation of our energy sector. This transformation is reflected most recently in the Biden administration's ambitious goal of reducing U.S. greenhouse gas emissions by more than 50% from 2005 levels by 2030.⁴ Included in this effort is a goal of producing 100 percent of U.S. electricity from carbon pollution-free sources by 2035. Meeting these goals requires looking forward, not backward, at how minerals produced from federal lands under the Mining Law can help facilitate the transition to a de-carbonized energy future.

In the White House's recent report "Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth"⁵ the Department of Defense evaluates critical vulnerabilities in the U.S. supply of certain "critical minerals and materials," many essential to the large-scale development of and transition to low-carbon, clean energy. These critical minerals are needed for, among other uses, electric vehicles, wind turbines and large storage batteries that can store and release intermittent solar and wind power. As noted by DOD, annual

³ [H.R. Rept. 116-467, 116th Cong., 2d Sess. \(Aug. 4, 2020\)](#), on the Hardrock Leasing and Reclamation Act of 2019, H.R. 2579.

⁴ [FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies \(White House April 22, 2021\)](#).

⁵ [Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth - 100-Day Reviews Under Executive Order 14017 \(White House June 2021\)](#) ("White House Report"). See "Review of Critical Minerals and Materials," Department of Defense, at pp. 151-204 ("Critical Minerals Review").

domestic mining activities are valued at less than \$100 billion but enable more than \$3 trillion in domestic value-added industry. DOD also warns that while critical mineral supply-chain vulnerabilities pose a national security threat, the greatest impact of critical mineral shortages will fall on private industrial activity, including the industries that will power our energy transformation.

Over the next 20 years, demand for minerals produced from federal lands will increase dramatically. According to a new study by the International Energy Agency, global demand for battery minerals lithium and graphite is anticipated to grow in the next 20 years by 4000% and 2500%, respectively, to meet clean energy and de-carbonization goals.⁶ The amounts of critical minerals consumed by this "green energy" transition will increase massively over the next two decades, to over 40% for copper and rare earth elements, 60-70% for nickel and cobalt, and almost 90% for lithium. This is a massive surge in demand for critical minerals for which supply is already stretched by increasing development around the globe.

Extraction from most federal lands of most of the critical minerals discussed in the Critical Minerals Review is currently governed by the Mining Law. Some of the more scarce but critical minerals needed for renewable energy and electric vehicles are often or solely found as co-products or byproducts of deposits of titanium, iron, nickel, copper, gold, platinum, lead, zinc and tin.⁷ For example, the massive copper-nickel deposits of the Duluth Complex in Northern Minnesota also contain cobalt, currently not produced at all in the United States, and platinum group metals, currently produced domestically at only one mine. The Stibnite gold and silver deposit in Idaho, currently undergoing permit review, would be the sole domestic source of antimony needed for batteries.⁸

Eighteen of the critical minerals studied in the DOD's Critical Minerals Review have no production at all in the United States, and 83% of critical minerals produced domestically are derived from a single mine. A single domestic source exists for 29 critical minerals, and 37 critical minerals for which the U.S. relies 50% or more on imports are produced from a single foreign country. This concentration of critical mineral supply has led, for example, to WTO disputes with China over its export quotas for rare earth minerals, and to cobalt supplied from the Democratic Republic of Congo using child labor. Strategies to reduce supply risk are limited in part by the locations where the minerals can be found. In the United States, many of these deposits are found on federal lands, and finding them requires laws and policies that provide open access to federal land for exploration and secure mineral tenure upon discovery.

⁶ [The Role of Critical Minerals in Clean Energy Transitions \(IEA 2021\)](#)

⁷ See Critical Minerals Review, pp. 177-79 (25% to 100% of cobalt, rare earth, gallium, indium, nickel, manganese, platinum, palladium, rhodium, tellurium and vanadium are mined as by-products of primary deposits of gold, copper, nickel and other metals).

⁸ See [Stibnite Gold Project EIS project page](#)

Additional domestic mineral exploration and development on federal lands will be needed even if recycling of critical minerals from magnets and batteries can be developed. Even 100% rates of recycling (which is not technically achievable) are inadequate to support the critical minerals needed to meet the Biden Administration goals for de-carbonization and clean energy development. For example, DOD notes that recycling of copper meets 40% of current U.S. demand, but copper demand is accelerating with the clean energy transition.

The Department of Energy review of supply chain issues for large storage batteries contained in the White House Report emphasizes that substantial amounts of the cobalt, nickel, copper and manganese needed for storage batteries to power the de-carbonization of the energy sector are found as co-products or byproducts of gold, copper and other primary deposits.⁹ The Department recommends supporting the sustainable domestic extraction of these minerals, including re-mining of previously-mined domestic deposits, to meet the imminent demand for storage batteries.¹⁰

Any change in the Mining Law that impacts how these precious and base metals are explored for and developed will also impact the critical minerals supply. The massive overhaul of the Mining Law as proposed last year in H.R. 2579, including conversion to mineral leasing and imposition of excessive royalties, will likely delay and decrease production of critical minerals and all other locatable minerals from federal lands.

B. Transitioning to a Leasing System Will Take Years or Decades, Time We Don't Have under the Biden Administration Goals

Given the huge increase in demand for the de-carbonization of our energy supply and the targeted 2030 reductions in greenhouse gas emissions, now is clearly not the time to replace the Mining Law with a new leasing system that will require many years to implement. Much more limited transitions of individual minerals from Mining Law to mineral leasing, even simply closing lands to new claims under the Mining Law, have resulted in years or decades of delay and legal uncertainty. Even relatively minor changes to laws for coal, oil shale and other minerals already in the leasing system have resulted in years or decades of regulatory rulemakings, planning efforts, uncertainties and court challenges. A few examples will illustrate the magnitude of the problem.

1. Oil Shale

The Mineral Leasing Act of 1920¹¹ converted oil shale, a sedimentary rock containing kerogen found in parts of Colorado, Utah and Wyoming, from a locatable mineral under the Mining Law to a leasable mineral. Thousands of oil shale mining claims were located prior to 1920, so when the Mineral Leasing Act withdrew oil shale from location, it preserved from the leasing system all "valid

⁹ "Review of Large Capacity Batteries," Department of Energy, in White House Report, pp. 97-105.

¹⁰ *Id.* At 138-42. Re-mining could be greatly encouraged if this Committee includes a "good samaritan" provision in any new mining bill.

claims existent on February 25, 1920 and thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery."¹²

Despite the clear protection of valid existing mining claims, the transition from oil shale mining claims to oil shale leasing was not an easy one. Oil shale leases have only infrequently been offered since 1920. The Department of the Interior instead spent decades attempting to invalidate oil shale mining claims grandfathered by the Mineral Leasing Act, culminating in three cases decided by the United States Supreme Court.¹³ A stalemate of sorts resulted from the oil shale mining claim provisions of the Energy Policy Act of 1992.¹⁴

The rocky, still uncompleted, 70-year transition from withdrawal of oil shale from the Mining Law to a leasing system occurred even though the Mineral Leasing Act of 1920 (like virtually all public land laws in U.S. history) grandfathered all existing mining claims from the new requirements, whether producing minerals or not. H.R. 2579 would have forced conversion to a lease for *all* hardrock mining claims that are not producing minerals on the date of enactment, with no protection of non-producing claims with "valid existing rights,"¹⁵ which would likely trigger even more litigation.

There were 386,936 active mining claims on federal land as of fiscal year 2019, significantly more claims with more market value than the oil shale claims that were litigated for decades under the Mineral Leasing Act. A forced conversion of mining claims to a leasing system will likely also spawn similarly massive litigation. The uncertain status of the hundreds of thousands of non-producing or non-permitted claims during the 10 year "transition" period of H.R. 2579 (and related litigation) will likely chill new investment needed in critical minerals, not just new "greenfields" projects but for advanced exploration and development projects and "brownfields" exploration around existing mining operations.

2. *Federal Coal Leasing Amendments Act*

The Federal Coal Leasing Amendments Act of 1976¹⁶ made certain modifications to leasing of coal on federal lands. Leasing was not new for coal, which had been leasable under the Mineral Leasing Act and prior law for more than 60 years.¹⁷ The passage of FCLAA followed a coal leasing and prospecting permit moratorium declared by the Department of the Interior in 1971 and 1973. FCLAA addressed the concerns that resulted in the moratorium by adding new requirements for competitive leasing and prior land use planning (adopted in a separate law), substituted exploration licenses for prospecting permits, adjusted

¹¹ 30 U.S.C. §§ 181-263 ("Mineral Leasing Act").

¹² 30 U.S.C. § 193.

¹³ See 2 American Law of Mining, 2nd Ed. §§ 20.20, 45.08[2] (RMMLF 2021) for the long history of this litigation.

¹⁴ Pub. L. No. 102-486, § 2511(e), 106 Stat. 2776 (1992), 30 U.S.C. § 242.

¹⁵ H.R. 2579, § 101.

¹⁶ Pub. L. 94-377, §§ 2-4, Aug. 4, 1976, 90 Stat. 1083, 1085, codified at 30 U.S.C. §§ 201(a)(2) ("FCLAA").

¹⁷ 1 American Law of Mining, 2nd Edition § 25.04 (RMMLF 2021).

royalty rates, and included certain diligent production requirements for federal coal leases.

With prospecting and leasing for coal already disrupted by the moratorium for five years prior to its enactment, FCLAA resulted in another 10 to 15 years of dysfunction in the federal coal leasing program as the Department of the Interior attempted to implement its provisions and fought with industry and environmental groups in court. FCLAA resulted in immediate confusion among federal coal lessees about whether and to what extent their existing leases were subject to the new rules, and the changes to the leasing system (including land use and coal program planning) took many years to implement.¹⁸ The law itself had to be amended within two years¹⁹ to clarify that the addition of new acreage to an existing lease (a common practice for producing coal mines) did not immediately subject the entire lease to the higher royalties and other requirements of FCLAA.

Similarly, FCLAA triggered a rash of lawsuits regarding whether and under what circumstances the Department of the Interior could impose new terms on existing coal leases as they came up for readjustment. These cases arose almost immediately after the enactment of FCLAA in 1976 and continued for 15 years.²⁰ Because some of the FCLAA changes to leases had substantial impacts on the economics of existing coal mines and mines in development, coal miners faced substantial uncertainty over whether to make hundreds of millions of dollars of investments in U.S. coal mines on federal lands during this period.

Under FCLAA, the Department of the Interior developed a Federal Coal Leasing Management Program, including a system for issuing competitive leases as required by FCLAA. The federal leasing program was immediately challenged in court by environmental groups and delayed for two years until the case was settled. The FCLAA regulations originally allowed new coal leases to be auctioned only in "known recoverable coal resource areas" (KRCRAs). Unfortunately, 83% of the known federal coal resources were not designated as KRCRAs and were thus barred from leasing. In 1982, six years after FCLAA was enacted, the unworkable KRCRA regulation was dropped.

DOI finally approved the Federal Coal Leasing Management Program in 1986, after more than 10 years of development, NEPA review, another Congressional coal leasing moratorium, and related litigation. The program established eight federal coal production regions throughout the U.S., each with a Regional Coal Team to propose and conduct the competitive lease auctions provided by the act. However, there was little or no interest in competitive leasing and the competitive leasing program immediately withered. Two regions were discontinued before the program was even approved in 1986, and the remaining six were decertified between 1987 and 1990 due to the complete lack of interest in

¹⁸ See generally 1 American Law of Mining, 2nd Ed. Ch. 25 & 26 (RMMLF 2021).

¹⁹ Pub. L. 95-554, § 2, Oct. 30, 1978, 92 Stat. 2073.

²⁰ See, e.g., *Trapper Mining Inc. v. Lujan*, 923 F.2d 774 (10th Cir. 1991); *Western Fuels-Utah, Inc. v. Lujan*, 895 F.2d 780 (D.C. Cir. 1990); *Rosebud Coal Sales Co. v. Andrus*, 667 F.2d 949 (10th Cir. 1982).

competitive coal leasing.²¹ Federal coal leasing program reverted to "leasing by application," similar to the pre-FCLAA practice.

H.R. 2579 contained provisions similar to FCLAA, requiring comprehensive land use planning prior to leasing and competitive leasing of hardrock deposits on "Federal lands known to contain valuable deposits of hardrock minerals" and not covered by existing mining claims or leases.²² There is no obvious reason to include this provision in a hardrock minerals law, copied from the Mineral Leasing Act for oil fields and large-scale bedded deposits that were "known to exist" in certain areas when they were withdrawn and converted to a leasing system. Oil & gas and coal and large-scale, bedded deposits like sodium, phosphates and potash, were comparatively easy to identify even in 1920, which is why the federal leasing laws and regulations required competitive leasing in areas with "known" deposits. Hardrock deposits, including critical minerals, are much harder to find, even near existing mines, which is why they were left as locatable under the Mining Law to continue to incentivize private parties to look for them.

There were 386,936 active mining claims located on 11,431,347 acres of federal land in fiscal year 2019 according to the BLM²³, leaving perhaps hundreds of millions of acres of federal land²⁴ to be evaluated for "known ... valuable deposits of hardrock minerals" and studied in land use plans and related NEPA documents under H.R. 2579, prior to *any* new permits or leases being available. Unlike FCLAA, the H.R. 2579 requirement is *statutory*, not *regulatory*, so the Department of the Interior would be unable to drop it if it proves unworkable, as it did for the Federal Coal Leasing Management Program. This staggering task of categorizing hundreds of millions of acres, and related regulations and court challenges, could easily consume a decade or more of the 14 years available to meet the Biden Administration de-carbonization and clean energy goals.

C. The "Suitability" Reviews Proposed in H.R. 2579 Spawned Decades of Litigation for Federal Coal Leasing

Similar to the lengthy land use and program planning provisions of FCLAA, H.R. 2579 borrowed another requirement from federal coal law for the Department of the Interior to determine whether any new mineral activity conducted after the date of enactment is located on "lands are suitable for mineral activities."²⁵ These determinations, which can be petitioned for, and are subject to appeal by, any third party for any tract of federal land, are to be incorporated into land use plans (which are similarly subject to NEPA review and third party appeals).

²¹ 1 American Law of Mining, 2nd Ed. § 26.02[6] n.15 (RMMLF 2021); [Mineral Resources: Federal Coal-Leasing Program Needs Strengthening \(GAO RCED-94-10 1994\)](#).

²² H.R. 2579, §§ 103(b)(4), 104.

²³ [Public Land Statistics 2019 \(BLM 2020\)](#), Table 3-22.

²⁴ The Department of the Interior and Forest Service do not know exactly how much federal land is open to mining claim location. ["Hardrock Mining: Availability of Selected Data Related to Mining on Federal Lands" \(GAO Report May 16, 2019\)](#)

²⁵ H.R. 2579, § 112.

These "suitability" determinations appear modeled after a similar provision in the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The SMCRA provision allows the Department of the Interior, on its own initiative or based on the petition of another government agency or private group or individual, to declare that specific lands are "unsuitable for coal mining" based on certain criteria.²⁶ The SMCRA "unsuitability" provision resulted in multiple rulemakings over more than 25 years and numerous takings claims over the five decades since enactment.²⁷ It seems safe to say that the rulemakings, program development, land use plans and accompanying appeals of a "suitability" provision such as H.R. 2579 will consume more than the 14 years available to increase production of critical minerals to meet the Biden Administration's clean energy agenda.

Moreover, the requirement in H.R. 2579 applies to *individual prospecting licenses*, meaning that *no new exploration* on open Federal lands anywhere in the United States can occur without a prior "suitability review." This will likely delay new greenfields exploration for the additional critical minerals we need for many years. The "suitability" provision by itself appears likely to derail the Biden Administration's 14 year timeframe to expand production of critical minerals to achieve its ambitious de-carbonization goals.

D. The Leasing System Proposed in H.R. 2579 was Not Designed for Hardrock Minerals

H.R. 2579 proposed the conversion of all non-producing mining claims on federal lands to a form of hardrock mineral lease that is currently used for just a few hardrock mining operations on "acquired" federal lands. The provisions of the Mineral Leasing Act that form the basis of the current federal hardrock leasing system were not designed for and are ill-suited for hardrock deposits. H.R. 2579's leasing system is even more of a square peg, especially when combined with other provisions like "suitability" reviews and requirements for surface agency consent prior to issuing prospecting permits and leases.

The Mining Law was designed with a self-initiation feature to encourage exploration and discovery across many millions of acres of federal land which are not yet proven to contain mineral deposits. Hardrock deposits are much harder to find and, if found, generally require much more extensive mining, processing and refining to produce salable products. In the Mineral Leasing Act of 1920, oil & gas, coal and similar bedded deposits like sodium and potassium that had been earlier withdrawn from location under the Mining Law were leased under different terms and conditions that made sense for the large and relatively easy to identify and process deposits of those specific minerals. Many of the leasable minerals, including coal, potash and helium, were subject to stricter leasing control and acreage limits for national security considerations of its 1920 era (potash was needed for explosives, helium for dirigibles, and coal for naval warships).

²⁶ 30 U.S.C. § 1272; see 5 American Law of Mining, 2nd Ed. § 172.04 (RMMLF 2021).

²⁷ See, e.g, the summary of rulemakings and litigation in the preamble to the 1999 amendments to the "unsuitability" regulations, [64 Fed. Reg. 70,766 \(Dec. 17, 1999\)](#)

Hardrock minerals were not made leasable in the Mineral Leasing Act of 1920 because of the differences in these minerals and the need to encourage self-initiated discovery of these small, hard to find deposits. Hardrock minerals on some lands were added to the leasing system decades later, due to unique circumstances, as described below.

There are currently very few federal hardrock mineral leases. The GAO reported to the Chairman last year that there were only 20 permitted operations located on 35,927 acres of federal hardrock leases, and only seven of those operations actually produced minerals as of September 30, 2018.²⁸ By comparison, there were 728 mining operations permitted on 317,783 acres of mining claims located under the claim location system. The scarcity of federal hardrock leases is partly because federal leasing of hardrock minerals only occurs on certain lands that are acquired by the government for non-mining purposes, mostly in Midwestern and Eastern states that had no "public domain" subject to operation of the Mining Law.

The fact that federal hardrock leases are only found on "acquired" lands rather than "public domain" lands is a critical fact, because the laws and regulations that permit "acquired" lands to be mined and explored for minerals were designed to protect the primary purpose for which the surface of those lands were acquired and managed. For example, the consent of the surface-managing agency (often the Forest Service) is required for issuance of a hardrock mineral lease, and a lease is used so that site-specific written conditions can be included to protect the primary purpose for which the surface was acquired. Surface agency consent addressed the unique circumstance of allowing mining after the fact on federal lands acquired for specific surface uses.

By contrast to the restricted purposes of "acquired lands," federal "public domain" lands where the Mining Law permits claim location are available for hardrock mineral exploration alongside other surface uses and managed for these multiple surface uses. To prioritize certain non-mining uses on "public domain," a series of laws and regulations were passed over the last 150 years, authorizing mineral withdrawals, designation of Wilderness Areas, National Parks, wildlife refuges and other categories of "preferred" land use. Where these "preferred" uses are incompatible with mineral development, these laws remove, or authorize surface management agencies to remove, federal lands from the Mining Law. Generally speaking, rather than requiring surface agency consent for each individual mining project, as is done for hardrock leases on "acquired" lands, these public land laws have been used to withdraw federal lands from the Mining Law or otherwise limit mining activities to prioritize other uses of the surface (wilderness, conservation, wildlife habitat, recreation, etc.) on a broader scale.

²⁸ [Mining on Federal Lands: More than 800 Operations Authorized to Mine and Total Mineral Production is Unknown \(GAO-20-461R May 28, 2020\)](#) ("GAO Mining Data Report").

This regional rather than project-specific consent approach to addressing and reconciling multiple uses of "public domain" has resulted in approximately 450 million acres of the 650 million acres of federal lands now being off limits to mining claims or mineral activities. The lands that remain are open to self-initiated mining claim location without site-specific consent of the surface management agency, but are subject to compliance with environmental and other permitting regulations for mineral exploration and development.

H.R. 2579 upends this entire system by effectively converting all "public domain" to "acquired lands" status requiring multiple, site-specific consents for any mineral activity. Public lands policy that evolved in numerous laws and compromised over 150 years to increase surface protection for "preferred" surface uses, balanced with leaving some lands open to mining claim location, is junked in favor of a surface agency consent requirement for any mineral activity at all, even prospecting. If enacted, the H.R. 2579 mineral leasing approach would be the most major change to public lands policy in more than a century.

E. H.R. 2579 Guts the Self-Initiation and Rights to Mineral Discoveries Provided Under the Mining Law

Hardrock lease procedures and terms were grafted onto the Mineral Leasing Act rules for other, dissimilar minerals, when they were later added to the leasing system. Lands acquired by the Forest Service under the Weeks Act, for example, as well as other specific acquired lands, were added to the mineral leasing regime under laws passed in 1946 and 1947, in part because of doubts raised about the legality of mineral leasing on "acquired" lands.²⁹ The 1946 law permitting the Department of the Interior to lease hardrock minerals under Forest Service "acquired" surface did not contain any procedures for leasing, so the regulations applicable under the Mineral Leasing Act of 1920 and the Mineral Leasing Act for Acquired Lands of 1947 were used by default.³⁰ For these reasons, the current federal hardrock leasing is more of a historical afterthought than a leasing system designed to promote hardrock mineral discovery and development.

The particular hardrock leasing provisions chosen for inclusion in H.R. 2579 lack critical elements that make the U.S. Mining Law location system work for mineral exploration and discovery, primarily the principle of self-initiation and security of ownership/tenure if a mineral deposit is discovered. Despite the claim that the bill was designed "to modify the requirements applicable to locatable minerals on public domain lands, *consistent with the principles of self-initiation of mining claims*,"³¹ H.R. 2579 contained no right of self-initiation and no clear right to mine any minerals discovered, for the following reasons:

²⁹ 1 American Law of Mining, 2nd Ed. § 20.03 (RMMLF 2021); see GAO Mining Data Report at pp. 1-2. Federal lands in Minnesota, which were not open to mining claim location under the Mining Law due to iron deposits identified prior to statehood, were added to the federal hardrock leasing system in 1950 after the 1948 discovery of the Duluth Complex copper-nickel deposits. 16 U.S.C. § 508b.

³⁰ 1 American Law of Mining, 2nd Ed. § 20.03[3] (RMMLF 2021).

³¹ H.R. Rept. 116-467, 116th Cong., 2d Sess., p. 1 (Aug. 4, 2020)(emphasis added).

1. A "prospecting license" requires prior consent from the surface managing agency (most often the BLM or Forest Service).
2. As discussed in Part C. above, a "prospecting license" is subject to a "suitability" review (individually or in a land use plan) before it can be granted, which can be appealed by any party.
3. Prospecting permits are limited to two years, and extensions of up to four years are discretionary with the Department of the Interior. Exploration often requires 10 years or more, and there is no policy reason to arbitrarily limit the exploration period to two or even six years.
4. Most critically, issuance of a hardrock lease to mine any deposit discovered under a prospecting permit **requires a second consent from the surface managing agency**, which consent can be denied, after many millions of dollars are spent exploring and discovering the deposit. In my 30 year experience evaluating and working with mining laws around the world, a second government consent imposed *after* discovery to obtain rights to mine the discovered deposit is a complete non-starter for mining companies to operate in that country.³²
5. Hardrock leases are limited to a term of 20 years, extendible only if producing at the end of that period. If not producing due to market forces or any other reason, only one 10-year extension is available at the discretion of the Department of the Interior. This term will be inadequate to exhaust many hardrock deposits, given that exploration, feasibility studies, permitting and related legal challenges, and construction often take 10 to 20 years before the first ore can be mined.
6. Prospecting permits are limited to 2,560 acres and no person can control more than 20,480 acres of hardrock leases in one state. This is far below the acreage typically needed to explore for and identify hardrock deposits. These acreage limitations were apparently copied from other mineral leasing laws for coal, potash and other leasable minerals, without regard for whether acreage limitations make any sense for any of the hundreds of hardrock minerals.

The problems posed by the prospecting permit renewal, surface agency consent and lease term and renewal provisions of H.R. 2579 are not just hypothetical. They are currently the subject of ongoing, lengthy regulatory and court skirmishes involving the Twin Metals project in Minnesota, which includes two hardrock leases and 13 prospecting permits that are governed by the federal

³² Approval of an operating plan or reclamation and environmental permitting prior to mining should be required. An unconditioned, discretionary surface agency veto on lease issuance *after* discovery of a mineral deposit should not. Many leasable minerals under the Mineral Leasing Act of 1920 grant a "preference right lease" to the discoverer of a valuable mineral deposit, but this approach was not adopted in H.R. 2579.

hardrock prospecting and leasing regulations on which H.R. 2579 is patterned. NEPA review and a follow-on lawsuit against the proposed four year extension of the prospecting permits have so far taken seven years, almost twice the length of the proposed permit extension. Two hardrock mineral leases were renewed by the Department of the Interior and the lease renewal was also promptly challenged in court and upheld after several years of appeals. After the regulatory approvals and litigation, the final extension of the leases is now approaching expiration after expenditures of more than \$450 million. This demonstrates the economic risk of fixed-term leases similar to the H.R. 2579 proposal, and why many states and countries use claim location systems or indefinite lease terms or automatic extensions, as described in Part F below, so that all permitting and other concerns can be addressed without arbitrary lease expiration deadlines.

The above provisions of H.R. 2579 make it totally unsuitable as a substitute for the Mining Law. A likely outcome if these hardrock permit and lease restrictions are adopted is that only mining claims and mining operations currently producing on federal lands will continue, with perhaps some limited exploration in and around those mines by the current owners. There will be no incentive to perform greenfields exploration to discover new deposits of the additional critical minerals we need for the ongoing energy transformation and de-carbonization of our economy.

F. The Leasing System Proposed in H.R. 2579 Does Not Contain Elements That Make Mining Leases and Agreements Workable in Other States and Countries

There are many countries that use mining agreements, including leases, as their tenure system for acquiring mineral rights. However, the countries with the most competitive mining laws allow free entry (self-initiation) using mining claims or prospecting or exploration permits that have similar characteristics to the open to location system Mining Law.

The attractiveness to mining exploration companies of the Mining Law's current location system versus hardrock leasing or other agreements is reflected in the Fraser Institute's Annual Survey of Mining Companies, an annual survey that ranks mining jurisdictions around the world based on their geologic attractiveness and government policies.³³ Ten of the top 20 jurisdictions (out of 77 jurisdictions studied in the Fraser survey) use a claim location system, including the U.S. states of Nevada, Arizona, Alaska, Idaho, Colorado, and New Mexico, and the Canadian jurisdictions of Newfoundland & Labrador, British Columbia, Yukon and Northern Territory and Ontario.

³³ [Annual Survey of Mining Companies 2020 \(Fraser Institute 2021\)](#). Fraser surveyed approximately 2,200 exploration, development, and other mining-related companies around the world. Respondents represent an aggregate of \$1.5 billion in annual mining exploration expenditures.

Most mining jurisdiction outside the United States use mining agreements (usually leases in British Commonwealth countries, often "concessions" in civil law countries) because all mineral rights in those countries are owned by the government, including all mineral rights under surface owned or controlled by private citizens First Nations or retained by the government. However, mining leases in Canada, for example, permit exploration and mining activities on surface owned by other parties, subject to notice and compensation for damage to the surface owners. Access rights and compensation are usually negotiated. In the U.S., "public domain" lands do not always have separately-owned surface, so the need for site-specific agreements that set forth respective mineral owner and surface owner rights are not necessary in each case and general laws have been passed to address potential surface owner and mineral owner use conflicts.³⁴

The Canadian provinces and territories use a claim location system which allows free entry to prospect and explore on lands open for exploration, similar to the Mining Law, followed by a mining lease from the government to mine. Exploration is allowed for up to 10 years.³⁵ Mining Leases have terms of 10 to 30 years

Some Western U.S. states permit mining claims to be located on their state-owned lands. Nevada and Alaska, currently ranked 1st and 3rd in the Fraser survey, have state claim location systems. All Western states³⁶ have hardrock mineral leasing systems that provide for mineral leases to be extended indefinitely, except for Oregon (up to 50 years with 10-year increments) and Washington (20 years with a 20 year extension). Notably, all of these state land regimes have considerably longer terms than the permits and leases proposed in H.R. 2579.

Western Australia and Queensland are also in the top 20 mining jurisdictions in the world according to the Fraser study. In Australia, similar to Canada, mineral rights are vested in the Crown (government) and can only be granted by a State or Territorial government. These States use several types of agreements for mineral rights, including an exploration license/permit with free right of access for prospecting and exploration, and a mining lease awarded to the holder of a license/permit that discovers commercially valuable minerals. An interesting innovation in Australia is a "retention/mineral development license," which is an agreement that allows the discoverer of minerals to study whether development is economic and to postpone development until mining becomes commercially viable by making payments to the government.³⁷ Such an agreement addresses the concerns that a fixed-term mining lease or limited extension will not be sufficient for the lengthy mine development process. The retention license also allows a

³⁴ Certain laws, such as the Surface Resources Act of 1955 and surface entry regulations on private surface patented under the Stockraising Homestead Act, govern rights between mining claimants and other users of public lands. See, e.g., 1 American Law of Mining, 2nd Ed. § 4.19 (RMMLF 2021).

³⁵ See, e.g., ["Mining Rights and Title in Canada," Cassels Brock & Blackwell LLP in Getting the Deal Through \(Lexology 2021\)](#).

³⁶ These Western states include Alaska, Arizona, California, Colorado, Idaho, Montana, New Mexico, Oregon, Utah, Washington and Wyoming.

³⁷ [See, e.g., "Mining in Australia: Overview," Baker McKenzie \(Thompson Reuters Practical Law\).](#)

miner to temporarily suspend development in order to weather a downturn in the market.

If the Committee chooses to explore amendments to the location system of the Mining Law, these U.S. state and foreign approaches to mining leases and agreements might address some of the shortcomings of H.R. 2579 discussed above. There are other approaches that could be considered as well, if there was time. However, the primary issue, as discussed above, is that replacing the Mining Law location system at this time, even with a system well-designed to attract mineral exploration for critical minerals, will consume too much time to be consistent with the Biden Administration de-carbonization and energy transition goals. H.R. 2579 is certainly not a competitive or workable leasing system, and 14 years is simply not enough time to transition the Mining Law to a new system.

G. An 8% to 12.5% Gross Royalty Would Decimate Federal Production of Critical Minerals

I have twice testified before this Subcommittee on the subject of mining royalties and once before the Senate Energy & Natural Resources Committee. In the 15 years since my first appearance here, the following principles for considering a hardrock royalty on federal lands remain unchanged:³⁸

1. Any royalty payment to the United States for hardrock minerals should be based on the value of the United States' ownership interest in the minerals. That interest is limited to the raw minerals in the ground. The United States makes land available for mineral exploration, but a royalty should not be paid on value added to the raw minerals by mining companies spending hundreds of millions of dollars to find, process, refine and sell the mineral products.
2. The purpose of the federal royalty is to encourage exploration and discovery across millions of acres of federal land which are not yet proven to contain mineral deposits. Compared to oil & gas and coal and similar bedded deposits like sodium and potassium, hardrock deposits are much harder to find and generally require much more extensive mining, processing and refining to produce salable products. This requires the incentive of a reasonable royalty.
3. There are two issues to consider when evaluating net and gross royalties - the royalty rate and the calculation of the amount against which that rate is applied (also called the "royalty base"). "[T]he definition of the royalty base is critical to understanding the rate.

³⁸ Please see my prior testimony before this Subcommittee for additional details. [Legislative Hearing 110-46 on H.R. 2262, Hardrock Mining and Reclamation Act of 2007 \(Subcommittee on Natural Resources Oct. 2, 2007\)](#); [Statement of James F. Cress, Oversight Hearing: Seeking Innovative Solutions for the Future of Hardrock Mining \(Subcommittee on Energy & Mineral Resources July 20, 2017\)](#)

When comparing royalty rates in different jurisdictions, care must be taken not to compare rates unless the royalty base is identical."³⁹

4. Mining companies pay income and many other taxes in the United States and in the state where they operate. Any federal hardrock royalty discussion should focus not only on the amount of the royalty, but on the entire tax and royalty burden applicable to mining. The total "government take" (royalties, taxes and other fees) for mining operations in the United States is already comfortably within the range of other competitive mining countries, even without a federal royalty, based on the most recent global survey.⁴⁰ The Committee should ask the NAS or GAO to perform an updated global royalty study prior to imposing a royalty on hardrock mining, to ensure that the royalty is globally competitive to attract needed investment in critical minerals exploration.
5. James M. Otto, an independent expert on mining law, policy and economics who has advised dozens of countries on mining royalties and taxes, testified before this Subcommittee in 2007 that an 8% gross income royalty would be "one of the highest value based royalty rates I have encountered in my work." The 8% to 12.5% gross royalty proposed in H.R. 2579 would also be the highest government hardrock royalty I have ever encountered. It would also be substantially higher than any Western state hardrock royalty or severance tax, as found in the GAO's 2019 update to its 2008 report on Western state royalties and taxes on hardrock mining.⁴¹
6. Almost all of the western states already impose a severance or extraction tax on mining from private, state and federal lands. Any federal royalty will have to be added on top of these existing burdens, making it crucial that the royalty not be so high that the combined burden makes future mining uneconomic, negatively impacting state tax revenues and driving mining activity off of federal lands. This impact should be studied in coordination with Western states prior to proposing a new federal royalty.
7. Grandfathering claims with a valid discovery as of the date of enactment from the royalty is thus the minimum transition approach that is legally defensible, as Professor Leshy agreed in his prior testimony before this Committee.

Not only would an excessive hardrock royalty undercut new exploration on federal land, but it would cause some existing mines to close prematurely. A royalty of this magnitude is simply not consistent with increasing, or even maintaining current levels of critical minerals production to support the Biden Administration de-carbonization and clean energy goals. Decreased production will

³⁹ Otto, et al., *Mining Royalties: A Global Study of Their Impact on Investors, Government, and Civil Society* p. 62 (World Bank 2006)

also not generate revenue as desired for a proposed abandoned mine reclamation fund.

Conclusion

The proposal to convert the mining claim system to a mineral leasing system and the imposition of a gross royalty of 8% to 12-1/2% on existing and future hardrock mining operations on federal lands would have a dramatic and adverse impact on mineral production from federal lands. We simply cannot afford a decade or more of Mining Law transition delays at a time when increasing exploration for and production of minerals is critical to the transition to a low-carbon, clean energy future.

The Mining Law claim location system is not broken, even if it is almost 150 years old. In our important and urgent quest to transition to a de-carbonized and clean energy future, we can continue to rely on the combination of the Mining Law claim location system, the many amendments that have strengthened and clarified the law, and the modern public lands and environmental laws that complement it to achieve sustainable mining of critical minerals on federal lands. The true "legacy" of the Mining Law may be that it helps us achieve the modern goal of transforming our nation and economy to run on clean and plentiful energy.

I thank the Chairman, Ranking Member and the other Members of the Subcommittee for the opportunity to address this important public lands issue, and I am happy to answer any questions you may have.

⁴⁰ Otto, Batarseh & Cordes, *Global Mining Taxation Comparative Study*, 2d. Ed. (Institute for Global Resources Policy & Management Mar. 2000).

⁴¹ [Hardrock Mining: Updated Information on State Royalties and Taxes \(GAO B-330854 July 16, 2019\)](#); [Hardrock Mining: Information on State Royalties and Trends in Mineral Imports and Exports \(GAO-08-849R July 21, 2008\)](#). The GAO state royalty and tax reports and my 2017 testimony before this Subcommittee also address the need for "apples to apples" comparison of the royalty base in any discussion of royalty rates.

Exhibit II

January 2007 Testimony of Mr. Jim Cress, Senate Energy and Natural Resources Committee

Full Committee Hearing: Oversight Hearing to Receive Testimony on Reform of the Mining Law of 1872

Energy and Natural Resources Committee
United States Senate

Statement of James F. Cress
Partner, Holme Roberts & Owen LLP

January 24, 2007

Mr. Chairman and members of the committee,

My name is Jim Cress, and I am testifying today as a mining lawyer in private practice on the subject of mining royalties. I am a partner at Holme Roberts & Owen, a 109-year old law firm that represented miners in Colorado in the late 1800's and today represents mining companies around the globe. I have specialized for nearly 20 years in U.S. and international mining law, as well as oil and gas and coal law. I have represented mining companies and landowners in negotiating royalties for gold, silver, copper, coal, uranium, oil and gas and other minerals, and have advised clients on royalty compliance for private, federal and state royalties and severance taxes. In my international practice, I have negotiated royalty and tax sharing agreements with governments from Asia to the Americas. I have taught in the Graduate Studies program in Natural Resources and Environmental law at the University of Denver Sturm College of Law, am a contributing author to the Rocky Mountain Mineral Law Foundation's American Law of Mining treatise, and am the former Chair of the Mineral Law Section of the Colorado Bar Association. Thank you for the opportunity to appear and speak on the important issue of hardrock mining royalties.

A royalty on hardrock minerals can and should be structured to promote a fair return to the public and a viable domestic mining industry. Fairness and continued viability of hardrock mining on federal lands should be the cornerstone of any royalty regime.

SIGNIFICANT PROBLEMS WITH A GROSS ROYALTY

A gross royalty will adversely impact investment in mining projects compared to a net royalty

A royalty assessed on gross income increases the economic risk of a given mining investment, and acts as a disincentive to investment. As a consequence, a company looking to develop a project will require a higher required pretax and after-tax rate of return to accommodate the increased risk. Because a royalty assessed on net income has a smaller effect on the

variability of after-tax rates of return, it is a better basis for assessing a royalty.

The difference between these two royalty methodologies becomes even more evident when volatility in commodity prices are taken into consideration. Simply put, as commodity prices decrease, the rate of return required to justify a mining investment increases more dramatically under a gross royalty than under a net royalty. Because the other costs of the mining operation are relatively fixed, the gross royalty takes a bigger bite out of the shrinking income pie as prices decrease.

Because the royalty assessed on gross income will cause a larger reduction in after-tax income when profits are low (or negative) than a royalty assessed on net income, the royalty on gross income can exacerbate industry downturns by causing a greater reduction in the cash flows of mining companies when profits are low. In this way, gross royalties are inconsistent with the principle of sustainable development. A gross royalty reduces the volume of an ore deposit that can be recovered. Each deposit of metallic minerals will have varying grades of mineral, generally requiring extensive concentration and refining to be marketable. The portion of the deposit with grades too low to be recovered economically is either removed as waste or left undisturbed in the ground. A gross royalty raises the "cutoff point" between recoverable ore and waste, shortening the life of a mine by causing what otherwise would be valuable minerals below the cutoff point to be lost. These lost reserves generally can never be recovered, because once the mine is closed and reclaimed, the stranded reserves are usually uneconomic to recover on their own.

A gross royalty is not a fair measure of the value of hardrock minerals in federal lands

Any royalty payment to the United States for hardrock minerals should be based on the value of the United States' ownership interest in the land. That interest is limited to the minerals in the ground, and it cannot justifiably be extended to require a royalty to be paid on values added by the mining company after mining, through processing, refining and selling the mineral products. The United States makes available raw land, and any minerals in the land for development, but the United States contributes nothing to the costs and effort of discovering, mining, processing and transporting the minerals to market. In addition, the mineral potential of the millions of acres of federal land is not uniform, and a royalty needs to be set low enough to provide an incentive for mineral exploration across a broad range of lands with differing mineral potential.

A gross royalty is punitive in periods of low commodity prices

Since a gross royalty approach generally does not allow deductions for mining costs, a mining company would have to pay the royalty regardless of

how high those costs may be for difficult mining situations or for low grade ores. This would require a mining company to continue paying a royalty even when it is operating at a loss, and that royalty could even cause the loss. No mine can be operated long at a loss. The result would be that some mines would shut down prematurely, creating loss of jobs, federal state and local taxes not paid, and suppliers of goods and services suffer. The result is lost economic benefits affecting both those directly involved in the mining activity and the governmental entities, including the United States, that are sustained by those activities.

Moreover, the premature loss of a mine before maximum economic recovery of the mineral deposit is achieved is a blow to the sustainable development of our natural resources, since some of the impacts of the operation will be felt without maximizing the benefits to society and affected communities. In times of high prices, mining operations can be expanded to recover lower grade or harder to process minerals, because the higher prices support the additional costs of recovering these minerals. A gross royalty can erode this ability to maximize recovery of the entire deposit.

A net proceeds or net income royalty, in contrast, does not cause a mining operation to operate at a loss. A net royalty automatically reduces during periods of low prices and increases again when prices are higher, permitting mining operations to weather periods of low commodity prices and maximize the recovery of marginal ore during periods of high prices.

Due to the cyclical nature of demand for mineral commodities, there have been and will always be periods of lower commodity prices. A net royalty provides the best incentive to explore for minerals on federal lands throughout economic cycles.

A gross royalty unfairly imposes a different levy on different minerals, while a net royalty is generally more equitable among minerals

Gross income is closer to net income for some minerals than for other minerals, resulting in a distortion between minerals if the royalty is based on gross income. For example, the end of the on-site mining process for a gold mine is typically a "doré" of 90% gold mixed with silver and other metals, which is then refined into 99.5% pure gold at an offsite refiner. The end of the on-site mining process for a copper mine is typically a concentrate that is much further from the final refined copper product. A gross royalty applied at the end of the on-site mining process thus has a disproportionate impact on these two very different mineral products.

A net proceeds or net income royalty cannot overcome the fact that income for royalty purposes will be determined at different points for different minerals, but it promotes more equal treatment of minerals by allowing deductions for the differing cost structures of various minerals,

mining methods and scales of operation. If one mineral requires more extensive processing than another, this will automatically be taken into account by permitting a deduction of the higher costs of the more processing-intensive mineral.

ROYALTY RATE

Determining what rate is appropriate to apply across dozens of commodities and millions of acres of federal land with differing mineral potential should not be a matter of opinion or guesswork. Congress should look closely at the type and rate of hardrock mineral royalty that has worked in states and countries that have maintained vibrant mining industries. Nevada's net proceeds approach is particularly worth studying, as an example of a regime that has been in place for decades during which time mining has remained a critical part of the state's economy.

ADMINISTRATION OF A ROYALTY

Complexities exist in any royalty approach, so the goal should be a fair return

The gross royalties currently imposed on oil and gas, coal, and trona, potassium and other bedded deposits are not simple to administer. Detailed regulations of the Department of the Interior contain complex processing deductions for gas, coal washing allowances, and transportation deductions. Any royalty regime for hardrock minerals is likely to be even more complex, because the Department will be faced with a greater number of mineral commodities, disparate mining and processing methods, and differing scales of operation. Complexity is thus unavoidable, and the priority of Congress in fashioning a hardrock royalty should be achieving a fair return rather than chasing the illusory goal of simplicity of administration.

Even the gross royalty proposed in H.R. 2262 will not avoid controversies in administration. H.R. 2262 contains a gross income royalty based on the definition of "gross income from mining" for depletion purposes under Section 613(c) of the Internal Revenue Code. Currently, the Federal courts are split on exactly where the "mining" process ends under Section 613(c) for the solvent extraction/electrowinning (SX/EW) method of recovering metals from solution. One federal circuit has held that the end of the mining process occurs after solutions are extracted and concentrated (the end of the solvent extraction phase). Sunshine Mining Company v. United States, 827 F.2d 1404 (9th Cir. 1987). Another circuit has held that "mining" concludes only after the metal is deposited onto cathodes from solution using an electrolytic procedure (the end of the electrowinning phase). Ranchers Exploration & Dev. Corp. v. United States, 634 F.2d 487 (10th Cir. 1980). H.R. 2262 incorporates all of these complexities into the federal royalty

system, along with the potential for different interpretations by the Department of the Interior and the Internal Revenue Service on the same issues. H.R. 2262's approach is not a recipe for either fairness or simplicity of administration.

A net proceeds royalty can more fairly be applied uniformly across different minerals and mining methods

The "fairest" royalty regime would be tailored to the individual characteristics of each mineral deposit after the characteristics of the deposit were known, but such a system would be difficult if not impossible to administer and the uncertainty regarding the amount of the royalty would act as a disincentive to mining investment. A royalty based on net income or net proceeds can be applied to many different minerals, mining methods and sizes of mining operation without the need to differentiate between the types of minerals being produced. Because it is based on revenues less allowable costs, the net calculation can be applied across different minerals, mine methods and scales of operation.

A net proceeds royalty can be structured to ameliorate concerns about administration of the royalty

Specifying the definition of "income" for royalty purposes and permissible types of deductions in the statute itself can help provide an appropriate balance between ease of administration and maintaining a strong, viable domestic mining industry. For example, the Nevada net proceeds of mine tax is based on a list of permissible deductions contained in the statute itself, with some of the details of those deductions elaborated in the Nevada regulations. A federal hardrock royalty should also specify the definition of income and permissible deductions.

Hardrock royalty enforcement provisions should not slavishly follow oil & gas precedent

Royalty enforcement and compliance provisions should be simple and designed to give the Department of the Interior adequate enforcement authority. They should not be slavishly modeled on existing enforcement statutes, or some royalty enforcer's "wish list" of enforcement authority as H.R. 2262's provisions appear to be. Many of the enforcement provisions of H.R. 2262 appear to be closely modeled on the provisions of the Federal Oil & Gas Royalty Management Act of 1982 ("FOGRMA"), 30 U.S.C. §§ 1701 et seq., Pub. L. No. 97-451, § 2, 96 Stat. 2448 (1983). FOGRMA was enacted to address the historical problem of theft of "hot oil" from federal lands as documented by the Linowes Commission. See Report of the Commission on Fiscal Accountability of the Nation's Energy Resources, U.S. GPO 1982-0-366-617/523 (1982). No such historical abuses exist for hardrock mining operations, and some of the provisions of FOGRMA (duties imposed on third party transporters, for example) make little sense in the hardrock context.

Other royalty enforcement provisions of H.R. 2262 go well beyond FOGRMA's requirements, for no apparent reason. These include the requirement that any "person paying royalties" essentially assume all liability for correct payment on behalf of the claim owners. H.R. 2262 also exceeds the requirements of any other federal royalty statute by requiring retention of royalty records for seven years after bond release for a hardrock mining operation, which may mean decades of record retention for any mine that operates for 10 or 20 years, a back-door attempt to avoid any meaningful statute of limitations for royalty audits. The Department's audit authority is also inexplicably broader than under FOGRMA, extending to all third parties that are directly or indirectly involved with production or sale of minerals. The Department is authorized to impose penalties for underpayment that far exceed the penalties provided under FOGRMA, again without any legislative history or basis for these more onerous requirements. Penalties are provided for without FOGRMA's six year statute of limitations on enforcement of those penalties. H.R. 2262 imposes joint and several liability on all owners of any interest in a claim for royalties on "lost or wasted" minerals from a claim, which will inject both the Department and every owner of an interest in a claim into second-guessing the mining and processing methods for development of the claim. This provision in FOGRMA addressed a documented issue with unauthorized flaring or venting of gas from oil and gas wells, which has no parallel in hardrock mining operations. These provisions appear to be solutions to problems not shown to exist in the hardrock context.

Enforcement provisions for a hardrock royalty should include a reasonable statute of limitations, not exceeding six years, for record retention and government claims for underpayment of royalties. The enforcement provisions should also allow for a hearing on the record in the event that penalties are imposed for underpayment. Interest should be chargeable for both underpayments and overpayments of royalties, at the same rate. Congress should not incorporate wholesale provisions from oil & gas statutes that were designed to redress problems that have not been shown to exist for hardrock operations.

Any hardrock royalty legislation should allow for royalty reductions and waivers on a case by case basis

All current federal royalty statutes for oil and gas, coal and other minerals permit the Department of the Interior to grant royalty waivers and reductions on a case by case basis. The same flexibility should be provided in any hardrock mining statute. In order to avoid administrative complexity, any hardrock royalty will probably have to be applied in a fairly uniform manner across a large number of commodities and mining and processing methods. Any inequities created by this broad brush approach can be partially addressed by providing a mechanism for specific operations to apply

for royalty relief, in order to address economic hardships or to maximize the economic recovery of minerals from each deposit.

TRANSITION RULES FOR A NEW ROYALTY SHOULD BE LEGALLY DEFENSIBLE AND FAIR TO AVOID POTENTIAL TAKINGS LITIGATION AND PROMOTE CERTAINTY

A grandfathering of at least some existing unpatented mining claims from the new royalty is both required by law and required to treat fairly parties that have made significant investments in federal lands prior to the enactment of the royalty. Moreover, it may be advisable to grandfather some claims that may not constitute fully vested property rights, in order to have a simple, bright-line test for which claims are subject to the new royalty, which will reduce uncertainty, reduce administration and litigation costs for the government and promote mining investment.

It is settled law that unpatented mining claims supported by a "discovery" of a "valuable mineral deposit" create Constitutionally-protected property rights in the owner of the claim. Imposition of a royalty on such claims is likely to trigger significant "takings" litigation against the government. A royalty is in no way comparable to the imposition of simple federal filing requirements on unpatented mining claims, which was upheld by the Supreme Court in United States v. Locke, 471 U.S. 84 (1985). Grandfathering claims with a valid discovery as of the date of enactment from the royalty is thus the minimum transition approach that is legally defensible, as Professor Leshy agreed in his prior testimony before this Committee.

The problem with protecting only claims with a valid discovery is that determining which of the hundreds of thousands of mining claims has a discovery would be an unprecedented administrative challenge for the Department of the Interior. Under a long line of court cases and administrative decisions, a mining claim does not have to be currently producing to support a "discovery"; a reasonable prospect that the claim could be profitably mined is sufficient. Currently, the Department requires an administrative hearing in order to contest claims for lack of a discovery. Due process requires a hearing for claimants on this issue. The Department has limited staff trained in the specialized rules applicable to determining whether a "discovery" exists. It would be unworkable for the Department to adjudicate hundreds or thousands of these mining claim validity cases to determine which claims can be legally subjected to a new federal royalty.

To avoid the royalty transition becoming an administrative gridlock, Congress should apply the royalty only to claims located after the enactment of the law or to claims that are included in a plan of operations approved by the Department prior to the date of enactment (without a requirement for commencement of commercial production). Having a "bright line" test will

save administrative costs and will also promote certainty about the application of the new royalty, which will encourage investment.

IT IS INHERENTLY UNFAIR TO APPLY APPROACHES FROM COAL, OIL AND GAS OR PRIVATELY NEGOTIATED ROYALTIES

Hardrock minerals are different, and should be treated differently than coal and oil and gas

Why should hardrock minerals not be subject to the 8 percent or greater royalty imposed on oil & gas and coal? The dramatically different characteristics of the minerals themselves and the ways in which they are explored for and developed justifies different treatment.

Oil and gas are fluid and usually collect in sedimentary basins. Exploration for oil and gas usually consists of seismic studies to detect the type of structures where oil and gas are found. These studies are conducted at relatively low cost and usually without the need to acquire more than an easement over the property to be explored. When a promising prospect is identified leases are acquired, a well is drilled and core samples, drill stem tests and logs are taken to determine whether the well is successful. The costs of drilling can sometimes be quite high, but a single well can also drain a large area because of the fluid characteristics of oil and gas. Development of a field is usually accomplished through initial exploratory wells followed by development wells that are drilled in locations reasonably expected, as a result of the information gathered from seismic studies and the initial wells, to maximize production from the same reservoir. Once one or more exploratory wells have discovered an oil and gas pool, identification of the size and shape of the reservoir can be conducted with relatively low risk and expense.

After extraction, oil must be processed and refined before it is ultimately consumed as vehicle fuel or other product. The royalty on oil produced under federal leases is not based upon the value of these refined products, however; it is measured by the value of the crude oil at the lease or wellhead, prior to such processing and refining. Unlike many other minerals, there is a market for oil in its crude, unrefined state and therefore a ready value for royalty purposes before the value added by refining and processing. Most oil is sold at the wellhead into this crude oil market and that wellhead sales price establishes the value of the oil for federal royalty purposes. Thus, it is somewhat misleading to call the federal royalty on oil a "gross" royalty. Because the royalty is typically based on the value of the crude oil prior to processing and refining, the royalty is, in essence, "net" of those costs, equivalent to a net or mine mouth royalty on the value of raw ore in a hardrock operation.

Similarly, federal royalty on gas is also based upon the value of the gas at the lease. After gas is extracted, often the only thing required for consumption by the ultimate end-user is transportation (the cost of which, if paid by the producer, is deducted before royalties are calculated). Sometimes further processing is required to remove sulfur and separate gasoline, butane and other constituents from the gas. The royalty, however, remains payable on the value of the gas at the lease or wellhead and the processing costs incurred by the producer downstream of the lease are deducted under the federal rules before calculating royalty, to arrive at essentially a "net" value at the lease.

Coal is a solid mineral of generally uniform quality and composition. In the West, where most federal deposits exist, coal beds often consist of vast deposits of great thickness, in Wyoming averaging 80 feet and up to 200 feet. Little exploration for coal is required, and it is relatively easy to determine the quality of the coal and the thickness of a seam prior to mining with drilling and sampling. The western coal miner thus knows much about the characteristics of the mineral he has to sell prior to actual mining. At the same time, coal mining is an extremely labor and capital-intensive enterprise. Because of the need to construct facilities, obtain equipment, employ workers, and comply with substantial permitting requirements, it can take years to design, permit and construct a mine. For these reasons, coal from federal lands in the West has often been sold under fixed, long-term contracts entered into prior to construction of a mine. Based on the certainty of a market provided by these contracts, the coal miner can lease sufficient reserves to mine over the life of these long-term contracts and make the considerable capital investments required to construct the mine. Additionally, many long term coal contracts and state utility laws allow for the pass through of the royalty burden to the consumer, while no such pass-through is available for many hardrock minerals, which are sold and priced in global markets.

While the 12.5% royalty imposed on coal in 1976 was a considerable increase over the coal royalties typical at the time, the royalty did not take effect for many federal coal leases until they were readjusted, which occurred over a period of 20 years. In the meantime, the demand for low-sulfur western coal boomed due to the increasingly stringent requirements of the Clean Air Act, and transportation costs out of the Powder River Basin decreased, which permitted the large surface coal mines developed in Wyoming during this period to bear the increased royalty burden, which in any event was generally passed on to utilities (and consumers) under long term coal contracts. The higher-cost coal production in Colorado and North Dakota did not fare as well as Wyoming. Colorado's production initially plummeted, and North Dakota's fared little better, and only because North Dakota mines are associated with mine mouth power plants and because the state made efforts to prop up the industry by lowering taxes and discouraging import of coal from Wyoming. The higher BTU or heating value and low sulfur content of Colorado coal has allowed the market to rebound

since that time, and to bear the 8% royalty applicable to Colorado's underground coal deposits (although some Colorado mines have operated under royalty reductions during economic downturns).

In addition, the federal coal royalty regulations permit the deduction of the most material processing cost, coal washing, and transportation. Thus, the federal coal royalty is not a gross royalty in the strictest sense, and is more akin to a net or mine mouth royalty on the value of raw ore in a hardrock operation.

Oil and gas and coal are not the only leasable minerals on federal lands. Sodium, potash, and phosphate are also leasable minerals. These minerals are commonly occurring, low margin industrial and fertilizer minerals the economics of which cannot support a 12.5% or even an 8% royalty. The statutorily established base rate for phosphate is 5% and for sodium and potassium is 2%. That is because the nature of these commodities and the economics around their extracting and marketing differ from oil and gas and coal. In practice, these mines have operated under government-sanctioned reduced royalties during periods when economic conditions and foreign competition threatened to close the mines.

These examples demonstrate clearly why prevailing royalties differ from mineral to mineral. Specific analyses can be made for many other types of minerals. It is clear, however, that application of a gross royalty at a rate of 8% to hardrock minerals simply because that is what is done with coal and oil and gas would be overly simplistic and dangerously naive.

Hardrock minerals are, by comparison, scarce and hard to find. Unlike oil and gas and coal, the size and shape of a hard rock ore deposit, the quality of the ore, the mineral composition, the value of the mineral products, the metallurgical processes required, the mining methods, the commodity prices and the capital costs all vary for each operation. Commercial ore bodies may be found under as little as a few acres of land. Exploration is conducted through exploratory drilling which gives initial clues regarding the deposit, followed by many expensive development drill holes to define a deposit for development and expensive feasibility studies of the metallurgical and other processes that will maximize production of the target mineral. Once a prospect is identified, development commences at considerable cost, with the capital and labor intensiveness of large coal mines, but without the geologic or metallurgical certainty of coal mines nor the economic certainty and incentive of long-term coal sales contracts, which are not customary for most hard rock minerals. The prices of hard rock minerals have historically been subject to great fluctuation. Because hardrock deposits were often concentrated by ancient subsurface magma flows which have been altered by subsequent faulting, the concentration of metals and their location can vary considerably over relatively small distances, unlike the relatively constant quality of western coal deposits. As a result, portions of a hardrock deposit may be economic while other portions

may contain near- or sub-economic ore that is extremely sensitive to the addition of royalty and other burdens. The combination of price volatility and the variations in the concentration and the chemical and geological characteristics of the minerals within an ore body can turn a profitable mine into valueless rock with a sudden downturn in the market.

Hard rock minerals, therefore, require considerably different approaches to exploration and extraction than do oil and gas and coal. Oil and gas and coal are relatively plentiful, and occur over relatively large areas where found. Hardrock minerals are scarce and occur in small concentrations, and must be discovered by expending considerable money pursuing elusive geological clues. The period between exploration and extraction for hard minerals is much more lengthy than with oil and gas or coal, and since hard minerals prices are not stable, the risk of the project becoming uneconomic before production begins is substantial. These factors are some of the reasons that hard rock mining transactions and agreements are considerably different from each other and from those dealing with oil and gas and coal. These factors also weigh in favor of a royalty reduction provision in the bill, so that site-specific determinations can be made to reduce costs and achieve the maximum economic recovery from federal mineral deposits.

While individual royalties for specific commodities would theoretically be the best approach, such a system might be too difficult to administer. The most reasonable approach given the large number of commodities to be covered would be a uniform net royalty that permits deduction of mining and processing costs. The Nevada net proceeds tax provides a model that has been tested in practice, and you should consider a similar approach for federal lands.

Gross or net smelter return approaches used in private negotiations are inappropriate comparisons

A negotiated royalty between private parties is not analogous to the federal government's imposition of a royalty on millions of acres of unexplored federal lands. Private royalties are negotiated on a case by case basis for each property. Usually, the royalty negotiated depends on what information is known about the property at the time of the negotiation. The less that is known, generally the lower the royalty.

An 8% gross royalty, such as contained in the H.R. 2262, for lands not proven to contain a mineral deposit is unheard of. I am aware of only one royalty of this magnitude in 20 years of practice. At the time Newmont's Gold Quarry royalty was negotiated, there was a known ore body containing eight million ounces of gold on the property, Newmont had existing mine facilities already built on adjacent land, and the owner conveyed the mineral rights to the surrounding area (measuring roughly 25 miles by 15 miles), free from any royalty. That royalty-free land has since proven to contain

millions of ounces of additional gold. Clearly, this is not the typical case on unexplored federal land.

Other examples of large "gross royalties" cited by mining opponents (see, for example, Earthworks "Fact Sheet," *H.R. 2262's Royalty: Industry Charges Itself Higher Rates* (10-29-07)) turn out on closer examination not to be gross royalties at all, or are explained by the circumstances of the individual negotiation. They are in no way "typical" private royalties.

For example, the AU Mining Inc. royalty cited by Earthworks was on a small underground mine (producing only 133,000 ounces in the last 10 years) that has average grades of more than 16 ounces per ton of ore, considerably higher than most operations. Moreover, the royalty burden apparently could not be sustained even with these ultra-high grades, forcing AU Mining to give the property back to the owner, LKA International, in a transaction providing for a much lower royalty capped at a maximum of \$12 million.

The Barrick Pipeline royalty cited by Earthworks is actually a highly-negotiated series of royalties covering different areas in the mine, consisting of sliding-scale gross smelter return royalties (GSR1 ranging from 0.40% to 5.0% and GSR2 ranging from 0.72% to 9.0%), a 0.71% fixed gross royalty (GSR3), and a 0.39% net value royalty (NVR1). The 9% royalty was granted on lands adjacent to an existing mine, known to contain millions of ounces of gold, in exchange for other royalty interests in an adjacent mine that was going into production at a later date. The Pipeline royalties resulted from an exchange of royalties in proven reserves with determinable values, and are in no way comparable to a royalty negotiated when the mineral value of the property is unknown.

The "gross royalty" paid by High River Gold on its Taparko-Boroum mine in Burkina-Faso is not a royalty at all, but a form of financing known as a "production payment" (an arrangement similar to a loan, with larger repayments of the "principal" in the form of gold at the beginning of the operation, decreasing to a much smaller royalty "tail" after recovery of the principal). The company receiving the royalty provided \$35 million to high river gold to construct the mine. High River Gold will repay this with \$35 million in gold through a temporary gross smelter royalty, which will then terminate and be replaced by a 2% royalty.

These atypical royalty arrangements in fact prove the point that a royalty on specific mining properties is negotiated based on what is known about the mineral value at the time of the negotiation (unlike the federal royalty, which must be designed to encourage exploration on millions of acres of land with unknown mineral potential). Private royalties are generally negotiated based on existing information about the particular property, including drill hole data and studies or analyses of the target mineral body. The purpose of the federal royalty is to encourage exploration

and discovery across millions of acres which are not yet proven to contain mineral deposits.

In privately-negotiated royalties, there are almost as many royalty rates and calculations as there are minerals. Each is dependent upon the nature of the product that is produced and sold, customs and practices in the industry, the strength of the market for the particular mineral, the mining cost/processing cost ratio, the specifics of the property for which the royalty is being negotiated, and many other factors. Use of a net royalty for federal lands avoids the need for extensive, mineral-specific legislation. All mines measure net revenues, or profits, and bear determinable operating costs. Therefore, a reasonable percentage net proceeds royalty can be applied and achieve a reasonable return for the use of federal lands, without disproportionate impacts on any particular mineral industry.

In my experience, other countries are paying considerable attention to the appropriate royalty and tax burden to encourage mineral exploration and development. The United States has relatively low grade deposits of many hardrock minerals, relatively high labor and production costs, and stringent environmental and operating requirements. These costs must also be balanced in determining whether a royalty is necessary on federal lands and if so, how much royalty should be charged. Congress should not impose a royalty without careful consideration of the economic and competitive impacts.

States have not generally adopted gross royalties, and states that have gross royalties use much lower rates than H.R. 2262

Another "fact" cited by opponents of mining is that a "majority" of states have adopted gross royalties. See, for example, Earthworks "White Paper," "A Hardrock Mining Royalty: Case Studies and Industry Norms" (10-2-07). In most cases where "gross royalties" are allegedly imposed by states, the royalty percentage is a fraction of the 8% royalty in H.R. 2262 or the royalty is imposed on ore or an earlier stage product, in some cases after deduction of mining and processing costs. See, e.g., Ariz. Rev. Stat. § 42-5201 - 5202 (2 ½% royalty on 50% of net proceeds); Colo. Rev. Stat. § 39-29-101 *et seq.* (2.25% of gross value of ore, excluding any value added subsequent to mining, subject to an exemption of first \$19 million in income and credits for property taxes paid); Idaho Code § 47-1201 *et seq.* (1% of the gross value of the ore, after deducting costs of mining and processing); Mont. Code Ann. §§ 15-6-131, 15-23-503, (1.6% net smelter return royalty on gold doré and bullion); New Mexico Code, Chapter 7, Art. 26 § 7-26-4 and 7-26-5 (0.5% for copper, 0.2% for gold and silver, and 0.125% for lead, zinc and other metals, on 50% of the value of the minerals). These state royalties are considerably lower than the 8% gross income royalty in H.R. 2262 and in some cases are essentially the equivalent of a net proceeds royalty.

BRITISH COLUMBIA'S FAILED EXPERIMENT WITH A "NET SMELTER RETURNS" ROYALTY IS INSTRUCTIVE

In 1974, British Columbia enacted the Mineral Royalties Act, which imposed royalties on mines located on Crown Lands and the Mineral Land Tax Act and subjected owners of private mineral rights to royalties equivalent to those applied to Crown Lands. The government imposed a net smelter royalty of at 2.5% in 1974, and 5% thereafter.

The results were devastating for British Columbia mineral development. During the period the royalty was in effect, no new mines were developed, several marginal mines ceased operations, and non-fuel mineral output fell, despite increased prices. As a result, revenue collected from royalties on metal mines declined from \$28.4 million in 1974 to \$15 million in 1975. During the two year period the royalties were in effect, nearly 6,000 mining-related jobs were lost. In 1972, \$38 million Canadian was spent on exploration expenditures. In 1975, exploration expenditures fell to \$15.3 million Canadian (a 60% decline) while exploration expenditures in the Pacific Northwest -- outside British Columbia -- increased. New mine exploration and development spending (excluding coal) decreased from an annual average of \$131 million in the years 1970-1973 to an estimated \$20 million in 1975 (an 85% decline). In 1972, 78,901 new claims were staked. In 1975 the number of new claims staked fell to 11,791 (an 85% decline).

The royalty was repealed in 1976. After the royalty was repealed, BC Mine Minister Tom Waterland said that "[t]he Government's decision to introduce royalties in 1974 was the result of inadequate understanding of the realities of mineral resource development and the economic characteristic of that development."

I thank the Committee for the opportunity to address this important public lands issue, and I am happy to answer any questions you may have.

Exhibit III

July 2017 Testimony of Mr. Jim Cress, House Energy & Mineral Resources Subcommittee

Oversight Hearing: "Seeking Innovative Solutions for The Future of Hardrock Mining"

Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
U.S. House of Representatives

Statement of James F. Cress

July 20, 2017

Mr. Chairman and members of the Subcommittee,

My name is Jim Cress. I am testifying today on the subject of mining royalties at the request of the Subcommittee and not on behalf of any organization. I am a mining lawyer in private practice at Bryan Cave LLP in Denver. With Bryan Cave and a predecessor firm, Holme Roberts & Owen, I have specialized for nearly 30 years in U.S. and international mining law, as well as oil and gas and coal law. I have represented mining companies and landowners in negotiating royalties for gold, silver, copper, iron, zinc, coal, uranium, barite, oil and gas and other minerals, and have advised clients on royalty compliance for private, federal and state royalties and mineral severance taxes. In my international practice, I have evaluated mining royalties and taxes and negotiated royalty and mining agreements with governments in a number of countries. I have also devoted substantial pro bono time to mining issues, particularly in developing countries. I worked on the royalty provisions in the International Bar Association Mining Law Committee's Model Mine Development Agreement, an example template for a mining agreement between a developing country government and mining company. I have supported local and indigenous communities in obtaining more equitable participation in the benefits of mining through the non-profits Sustainable Development Strategies Group and RTC Impact Fund.

Thank you for the opportunity to appear and speak on the important issue of hardrock mining royalties. I have previously testified on this subject before this Subcommittee and before the Senate Energy & Natural Resources Committee, and my comments today will reflect on some of the same issues, which are difficult ones. In particular, if Congress determines that a royalty on locatable hardrock minerals is needed, how can Congress structure a royalty on to promote a fair return to the public, while ensuring a viable domestic mining industry that **minimizes reliance** on foreign imports of strategically critical minerals?

A. What Does a Royalty Compensate? How Much is Too Much?

The threshold policy question for evaluating a federal hardrock mining royalty is what is the policy reason for compensating the United States with a royalty? Any royalty payment to the United States for hardrock minerals should **be based on the value of the United States' ownership interest in the minerals.**

That interest is limited to the raw minerals in the ground. The purpose of the federal royalty is to encourage exploration and discovery across millions of acres of federal land which are not yet proven to contain mineral deposits. Compared to oil & gas and coal and similar bedded deposits like sodium and potassium, hardrock deposits are much harder to find and generally require much more extensive mining, processing and refining to produce salable products. **A royalty should not be paid on value added to the raw minerals by a mining company** spending hundreds of millions of dollars to find, process, refine and sell the mineral products. **The United States makes land available for mineral exploration, but the United States contributes nothing to the enormous costs and effort of finding, producing** and processing the minerals.

Mining companies pay income and many other taxes in the United States. Any discussion of federal hardrock royalties should focus not only on the amount of the royalty, **but on the entire tax and royalty** burden applicable to mining. Mining companies take the same holistic view of the cost of doing business when they are deciding whether to invest their exploration and mine development capital in the U.S. or another country.

The total "government take" (royalties, taxes and other fees) for mining operations in the United States is already comfortably within the range of other competitive mining countries. Professor James Otto and others have conducted various studies comparing government take from mining in various countries, which included the states of Arizona and Nevada (two of the highest mineral producing western states with substantial federal lands). The most recent public study was published in 2000. Otto, Batarseh & Cordes, "*Global Mining Taxation Comparative Study (Second Edition)*" (Institute for Global Resources Policy & Management Mar. 2000) ("Global Mining Taxation"). The study evaluated all of the direct and indirect taxes on mining (including royalties) in 24 countries, including a range of developed and developing countries. The authors then modeled the impact of "government take" in these countries on two hypothetical mineral deposits, a gold mine and a copper mine, to evaluate and compare the burden imposed by these tax and royalty regimes.

Professor Otto testified in 2008 before the Senate Energy and Natural Resources Committee that his studies have shown that many mineral producing countries impose a total effective tax rate (government take) in the range of 40 to 50%. In the Global Mining Taxation study, the effective tax rate in 2000 for Nevada was 49.3% for a medium-profitable gold mine, without the imposition of any federal royalty. See Global Mining Taxation, Section 4.5, pp. 95-96 and Table 27. With a 10% drop in the gold price from the 2000 price, Nevada's effective tax rate jumped to a confiscatory 63%. Id. p. 101 and Table 28. Similarly, the effective tax rate in 2000 for the hypothetical copper mine in Arizona was 49.9%, without the imposition of any federal royalty. Id. Section 4.5, pp. 95-96 and Table 27. **These studies suggest that even a small federal royalty could take the United States out of the 40-50% effective tax rate range typical for successful mineral producing countries, making the U.S. less competitive for mining investment.**

It would be prudent to update these studies in designing any federal royalty, so the impacts can be modeled and understood. Significantly, as discussed below, almost all of the western states already impose a severance or extraction tax on mining from private, state and federal lands. Any federal royalty will have to be added on top of these existing burdens, making it crucial that the royalty not be so high that the combined burden makes future mining uneconomic, negatively impacting state tax revenues and driving mining activity off of federal lands.

B. Form of a hardrock royalty - gross versus net royalties and royalty rates

There are many types of royalties used in the mining industry and by governments around the world, from simple unit-based royalties (a fixed amount per ton produced) to royalties based on **net proceeds or net profits after deduction of mining and/or processing costs**, to gross royalties with little or no deductions. The latter two types, often referred to loosely as "net" and "gross" royalties, are most often proposed for a potential federal hardrock royalty.

There are two issues to consider when evaluating net and gross royalties - the royalty rate and the calculation of the amount against which that rate is applied (also called the "royalty base"). Differences in the royalty base are what we are discussing when talking about "net" versus "gross" royalties. **It is important to look closely at the definition of the royalty base when comparing** private royalties to government royalties or comparing royalties of different countries or U.S. states, since what may be called a "gross" royalty may actually be based on the "gross value of ore," rather than a final mineral product, the "gross value less processing costs," "gross value at the mine mouth" or another royalty base definition that is functionally equivalent to a net royalty base. "[T]he definition of the royalty base is critical to understanding the rate. When comparing royalty rates in different jurisdictions, care must be taken not to compare rates unless the royalty base is identical." Otto, et al., "Mining Royalties: A Global Study of Their Impact on Investors, Government, and Civil Society" p. 62 (World Bank 2006)("World Bank Study").

Net royalties and gross royalties have differing impacts on mining investment due to the cyclical nature of commodity price cycles. **Generally, a royalty assessed on gross income increases the economic risk of a given mining investment, and acts as a disincentive to investment. As a** consequence, a company looking to develop a project will require a higher required pretax and after-tax rate of return to accommodate the increased risk. Because a royalty assessed on net income has a smaller effect on the variability of after-tax rates of return, it is a better basis for assessing a royalty. As commodity prices decrease, the rate of return required to justify a mining investment increases more dramatically under a gross royalty than under a net royalty. Because the other costs of the mining operation are relatively fixed, the gross royalty takes a bigger bite out of the shrinking

income pie as prices decrease. This can have a dramatic impact on whether existing mines stay open or new mines are built.

Because the royalty assessed on gross income will cause a larger reduction in after-tax income when profits are low (or negative) than a royalty assessed on net income, the royalty on

A gross royalty can exacerbate industry downturns by causing a greater reduction in the cash flows of mining companies when profits are already low. A gross royalty may actually reduce the volume of an ore deposit that can be recovered. Each deposit of metallic minerals will have varying grades of mineral, generally requiring extensive concentration and refining to be marketable. The portion of the deposit with grades too low to be recovered economically is either removed as waste or left undisturbed in the ground. A gross royalty raises the "cutoff point" between recoverable ore and waste, and may shorten the life of a mine by causing what otherwise would be valuable minerals below the cutoff point to be lost. These lost reserves generally can never be recovered, because once a mine is closed and reclaimed, the **stranded reserves** are usually uneconomic to recover on their own in the future. When mines shut down prematurely, in addition to lost mineral reserves, jobs are lost, federal state and local tax revenues are lost, and business is lost by suppliers of other goods and services that support the mines. These lost economic benefits affect both those directly involved in the mining activity and the governmental entities, including the United States, and their citizens who rely on taxes paid by mining operations.

A net proceeds or net income royalty, in contrast, does not cause a mining operation to operate at a loss. A net royalty automatically reduces during periods of low prices and increases again when prices are higher, permitting mining operations to weather periods of low commodity prices and maximize the recovery of marginal ore during periods of high prices. Due to the cyclical nature of demand for mineral commodities, there have been and will always be periods of lower commodity prices. A net royalty provides the best incentive to explore for minerals on federal lands throughout economic cycles and keep the domestic industry viable and the nation's mineral supply secure.

Determining what rate is appropriate to apply across dozens of commodities and millions of acres of federal land with differing mineral potential should not be a matter of opinion or guesswork. Congress should look closely at the type and rate of hardrock mineral royalty that has worked in states and countries that have maintained vibrant mining industries.

C. Hardrock minerals are different, and should be treated differently than coal and oil and gas

Why should hardrock minerals not be subject to the 8 percent or greater royalty imposed on oil & gas and coal? The dramatically different characteristics of the minerals themselves and the ways in which they are explored for and developed justifies different royalty treatment. The royalty on oil produced

under federal leases is not based upon the value of these refined products, however; it is measured by the value of the crude oil at the lease or wellhead, prior to such processing and refining. Unlike most hardrock minerals, there is a market for oil in its crude, unrefined state and therefore a ready value for royalty purposes before the value added by refining and processing. Most oil is sold at the wellhead into this crude oil market and that wellhead sales price establishes the value of the oil for federal royalty purposes. Thus, it is somewhat misleading to call the federal royalty on crude oil a "gross" royalty, because the royalty is "net" of refining costs, equivalent to a net or mine mouth royalty on the value of raw ore in a hardrock operation.

Similarly, federal royalty on gas is also based upon the value of the gas at the lease. After gas is extracted, often the only thing required for consumption by the ultimate end-user is transportation (the cost of which, if paid by the producer, is deducted before royalties are calculated). Sometimes further processing is required to remove sulfur and separate gasoline, butane and other constituents from the gas. The royalty, however, remains payable on the value of the gas at the lease or wellhead and the processing costs incurred by the producer downstream of the lease are deducted under the federal rules before calculating royalty, to arrive at essentially a "net" value at the lease.

Coal is a solid mineral of generally uniform quality and composition that requires little or no processing. In the West, where most federal deposits exist, coal beds are vast, world-class deposits of great thickness, in Wyoming averaging 80 feet and up to 200 feet. Little exploration for coal is required, and it is relatively easy to determine the quality of the coal and the thickness of a seam prior to mining with drilling and sampling. While the 12.5% royalty for surface mined coal (8% for underground) imposed in 1976 was a substantial increase over coal royalties typical at the time, the royalty did not take effect for many federal coal leases until they were readjusted, which occurred over a period of 20 years. In addition, the federal coal royalty regulations permit the deduction of the most material post-mining costs, coal washing (where needed) and transportation. Thus, the federal coal royalty is not a gross royalty in the strictest sense, and like oil and gas, is more akin to a net or mine mouth royalty on the value of raw ore in a hardrock operation.

Oil and gas and coal are not the only leasable minerals on federal lands. Sodium, potash, and phosphate are leasable minerals that are low margin industrial and fertilizer minerals, the economics of which cannot support a 12.5% or even an 8% royalty. The statutorily established base rate for phosphate is 5% and for sodium and potassium is 2%. That is because the nature of these commodities and the economics around their extracting and marketing differ from oil and gas and coal. In practice, these mines have operated under government-sanctioned reduced royalties during periods when economic conditions and foreign competition threatened to close the mines.

These examples demonstrate clearly why prevailing royalties differ from mineral to mineral. Specific analyses can be made for many other types of minerals. It is clear, however, that application of a gross royalty at a rate of 8%

to hardrock minerals simply because that is what is done with coal and oil and gas would be overly simplistic and dangerously naive.

D. State Royalties and Severance Taxes are Generally Net Royalties or Small Gross Royalties

Western states, in which most federal lands are located that would be subject to a federal hardrock royalty, tend to impose two types of burdens on hardrock mining - royalties on mineral production from state lands and severance taxes on private, state and federal mineral production. Both are calculated using a percentage of the value of the mineral produced, so both can be useful as comparisons for a federal royalty.

The approaches of the western states to royalties and severance taxes, including the use of net or gross, vary considerably (with more than one approach sometimes used in the same state), but most states include a net approach or an approach based on the gross value of ore or mine mouth value, which is equivalent to a net. State royalties and severance taxes were summarized by the General Accounting Office in a 2008 study. See "Hardrock Mining: Information on State Royalties and Trends in Mineral Imports and Exports," GAO-08-849R (GAO July 2008)(2008 GAO Report).

Western states apparently do not perceive that net approaches impose undue burdens on the state in calculating and collecting royalties and severance taxes. No state imposes a flat royalty on gross income without any deductions like the royalty often proposed in prior mining law and budget bills. In addition to their varied approaches to the royalty or severance tax base, the states all impose significantly lower royalty or severance tax rates than the 8% gross royalty that has often been proposed in prior mining law and budget bills. Rates in the western states tend to be lower for gold, copper and other metals.

The various western state approaches to royalty and severance tax base are discussed below in a continuum from the most "net" to the most "gross" approaches. This summary is based on the 2008 GAO Report, the most recent survey of state royalty and severance tax laws, and has not been updated, but the variety of state approaches have not differed materially since its publication.

1. Net Profits or Net Proceeds

A number of states define the royalty base or severance tax base on a net profits or net proceeds basis. These state burdens are truly "net," in the sense that the royalty base is typically determined after deduction of all mining and processing costs and transportation.

Alaska imposes a royalty of three percent of net income on mining from state lands. Alaska Stat. § 38.05.212. Alaska also imposes an additional mining license tax (similar to a severance tax) that is calculated as a percentage (between three and seven percent) of the net income from the property.

Producing mines are exempted from the tax for three and a half years, in order to allow them first to recover their capital costs. Alaska Stat. Tit. 43, Ch. 65..

Nevada imposes a severance tax of between 2 and 5 percent of net proceeds. Nev. Rev. Stat. Ann. Ch. 362.. "Net proceeds" is defined as the gross value of the mineral product, less deductions for extraction costs, processing, refining and sale costs, costs of transportation from the mine to the place of processing and sale, marketing costs, maintenance and repair costs for machinery, facilities and equipment used in mining, processing and transportation, depreciation of such facilities and equipment, insurance costs, costs of employee benefits, development costs, royalties, and certain administrative overhead costs. *Id.* § 362.120; Nev. Admin. Code Ch. 362. This tax is phased in as the percentage of net proceeds to gross proceeds increases, with the lower rate applying to operations generating \$4 million or less in annual net proceeds.

California imposes a royalty on state lands on a lease-by-lease basis. One basis used is a percentage of the net profits derived from mineral extraction operations. See Cal. Pub. Resources Code § 6895.

Montana taxes the net proceeds of minerals other than coal, bentonite and metal mines (metal mines are taxed on a net smelter returns basis as described below). Mont. Code Ann. § 15-6-131(1), (2). *Id.* § 15-23-503. The "net proceeds" tax base is defined as gross receipts received from the sale of concentrates or metals, less allowable deductions. Deductions allowed include royalties paid, costs of labor, machinery and supplies used in mining operations and development, costs of improvements, repairs or replacements to the mine, mill or reduction works, and depreciation of the mill and reduction works, transportation from mine to mill or place of sale, marketing costs, insurance, environmental, reclamation and mine safety compliance costs, sampling and assaying charges, engineering and geological service charges.

"Net profits" are defined as gross receipts from the sale of precious metals, less deductions for the cost of extraction, transportation from mine to mill, the costs of reduction, refining and sale, marketing costs, costs of maintenance and repairs of mining, processing and transportation machinery, equipment and facilities and administrative facilities, interest costs, insurance costs, employee benefits, depreciation of machinery, equipment and facilities, mine exploration and development costs, reclamation costs, royalty payments, state and local taxes, and general administrative expenses incurred within the state. *Id.* §§ 10-39-44, 10-39-45.2.

Arizona also had a royalty on state land of five percent of the net value of minerals, until a 1989 state supreme court decision overturned this method as being inconsistent with the State's enabling act (a rationale that would not apply to a federal royalty). Ariz. Rev. Stat. § 27-234 (repealed); see *Kadish v. Arizona State Land Department*, 155 Ariz. 484; 747 P.2d 1183 (1987).

2. Gross Value of Ore or Mine Mouth Value

A number of western states have imposed royalties or severance taxes that are based on the gross value of the unprocessed ore or mine mouth value. This is the functional equivalent of a net proceeds or net profits approach, with deductions for all processing and transportation costs and, in some states, mining costs.

Colorado's severance tax is 2.25% of the gross value of the ore, excluding any value added subsequent to mining, and subject to an exclusion for the first \$19 million in income and credits for property taxes and any state land royalties. Colo. Rev. Stat. §§ 3929-102 to -104. Colorado state land royalties are determined on a case by case basis, see Colo. Rev. Stat. §36-1-113 , but gross value of ore has been used for some minerals, and net smelter returns for others. See "Royalties in the Western States and in Major Mineral-Producing Countries," GAO/RCED-93-109, p.28 (GAO 1993)("1993 GAO Report").

Idaho imposes a license tax (equivalent to a severance tax) of 1% of the gross value of ore, after deducting all costs of mining and processing the ore. Idaho Code §§ 47-1201, 47-1202. Idaho, like Colorado, imposes state land royalties on a case by case basis in each lease, see Idaho Code § 47-710 , and has in the past also used a royalty of between 2.5% (for certain metals) to 10% (for certain non-metallic minerals) of the value of the unprocessed ore. See 1993 GAO Report, p.30.

Utah has imposed a royalty on minerals extracted from state lands of a specified percentage of the value of the minerals, including a royalty of 4% of the gross value of the ore sold for metals other than uranium. See 1993 GAO Report, p.43.

South Dakota imposes a royalty on leases of state lands of not less than 2% of the gross returns from the sale of ores and mineral products derived therefrom, less smelting and reduction charges and transportation and any other "customary and appropriate charges" determined by the state land commissioner. S.D. Cod. Laws § 5-7-55. If the ore is sold, this constitutes a royalty on the "gross value of ore" without a deduction for mining costs.

Wyoming's severance tax is based on the fair market value of the minerals at the mouth of the mine, after extraction. Wyo. Stat. § 39-14-703. This royalty base is also equivalent to the value of ore, like the states above, but without a deduction for mining costs.

Montana imposes a royalty on state lands of at least 5% of the market value of the minerals recovered. Mont. Code Ann. § 77-3-116. Montana has in the past defined this royalty as a percentage of the value of the raw minerals recovered from the claim, See 1993 GAO Report, p. 32; 2008 GAO Report, p.18-19, which is similar to the "gross value of ore" used in the states described above.

Oregon imposes a royalty of 5% on most metallic minerals removed from leases of state lands. Or. Admin. R. §§ 141-071-0410, -0610. The royalty base is calculated on the gross value of minerals at the mine mouth. *Id.* § 141-071-0620; *See 2008 GAO Report*, p.25.

3. Net Smelter Return and Similar Approaches

Several states employ net smelter return or similar methodologies in their royalties or severance taxes. Net smelter return approaches are more common in state land royalties, which may be in part because of the trust requirements imposed by state enabling statutes on state lands, as discussed above.

Montana imposes a license tax (similar to a severance tax) on metal mines of 1.6% of the net smelter returns for precious and base metals. The tax is 1.8% on mineral concentrates prior to shipment to the smelter. Mont. Code Ann. §§ 15-23-801, 15-37-102, 15-37-103. The tax base is the receipts received from the sale of concentrates or metals, less allowable deductions. Deductions allowable in calculating the tax include treatment and refinery charges, costs of transportation from the mine or mill to the smelter, roaster or other processing facility, quantity, price, impurity and penalty charges, and interest. *Id.* § 15-23-801(5). Treatment and refinery charges include labor cost, utility and fuel costs, costs of maintenance, repairs and supplies, materials, depreciation, rental of equipment, pollution control costs, costs of training, freight, engineering, insurance and licensing attributable to smelting and refining, administrative services and all third party treatment and processing costs. *Id.* § 15-23-801(2).

New Mexico imposes a royalty on state lands of not less than 2% of the gross returns from the smelter or other processing facility, less the costs of smelting or reduction and transportation. N.M. Stat. Ann. § 19-8-22. This is functionally a net smelter returns royalty. The royalty percentage is not less than 5% for uranium and certain other minerals.

South Dakota imposes a royalty on leases of state lands of not less than 2% of the gross returns from the sale of ores and mineral products derived therefrom, less smelting and reduction charges and transportation, and any other "customary and appropriate charges" determined by the state land commissioner. S.D. Cod. Laws § 5-7-55. If concentrates or metals are sold and no other deductions are allowed by the commissioner, this is equivalent to a net smelter return.

As an alternative to the net profits royalty base described above, **California** may impose on a case-by-case basis a royalty on state lands based on 10% of the gross value of the mineral production less processing and transportation charges, which is similar to a net smelter return calculation. *See Cal. Pub. Resources Code* § 6895.

4. Gross with Flat Cost Deduction

Two states use an innovative "gross with flat cost deduction" severance tax system. This approach attempts to approximate the economic burden of a net profits or net proceeds tax, while minimizing the administrative burden by eliminating the need to audit mine-specific cost deductions, by allowing a flat deduction of a percentage of gross proceeds to approximate the deduction of mining and processing costs. These states apply different tax rates to different minerals, and permit different flat cost deductions for different types of mineral products. This is not a "net" approach, however, because the flat cost deduction treats all mining operations the same regardless of their actual costs; this system is effectively a small gross burden that varies for different minerals. The administrative simplicity of the flat deduction has been somewhat offset by the need to amend the statute more frequently to ensure that the size of the flat cost deduction reflects actual costs to the extent possible, and to address concerns of particular mineral producers with higher processing costs, such as beryllium miners in Utah.

New Mexico imposes a severance tax of between 1/8 and 1/2 of 1% (depending on the metal or mineral) of the "taxable value" Taxable value is the value of a specific mineral product (concentrates for molybdenum, copper, lead and zinc, concentrate or dore for gold) less 50% to 66-2/3% of that value to approximate the costs of mining and processing. The tax rate and cost deductions differ for various minerals.

Utah's severance tax is 2.6% of the "taxable value," which is determined based on the product sold. If the mineral product sold is ore, the taxable value is 80% of the gross proceeds, with the 20% of the value excluded approximating a deduction for mining and transportation costs. If the product sold is metal (other than beryllium), the taxable value is 30% of the gross proceeds, with the remaining 70% of gross proceeds approximating a deduction for mining, processing and transportation costs. Beryllium formerly had a taxable value of 20% of the gross proceeds, with an 80% deduction for costs, but taxable value is now equal to 125% of the mining costs. For intermediate mineral products such as copper concentrate, the taxable value is based on the amount of contained metal in the product if the intermediate product is further processed rather than being sold at the point of taxation.

5. Gross Receipts from First Marketable Product

Washington imposes a royalty on minerals extracted from state lands of 5% of the gross receipts. "Gross receipts" are based on the value of the first marketable product, subject to the deduction of transportation costs. Wash. Admin. Code §§ 332-16-035, 332-16-155. This royalty appears to be either a gross or net burden depending on the mineral product sold, whether ore, concentrates or finished metals. Washington has no severance tax, which may help offset the impact of this potentially more gross royalty calculation.

6. Unit-based Severance Taxes on specific minerals

Several states impose an additional, unit based severance tax on particular minerals. A unit-based tax is not based on a percentage of the value of the mineral, such as the net and gross ad valorem approaches described above, but is a flat dollar amount per unit of mineral produced. These taxes tend to be aimed at large producers or particular minerals in these states, presumably because the states have determined they are able to bear a higher tax burden. Unit-based royalties are not a good basis for designing a federal royalty, which must apply to many commodities and many types of mining operations.

Colorado imposes an additional severance tax of five cents per ton of molybdenum ore for all tons over 625,000 produced in a calendar quarter. The quantity limitation limits the tax primarily to two of the largest molybdenum mines in the world that have operated in Colorado for decades.

South Dakota imposes a severance tax on gold of \$4 per ounce, plus an additional \$1 to \$4 dollars per ounce depending on the gold price. *Id.* § 10-39-43.

E. Any hardrock royalty legislation should allow for royalty reductions and waivers on a case by case basis

All current federal royalty statutes for oil and gas, coal and other minerals permit the Department of the Interior to grant royalty waivers and reductions on a case by case basis. The same flexibility should be provided in any hardrock mining statute. In order to avoid administrative complexity, any hardrock royalty will probably have to be applied in a fairly uniform manner across a large number of commodities and mining and processing methods. Any inequities created by this broad brush approach can be partially addressed by providing a mechanism for specific operations or mineral commodities to apply for royalty relief, in order to address economic hardships or to maximize the economic recovery of minerals from each deposit.

F. Any Royalty Should Not Apply to Existing Valid Mining Claims

A grandfathering of at least some existing unpatented mining claims from the new royalty is both required by law and required to treat fairly parties that have made significant investments in federal lands prior to the enactment of the royalty. Moreover, it may be advisable to grandfather some claims that may not constitute fully vested property rights, in order to have a simple, bright-line test for which claims are subject to the new royalty, which will reduce uncertainty, reduce administration and litigation costs for the government and promote mining investment.

It is settled law that unpatented mining claims supported by a "discovery" of a "valuable mineral deposit" create Constitutionally-protected property rights in the owner of the claim. Imposition of a royalty on such claims is likely to

trigger significant "takings" litigation against the government. A royalty is in no way comparable to the imposition of simple federal filing requirements on unpatented mining claims, which was upheld by the Supreme Court in United States v. Locke, 471 U.S. 84 (1985). Grandfathering claims with a valid discovery as of the date of enactment from the royalty is thus the minimum transition approach that is legally defensible, as Professor John Leshy agreed in his prior testimony before the Senate Environment and Natural Resources Committee.

The problem with protecting only claims with a valid discovery is that determining which of the hundreds of thousands of mining claims has a discovery would be an unprecedented administrative challenge for the Department of the Interior. Under a long line of court cases and administrative decisions, a mining claim does not have to be currently producing to support a "discovery"; a reasonable prospect that the claim could be profitably mined is sufficient. Currently, the Department requires an administrative hearing in order to contest claims for lack of a discovery. Due process requires a hearing for claimants on this issue. The Department has only a handful of hearing examiners trained in the specialized rules applicable to determining whether a "discovery" exists. It would be unworkable for the Department to adjudicate hundreds or thousands of these mining claim validity cases to determine which claims can be legally subjected to a new federal royalty.

To avoid the royalty transition becoming an administrative gridlock, Congress should apply the royalty only to claims located after the enactment of the law or to claims that are not included in a plan of operations approved by the Department prior to the date of enactment (without a requirement for commencement of commercial production). Having a "bright line" test will save administrative costs and will also promote certainty about the application of the new royalty, which will encourage investment.

Conclusion

In my experience, other countries are paying considerable attention to the appropriate royalty and tax burden to encourage mineral exploration and development. The United States has relatively low grade deposits of many hardrock minerals, relatively high labor and production costs, and appropriately stringent environmental and operating requirements. These costs must also be balanced in determining whether a royalty is necessary on federal lands and if so, how much royalty should be charged. Congress should not impose a royalty without careful consideration of the economic and competitive impacts.

I thank the Committee for the opportunity to address this important public lands issue, and I am happy to answer any questions you may have.

Exhibit IV

October 2021 Testimony of Mr. Rich Haddock, Senate Energy and Natural Resources Committee

Hearing to Examine and Consider Updates
To The Mining Law of 1872
Committee on Energy and Natural Resources
U.S. Senate
October 5, 2021

Statement of Rich Haddock
General Counsel, Barrick Gold Corporation

Chairman Manchin, Senator Barrasso, Senator Cortez-Masto and members of the Committee. Thank you for inviting me to appear before you today to talk about the U.S. Mining Law.

My name is Rich Haddock. I am General Counsel of Barrick Gold Corporation. Barrick is the second largest gold producing company in the world and the biggest gold producer in the United States. Barrick has gold and copper mining operations and projects in 13 countries in North and South America, Africa, Papua New Guinea and Saudi Arabia.

Most of our US gold production comes from Nevada. We operate Nevada Gold Mines, a joint venture of Barrick and the Newmont Corporation. Nevada Gold Mines is the largest gold-mining complex in the world with more than 7,000 employees and 4,000 contractors, who employ thousands more people, in Nevada and around the country. These jobs pay average wages of \$94,000 – higher than any other industry in Nevada.

Nevada Gold Mines



About 85% of Nevada is owned and managed by the Federal Government, the most of any state. Most of our operations take place on unpatented mining claims under the approval of the federal Bureau of Land Management. Dominant federal ownership makes the mining law more important to Nevada than any other state.

I have worked for Barrick for 24 years and have been an in-house lawyer in the gold mining industry for 29 of the 37 years that I have been practicing law. I also spent three years as the global Vice President of Environment for Barrick. I am familiar with almost every aspect of our Nevada and other US operations, and with the long-running debate about the 1872 Mining Law.

The Mining Law

I have participated directly and through trade organizations—the Nevada Mining Association and the National Mining Association—in the debate over proposed changes to the 1872 Mining Law. As a long-time mining lawyer, I can tell you that the Mining Law has survived so long for a simple reason: because it works. The Mining Law is a land tenure law governing the acquisition of mineral rights on federal lands, and the relationships between claimholders and the United States as paramount title holder. It also governs the relationships between competing claimants. The Mining Law still does these jobs very well.

But while it works, we recognize that the Mining Law is not perfect, and that the law could be updated. One of the Mining Law’s original purposes – settlement of the West – is certainly no longer a reason for the Law’s existence. However, its other main purpose – supplying valuable minerals for the nation – is more relevant than ever. It is important that any reform of the Mining Law be consistent with the United States’ need for stable domestic supplies of critical minerals, including gold.

Barrick has consistently supported changes in the Mining Law – including the imposition of a reasonable net royalty – since the Senate’s last serious effort to reform the law in the 1990s. In fact, Barrick and other miners supported a net royalty that was included in a 1995 budget reconciliation package passed by Congress, but vetoed on other grounds by President Clinton. If not for that veto, we would not be having this conversation today.

We welcome the conversation about royalties and other updates to the Mining Law. However, when talking about reform, there are two aspects of the current Mining Law that are absolutely essential to preserve. One is what we call “**self-initiation**”- the right of the explorer to identify the land they want to explore, based on ever-evolving understanding of geology and new technologies. The second is “**security of tenure**”- the ability to hold the area with confidence and explore long enough to determine whether it contains a viable mineral deposit or not, and if justified, to develop it into a mine. These features are essential because they determine whether the hardrock mining industry will be able to thrive in the United States in the future.

Our position today is simple, and consistent with the mining law principles of the National Mining Association, which are attached. We support legislation imposing a reasonable prospective net royalty and an additional claim fee earmarked for reclamation and remediation of abandoned mine lands.

Self-Initiation

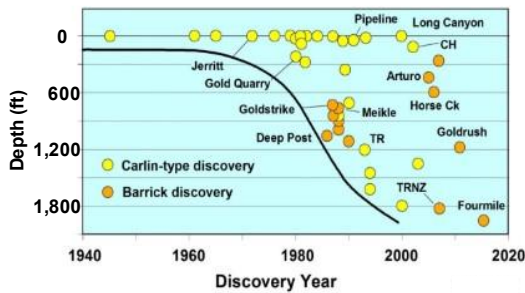
Hard rock metal mines are not just discovered, as was more commonly the case in the 19th Century. They are literally *made* by extensive investment of drilling and processing technologies and the application of human knowledge to a complex multi-faceted problem of geology, chemistry, and engineering. The very foundation of the exploration business is being able to choose where you are going to look for commercial deposits of minerals: that’s the concept of self-initiation. A miner’s competitive advantage comes from targeting the best available ground

based on superior geologic knowledge and application of the best (and ever evolving) exploration and processing technologies.

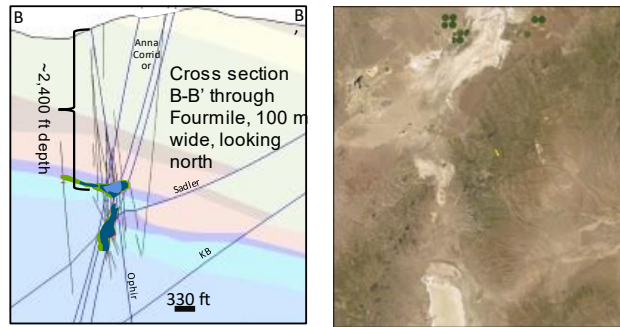
Looking for the Needle in the Haystack



Deposits are getting deeper and harder to find



Deposits have compact footprints



Fourmile deposit footprint is 3,000 ft long, and mineralization is 30 -200 ft thick.

Commercial deposits, in the U.S. and around the world, are getting deeper and harder to find, and the time between discoveries is lengthening. Our Fourmile exploration project in Nevada is a good example of this. As depicted above, that deposit is over 2000 feet below ground surface, meaning that every drill hole costs between \$500,000 and \$1 million. On the right-hand side of the figure above, a small yellow shape is superimposed to represent the size of the surface footprint of the Fourmile deposit—it is 3000' x 650'. The mineralized rock, or “ore body,” is an irregular shape inside of the surface footprint, that is half a mile deep and between 30 feet and 200 feet wide. Orebodies like these are very difficult and expensive to find. And federal and state governments are not investing the resources to find them. If miners don't find them, they will not be found. This is why self-initiation remains so important to the modern Mining Law.

Goldrush- Fourmile Exploration

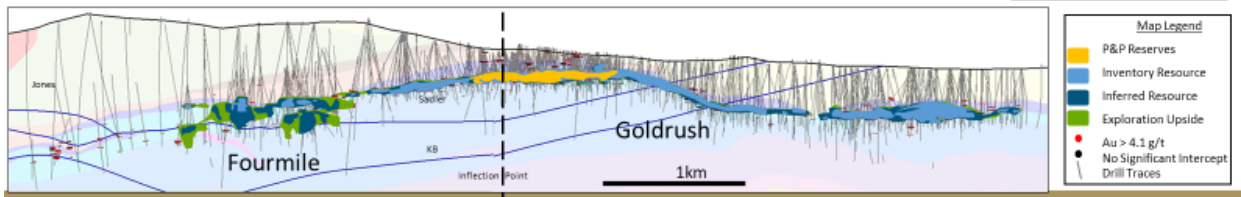
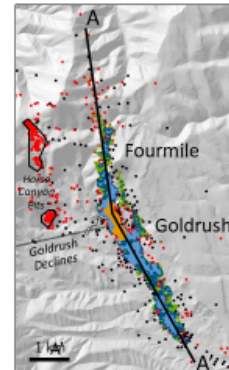


History

- Mid to late 1980's: Shallow oxide mineralization drilled (~100m depth, abandoned because it couldn't support heap leach)
- 2001 – 2004: 36 RC holes identified deeper refractory mineralization w/ 2 "discovery-quality intercepts"
- 2008: Identified Red Hill and KB w/ open-ended mineralization
- 2009: **Discovery of Goldrush**, "discover-quality intercept" 1.8km SE of Red Hill; recognized that mineralization was hosted in the same rock unit
- 2009 – 2015: Deposit continuity verified through extensive drill programs
- 2015 – Present: Infill Drilling to support Feasibility studies and Resource Conversion
 - 2015: **Discovery of Fourmile** extending deposit footprint another 1 km to the north

➤ > 1,200 holes drilled to date to discover and delineate orebodies

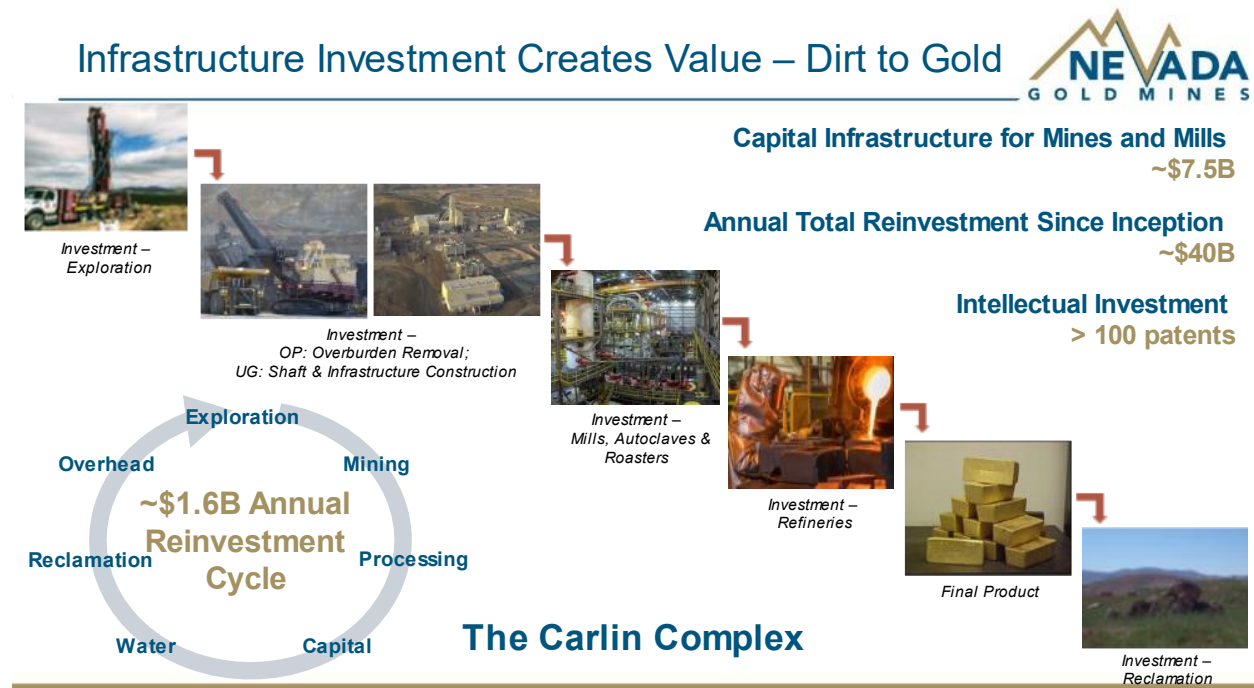
A ➤ >\$459M spent (drilling and technical studies)



Tenure

It takes years – often decades – and hundreds of millions of dollars to turn a successful exploration target into a mine. Nevada Gold Mines' Goldrush project is a good example. Goldrush was originally identified as prospective through drilling in the mid-1980s, but not pursued at that time. In the early 2000s, based on better knowledge and better drilling and other technology, we found true ore grade mineralization. Now, in 2021, over \$459 million, 1200 drillholes, and extensive environmental studies later, Nevada Gold Mines has applied for a permit from the BLM to mine this deep ore body and is looking forward to initial production in 2023. This mine would not have happened without the provisions in the Mining Law that allow miners to hold claims securely while they explore, and sometimes to retreat and reassess to justify the continued investment in exploration and

development.



Open pits require a huge investment in pre-stripping to reach the ore deposit. Open pits are engineered facilities designed to reach the ore while removing the minimum safe amount of barren rock. For underground mines, the miner has to build the shafts, the underground access and surface infrastructure. As an example, the new third shaft at Nevada Gold Mines’ Turquoise Ridge mine is nearing completion at a cost of about \$300 million.

Even after removing ore from the ground, it still takes hundreds of millions of dollars of investment and technology to make a saleable product. Recovering the gold requires mills and special processing facilities, in our case called autoclaves and roasters, that are custom-designed for the specific ore. It would cost at least a billion dollars to replace any of our rosters or autoclaves. At the Nevada Gold Mines’ Carlin complex in Nevada, the initial investment in the mills, roasters, autoclaves and mines was about \$7.5 billion. Every year we continue to incur costs in operating and maintaining the facilities and equipment necessary to produce gold. Those expenditures have totaled \$40 billion over the life of the Carlin Complex so far. Without the security of tenure that is afforded by the Mining Law, no company could or would put that much money at risk.

Royalty

As noted above, Barrick has long supported a prospective and reasonable net proceeds royalty for minerals produced from federal lands. Most important is the nature of the royalty. Barrick supports a net proceeds royalty because it will provide substantial royalty revenue to the U.S. government while allowing mineral production to continue during periods of low metals prices.

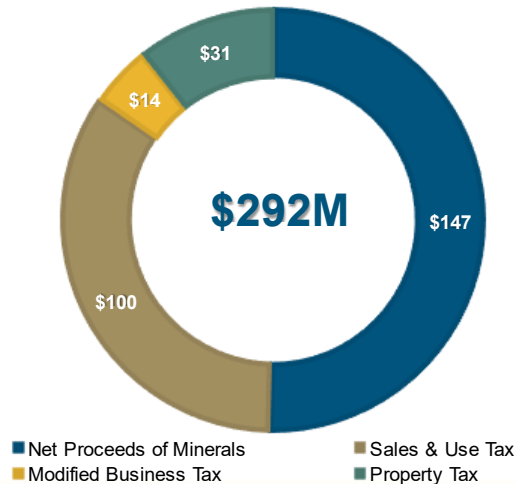
In the past, Congress has considered two types of royalties: gross and net. The subject of royalties is complex and there are numerous versions of gross and net royalties. But in simple terms, a “gross” royalty requires that an operator pay a percentage on the gross income derived from a particular mining claim or at a particular mine, before any cost deductions. For example, if a mine’s total income from product sales in a given year was \$100 million and the gross royalty rate was 4%, the miner would pay \$4 million in royalties. Alternatively, a “net” royalty or a “net proceeds” royalty allows the operator to make certain deductions from total income before the royalty is calculated. Those deductions typically include the actual costs of extracting, transporting, processing, or refining the mineral, including wages and related labor expenses, equipment, fuel and other cost components. Deductions also typically include the costs of mine development, environmental studies and compliance, and reclamation and closure. The Nevada Net Proceeds tax, which generated over \$200 million for the state in 2020, is an example of a net royalty.

For a number of important policy reasons, a net royalty is preferable to a royalty on gross income. First, it is important that Congress consider any royalty in the context of the entire tax contribution from the industry.

NGM Economic Contributions



NGM TAXES TO THE STATE OF NEVADA 2020
(MILLIONS)



Wages & Benefits
\$1.1B

Social Investments
\$8.4M

Good & Services
Purchased in NV
\$944.4M

COVID-19
Community Support
\$9.9M

2021

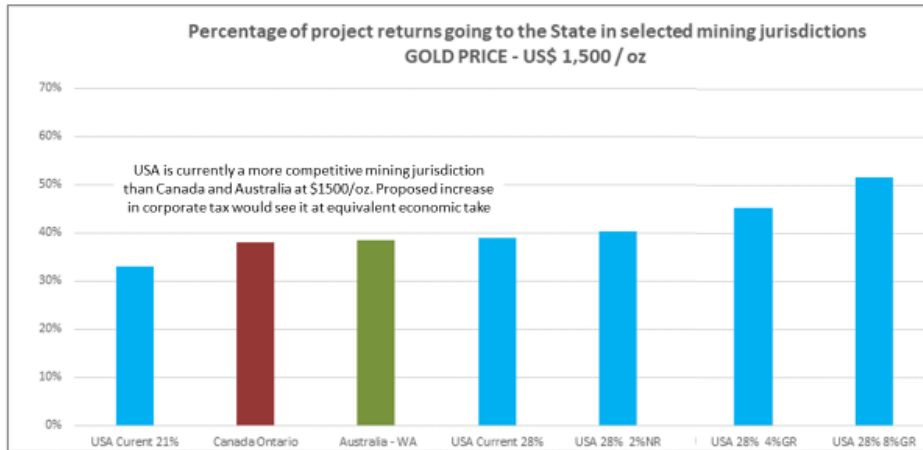
- New excise tax created on gold and silver operations that goes *directly* to funding education in the state.
- Expected to raise an additional **\$85M/year**.

Even without a royalty, mining is a substantial taxpayer. In Nevada, we are the 12th largest industry, but we pay the second highest amount in state taxes as a percentage of revenue. As the chart above illustrates, in 2020 we paid \$292 million in state taxes. In addition, in the last Nevada legislative session, the mining industry supported a bi-partisan effort to increase its net proceeds of mines tax by another 60% by creating a new excise tax earmarked for education.

Comparison of Total US “Take” to Other Developed Countries

Percentage of returns going to the government
Gold Price : US\$ 1,500/oz

BARRICK



To evaluate the impacts of a federal royalty on the total industry tax burden, we created a “synthetic stand-alone gold mine” comparison of the tax regimes in the United States, Canada and Australia. If we assume a federal income tax rate of 28 percent (we realize corporate income tax rates are a moving target right now), at \$1,500/oz. gold (near the long-term consensus gold price), Canada, Australia and the U.S. have a similar total tax burden of about 38 to 39%, when all other state and provincial taxes are taken into account. A 2 percent net royalty, such as that proposed in the National Mining Association principles (attached), increases the U.S. share (state and federal) to about 41 percent. At the higher 8% gross royalty rate proposed by the House of Representatives, the U.S. total tax take exceeds 50%. If the gold price drops, as it inevitably will (the gold price in 2015 was about 40% lower than it is today), a gross royalty dramatically impacts the viability of the operation, giving the U.S. about 2/3 of the take, significantly narrowing the range in which it can be profitable. If the U.S. tax and royalty combined take reaches even 50%, the US is then taking a similar share as many developing nations, and given the much higher labor costs and much longer timelines from discovery to production because of permitting in the U.S., mines located in the United States become drastically uncompetitive compared with other jurisdictions. Under those conditions, it is inevitable that exploration and development investments will be redirected to those other jurisdictions.

Why Hardrock Minerals are Different From Other Commodities

A hardrock royalty is not a cost that can be passed on to the buyer. Hardrock miners are “price takers”—metal prices are fixed daily by the global market. This is in sharp contrast to coal, which is often cited as a model for federal hardrock royalties. With coal, the royalty is typically passed on to the power plant that buys the coal, who in turn recovers that royalty from electricity rate payers. In effect the coal royalty becomes a user tax on everybody. In contrast, in the case of a royalty on gold or other hard rock minerals where prices are set in global markets, the burden of a royalty falls solely on the miner.

Disadvantages of a Gross Royalty

As a cost, any royalty on a mineral deposit will reduce the amount of ore by making marginal ore uneconomic. A gross royalty is, however, particularly regressive for hardrock minerals. It shrinks the resource by making more marginal mineralization uneconomic to mine. In this way, a gross royalty eliminates a return on this marginal mineralization for the federal and state governments, and eliminates jobs unnecessarily early. More mines will close early, less product will be available for commerce, and less tax revenues will be generated.

Instead of benefitting all stakeholders by generating the maximum production and return from each deposit, a gross royalty dramatically “shrinks the pie” that generates the return. Because of the huge investments that are necessary to bring a hardrock mine online, a gross royalty affects hardrock mining uniquely. Rather than taxing the raw ore, the gross royalty becomes a tax on the value that is added by the miner through the use of investment to create the product at the mine mouth.

Further, a gross royalty increases the risk of (and disincentivizes) capital investment because as the available return is reduced, the risk of investing significant capital into a project becomes higher, especially given expected fluctuations in the prices of gold and other minerals. Thus, mineralization gets left in the ground and generates no return, either for the miner or the government.

Finally, a gross royalty picks winners and losers because the deposits that have high enough grade can better absorb a gross royalty, while a lower grade or marginal deposit, which would otherwise still generate taxes, jobs and materials, becomes uneconomic.

Advantages of a Net Royalty

In contrast, a net royalty allows the miner to recoup capital investments through the inevitable commodity price cycles. A net royalty normalizes for ore grade because certain costs are covered, and in this way some more marginal mines can still survive and provide necessary materials and employment. The mine life is extended because the miner can afford to mine and process marginal ore.

A net royalty allows the industry to survive the inevitable dips in the commodities cycles while giving the United States the benefit of the peaks in the cycles. In other words, when revenues are low due to the price (which is out of the miner's control), operations would pay less, allowing them to reduce costs and maintain production and employment during tough times. Conversely, when net revenues are high, the royalty revenue returned to the government is higher. When looked at this way, the industry and the government win in both cases: (1) preserved employment, tax revenues, product output, and some returns in cycle troughs; and (2) higher returns and employment in cycle peaks.

Conclusion

Thank you for your time. I am happy to answer any questions or submit additional materials if requested.



Principles for Royalty from Hardrock Mineral Production on Federal Lands

New Royalty

- ROYALTY: Impose a **PROSPECTIVE, NET** royalty in range of **2** percent.
- DEDUCTIONS/CREDITS: Allow deduction of costs and charges (including depreciation and amortization) attributable to permitting, baseline studies, extraction, processing and transportation, and taxes – similar to other federal royalty structures – to ensure **royalty is imposed on profits**. Allow claims maintenance and occupancy fees to be credited against royalty amount owed.
- SMALL MINER EXCLUSION: Not applicable when net value of production from mining claims subject to the royalty is less than \$500,000.
- WAIVER, SUSPENSION OR REDUCTION: Allow Secretary of the Interior to waive, suspend, or reduce the royalty – similar to other federal royalty structures – to promote development or keep a mine successfully operating.

Increased and New Fees

- CLAIMS MAINTENANCE FEE: **Increase fee** to raise funds – presumably for abandoned mine land cleanup – since new royalty will create limited revenue in early post-enactment years. Provide a waiver from claims maintenance fee for claimholders with 10 or fewer claims.

OCCUPANCY/USE FEE: Impose **new fee** to raise funds – presumably for abandoned mine land cleanup – since new royalty will create limited revenue in early post-enactment years.
- PREVENTING DOUBLE-DIP: Sunset new and increased fees after 10 years or allow operations to credit the payments of such fees against amounts owed in royalties.

NMA estimates that new and increased fees could generate approximately \$100 million per year. These could be directed towards increased funding of AML.

Competitive Domestic Supply Chains

- SECURITY OF TENURE: Provide security of tenure by tying it to the payment of claims maintenance fees in order to provide certainty regarding operators' ability to access federal lands for mineral production.
- PERMITTING EFFECIEINCIES: Include provisions to reduce permitting delays. Unenacted bipartisan permitting provisions of S.1317 (116th Congress) may provide a guide for this Congress.

Exhibit V

October 2021 Testimony of Ms. Katie Sweeney, Senate Energy and Natural Resources Committee



**Testimony of
Katie Sweeney
Executive Vice President & General Counsel
National Mining Association
before the
United States Senate
Committee on Energy Natural Resources**

Full Committee to Examine and Consider Updates to The Mining Law Of 1872

October 5, 2021

Good morning Chairman Manchin, Ranking Member Barrasso and members of the committee. I am Katie Sweeney, Executive Vice President and General Counsel of the National Mining Association (NMA). The NMA is the national trade association representing the producers of most of the nation's hardrock metals, coal, industrial and agricultural minerals; and, manufacturers of mining and mineral processing machinery, equipment and supplies. NMA members produce hardrock minerals and metals on private, state and federal lands throughout the United States.

Thank you for the opportunity to be here with you today to discuss such an important topic. I would like to extend a special thank you to Senator Catherine Cortez Masto, the new chair of the Public Lands, Forests, and Mining Subcommittee, for working with industry and organizing an important mining briefing and tour in Nevada spanning from Reno to Elko for the committee in August. The Mining Law is a critical tool in our nation's arsenal to help develop and support key sectors of the economy and aid in economic recovery. As the front end of the supply chain for manufacturing, energy and infrastructure, healthcare, national security, and many other sectors, mining is an essential industry that stands ready and willing to aid President Biden in his "Build Back Better" priorities. With a focus on mining more safely and environmentally responsibly than many of the countries that we are currently reliant upon for our mineral imports, made-in-America should also mean mined-in-America.

Ever-increasing Demand for Minerals

In 2020, even as COVID-19 impacted the landscape of our nation and caused so much harm in our communities, the mining industry employed an estimated 1.2 million jobs in all 50 states. Annual salaries for these workers – often in rural areas – averaged more than \$81,000, well above the national average. Further, from 2019 – the most recent numbers available – domestic mining activity generated an estimated \$18 billion in federal, state and local taxes that supported direct, indirect and induced taxes of \$41 billion.

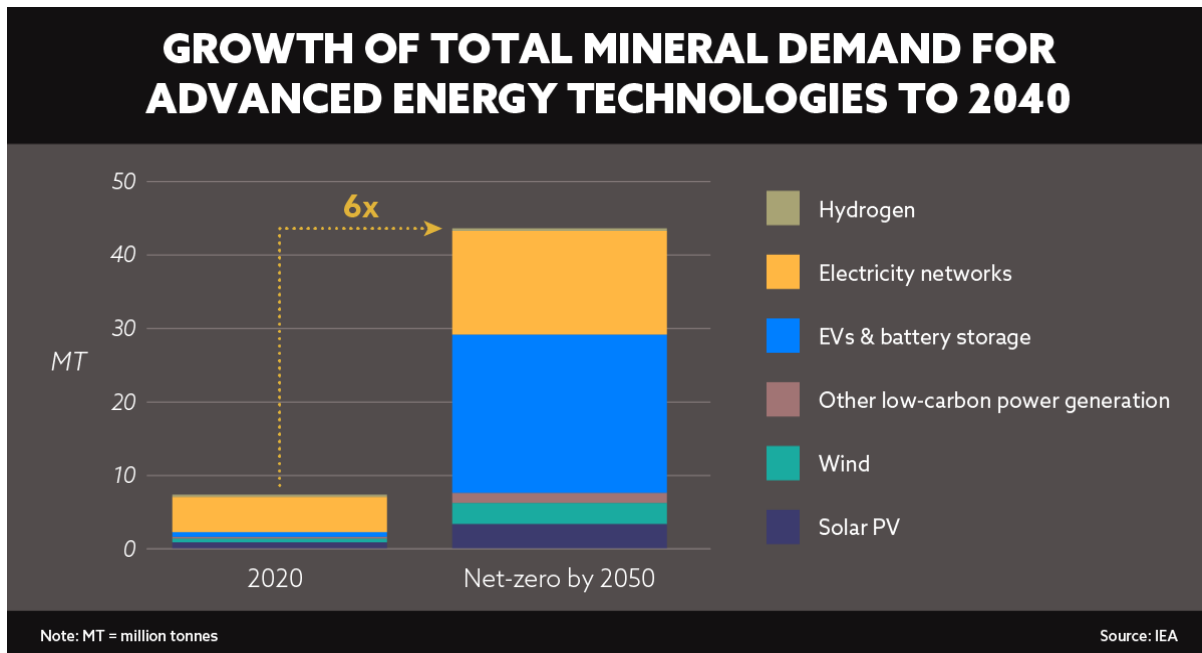
The mining industry provides the metals and minerals necessary for economic recovery and the growth, innovation and advancements that are necessary to meet the needs of

tomorrow. This can only continue to be accomplished by making careful policy decisions today.

In 2017, the World Bank projected demand for targeted minerals would grow more than 1,000 percent due to the global focus on new energy technologies.¹ The World Bank's 2020 report predicted an astounding 500 percent increase in broad categories of mineral demand to feed the needs of emerging technologies.²

More recent estimates from the International Energy Agency (IEA) and others show those estimates may have been far too conservative and that demand for some minerals could grow by more than 40 times by 2040. According to IEA:

- Lithium demand is anticipated to grow by more than 40 times by 2040, followed by graphite, cobalt and nickel at around 20-25 times;
- Copper demand for grid infrastructure and electrification more than doubles by 2040;
- Demand for cobalt is expected to be anywhere from 6 to 30 times higher than today's levels; and
- Rare earth elements may see three to seven times higher demand in 2040 than today.³



Just as the world began to awaken to the impending exponential growth in demand, the pandemic unleashed a massive disruption of supply chains putting a renewed focus on

¹ <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/207371500386458722/the-growing-role-of-minerals-and-metals-for-a-low-carbon-future>

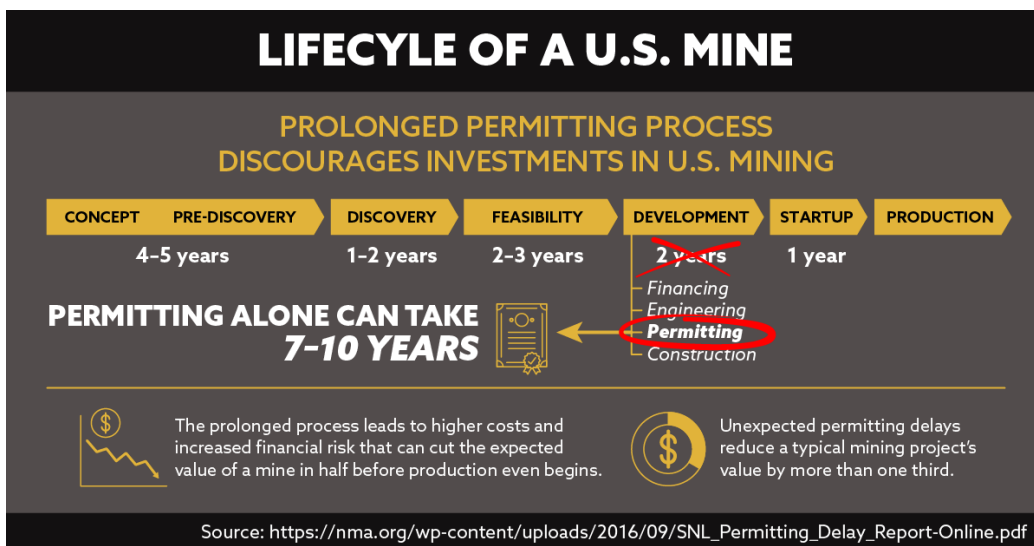
² <https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf>

³ <https://iea.blob.core.windows.net/assets/24d5dfbb-a77a-4647-abcc-667867207f74/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf>

mineral supply chain risks. The Biden administration has acknowledged the importance of the mining industry to its goals through the January “Made in America” Executive Order’s acknowledgment that Made in America means Mined in America, and the American Supply Chains Executive Order expressing the need to secure our mineral supply chains. With over \$6 trillion worth of mineral resources here in the United States, a highly trained and highly compensated workforce, and world-class environmental and safety standards, the U.S. mining industry can help the nation meet ever-increasing demand for minerals for electrification, infrastructure and manufacturing needs. And there is significant public support for using our own resources rather than increasing reliance on foreign sources. According to recent polling conducted by Morning Consult, 84 percent of Americans believe any “Made in America” agenda, such as the administration’s effort to win the electric vehicle revolution, should use domestically sourced minerals.

However, there is real room for improvement. To improve supply chain security, we must also have a robust domestic mineral supply chain. That includes more smelting, processing and refining capabilities in the U.S. necessary to claw back these essential processes from geopolitical adversaries like China, which controls more than 80 percent of global rare earth element production and significant mineral processing capabilities.

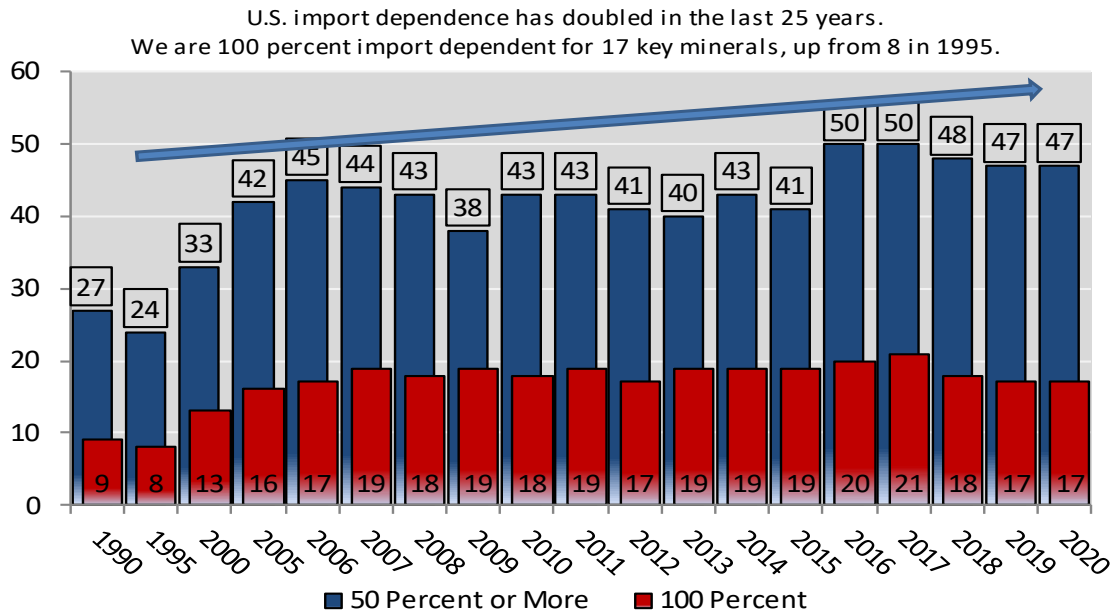
Nearly two decades ago, the U.S. attracted almost 20 percent of the world’s total mining investment. Unfortunately, in the time since, there has been a sharp decline in U.S. exploration investment. This is not due to lack of resources, but rather a lack of confidence in the U.S. as a viable mining jurisdiction in which to invest hundreds of millions of dollars in upfront costs due to duplicative, inefficient and costly permitting timeframes, making the U.S. more dependent on other countries for metals. It currently takes between seven to 10 years – or longer – to permit a mine in the U.S. In Canada and Australia, which have environmental standards comparable to the U.S., it takes two to three years to complete the same process.



The U.S. is increasingly vulnerable to supply chain disruptions and retaliation from geopolitical adversaries due to our ever-increasing reliance on imports for these essential resources. Less than half of the mineral needs of U.S. manufacturing are met by domestically produced minerals, which leaves our economy and national security at a

strategic disadvantage. The U.S. Geological Survey’s annual commodity summary reports that we now find ourselves entirely import dependent for 17 key mineral resources and more than 50 percent import dependent for an additional 29. Of the 35 mineral commodities listed as essential for U.S. economic and national security, China is the top producer or top supplier for 23 of them.⁴

U.S. Rising Import Dependence



Source: USGS Mineral Commodity Summaries 1991 -2021 editions

In order to further support new domestic production, a robust domestic supply chain that includes minerals and metals sourced, refined, processed and smelted within our borders, we need to build on the important work done by this committee. This committee has led the way in educating policymakers and the public on the role of mined materials as the front end of the supply chain for a modern way of life. Thank you for your leadership on these issues, especially your awareness of the impediments that stand in the way of securing our mineral supply chains such as the inefficient permitting processes that impair the industry’s global competitiveness. This committee has been solution-oriented and has worked to take recent positive steps through both the bipartisan American Mineral Security Act and the Senate Infrastructure Legislation to improve permitting timeframes while maintaining the rigor of the reviews. These types of actions will attract investment, reshore essential supply chains and build the materials industrial base needed to underpin new technologies and innovation.

Current Reconciliation Process

Today’s hearing addresses a very important topic – the examination and consideration of updates to the Mining Law. As the NMA sees it, we are at a crossroads; the direction we

⁴ <https://www.usgs.gov/centers/nmic/mineral-commodity-summaries>

take on Mining Law can either help secure domestic mineral supply chains or drive mining investments offshore.

The current legislation being considered through the budget reconciliation process in the U.S. House Representatives contains many policy changes detrimental to a healthy domestic mining industry. With so much in the balance, budget reconciliation legislation is not the right vehicle for this dialogue. There are numerous issues outside the scope of reconciliation that should be considered in tandem to changes to the Mining Law with good Samaritan cleanups and review of permitting regimes being prime examples. We welcome the opportunity to engage in a process not constrained by the vagaries and confines of reconciliation.

For more than a decade, we have seen legislative proposals reintroduced calling for a gross royalty on new and existing mining operations like those included in the U.S. House reconciliation legislation. These, in combination with a displaced material fee or dirt tax on the same material, would result in severe reduction of new operations and economic infeasibility to move forward on a project. For existing operations, a new gross royalty that was never accounted for in the mine plan of operation would erase profitability, potentially leading to an early mine closure.

If the new, punitive gross royalty and dirt tax proposals currently in the U.S. House reconciliation legislation are allowed to continue, no amount of permitting reforms will make the U.S. an attractive investment jurisdiction. The mining industry has long worked to engage with Congress in a bipartisan fashion to enact reasonable amendments to the Mining Law, including a royalty. The reconciliation process, however, is counterproductive to the careful and comprehensive negotiations on these issues if consensus is to be reached.

Mineral mining is unlike other natural resources production. The amount of processable material produced can be less than a percent or ounces of a ton of displaced material. That processable material must then go through many steps of being beneficiated, treated and smelted, including cracking the minerals to produce the metal. A tiny fraction of millions of tons of displaced material and rock, in addition to costly processing, ultimately produces a salable product.

Another key element to consider when discussing a federal royalty is that hardrock mining companies pay income and other federal state, and local taxes where they operate. This cumulatively makes up the total “government take” (royalties, taxes and other fees) paid by mining companies operating in the U.S. For many of our companies, the existing government take is close to 40 percent and sometimes more, nearing the top range of other competitive mining countries. Evaluating the impact of proposed gross royalties of 8 percent on new mining operations and 4 percent on existing operations spikes that number to over 50 percent, creating an uncompetitive situation for U.S. mining operations. Couple this with the significant operational costs paid by domestic mining companies, it is easy to see why a study by the World Bank cautioned against excessive royalty structures recommending:

“When designing a tax system, policy makers should be aware of the cumulative effects taxes can have on mine economics and on potential levels of future investment...Nations should carefully weigh the immediate fiscal rewards to be

gained from high levels of tax, including royalty, against the long-term benefits to be gained from a sustainable mining industry that will contribute to long-term development, infrastructure, and economic diversification.”⁵

Regardless of royalty rate, any action by the federal government to diminish the economic value of an existing mining operation could very likely be seen as a destruction of property rights and would therefore expose the federal government to substantial liability risk as a taking.

Path Forward

The NMA is committed to the development of a fair, predictable and efficient national minerals policy through amendments to the Mining Law. We are ready and willing to have this discussion. Appropriate changes to the Mining Law provide an opportunity to decrease our dependence on foreign minerals, promote job creation, drive economic growth and new technologies. Our principles for amendments start with the preservation of self-initiation and the security of tenure. Self-initiation is critical to encourage the exploration activities that spur new mineral discoveries. Given the elusive nature of mineral deposits, discoveries cannot occur without widespread exploration. Such extensive exploration activities are required because concentrations of useful minerals rich enough to form ore deposits are rare phenomena. Commercially extractable concentrations form only where special physical and chemical conditions have favored their accumulation. Exploration geologists frequently cite the metric that at best approximately 1 out of 10,000 deposits has the chance of being transformed into an operating mine. Finding new resources and delineating their economic potential is critical to keeping the commodity pipeline flowing.

Without security of tenure or title, mining projects in the United States will not be able to attract the large capital investments needed to bring such projects to fruition. Security of tenure or title provides the necessary assurance to investors that a mining project in the United States can obtain approval and proceed unimpeded as long as the operator complies with all relevant laws and regulations.

The mining industry also supports a net, prospective royalty that appropriately takes into consideration market conditions and commodity cycles. We are committed to finding solutions to abandoned mine lands cleanup through dedicating royalties, as well as enacting good Samaritan legislation. While modern mining reclamation and financial assurance regulations will prevent new abandoned mines, the industry acknowledges that existence of legacy sites impairs its social license to operate and have to be addressed.

I believe there is a path forward in this committee that will satisfy all of our priorities and goals. The path will not be easy, but our shared desire to support domestic supply chains, create long lasting and good paying jobs, and spur sustained economic recovery and growth will enable us to work together on a legislative product that benefits the American taxpayers, our environment and our economy.

I urge you to join with the NMA, our member companies and the one million-strong hardrock mining workforce to help secure our nation’s economic recovery and prosperity for years to come, without jeopardizing the mining foundation of our country.

⁵ <https://openknowledge.worldbank.org/handle/10986/7105>

The U.S. House reconciliation legislation simply contains a series of punitive proposals which will sideline the U.S. mining industry. These excessive taxes and fees are the wrong path at the wrong time for our country. Instead of raising revenue and protecting land, this approach will lead to premature closure of existing mines and minimal interest in future U.S. mines, resulting in an unhealthy increased reliance on foreign sources of minerals from countries with far less stringent environmental and labor standards, a loss of high paying family-wage jobs, and severe economic hardship on mining-dependent rural communities.

Compromise is possible. The mining industry is open to reasonable royalties. Working together in a bipartisan way, we can assemble a package that recognizes the unique business of hardrock mining, we can come together on a solution that will help secure our nation's economic recovery and prosperity for years to come, without jeopardizing the mining foundation of our country.

I thank you for the opportunity to testify and would be pleased to answer any questions.

Exhibit VI

American Exploration & Mining Association Mining Law Fifth Amendment Takings Analysis



American Exploration &
Mining Association
EST. 1895

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Mining Law Fifth Amendment Takings Analysis

Prepared by

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Reviewed and edited by

Stephen Alferts, Esq.

July 2021

MINING LAW FIFTH AMENDMENT TAKINGS ANALYSIS

I. INTRODUCTION¹

During January of 2021, the Biden Administration issued two executive orders that are likely to shape policies, infrastructure development, and American jobs. First, Executive Order 14005: “Ensuring the Future is Made in All of America by All American Workers” to “maximize the use of goods, products, and materials produced in, and services offered in, the United States” and, second, Executive Order 14008: “Tackling the Climate Crisis at Home and Abroad” to focus on initiatives to advance a clean energy transition and development of clean energy technologies. Among their many implications, these orders should be the basis for promoting the production of minerals in the United States, especially those needed to support renewable energy technologies and infrastructure, including copper, nickel, manganese, graphite, lithium, cobalt, and rare earths, among others. To support this point, the International Energy Agency recently reported that “a concerted effort to reach the goals of the Paris Agreement . . . would mean a quadrupling of mineral requirements for clean energy technologies by 2040.”²

The United States is blessed with rich mineral reserves enabling the Administration’s Buy America focus to include the U.S. mining sector to source the renewable energy sector’s mineral needs. In recent years, however, the United States Congress has proposed legislation that would disincentivize mineral investment in the U.S., increasing costs and reducing mineral ownership rights.

For example, in the 116th Congress, Congressman Raúl Grijalva introduced a bill to replace the General Mining Law of 1872 (“General Mining Law”) with a leasing system.³ Senator Tom Udall similarly proposed legislation to reduce the revenue interests of mining claim owners and impose burdensome royalties on existing unpatented mining claims.⁴ These proposed laws would have restricted the use of public lands for mineral development purposes, taken possessory and unpatented mining claim interests in federal public lands, diminished the economic value of unpatented mining claims, and imposed unintended burdens on private inholdings and checkerboard lands through other regulatory burdens. These were not the first attempts to amend the General Mining Law,⁵ and they likely will not be the last.

¹ The principal authors express their appreciation for the substantial assistance with initial research, drafting, review, and editing by Alexander M. Arensberg, Esq., and Jacob M. Dillon, Esq.

² INTERNATIONAL ENERGY AGENCY, THE ROLE OF CRITICAL MINERALS IN CLEAN ENERGY TRANSITIONS 8 (2021), <https://iea.blob.core.windows.net/assets/24d5dfbb-a77a-4647-abcc-667867207f74/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf>.

³ H.R. 2579, 116th Cong. (2019).

⁴ S. 1386, 116th Cong. (2019).

⁵ See, e.g., *Effect of the President’s FY 2016 Budget and Legislative Proposals for the Bureau of Land Management and the U.S. Forest Service’s Energy and Minerals Programs on Private Sector Job Creation, Domestic Energy and Minerals Production and Deficit Reduction: Hearing Before the Subcomm. on Energy and Mineral Resources of the H. Committee on Natural Resources*, 114th Cong. (2015) (statement of Neil Kornze, Director, Bureau of Land Management) (describing President Obama’s legislative proposal of instituting a leasing process for some minerals governed by the Mining Law); Press Release, Bureau of Land Management, President Proposes \$1.13 Billion for BLM in Fiscal Year 2012 to Protect Resources and Manage Uses of Public Lands (Feb. 14, 2011) (describing attempts to convert some minerals covered by the General

Future legislators, however, must reconcile their attempts to regulate or eliminate unpatented mining claim rights with the Fifth Amendment’s unconstitutional “takings” prohibition absent just compensation. Congress has successfully navigated such takings issues in the past, when it instituted the Mineral Leasing Act of 1920 (“MLA”) and the Federal Land Policy and Management Act of 1976 (“FLPMA”), and it has addressed takings concerns on multiple occasions with regard to other proposed legislation to modify mining and mineral laws. Going forward, lawmakers should consider legislative and judicial precedent when considering mining law revisions. Otherwise, their actions could cost the federal government incalculable resources and taxpayer dollars.

This white paper discusses the protected rights and interests held by U.S. citizens who invest their time, effort, and capital to explore for, identify, and develop our country’s much-needed minerals under the General Mining Law. It addresses whether these rights and interests are protected by the Fifth Amendment of the United States Constitution and evaluates past Congressional amendments and attempted changes to the General Mining Law which successfully avoided an unconstitutional taking. Lastly, this paper closes with a brief look at the potential litigation risks and damages the United States government would face if it were to extinguish mining claim rights from the nearly 400,000 active unpatented mining claims⁶ currently held by its private citizens.

II. PROPERTY RIGHTS UNDER THE GENERAL MINING LAW OF 1872

The General Mining Law states as follows:

That all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners, in the several mining-districts, so far as the same are applicable and not inconsistent with the laws of the United States.

Mining Law of 1872 § 1, 17 Stat. 91 (codified at 30 U.S.C. § 22) (“Section 22”). Section 22 provides a “free and open” invitation to all U.S. citizens (and those who intend to become U.S. citizens) to enter federal lands to explore for and produce minerals, and engage in activities reasonably incident to mining. This statutory grant allows the attainment of property rights to be self-executing and creates a right of self-initiation for U.S. citizens to enter, occupy and acquire privately owned interests in the public domain. Property interests acquired under this law include the right to explore, possess, profit from and exercise mineral and mineral-related surface rights, and these property interests in federal lands evolve incrementally through the entry, location and maintenance process. Certain rights and protections are acquired early, before the unpatented claim is even documented in the public records, and before the

Mining Law to a leasing system); *see also* H.R. 2262, 110th Cong. (2007) (seeking to impose gross royalties of 4 percent on existing mines and 8 percent on new mines); *United States v. Shumway*, 199 F.3d 1093, 1098 (9th Cir. 1999).

⁶ BUREAU OF LAND MANAGEMENT, PUBLIC LAND STATISTICS 2019 128 tbl. 3-22, 130 tbl. 3-23 (2020), <https://www.blm.gov/sites/blm.gov/files/PublicLandStatistics2019.pdf>, (Tables 3-22 and 3-23 showing fiscal year claims managed by the United States Bureau of Land Management (“BLM”).

discovery of any valuable mineral deposit.⁷ From their initial location, unpatented mining claim rights are considered “real property in the fullest sense” enforceable by law.⁸ As such, Constitutional protections extend “to every sort of interest the citizen may possess.”⁹

Through the General Mining Law, and its process of conferring property rights, Congress sought to encourage citizens to invest (and risk) their own resources to develop America’s domestic mineral resources — a goal that is still very applicable and even more important today.¹⁰ To achieve this goal, Congress offered miners security of tenure, protecting their possessory rights and protecting any “mining claims” or “mining locations” staked or located “according to the local customs or rules of miners.”¹¹ Though Congress has amended and attempted to change the General Mining Law numerous times since its original passage, it has continuously recognized the existence of property rights vested in its citizens under this law, and has taken specific measures to protect valid existing rights. In this regard, “[i]t is a matter beyond dispute that mining claims are ‘private property’ enjoying the protection of the fifth amendment.”¹²

III. UNPATENTED MINING CLAIMS ARE PROTECTED BY THE FIFTH AMENDMENT

The Fifth Amendment prohibits governmental “takings” of private property for public use without “just compensation.”¹³ A taking occurs if there is: (1) an “actual” taking (*i.e.*, the government physically (or

⁷ See, e.g., *Earthworks v. United States DOI*, 496 F. Supp. 3d 472, 479, 491–92 (D.D.C. 2020) (specifically recognizing pre-discovery rights vested in unpatented mining claim owners, including exploration rights and *pedis possessio* rights, as well as their protections); *Best v. Humboldt Placer Mining Co.*, 371 U.S. 334, 336 (1963); *Creede & Cripple Creek Mining & Milling Co. v. Uinta Tunnel Mining & Transp. Co.*, 196 U.S. 337, 354 (1905) (“[I]t is not a vital fact that there was a discovery of mineral before the commencement of any of the steps required to perfect a location . . .”); see also *Union Oil Co. of Cal. v. Smith*, 249 U.S. 337 (1919) (“[T]he order of time in which these acts [discovery, marking and recording a claim] occur is not essential in the acquisition from the United States of the exclusive right of possession . . .”); *Davis v. Nelson*, 329 F.2d 840, 845 (9th Cir. 1964) (“[O]ccupation and working of the claim . . . gives the locator a limited defendable right of possession . . .”).

⁸ *Wilbur v. United States ex rel. Krushnic*, 280 U.S. 306, 316 (1930) (holding the perfected location of mining claim “is property in the fullest sense of that term; and may be sold, transferred, mortgaged, and inherited without infringing any right or title of the United States”); *Best*, 371 U.S. at 335–36; *Shumway*, 199 F.3d at 1100 & n.26 (defining a mining claim as “real property in every sense, and not merely an assertion of a right to property” and citing *Benson Mining & Smelting Co. v. Alta Mining & Smelting Co.*, 145 U.S. 428 (1892)); *Independence Min. Co. v. Babbitt*, 885 F. Supp. 1356, 1366 (D. Nev. 1995) (citing *Swanson v. Babbit*, 3 F.3d 1348, 1350 (9th Cir. 1993)); see also *Saltzman v. United States*, No. 13-1014L, 2014 WL 4050181 at *3 (Fed. Cl. Aug. 15, 2014) (finding plaintiff alleged valid property interests in an unpatented mining claim); see also *Belk v. Meagher*, 104 U.S. 279, 283 (1881) (“There is nothing in the act of Congress which makes actual possession any more necessary for the protection of the title acquired to such a claim by a valid location, than it is for any other grant from the United States.”).

⁹ *Freese v. United States*, 639 F.2d 754, 757 n.3 (Ct. Cl. 1981) (quoting *United States v. General Motors Corp.*, 323 U.S. 373, 377–78 (1945)).

¹⁰ OFFICE OF THE SOLICITOR, UNITED STATES DEPARTMENT OF INTERIOR, OPINION NO. 37057, AUTHORIZATION OF REASONABLY INCIDENT MINING USES ON LANDS OPEN TO THE OPERATION OF THE MINING LAW OF 1872 3, 4 (Aug. 17, 2020) (“Opinion M-37057”); *United States v. Cal. Midway Oil Co.*, 259 F. 343, 351–52 (S.D. Cal. 1919) *aff’d*, 279 F. 516 (9th Cir. 1922) *aff’d mem.*, 263 U.S. 682 (1923).

¹¹ 30 U.S.C. §§ 23, 26, 35, 36, 38; *Shumway*, 199 F.3d at 1098.

¹² *Freese v. United States*, 639 F.2d at 757 (describing “property” as “composed of the rights of use, enjoyment and disposition. . . to the exclusion of all others” (citation omitted)); *Shumway*, 199 F.3d at 1100–01 (discussing *United States v. North American Transportation & Trading Co.*, 253 U.S. 330 (1920) and *Swanson v. Babbitt*, 3 F.3d 1348 (9th Cir. 1993)).

¹³ U.S. CONST. amend. V (“[N]or shall private property be taken for public use, without just compensation.”).

legislatively) confiscates or occupies property)¹⁴; or (2) a “regulatory” taking (*i.e.*, government action, by legislation or regulation deprives the owner of economically reasonable use of the property).¹⁵ Whenever the government’s action constitutes a taking, it is required to pay the property owner “just compensation” (*i.e.*, fair market value).¹⁶

In the context of an “actual” taking, any seizure from the bundle of privately held rights is considered a categorical or *per se* taking, requiring appropriate compensation.¹⁷ This means the constitutional protection is triggered whether the government takes or limits only a portion of the privately held interests, or takes the entirety of rights held by the private party.¹⁸ This point has been emphasized by the United States Supreme Court as recently as its latest term, where it struck down a California access regulation that limited the rights of farm owners to exclude others from their property.¹⁹ “When the government physically takes possession of an interest in property for some public purpose, it has a categorical duty to compensate the former owner, regardless of whether the interest that is taken constitutes an entire parcel or merely a part thereof.”²⁰

Courts have consistently held that appropriations of patented mining claim interests constitute an “actual taking” under the Fifth Amendment.²¹ It follows that the conversion of unpatented mining claims into

¹⁴ *Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Plan. Agency*, 535 U.S. 302, 324 (2002); *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1015–16 (1992); *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 441 (1982).

¹⁵ *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1004 (1984); *Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104, 124 (1978); *Pa. Coal Co. v. Mahon*, 260 U.S. 393, 415 (1922).

¹⁶ *First English Evangelical Lutheran Church of Glendale v. Cnty. of Los Angeles*, 482 U.S. 304, 319 (1987); *United States v. 564.54 Acres of Land*, 441 U.S. 506, 510–12 (1979); *Olson v. United States*, 292 U.S. 246, 255 (1934); *Monongahela Navigation Co. v. United States*, 148 U.S. 312, 326 (1893); *see also Freese*, 226 Ct. Cl. at 255–56 ([G]overnmental seizure of private property for public use -- is unconstitutional unless followed by payment . . . of the fair market value of what was taken” and holding that “federal mining claims are ‘private property’ enjoying the protection of the fifth amendment.” (quotation marks omitted, citation omitted)).

¹⁷ *See, e.g., Vulcan Materials Company v. City of Tehuacana*, 369 F.3d 882, 888–89 & n.5 (5th Cir. 2004) (discussing a “partial taking” (where the government action triggers the Fifth Amendment in destroying or taking one or more strands from the bundle of sticks)).

¹⁸ *Id.*; *Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency*, 535 U.S. 302, 322 (2002); *United States v. Causby*, 328 U.S. 256, 262 (1946) (government use of airspace above property adjacent to its runways constituted a taking in the form of an easement which triggers the Fifth Amendment “as directly and completely as if it were used for the runways themselves”); *Jacobs v. United States*, 290 U.S. 13 (1933); *Hendler v. United States*, 952 F.2d 1364 (Fed. Cir. 1991); *Florida Rock Indus. v. U.S.*, 18 F.3d 1560, 1568 (Fed. Cir. 1994) (“Nothing in the language of the Fifth Amendment compels a court to find a taking only when the Government divests the total ownership of the property; the Fifth Amendment prohibits the uncompensated taking of private property without reference to the owner’s remaining property interests.” (emphasis omitted)); *Freese*, 226 Ct. Cl. at 256 n. 3 (noting that the Constitutional protection extends to “every sort of interest the citizen may possess” (quoting *United States v. General Motors Corp.*, 323 U.S. 373, 377–78 (1945))).

¹⁹ *Cedar Point Nursery v. Hassid*, 594 U.S. ____, 141 S. Ct. 2063, 2021 U.S. Lexis 3394 at *24 (2021) (Even when “the government’s intrusion does not vest it with a property interest recognized by state law, such as a fee simple or a leasehold . . . [W]e recognize a physical taking all the same.”); *see also United States v. Causby*, 328 U.S. 256 (1946); *Portsmouth Harbor Land & Hotel Co. v. United States*, 260 U.S. 327 (1922).

²⁰ *Tahoe-Sierra Pres. Council*, 535 U.S. at 322 (“[C]ompensation is mandated when [even] a leasehold is taken”); *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 441 (1982); *United States v. Shumway*, 199 F.3d 1093, 1100 (9th Cir. 1999) (“[T]he government cannot reserve its own land from an unpatented mining claim without paying the owner the value of the claim, because an unpatented mining claim is property.”); *Freese*, 226 Ct. Cl. at 256.

²¹ *See, e.g., Horne v. Dep’t of Agriculture*, 576 U.S. 350, 357–358 (2015); *Ark. Game and Fish Comm’n v. United States*, 568 U.S. 23, 31 (2012) (“When the government physically takes possession of an interest in property for some public purpose,

mineral leases likewise constitutes an actual “taking” under this provision.²² Though not originally rising to the level of “full fee property,” from their initial location, unpatented mining claims are considered real property “in the fullest sense” enforceable by law.²³ Notably, the General Mining Law establishes property interests in mining claimants at various stages throughout the location process, creating specific exploration and possessory rights even prior to the discovery of a valuable mineral deposit.²⁴ In this regard, courts have established that “unpatented mining claims are themselves property protected by the Fifth Amendment against uncompensated takings.”²⁵ To the extent a claimant complies with statutory requirements, his or her mineral and other associated rights in unpatented mining claims can continue without term limits.²⁶ Mining law legislation that would terminate or even partially take these possessory rights, replacing unpatented claims with something less (*i.e.*, lease term limitations or lower net revenue interests²⁷), amounts to an unconstitutional taking and would require compensation.²⁸ This principle has

it has a categorical duty to compensate the former owner.” (quoting *Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency*, 525 U.S. 302, 322 (2002)); *Strickley v. Highland Boy Gold Mining Co.*, 200 U.S. 527, 529–31 (1906); *Loretto v. Teleprompter Manhattan Catv Corp.*, 458 U.S. 419, 427 (1982); *Shumway*, 199 F.3d at 1103.

²² *Clawson v. United States*, 24 Cl. Ct. 366, 369 (1991) (“Clearly, compliance with the [Mining Law] and its implementing regulations may give a mineral claimant a possessory interest in property the extinguishment of which can support a Fifth Amendment taking claim.”); *see also Best v. Humboldt Placer Mining Co.*, 371 U.S. 334, 335–38 (1963); *Forbes v. Gracey*, 94 U.S. 762, 766 (1876); *Skaw v. United States*, 740 F.2d 932, 936 (Fed. Cir. 1984) (holding that an unpatented mining claim is a property right which is within the protection of the Fifth Amendment’s prohibition against the taking of private property without just compensation) (citing *Freese*); *see also* Department of Interior & Related Agencies Appropriations Act, 1998, Pub. L. No. 105-83, 111 Stat. 1543, § 120 (acknowledgement by Congress that its taking of both patented and unpatented mining claims is subject to limitations under the Fifth Amendment as it enacted legislation to acquire title to mining claims located within the Denali National Park and Preserve).

²³ *Wilbur v. United States ex rel. Krushnic*, 280 U.S. 306, 316 (1930); *United States v. N. Am. Transp. & Trading Co.*, 253 U.S. 330, 333–35 (1920); *Indep. Mining Co. v. Babbitt*, 885 F. Supp. 1356, 1366 (D. Nev. 1995) (citing *Swanson v. Babbit*, 3 F.3d 1348, 1350 (9th Cir. 1993)); *see also United States v. Locke*, 471 U.S. 84, 104 (1984); *Belk v. Meagher*, 104 U.S. 279, 283 (1881); *Saltzman v. United States*, No. 13-1014L, 2014 WL 4050181 at *1 (Fed. Cl. Aug. 15, 2014) (finding plaintiff alleged valid property interests in an unpatented mining claim).

²⁴ *See, e.g., Best*, 371 U.S. at 336 (citing with approval *United States v. Houston*, 66 I.D. 161 (1959)) (“A locator who does not carry his claim to patent does not lose his mineral claim, though he does take the risk that his claim will no longer support the issuance of a patent.”); *see also Union Oil Co. of Cal. v. Smith*, 249 U.S. 337, 347 (1919) (“[T]he order of time in which these acts [discovery, marking and recording a claim] occur is not essential in the acquisition from the United States of the exclusive right of possession of the discovered minerals”); *Creede & Cripple Creek Mining & Milling Co. v. Uinta Tunnel Mining & Transp. Co.*, 196 U.S. 337, 354 (1905) (“[I]t is not a vital fact that there was a discovery of mineral before the commencement of any of the steps required to perfect a location”); *Houston*, 66 I.D. at 165 (“[Even] if the locator elects not to carry his claim to patent . . . his rights to the minerals in the claim are not diminished.”); *see also Earthworks v. United States DOI*, 496 F. Supp. 3d 472, 479, 491–92 (D.D.C. 2020) (specifically recognizing pre-discovery rights vested in unpatented mining claim owners, including exploration rights and *pedis possessio* rights, as well as their protections).

²⁵ *Kunkes v. United States*, 78 F.3d 1549, 1551 (Fed. Cir. 1996) (citing *Best*, 371 U.S. at 334); *see also Chittenden v. United States*, 126 Fed. Cl. 251, 262 (2016) (holding that a valid unpatented mining claim constitutes property fully protected by the Fifth Amendment); *see also Forbes v. Gracey*, 94 U.S. 762, 766 (1876); *Skaw*, 740 F.2d at 936; *Davis v. Nelson*, 329 F.2d 840, 845 (9th Cir. 1964); *Clawson v. United States*, 24 Cl. Ct. 366, 369 (1991); *Freese v. United States*, 639 F.2d 754, 757 (Ct. Cl. 1981).

²⁶ *See, e.g., 30 U.S.C. §§ 26–28; Shumway*, 199 F.3d at 1100 (holding owner of a mining claim ‘is not required . . . to secure patent from the United States; so long as he complies with all provisions of the mining laws, his possessory right, for all practical purposes of ownership, is as good as though secured by patent.’” (quoting *Wilbur v. United States*, 280 U.S. 306, 316 (1930)).

²⁷ *See, e.g., H.R. 2579*, 116th Cong. §§ 101(b)(1), 107(a) (2019); *see also S. 1386*, 116th Cong. § 201(a) (2019).

²⁸ *See generally Cedar Point Nursery v. Hassid*, 141 S. Ct. 2063, 2021 U.S. Lexis 3394 *14 (2021); *Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Plan. Agency*, 535 U.S. 302, 321–22 (2002); *United States v. Causby*, 328 U.S. 256 (1946);

been demonstrated on multiple occasions, not only in federal actions,²⁹ but cases where the government's power of eminent domain has been exercised by various parties to condemn right of ways through unpatented mining claims³⁰ or simply appropriate mining claims for a public purpose.³¹

As for “regulatory” takings, U.S. courts have ruled that a categorical or *per se* taking occurs whenever the government, through regulatory or legislative restrictions, completely destroys the property's economic value.³² Regulatory takings often appear in the form of overburdensome restrictions placed on activities or uses of the privately held interests.³³ Even in situations where the economic value of a property is not entirely depleted, a “regulatory taking” can still be found based on three factors set forth in the seminal Supreme Court case, *Penn Central Transportation Co. v. New York City*³⁴ – namely (1) the overall economic impact on the owner, (2) the degree of interference with the owner's reasonable investment-backed expectations, and (3) the character of the government action. In the absence of a categorical or *per se* regulatory taking, U.S. courts will analyze these factors carefully to decide whether restrictions on property use go too far under the Fifth Amendment.³⁵

Mining legislation that would regulate or restrict activities on unpatented mining claims (whether for environmental purposes or otherwise), to the point of denying owners the economically viable use of their property for mining purposes, amounts to an unconstitutional taking.³⁶ Restrictions that wholly destroy a mining claim's economic value amount to a *per se* or categorical taking of the privately held interest.³⁷ Restrictions that do not completely extinguish economic value may still trigger the Fifth Amendment if (1) the overall economic impact is significant, (2) the restrictions interfere with the reasonable investment-backed expectations of the claimant from when it acquired the unpatented mining claim, and (3) the restrictions are atypical when compared to those historically imposed by U.S. governmental bodies.³⁸ In these circumstances, the factual analysis required to defend or analyze regulatory takings issues in this context can be exhaustive, and each case is uniquely complex.³⁹

Jacobs v. United States, 290 U.S. 13 (1933); *Kunkes*, 78 F.3d at 1551; *Fla. Rock Indus. v. United States*, 18 F.3d 1560, 1568–69 (Fed. Cir. 1994); *Hendler v. United States*, 952 F.2d 1364 (Fed. Cir. 1991); *Shumway*, 199 F.3d at 1101.

²⁹ Federal suits are frequently filed in the Federal Court of Claims pursuant to the Tucker Act. Enacted in 1887, the Tucker Act expressly waives the United States' sovereign immunity in certain kinds of claims – including takings claims under the Fifth Amendment. 28 U.S.C. §§ 1346(a), 1491 (2021); *see also, e.g., Skaw v. United States*, 740 F.2d 932 (Fed. Cir. 1984).

³⁰ *See, e.g., Las Vegas & Tonopah R.R. Co. v. Summerfield*, 129 P. 303, 305 (Nev. 1912) (acknowledging a mining company's right to just compensation based on its original certificate of location and filings – not the existence or proof of a valuable mineral deposit); *accord Jacobson v. Memmott*, 354 P.2d 569 (Utah 1960).

³¹ *United States v. N. Am. Transp. & Trading Co.*, 253 U.S. 330, 333 (1920).

³² *Tahoe-Sierra Pres. Council*, 535 U.S. at 322; *Lucas v. S.C. Coastal Council*, 505 U.S. 1003 (1992).

³³ *See supra* note 31; *see also Pa. Coal Co. v. Mahon*, 260 U.S. 393 (1922).

³⁴ 438 U.S. 104 (1978).

³⁵ *Id.*; *Murr v. Wisconsin*, 137 S.Ct. 1933 (2017); *Keystone Bituminous Coal Ass'n v. DeBenedictis*, 480 U.S. 470 (1987); *Mountain States Legal Found. v. Hodel*, 799 F.2d 1423 (10th Cir. 1986).

³⁶ *See Pa. Coal Co. v. Mahon*, 260 U.S. 393, 415 (1922); *see also Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104, 130–31 (1978).

³⁷ *See Lucas v. S.C. Coastal Council*, 505 U.S. 1003 (1992); *Tahoe-Sierra Pres. Council*, 535 U.S. at 322.

³⁸ *See generally Murr v. Wisconsin*, 137 S.Ct. 1933 (2017); *Keystone Bituminous Coal Ass'n v. DeBenedictis*, 480 U.S. 470 (1987); *Mountain States Legal Foundation v. Hodel*, 799 F.2d 1423 (1986).

³⁹ *See, e.g., Skaw v. U.S.*, 740 F.2d 932 (Fed. Cir. 1984).

Congress should avoid both *actual* and *regulatory* takings when considering proposed mining law revisions. As discussed in the following sections, history provides several instructive examples of how Fifth Amendment takings issues can be avoided.

IV. CONGRESS AVOIDED “UNCONSTITUTIONAL TAKINGS” THROUGH THE MINERAL LEASING ACT OF 1920 AND THE FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976

A. Legislative History for the Enactment of the Mineral Leasing Act of 1920

The MLA established a leasing and royalty system for the development of oil, gas, and other non-metalliferous minerals, thereby removing those minerals from the scope of the General Mining Law. Section 37 of the MLA, however, alleviated Fifth Amendment takings concerns by exempting preexisting unpatented mining claims from the new leasing and royalty system. On the date of its enactment, Section 37 of the MLA read as follows:

That the deposits of coal, phosphate, sodium, oil, oil shale, and gas, herein referred to, in lands valuable for such minerals, including lands and deposits described in the joint resolution entitled “Joint resolution authorizing the Secretary of the Interior to permit the continuation of coal mining operations on certain lands in Wyoming,” approved August 1, 1912 (Thirty-seventh Statutes at Large, page 1346), shall be subject to disposition only in the form and manner provided in this Act, except as to valid claims existent at date of the passage of this Act and thereafter maintained in compliance with the laws under which initiated, which claims may be perfected under such laws, including discovery.

Section 37 of the Act of February 25, 1920, c. 85, 41 Stat. 437, 451 (emphasis added).⁴⁰ The language in this savings clause clearly evinces a desire to avoid the extermination of existing rights, and legislative history confirms that Congress intended to preserve such existing rights of owners of claims, including those claims without a discovery. First, it is notable that the language of Section 37 was itself not subject to considerable debate and amendment – indicating the savings clause was not a controversial subject.⁴¹

Second, savings clauses like that in Section 37 had long been fixtures in the proposed legislation which preceded the MLA’s enactment.⁴² These previous clauses, like that contained in Section 37 of the MLA, were not subject to considerable debate and amendment – once again indicating that there was no significant dispute regarding whether savings clauses were necessary.⁴³

⁴⁰ Section 37’s reference to coal entries number 18 to 49 in Lander, Wyoming is the result of the Act of August 1, 1912, 62nd Cong., Priv. Res. 4, 37 Stat. 1346 (formerly S.J. Res. 100, 62nd Cong.).

⁴¹ See, e.g., 58 Cong. Rec. 4578–81, 7781 (containing a debate in which the only facet of the savings clause being discussed was whether it should apply to “valid claims” as compared to “valid locations”; a discussion regarding the clause’s necessity was notably absent).

⁴² See, e.g., H.R. 3232, 65th Cong.; S. 2812, 65th Cong.; H.R. 406, 64th Cong.; H.R. 16186, 63rd Cong.

⁴³ See Senate Debates, 58 Cong. Rec. 4054-57, 4111-17, 4160-76, 4247-4258, 4267-4290, 4415-4418, 4443-45, 4446-51, 4502, 4577-92, 4610, 4619-4623, 4731-89 (1919); House Debates, 58 Cong. Rec. 7509-38, 7596-7605, 7642-54 and 7767-91 (1919); House Conference Report, H. Rep. No. 600, 66th Cong., 2nd Sess. (1920); see also House Approval of Conference Report, 59 Cong. Rec. 2702-2714 (1920); Conf. Report Submission to Senate, 59 Conf. Rec. 2737-2742 (1920).

Finally, on the few occasions that these savings clauses were discussed in historical debates, it is clear that members of Congress believed “justice, fairness, and common decency” required their inclusion to ensure that pre-existing laws were applied “for the benefit of those who [had] acted” in accordance therewith.⁴⁴ Taken together, this history demonstrates that savings clauses have been a germane fixture of mineral leasing legislation for well over a century – with their inclusion being compelled by fundamental principles of “justice, fairness, and common decency.”⁴⁵

B. Legislative History for the Federal Land Policy and Management Act of 1976

Congress enacted the Federal Land Policy and Management Act⁴⁶ in 1976 to provide the Secretary of the Interior with authority to manage the federal public lands, including those lands containing mining claims located under the General Mining Law of 1872. FLPMA explicitly acknowledged the continued vitality of the General Mining Law, but amended it in two primary ways.

First, Section 314 imposed new claim filing and recordation requirements to give the BLM a mechanism to rid the federal lands of stale mining claims.⁴⁷ The Section 314 filing and recording requirement was applied to all mining claims and did not consider whether a claim had a discovery of a valuable mineral deposit (i.e., had been “perfected”). Congress required mining claim owners to make their initial Section 314 filing within three years of FLPMA’s enactment for any claim that the owner intended to maintain as an active claim and to submit annual filings thereafter.⁴⁸

Second, Section 302(b) directed the Secretary of the Interior, by regulation or otherwise, to take any action necessary to prevent unnecessary or undue degradation of the public lands.⁴⁹ The Section 302(b) mandate to “prevent unnecessary or undue degradation,” however, included a savings clause providing that “no provision of this section or any other section of this Act shall in any way amend the Mining Law of 1872 or impair the rights of any locators or claims under that Act, including, but not limited to, rights of ingress and egress.”⁵⁰

⁴⁴ 64 Cong. Rec. 1048-49; *see also* 58 Cong. Rec. Part 5, Leasing of Oil Lands 4,577-78 (daily ed. Aug. 30, 1919) (Sen. Jones reading 13 pieces of correspondence received from constituent claimholders in New Mexico, and reading correspondence from E.L. Medler stating that unpatented claimholders have vested property rights and prolonged litigation will ensue if the MLA strips them of these rights.); *see also* 58 Cong. Rec. Part 5, Leasing of Oil Lands 4,580-81 (Sen. Lenroot providing an example of a claimholder who falls under the protection of the MLA savings clause); 4,582 (Sen. Jones stating that, considering the congressional record, the Interior Department would not be justified in turning down a patent application for a claim that had been maintained under the Mining Law after the MLA is in effect).

⁴⁵ *Id.*

⁴⁶ Pub. L. No. 95-554, 92 Stat. 2073 (codified at 43 U.S.C. § 1701 *et seq.*)

⁴⁷ *Id.* § 1744.

⁴⁸ In FLPMA Section 314(d), Congress established that claim filings must be made for claims that did not have a discovery of a valuable mineral deposit and were thus not “valid” claims. *See* 43 U.S.C. § 1744(d) (“Such recordation or application by itself shall not render valid any claim which would not be otherwise valid under applicable law.”). By requiring claim filings for all claims regardless of their discovery/validity status, FLPMA treats all claims equitably and does not create a different hierarchy or status for valid claims versus pre-discovery claims (i.e. claims of unknown validity and claims without a discovery); *see United States v. Locke*, 471 U.S. 84, 87, (1985)

⁴⁹ 43 U.S.C. § 1732(b).

⁵⁰ *Id.*

Third, Congress specifically preserved the savings clause from Section 37 of the MLA when it enacted FLPMA, confirming that the protections from that savings clause remain in effect.⁵¹ Notably, the post-FLPMA amendment to Section 37 of the Mineral Leasing Act explicitly provided that the General Mining Law, not the MLA, would be applied to mining claims established prior to the MLA and that owners could continue working their claims for purposes of perfection and discovering a valuable mineral deposit.⁵²

While analysis of the legislative history for FLPMA does not reflect a thorough debate in Congress over Fifth Amendment takings concerns, the application of this Act, and its inclusion of savings clauses, confirms Congress' goal to avoid triggering the Fifth Amendment, and shows the steps Congress took to avoid reducing unpatented mining claim interests or otherwise affecting the economic viability of unpatented mining claim ownership.⁵³

V. CONGRESS HAS RECOGNIZED ON MULTIPLE OCCASIONS THAT MODIFICATIONS TO MINING AND MINERAL LAWS COULD RESULT IN UNCONSTITUTIONAL TAKINGS

Takings concerns have been discussed during congressional debates and hearings for various bills to amend the MLA of 1920 and the General Mining Law of 1872. The following sections discuss a number of these bills and their associated debates. While none of the bills discussed below were enacted into law, they evidence lawmakers' concerns that these proposed amendments would constitute a taking. Furthermore, as cited below, in considering each of these bills Congress heard comprehensive analysis from legal experts regarding potential takings issues. The testimony from those experts, including their written materials, provide a useful resource in evaluating future amendments to the General Mining Law.

A. H.R. 1039, 100th Cong. (1987)

In 1987, the House of Representatives passed H.R. 1039, entitled “[a] bill to amend section 37 of the Mineral Lands Leasing Act of 1920 relating to oil shale claims, and for other purposes.”⁵⁴ H.R. 1039 would have converted unpatented mining claims for oil shale into a leasing system. Specifically, it would have amended the MLA to prohibit the issuance of patents for oil shale claims after February 5, 1987. It also would have required the owner of each unpatented oil shale claim to elect, within 90 days after enactment of the Act, to either: (1) apply to the Secretary for a lease; or (2) maintain its claim by complying with all laws pertaining to the maintenance of mining claims, including regulations regarding annual expenditures which represent diligent efforts towards shale oil production and substantial work on the claims.⁵⁵

The legislative history for H.R. 1039 shows that the House considered whether the bill would constitute a taking under the Fifth Amendment, but it ultimately concluded that so long as the mining claimant's

⁵¹ *Id.*

⁵² 95 Pub. L. 554, 92 Stat. 2073 (1978).

⁵³ *See generally* Committee on Energy and Natural Resources, Compilation of the Legislative History of the Federal Land Policy and Management Act of 1976 (Public Law 94-579).

⁵⁴ H.R. 1039, 100th Cong. (1987).

⁵⁵ *See* H.R. 1039, § 2(b)(2).

“possessory interest” was not *forcibly* canceled, the provision would not amount to a constitutional taking.⁵⁶

One of the most widely debated issues during the Committee’s deliberations on H.R. 1039 involved whether the legislation preserves the rights of the holders of the oil shale claims The Committee has taken great pains in this regard and finds the bill, as amended, fully protects the existing rights of the claim holders and represents a fair and just resolution of an issue which has plagued the administration of these public lands for more than 66 years.

While holders of valid claims under the mining law have certain rights and interests in the property, the Congress, in the public interest, retains the right to regulate mining claims on federal lands. H.R. 1039 does not extinguish the existing rights and interests of claim holders by requiring them to elect either to continue holding the claims under certain new maintenance standards or to convert them to leases.

H.R. 1039 will prohibit the patenting of most existing oil shale claims. This is consistent with other actions Congress has taken in the past placing limitations on the issuance of mining claim patents.⁵⁷

Ultimately, the House Report for H.R. 1039 asserted that “the bill fully preserves the possessory right of the claim holders by providing them with the *opportunity* to either convert valid claims to oil shale leases or retain valid claims in compliance with the current law and a new, prospective, expenditure requirement.”⁵⁸ The House Report, however, also included concerns and testimony that the Act would result in a taking under the Fifth Amendment if it were passed into law.⁵⁹ Specifically, numerous legislators argued that the prohibition on patenting amounted to a constitutional taking:

H.R. 1039 changes the vested rights of the oil shale claimant. Section 2(b) prohibits the patenting of oil shale claims forevermore.

* * * * *

In our view, denial of a patent may well be a taking under the Fifth Amendment. Furthermore, the election provisions are unworkable and in conflict with established precedent governing the maintenance and patenting of oil shale claims under the 1872 General Mining Laws.

* * * * *

We seriously question whether the denial of patents to oil shale mining claimants is constitutional in these circumstances. United States Supreme Court decisions contemporaneous with the times these claims were located characterize the possessory

⁵⁶ See H.R. Rep. No. 100-43 (1987).

⁵⁷ H.R. Rep. No. 100-43, at 12 (1987).

⁵⁸ *Id.* at 13 (emphasis added).

⁵⁹ *Id.* at 21.

rights of entrymen as “a substantial inceptive title” and that the owner of a valid claim has the right “to demand and receive a patent at a small sum per acre after he has put in” \$500 worth of labor and improvements. It is under these kinds of rules that Congress passed the savings clause in the 1920 Mineral Leasing Act. If the miner had a valid oil shale claim, Congress recognized his right to receive a patent. To deny that recognition and expectation today may well be a taking. *Cf., Regional Rail Reorganization Act Cases*, 419 U.S. 102, 126-7 (1974).

* * * * *

If the Secretary determines under established practice and precedent, that the claims are valid, then the owner of the oil shale mining claim has a vested right to apply for a patent. The denial of that right appears to us to be a taking.

We think there is serious doubt and little wisdom in denying the owner of a valid oil shale mining claim the right to the fee title. It seems peculiar public legislative policy to deny the owner of a valid oil shale claim a patent while the courts are at the same time recognizing, the mining claimant's rights “to prevent third parties from interfering with their possessory interest,” and who have a “property right to possess and mine to extinction the minerals located on their unpatented claims.” *Skaw v. United States*, 740 F.2d 932, 938, 940 (CA Fed., 1984). Those rights are within the protection of the Fifth Amendment's prohibition against the taking of private property for public use without just compensation.

It seems abundantly clear that, while a guaranteed right to a mineral patent is in question, there is no doubt that the revocation or interference with the vested rights under a valid oil shale mining claim, whether by statute or the authorized action of an administrative official, will constitute a taking under the Fifth Amendment to the U.S. Constitution.⁶⁰

As the House Report debate for H.R. 1039 reveals, the Committee determined that whether the bill restricting the patent process amounts to a legislative taking turned on whether the holder of an unpatented claim for oil shale had a vested property right in the ability to patent the claim.

The legislative history for that bill also shows that the House Subcommittee on Mining and Natural Resources heard testimony from several attorneys and the Director of the Bureau of Land Management regarding whether H.R. 1039 would constitute a legislative taking.⁶¹ Of particular note, the BLM Director testified:

If Congress enacts legislation affecting claimants' property rights, first it should determine the manner in which that legislation would affect claimants' rights previously established, and whether there would be an interference with those rights that would constitute a compensable taking. The Department is concerned that H.R. 1039 may well present constitutional problems . . .⁶²

⁶⁰ *Id.* at 21–23.

⁶¹ H. Hrg. 100-1 (Mar. 3, 1987).

⁶² H. Hrg. 100-1 (Mar. 3, 1987) at p.24.

The BLM Director further identified Section 2(b)(2) of H.R. 1039, which addressed the conversion of existing oil shale mining claims to leases, as “a clear setting for [takings] concerns.”⁶³ After summarizing case law concerning the constitutionality of protective requirements affecting unpatented mining claims, including *United States v. Locke*, *Freese v. United States*, and *Alaska Miner’s Association v. Andrus*, the Director cautioned the subcommittee to carefully consider whether H.R. 1039 would amount to a compensable taking.⁶⁴

B. Senate Bill No. 2089, 100th Cong. (1988)

After H.R. 1039 passed the House, the Senate considered it and the companion bill, S.B. 2089. Like H.R. 1039, S.B. 2089 would have (1) prohibited the issuance of oil shale mining claim patents after February 5, 1987, for any claim located prior to enactment of the MLA; and (2) required the owners of valid oil shale mining claims, located pursuant to the General Mining Law prior to enactment of the MLA, to make specified elections within 180 days after enactment of the act or be conclusively deemed to have abandoned the oil shale claim. Specifically, claim holders could elect to either convert their claims to leases or maintain their claims by compliance with federal mining laws and the Act.⁶⁵

The Senate Subcommittee on Mineral Resources Development and Production held a hearing on S.B. 2089 and H.R. 1039.⁶⁶ The Subcommittee heard statements from numerous witnesses discussing whether the bill would constitute a legislative taking.

For instance, James E. Cason, Deputy Assistant Secretary, Land of Minerals Management, testified in his prepared remarks that Land and Minerals Management believed S. 2089 would constitute a taking.⁶⁷ “A valid mining claim carries with it a full bundle of rights, and S. 2089 would grant a clearly lesser set of rights. The undefined reduction would raise the issue of taking without just compensation . . . If S. 2089 were passed in its present form its effect on claimants’ rights would be too onerous and not consistent with the Fifth Amendment as related to takings. Therefore, we strongly oppose S. 2089.” Mr. Cason then further explained the agency’s reasoning:

From our perception, it certainly [would be a taking]. If you take a look at . . . a Supreme Court decision, back contemporaneous with the passage of the Mineral Leasing Act, and just post that period where we were beginning to deal with the issue again, in *Wilbur v. Krushnic*, . . . they looked at whether an unpatented mining claim is a private property right and decided that an unpatented mining claim is a property in the full sense of that term. The owner is not required to purchase the claim or secure a patent from the United States. But so long as he complied with the provisions of the Mining Law, his possessory right for all practical purposes is ownership. It is as good as if it were secured by a patent.⁶⁸

⁶³ *Id.*

⁶⁴ H. Hrg. 100-1 (Mar. 3, 1987) at p.27.

⁶⁵ See S. 2089, 100th Cong. (1988).

⁶⁶ See S. Hrg. 100-744 (Apr. 22, 1988).

⁶⁷ *Id.* at 47-49.

⁶⁸ *Id.* at 63.

Mr. Cason's response to questioning from Senator Wirth is also insightful. Sen. Wirth asked how the agency could view S. 2089 as a taking when unpatented mining claim holders do not have a property interest *in the option* to apply for patents under their claims. In response, Mr. Cason focused on the impact that S. 2089 would have on the underlying marketability of the unpatented claims, stating "we believe that the production requirement in S. 2089 raises the bill to a level of taking because of the very strong likelihood that shale oil in significant marketable amounts will not be obtainable from a claim within 10 years of enacting. This would be deemed abandoned . . . The elimination of the market value associated with the prospect of future utility we believe would be an un-constitutional taking."⁶⁹

S. 2089 did not make it out of committee, and it is uncertain to what extent members of the Senate Subcommittee on Mineral Resources Development and Production were persuaded by the testimony heard on the legislative takings issue. Nevertheless, this testimony and legal analysis is useful in analyzing whether the disruption of unpatented mining claim interests or their conversion into mineral leases would constitute a federal taking, entitling claim owners to just compensation.⁷⁰

C. Senate Bill No. 1126, 101st Cong. (1989-1990)

Senate Bill No. 1126, entitled "a bill to provide for the disposition of hardrock minerals on Federal lands, and for other purposes," was introduced during the 101st Congress (1989-1990).⁷¹ S. 1126 never made it out of committee, but it would have forced owners of existing unpatented mining claims located pursuant to the General Mining Law to either (i) relocate their claim pursuant to the requirements of the new law or (ii) become obligated to comply with enhanced claims maintenance requirements set forth in the new law.⁷² Furthermore, patents issued under the new law would have been subject to both a royalty and a reversionary interest in favor of the United States at the end of production. The hearing on S. 1126 before the Subcommittee on Mineral Resources Development and Production, Committee on Energy and Natural Resources, included an extensive discussion of whether the new law would amount to an unconstitutional taking.⁷³

We note that a near identical version of S. 1126 was introduced in the subsequent Congress but like S. 1126 the newer bill did not make it out of Committee.⁷⁴ Before S. 433 was defeated, and in considering whether it would amount to a taking, the Subcommittee on Mineral Resources Development and

⁶⁹ *Id.* at 66.

⁷⁰ We note that near identical versions of S. 2089 and H.R. 1039 were introduced in the subsequent Congress but also were not adopted into legislation. *See* S. 30, 101st Cong. (1989); H.R. 643 and H.R. 2392, 101st Cong. (1989); *see also* H.R. Rep. No. 101-49 (House Report for H.R. 643 including discussing of majority and minority views as to whether bill would constitute a taking).

⁷¹ *See* S. 1126, 101st. Cong. (1989).

⁷² *See* S. 1126, 101st Cong., §§ 501–502 (1989).

⁷³ S. Hrg. 101-205; *see* Statement of Sen. James McClure, S. Hrg. 101-205 (June 7, 1989) at 113 ("[i]t is very clear that a property owner may have the right to proceed to patent. It is not so clear whether that is a property right subject to the taking question."); Statement of Sen. Malcom, *id.* at 114 (describing the law's treatment of existing claim holders as a "constitutional taking"); *see also* Statement of Attorney Stephen Alfors, Davis, Graham & Stubbs, *id.* at 338 (providing legal analysis of whether the law would constitute a taking); Statement of John D. Leshy, Professor of Law, Arizona State University, *id.* at 362 (same).

⁷⁴ *See* S. 433, 102nd Cong. (1991).

Production again heard testimony from many of the same legal experts on the constitutional taking issue.⁷⁵

VI. LEGAL ACTIONS AND JUST COMPENSATION RESULTING FROM UNCONSTITUTIONAL TAKINGS WOULD REQUIRE EXTENSIVE FEDERAL RESOURCES

If legislation were adopted in which unpatented mining claims are (1) converted into leases, (2) burdened with royalties, or (3) limited by restrictions that diminish economic viability, then Fifth Amendment takings liability would become a central obstacle. In such cases, taxpayer dollars would be wasted – at a minimum in litigation – as the government defends its destruction of these private property rights, contravening current case law precedent.⁷⁶ In the event of a taking, as required by the U.S. Constitution, the federal government would have to pay the claim holders “just compensation” usually measured by the “fair market value” of the property taken.⁷⁷ “[W]hen market value [is] too difficult to find, or when its application would result in manifest injustice to owner or public,” other complicated measures are employed.⁷⁸ In these instances, courts would have “discretion in adopting a methodology that awards a takings plaintiff just compensation.”⁷⁹ As a general matter, however, methodologies for just compensation must be based on “[t]he highest and most profitable use for which the property is adaptable[.]”⁸⁰

With respect to unpatented mining claims, just compensation evaluations would likely require, first, an analysis of valid existing rights,⁸¹ followed by an evaluation of the confirmed or unconfirmed mineral resource, potential mining costs, examination of the market value against similar mining claims, and a costly review of alternatives and multiple unique factors applicable to each unpatented mining claim or claim group. There are currently on record nearly 400,000 active unpatented mining claims on public

⁷⁵ See S. Hrg. 102-258, 102nd Congress (1991).

⁷⁶ *Chittenden v. United States*, 126 Fed. Cl. 251, 262 (2016), *aff'd*, 663 F. App'x 934 (holding that unpatented mining claims are “valid against the United States if there has been a discovery of mineral within the limits of the claim.”); *Freese v. United States*, 639 F.2d 754, 757 (Ct. Cl. 1981)

⁷⁷ See *United States v. 564.54 Acres of Land*, 441 U.S. 506, 511 (1979) (stating that fair market value is the Court’s “relatively objective working rule” in determining just compensation); *United States v. Fuller*, 409 U.S. 488, 490 (1973) (noting that prior Supreme Court decisions have used fair market value as the standard of measuring just compensation); *United States v. Miller*, 317 U.S. 369, 374 (1943) (to find a practical standard of measuring just compensation, courts have adopted the concept of market value).

⁷⁸ *U.S. v. Commodities Trading Corp.*, 339 U.S. 121, 123 (1950); see also *Miller*, 317 U.S. at 374–75 (where property is taken and other property in its vicinity has not been sold in recent times, application of fair market value test is, at best, a guess); *Olson v. United States*, 292 U.S. 246, 255 (1934) (“Just compensation includes all elements of value that inhere in the property[.]”).

⁷⁹ *McCann Holdings, Ltd. v. United States*, 111 Fed. Cl. 608, 613 (2013); see also *Childers v. United States*, 116 Fed. Cl. 486, 497 (2014) (“Just compensation should be carefully tailored to the circumstances of the case . . .”); *United States v. Va. Elec. & Power Co.*, 365 U.S. 624, 633 (1961) (holding that fair market value is “not an absolute standard nor an exclusive method of valuation”); *Fuller*, 409 U.S. at 490 (“The constitutional requirement of just compensation derives as much content from the basic equitable principles of fairness as it does from technical concepts of property law.”) (citing *Commodities Trading Corp.*, 339 U.S. at 124).

⁸⁰ *Olson*, 292 U.S. at 255; see also *Clark’s Ferry Bridge Co. v. Pub. Serv. Comm’n*, 291 U.S. 227, 234 (1934); *Boom Co. v. Patterson*, 98 U.S. 403, 408 (1878).

⁸¹ See *Vane Minerals (US), LLC v. United States*, 116 Fed. Cl. 48, 57 (2014); *Shumway*, 199 F.3d at 1102 (9th Cir. 1999); *Swanson v. Babbitt*, 3 F.3d 1348, 1353 (9th Cir. 1993).

lands managed by the BLM.⁸² In addition to takings liability for these unpatented mining claims themselves, changes to the General Mining Law could create potential takings liability to private landowners in situations where unpatented mining claims exist on federal lands checkerboarded with private sections, where inholdings are found, and where patented and unpatented mining claims are intermixed. To this point, federal courts have established that partial takings affecting the “integrated use” of such tracts may justify their treatment as a “single” or “larger” parcel for purposes of calculating Fifth Amendment takings damages.⁸³ Consequently, a determination of what constitutes “just compensation” for each mining claim would be a difficult and costly task, not to mention federal government liability and other costs associated with a likely flood of takings lawsuits.⁸⁴

VII. CONGRESS SHOULD FOLLOW LEGISLATIVE PRECEDENT AND EXPRESSLY EXEMPT PREEXISTING UNPATENTED CLAIMS FROM ANY PROPOSED LEASING/ROYALTY SCHEMES

To avoid Fifth Amendment takings and the attendant inequity and costs, any mining law amendments or revisions enacted by Congress should follow the precedent of allowing claimholders to continue holding their pre-existing claims under the General Mining Law. The MLA and its “savings clause” provide a seminal example of legislation purposed towards changing unpatented claim procedures into a leasing scheme, without unconstitutionally taking protected property rights. Under Section 37, the “savings clause” of the MLA, unpatented mining claims that were actively maintained were protected regardless of whether valuable mineral deposits had been discovered or all aspects of the claim location process had been finalized.⁸⁵ The record reflects that both lawmakers and claimholders were concerned about how the law’s transition to a leasing process would affect existing rights.⁸⁶ They were particularly concerned that the MLA would amount to a conversion of possessory interests and initial exploration

⁸² In fiscal year 2019 BLM reported 386,936 active mining claims. BUREAU OF LAND MANAGEMENT, PUBLIC LAND STATISTICS 2019 128 tbl. 3-22 (2020), <https://www.blm.gov/sites/blm.gov/files/PublicLandStatistics2019.pdf>; *see also* THE DIGGINGS, <https://thediggings.com/> (currently reporting 422,500 active mining claims) (last visited July 25, 2021).

⁸³ *United States v. 33.92356 Acres of Land*, 585 F.3d 1, 10 (1st Cir. 2009) (quoting *Baetjer v. United States*, 143 F.2d 391, 394–95 (1st Cir. 1944)) (“[W]hether the parcels are a ‘single tract’ for takings purposes ‘does not depend upon artificial things like boundaries between tracts . . . whether the owner acquired his land in one transaction . . . [or] whether holdings are physically contiguous.’ The key question is whether the parcels have an ‘integrated use.’” (addition in original)); *see also United States v. 4.0 Acres of Land*, 175 F.3d 1133, 1139 (9th Cir. 1999) (If the value of the remaining land diminishes when the condemned portion is removed from the larger whole, “the landowner is entitled to compensation ‘both for that which is physically appropriated and for the diminution in value to the non-condemned property.’”) (quoting *United States v. 33.5 Acres*, 789 F.2d 1396, 1398 (9th Cir. 1986); citing 71 Nichols on Eminent Domain § 12.03).

⁸⁴ *See, e.g.*, 58 Cong. Rec. Part 5, Leasing of Oil Lands 4,577-78 (daily ed. Aug. 30, 1919); (Sen. Jones reading correspondence from E.L. Medler stating that unpatented claimholders have vested property rights and prolonged litigation will ensue if the MLA strips them of these rights); *compare Earthworks v. United States DOI*, 496 F. Supp. 3d 472 (D.D.C. 2020).

⁸⁵ *See generally Union Oil Co. of Cal. v. Smith*, 249 U.S. 337, 347 (1919) (“[T]he order of time in which these acts [discovery, marking and recording a claim] occur is not essential to the acquisition from the United States of the exclusive right of possession of the discovered minerals”); *see also Creede & Cripple Creek Mining & Milling Co. v. Uinta Tunnel Mining & Transp. Co.*, 196 U.S. 337, 354 (1905) (“[I]t is not a vital fact that there was a discovery of mineral before the commencement of any of the steps required to perfect a location”); *Earthworks*, 496 F. Supp. 3d at 479, 491 (recognizing pre-discovery rights vested in unpatented mining claim owners, including exploration rights and *pedis possessio*, as well as the protection of those rights);

⁸⁶ 58 Cong. Rec. Part 5, Leasing of Oil Lands 4,577-78 (daily ed. Aug. 30, 1919) (Sen. Jones reading 13 pieces of correspondence received from constituent claimholders in New Mexico.).

rights, even in those cases where a valuable discovery had not yet been fully identified.⁸⁷ These claimants were prepared to defend their mining claims and property interests through various means, including litigation.⁸⁸

In response to these concerns, the MLA's drafters protected all unpatented mining claims being actively maintained by claimholders. Notably, one senator confirmed that the MLA exempted any claimholder who "may not have made a discovery, but [who] complied with the mining laws up to the date of the passage of [the MLA]."⁸⁹ Another senator stated that the congressional record clearly establishes intent for the savings clause to apply to *all* preexisting unpatented claims.⁹⁰ Instead of legislating a blanket conversion of property interests, in 1920, Congress surgically amended the General Mining Law so as to not disturb pre-existing rights. This approach benefitted the federal government in later years when takings claims were addressed against the United States, as it simplified the judiciary's analysis to simply evaluating whether the mining claims had been actively maintained by the private owner,⁹¹ and the larger liability exposure of the United States was avoided.⁹²

In each instance where Congress modified rights under the General Mining Law, it avoided "takings" concerns through savings clause provisions. Notably, the MLA is the only major amendment to the General Mining Law that substantively changed the claims interest structure for mineral deposits on public lands into a leasehold process. The Multiple Surface Use Act of 1955, which reduced surface rights associated with unpatented mining claim ownership, also included a savings clause that preserved the existing rights of claimholders,⁹³ and numerous steps were taken in FLPMA to avoid triggering the Fifth Amendment with the implementation of that Act.⁹⁴ These successful amendments to the General Mining Law provide strong precedent for avoiding takings of protected property interests in the future.

⁸⁷ *See id.*

⁸⁸ *Id.* (Sen. Jones reading correspondence from E.L. Medler stating that unpatented claimholders have vested property rights and prolonged litigation will ensue if the MLA strips them of these rights.)

⁸⁹ *Id.* at 4,580-81 (Sen. Lenroot providing an example of a claimholder who falls under the protection of the savings clause.)

⁹⁰ *Id.* at 4,582 (Sen. Jones stating that, considering the congressional record, the Interior Department would not be justified in turning down a patent application for a claim that had been maintained under the Mining Law after the MLA is in effect.)

⁹¹ *Hickel v. Oil Shale Corp.*, 400 U.S. 48, 57-58 (1970) (holding Secretary of Interior was correct to invalidate existing oil shale claims where the claimants had not substantially complied with the maintenance requirements adopted by the MLA's savings clause); *accord Orion Rsrvs. Ltd. v. Salazar*, 553 F.3d 697, 708 (D.C. Cir. 2009); *Exxon Mobil Corp. v. Norton*, 346 F.3d 1244 (10th Cir. 2003); *Cliffs Synfuel Corp. v. Norton*, 291 F.3d 1250, 1260-61 (10th Cir. 2002) (holding mineral claimant's failure to perform assessment work for 46 years was merely "token" assessment work, inconsistent with the requirements of the MLA's savings clause, and the claims were, therefore, invalid).

⁹² *See generally supra* note 91.

⁹³ *See, e.g.*, The Act of July 23, Pub. L. 84-167, § 7, 69 Stat. 367 (1955) (preserving the existing surface rights associated with unpatented mining claim ownership which were held by *any claimant*).

⁹⁴ The various public land withdrawals from appropriation under the public land laws also uniformly preserve unpatented mining claims existing at the time of withdrawal. *See e.g., Skaw v. United States*, 740 F.2d 932, 933 (Fed. Cir. 1984) (withdrawal of the St. Joe River main stem under the Wild and Scenic Rivers Act of 1968, Pub. L. 90-542, 82 Stat. 906 (1968)); *Freese v. United States*, 639 F.2d 754, 755 (Ct. Cl. 1981) (withdrawal to create Sawtooth National Recreation Area under the Sawtooth Act, Pub. L. 92-400, 86 Stat. 612 (1972)); *United States v. N. Am. Transp. & Trading Co.*, 253 U.S. 330, 333 (1920) (public reservation for Army post under the Acts of March 3, 1899, c. 423, 30 Stat. 1064, 1070 and May 26, 1900, c. 586, 31 Stat. 205, 213).

VIII. CONCLUSION

Congress is likely to consider converting unpatented mining claims on federal lands into leases or imposing royalty burdens through future legislation. Congress may also consider imposing statutory obligations on claimholders that would diminish the economic viability of unpatented mining claim ownership. Any such destruction of property rights would expose the federal government to substantial liability risk under the Fifth Amendment of the United States Constitution. Any reformative measures to the General Mining Law should follow responsible congressional precedent by including a savings clause to preserve existing claims, including the right to pursue discovery. To do otherwise would not only be unjust, but could result in substantial federal resources and taxpayer dollars being wasted on takings issues, just compensation determinations, and needless litigation.

Exhibit VII

**Nevada Division of Environmental Protection - Bureau of Land Management - U.S. Forest Service
Memorandum of Understanding**

MEMORANDUM OF UNDERSTANDING

For
**MINING AND MINERAL RELATED ACTIVITIES
WITHIN THE STATE OF NEVADA**

AMONG
**NEVADA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION**

AND
**USDA, FOREST SERVICE
HUMBOLDT-TOIYABE NATIONAL FOREST**

AND
**USDA, FOREST SERVICE
INYO NATIONAL FOREST**

AND
**U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NEVADA**

This MEMORANDUM OF UNDERSTANDING (MOU) is hereby made and entered into by and between the State of Nevada, Department of Conservation and Natural Resources, Division of Environmental Protection (NDEP); the United States Department of Agriculture, Forest Service, Humboldt-Toiyabe National Forest and Inyo National Forest (U.S. Forest Service); and the United States Department of the Interior - Bureau of Land Management, Nevada State Office (USDOI-BLM).

SECTIONS.

- I. PURPOSE
- II. AUTHORITIES
- III. DEFINITION OF TERMS USED IN THE MOU
- IV. COMPLIANCE ENFORCEMENT
- V. PLANS AND PERMITS
- VI. DETERMINING THE RECLAMATION COST ESTIMATE/
ADMINISTERING THE BOND
- VII. DETERMINING THE LONG-TERM FUNDING MECHANISM COST
ESTIMATE/ADMINISTERING THE LONG-TERM FUNDING MECHANISM
- VIII. LIMITATIONS
- IX. COORDINATION
- X. DISPUTE RESOLUTION
- XI. EFFECTIVE DATE
- XII. NOTICES

- XIII. ENDORSEMENT
- XIV. AMENDMENT
- XV. TERMINATION
- XVI. NON-FUND OBLIGATION DOCUMENT
- XVII. NONBINDING AGREEMENT
- XVIII. MEMBERS OF U.S. CONGRESS
- XIX. TEXT MESSAGING WHILE DRIVING
- XX. DEBARMENT AND SUSPENSION
- XXI. FREEDOM OF INFORMATION ACT (FOIA)
- XXII. PARTICIPATION IN SIMILAR ACTIVITIES
- XXIII. PRINCIPAL CONTACTS
- XXIV. AUTHORIZED REPRESENTATIVES/SIGNATURES

I. **PURPOSE.** The purpose of this MOU is to achieve the following:

- 1. Establish and maintain coordination among the NDEP, the U.S. Forest Service, and the USDOJ-BLM ("the agencies") for their respective joint responsibilities pertaining to the administration and reclamation of lands disturbed by exploration projects and mining operations for locatable minerals on private and Federal lands administered by the U.S. Forest Service and USDOJ-BLM within the State of Nevada;
- 2. Expedite administration and enforcement of the agencies' respective authorities pertaining to exploration and mining operations;
- 3. Prevent unnecessary or undue degradation of Federally-managed and private lands and minimize adverse environmental impacts on surface resources; and
- 4. Develop and maintain common guidance to regulate facilities and activities on operations consisting of a mixture of Federally-managed and private lands.

II. **AUTHORITIES.** This MOU is based on the following authorities:

A. **NDEP**

- 1. Nevada Revised Statutes, Chapter 519A (NRS 519A).
- 2. Nevada Revised Statutes, Chapter 445A (NRS 445A).
- 3. Nevada Administrative Code, Chapter 519A (NAC 519A).
- 4. Nevada Administrative Code, Chapter 445A (NAC 445A).

B. **U.S. Forest Service**

- 1. The General Mining Law of May 10, 1872, as amended (30 U.S.C. 22, et seq.).

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2. The Organic Administration Act of June 4, 1897, as amended (30 STAT 36, 16 U.S.C. 478 and 551).
3. Title 36 Code of Federal Regulations, Part 228, Subpart A, as amended.
4. Title 30 U.S.C. Section 612.
5. Title 36 Code of Federal Regulations, Part 219, as amended.
6. Title 36 Code of Federal Regulations, Part 261, as amended.

C. USDOI-BLM

1. The General Mining Law of May 10, 1872, as amended (30 U.S.C. 22, et seq.).
2. Title 30 U.S.C. Section 612.
3. Sections 102(a)(12), 302, 303 and 603 of The Federal Land Policy and Management Act of Oct. 1, 1976, as amended (90 STAT 2762, 43 U.S.C. 1732 et seq.).
4. Title 43 U.S.C. Sections 1201 and 1457.
5. Title 43 Code of Federal Regulations, Subparts 3802, 3809 and 3715.

III. DEFINITIONS OF TERMS USED IN THIS MOU.

1. Bureau of Land Management (BLM) Lands - Lands managed by the USDOI-BLM.
2. Compliance Enforcement - Administrative and legal remedies for violations of an agency's applicable laws and regulations.
3. Federal Agencies - For purposes of this MOU, "Federal Agencies" refers to the U.S. Forest Service and the USDOI-BLM.
4. Final Plan for Permanent Closure (FPPC) - A Final Plan for Permanent Closure provides closure goals, methods and final designs, as applicable, to achieve final chemical stabilization, removal or mitigation of pollutant source(s) for any process component. A process component is any constructed point source at a mine facility from which there is or may be the discharge of pollutants. A FPPC may apply to one or more individual process components or to all remaining process components at a facility as appropriate. Additional closure requirements and considerations for open pit and underground mines, heap leach pads, and tailings impoundments must also be addressed. A FPPC includes a post-closure monitoring plan to demonstrate that the closure goals have been met. The primary closure goal for all FPPCs is to prevent degradation of waters of the State beyond established limits under the environmental conditions that may reasonably be expected to exist at the site. Pit lakes have the additional closure goal of preventing the potential to adversely affect the

health of human, terrestrial or avian life. A FPPC for any process component must be submitted to NDEP at least two years prior to the anticipated permanent closure of that process component or at any time that permanent closure is mandated.

5. **Locatable Minerals** - All mineral deposits under the General Mining Law of 1872, **as amended**, except those minerals specifically excluded by the Mineral Leasing Act of 1920, **as amended**, and Mineral Materials Act of 1947, **as amended**.
6. **Long-Term Funding Mechanism (LTFM)** - A trust fund or other funding mechanism established by the operator to ensure the continuation of any long-term, post-mining treatment or maintenance requirements. Establishing a LTFM does not relieve the operator of their continuing responsibility to provide long-term management and maintenance of the site. The federal case file will not be closed and the NDEP Reclamation Permit will not be terminated before all long-term, post-mining treatment or maintenance requirements have been completed and the LTFM has accordingly been terminated. The NDEP water pollution control permit will not be terminated before the LTFM if the LTFM covers activities related to that permit.
7. **National Forest System (NFS) Lands** - Lands managed by the U.S. Forest Service.
8. **Notice of Intent to Operate** - Formal notification prior to initiating operations which might cause significant surface disturbance of surface resources administered by the U.S. Forest Service. If the District Ranger determines that the proposed operations will likely cause or are causing significant surface disturbance, then a Plan of Operations shall be submitted.
9. **Operator** - A person conducting or proposing to conduct operations. "Person" means any individual, firm, corporation, association, partnership, trust, consortium, joint venture, or any other entity conducting operations on Federally-managed and private lands.
10. **Plan of Operations (Plan)** - A classification of operations. A formal proposal to conduct operations, including reclamation, on Federally-managed lands. The appropriate land managing agency (ies) must review and approve the Plan. Approval requires an acceptable Reclamation Cost Estimate and Reclamation Bond for the Plan.
11. **Reclamation Bond** - The financial assurance provided by or on behalf of an Operator to guarantee the lands disturbed under an approved Plan are reclaimed in the event the Operator cannot or will not perform the required reclamation (i.e. a surety bond or a personal bond secured by a financial pledge).
12. **Reclamation Cost Estimate (RCE)** - A Reclamation Cost Estimate is prepared and submitted by an Operator and reviewed by the appropriate agencies. The RCE must cover the estimated costs as if the U.S. Forest Service and/or USDOI-BLM and/or NDEP were to contract with a third party to reclaim the operations according to the Reclamation Plan, including construction and maintenance costs for any treatment facilities necessary to meet Federal and State environmental standards. The RCE must also cover any interim stabilization and infrastructure maintenance costs needed to maintain the area of operations

in compliance with applicable environmental requirements while third-party contracts are developed and executed.

The U.S. Forest Service RCEs are based on the principles put forth in the "Training Guide for Reclamation Bond Estimation and Administration for Mineral Plans of Operation authorized and administered under 36 CFR 228A USDA – Forest Service, April 2004."

13. **Reclamation Permit** - The permit issued by the NDEP regarding reclamation of mining operations and exploration projects that disturb five acres or more. The permit application is reviewed per NAC 519A regulations. Once the permit application is deemed complete by NDEP and consistent with NAC 519A regulations, the Reclamation Permit is issued.
14. **Reclamation Plan (RecPlan)** - The part or section of the Plan that describes actions necessary to reclaim, rehabilitate, shape, stabilize, revegetate or otherwise treat the land in order to return it to a safe, stable condition consistent with the establishment of a productive post mining land use and to prevent unnecessary or undue degradation. Description of equipment, devices or practices proposed should be consistent with regulations at 36 CFR 228 Subpart A, 43 CFR 3809, and NAC 519A, as appropriate. Abandonment or demolition of facilities is conducted to maximize public health and safety and visual resource management.
15. **Tentative Plan for Permanent Closure (TPPC)** - A Tentative Plan for Permanent Closure is part of the operating plans submitted with a water pollution control permit application. The TPPC is a conceptual closure plan to chemically stabilize all pollutant sources at a mining facility, including but not limited to mine-impacted waters, and is required to include sufficient detail to support the RCE. All activities required in the TPPC should fall under the scope of the RecPlan/RCE, but some activities in the RecPlan/RCE may fall outside the scope of the TPPC (e.g., physical reclamation unrelated to pollutant sources).

IV. **COMPLIANCE ENFORCEMENT**. Each agency shall have the responsibility for enforcement of its applicable laws and regulations. The Federal Agencies and the NDEP will coordinate enforcement actions when appropriate. An Operator's failure to achieve Compliance Enforcement requirements by any agency may result in a request for bond forfeiture.

V. **PLANS AND PERMITS**. The USDOJ-BLM and the NDEP have developed a joint recommended RecPlan format for use by an Operator. The USDOJ-BLM also has a voluntary Plan outline available to assist Operators in complying with the requirements at 43 CFR 3809. The RecPlan is required by the Federal Agencies and the NDEP. The Federal Agencies and the NDEP acknowledge that a RecPlan written according to the Voluntary – 3809 Plan of Operations Outline/Format should satisfy USDOJ-BLM and the NDEP requirements, and the U.S. Forest Service Section V (H) Reclamation of the U.S. Forest Service Plan of Operations Form FS-2800-5 (Rev. 12/11).

The Federal Agencies and the NDEP will make every effort to participate in pre-Plan coordination meetings with the Operator prior to submittal of a new or amended Plan. This will allow the agencies to provide input into the conceptual design of the Plan and coordinate

baseline information needs and agency review schedules including, but not limited to, rock characterization analysis, hydrological and geochemical modeling requirements, and pit lake studies before the Plan is submitted for agency review.

Upon receipt of a new or an amended Plan by the USDOI-BLM or the U.S. Forest Service, the Federal Agency (ies) and the NDEP will make every effort to participate in a coordination meeting with the Operator, as appropriate, to discuss coordination, permitting, review processes, Reclamation Cost Estimate, bonding, National Environmental Policy Act (NEPA) requirements, and establish contacts for the Plan approval process. When an agency receives a new or amended Plan covered by this MOU, the agency will verify that a duplicate copy was filed with the other responsible agency (ies). The review and approval of the Plan will be coordinated between the agencies.

The agencies will coordinate reviews and approvals for mine closure requirements. When an Operator submits a TPPC, FPPC or closure report, the NDEP will verify that a duplicate copy has been filed with the other responsible agency (ies). The Federal Agency (ies) will review the closure documents to determine if a Plan amendment or a revised RCE is needed and the level of NEPA analysis required. The Federal Agency (ies) will notify the Operator and other agency (ies) involved of its determination.

VI. DETERMINING THE RECLAMATION COST ESTIMATE/ADMINISTERING THE BOND.

The provisions of this section describe coordination of the agencies in determining a RCE, the amount required for a Reclamation Bond, administering a bond, obtaining performance under a bond, and performing reclamation of Plans covered by this MOU.

1. Based on a complete and adequate RCE submitted by an Operator, the agencies shall determine a single amount required for the Reclamation Bond, write a Reclamation Bond decision letter and ensure the agency (ies) are copied on the decision.

If NFS lands are involved, the applicable portion of the RCE shall be documented by the U.S. Forest Service and that portion of the bond shall be allocated for the NFS lands. The NDEP or the U.S. Forest Service shall each have access to its appropriate allocation of the bond based on the bond amounts for NFS land and private land unless otherwise agreed to in writing. If a bond includes coverage of USDOI-BLM and NFS lands, then an interagency agreement may be executed as necessary.

2. All reviews of RecPlans, TPPCs and RCEs shall be coordinated between the agencies to the extent feasible to determine a mutually acceptable required bond amount. Descriptions of the activities included in both the TPPC and RecPlan should be consistent and provide sufficient detail to support the RCE. The agencies shall make every effort to resolve any major discrepancies between the RCE and the TPPC to the extent that their scopes overlap, including requiring the Operator to reconcile any such discrepancies by amending the RCE and TPPC when determined necessary. For projects involving USDOI-BLM and private

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lands, the USDOI-BLM and the NDEP will coordinate on correspondence of formal comments and approvals of the required bond amount.

If the Federal Agencies or the NDEP are unable to complete their RCE review in a timely manner, the agency that has completed its review will proceed with issuing a RCE determination as required by applicable state or federal regulations. An agency with an unanticipated delay in its review will issue a RCE determination upon completion of its review of the RCE. The agencies will make every effort to limit delays.

For operations involving NFS and private lands that cumulatively propose five acres or more of disturbance, the U.S. Forest Service and the NDEP will mutually determine whether a single Reclamation Bond or separate Reclamation Bonds will be held for the operation. A single Reclamation Bond may be provided if the RCE specifies the amount of the Reclamation Bond allocated to reclamation for the NFS lands. The basis for the allocations shall be the RCE determined by the agencies in provision 1 of this section of the MOU. The Reclamation Bond may be held by the U.S. Forest Service or by the NDEP. Such Reclamation Bond must be acceptable to both agencies, and must meet their respective requirements and standards.

If separate Reclamation Bonds are allocated for NFS and private lands, the U.S. Forest Service will review the RCE and adjust as necessary according to regulation/policy applicable to the RCE for the NFS lands associated with the project. The NDEP will review the RCE and subsequent updates to the RCE for the private portion of the operation. Both agencies will issue a determination of required Reclamation Bond upon the completion of their respective reviews.

The Standardized Reclamation Cost Estimator (SRCE) is a tool used by the NDEP and USDOI-BLM to calculate Reclamation Bond costs for exploration and mining projects proposing five acres or more disturbance. Appropriate use of SRCE can provide a consistent basis for estimating reclamation costs for operations in Nevada and can help ensure that RCEs meet applicable regulatory requirements. For Mining Plans on NFS lands in Nevada, the U.S. Forest Service may also use SRCE as a tool to calculate reclamation costs proposing 5 acres or more disturbance.

3. When the USDOI-BLM and the U.S. Forest Service require a Reclamation Bond for a Plan that involves lands managed by both agencies, a Reclamation Bond for the Plan may be held by either agency and shall be redeemable by either agency. Any such Reclamation Bond(s) must be acceptable to both agencies. An interagency agreement may be executed as necessary.
4. If the NDEP holds a single bond for a Plan covered by this MOU that includes Federally-managed lands, then the Reclamation Bond must be acceptable to the USDOI-BLM (consistent with regulations at 43 CFR 3809.203, § 3809.570, and § 3809.571) prior to the NDEP acceptance.

5. The amount of the Reclamation Bond provided for a Plan must be sufficient to satisfy the RCE for the lands under each agency's jurisdiction as required by the laws and regulations of each agency. Where a mutually acceptable RCE cannot be reached, the agencies shall enter into dispute resolution as outlined in Section X of this MOU. If dispute resolution is not successful, then the agencies shall be responsible for determining the RCE for lands under their separate jurisdictions and require bonding accordingly.
6. If an agency finds cause to demand payment of a Reclamation Bond held by another agency, the agency finding cause must provide adequate justification and request the holding agency to initiate collection action. The agency holding the Reclamation Bond will initiate the process to collect the Reclamation Bond to the extent provided by and consistent with its laws and regulations. It is further agreed the agency holding the Reclamation Bond will act on behalf of the other agencies on any matters concerning the Reclamation Bond, to the extent provided by or consistent with its laws and regulations.
7. When a Reclamation Bond is collected, forfeited, or relinquished, the agency holding the appropriated funds will coordinate with the jurisdictional agencies on site reclamation. Expenditure and allocation of funds will be a collaborative decision between the agencies based on a coordinated site visit to determine reclamation needs in the best interest of public health and safety, and to minimize unnecessary or undue degradation of the environment. Each agency, however, remains responsible for complying with its law and regulations when collecting, forfeiting, expending or allocating such reclamation funds and nothing in this MOU should be interpreted in contravention of each agency's legal authorities and mandates.
8. The agencies may enter into additional agreements when necessary to implement any provisions under this Section. Such agreements may be required to describe legal and procedural requirements that must be followed by the agencies in determining the required amount of a Reclamation Bond, administering the bond, collecting the Reclamation Bond and/or performing reclamation on Federally-managed and private lands.
9. Written concurrence will be required of all agencies to verify any reduction of the obligated amount of a bond prior to a reduction being allowed. A reduction of the obligated amount of the bond will be effected by the office of the agency which accepted and maintains the bond. All parties to the bond and/or operations will be advised if and when the obligated amount of the bond is reduced.

VII. DETERMINING THE LONG-TERM FUNDING MECHANISM COST ESTIMATE/ ADMISTERING THE LONG-TERM FUNDING MECHANISM. The provisions of this section describe how the agencies will coordinate in determining a LTFM cost estimate, the funding amount (present value) required for a LTFM, administering a LTFM, obtaining performance under a LTFM, and performing long-term site management of Plans covered by this MOU using a LTFM. NDEP's authority with respect to LTFMs is limited to those activities involving waters of the state, mine-impacted waters and activities required to maintain the effectiveness of reclamation and closure.

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1. **The RecPlan for operations that require a LTFM must include a detailed description of the long-term management requirements for the site. The RecPlan is a component of the Plan. The agencies shall coordinate all reviews of RecPlans and LTFM cost estimates to the extent feasible to ensure that all appropriate activities and costs are identified. The agencies shall make every effort to resolve any major discrepancies between the RecPlan, TPPC (and FPPC if one exists) and LTFM cost estimate, to the extent that their scopes overlap, and when determined to be necessary shall require the Operator to reconcile any such discrepancies by amending the Plan, TPPC (and FPPC if one exists) and LTFM cost estimate. For projects involving BLM Lands and private lands, the USDOJ-BLM and the NDEP will coordinate on the communication of the agencies' formal comments.**
2. **The USDOJ-BLM shall be the lead agency regarding the determination of a LTFM cost estimate for operations that include BLM Lands. The USDOJ-BLM will issue a decision determining the required LTFM cost estimate and will ensure the appropriate agency (ies) is copied on the decision as appropriate.**
3. **For operations on BLM Lands, all aspects of fund administration, including but not limited to establishing the discount rate, identifying the funding amount (present value), determining the appropriate asset mix, and monitoring fund performance, will be the responsibility of the USDOJ-BLM.**
4. **The amount of the LTFM provided for a Plan must be sufficient to satisfy the cost estimate for the lands under each agency's jurisdiction as required by the laws and regulations of each agency. Where appropriate, the agencies may choose to develop separate LTFM cost estimates for lands under their separate jurisdictions and require financial assurances accordingly.**
5. **For operations on BLM Lands, the USDOJ-BLM will be the sole beneficiary of the LTFM. If the operator ceases to exist or is subject to a dissolution proceeding or a petition under Chapter 7 of the United States Bankruptcy Code, Title 11 U.S.C., as it may be amended or revised, or as otherwise provided for in the LTFM agreement, the USDOJ-BLM will use any and all withdrawals, distributions or disbursements from the LTFM to finance the long-term post-mining obligations described in the RecPlan. The USDOJ-BLM will coordinate with the jurisdictional agencies on long-term site management activities. Expenditure and allocation of funds on BLM Lands will be a USDOJ-BLM decision after considering input from the agencies based on a coordinated site visit to determine site management needs in the best interest of public health and safety, and to minimize unnecessary or undue degradation of the environment. Each agency, however, remains responsible for complying with its laws and regulations when withdrawing, distributing or dispersing such funds and nothing in this MOU should be interpreted in contravention of each agency's legal authorities and mandates.**
6. **For operations on lands in Nevada managed by the U.S. Forest Service, the U.S. Forest Service will work with the NDEP to establish the LTFM. NDEP will hold and administer the LTFM.**

7. The agencies may enter into additional agreements when necessary to implement any of the provisions under this Section. Such agreements may be required to describe legal and procedural requirements that must be followed by the agencies in administering the LTFM, withdrawing, distributing or dispersing the LTFM, and/or performing long-term site management on Federally-managed and private lands using the LTFM.
8. In the event that a LTFM cost estimate and/or funding amount is decreased, the affected agency (ies) will be notified by the agency administering the LTFM. The notification will explain why the LTFM cost estimate and/or funding amount is being reduced and the new LTFM cost estimate and/or funding amount required.

VIII. **LIMITATIONS.** This MOU is not intended to waive or otherwise limit any Federal or State laws, rules, or regulations, or any other requirements or duties under such laws and regulations. This MOU is not intended to give an agency additional authority beyond the agency's current legal authorities.

IX. **COORDINATION.** The Federal Agencies and the NDEP have many similar requirements for the Plan and/or water pollution control permit, including content requirements and compliance. The agencies will coordinate and exchange relevant information and correspondence as described below.

1. Each agency will promptly inform the other agencies of any new or recently discovered mineral-related activities on either Federally-managed or private lands to the agency (ies) with jurisdiction.

The Federal Agencies will inform the NDEP of any exploration greater than five acres, or mining and processing activities of any size, on Federally-managed lands.

2. Each agency will promptly inform the other agencies of any changes in law, regulation or policy that could affect this MOU.
3. Representatives from the agencies will meet as needed to coordinate activities, resolve issues or mutual concerns, exchange information on policies and procedures, and address any other matters of mutual concern that affect the implementation of this MOU.
4. Each agency will provide the other agencies a list of general personnel contacts corresponding to U.S. Forest Service and BLM Field Office management areas as a working directory of current locatable mineral projects and the points of contact for each operation. Points of contact lists shall be updated at least annually.
5. The agencies will coordinate and exchange relevant information and correspondence relating to inspections, Plans and RecPlans for projects affecting the agencies. When the Federal Agencies receive a new or amended Plan covered by this MOU they will verify that a duplicate copy was also provided to the Reclamation Branch of the NDEP, Bureau of Mining Regulation and Reclamation. The NDEP will allow submittal of duplicate copies in electronic format.

6. To the extent possible, in order to streamline the NEPA process and reduce potential for permitting delays, the agencies will make every effort to coordinate with each other and the Operator prior to the formal submittal of a new Plan or major modification to an existing Plan. This will allow the agencies to provide input into the conceptual design of the Plan and coordinate baseline information needs before the Plan is submitted for agency review.
7. The agencies will coordinate and exchange relevant information and correspondence relating to the water pollution control permit, including the following plans:
 - water management plans
 - waste rock management plans
 - hydrological and geochemical studies
 - design plans for mining areas and processing facilities, waste rock and tailing disposal facilities
 - monitoring plans
 - interim management plans
 - TPPCs, and
 - FPPCs.
8. To the extent possible, the agencies will make every effort to encourage and facilitate joint inspections.
9. The agencies will coordinate and exchange non-confidential information relating to Noncompliance Orders, Notices of Noncompliance and Findings of Alleged Violation and Orders.
10. The agencies will coordinate and exchange relevant information and correspondence relating to a change of operator, permit transfer, and related Reclamation Bond release. A Reclamation Bond release by NDEP requires the Operator to submit documentation of reclamation activities for surety release (Attachment A of the NDEP Reclamation Permit). The agencies will make every effort to review Attachment A prior to conducting joint site inspections and to coordinate authorization of bond releases. The agencies will not authorize Reclamation Bond releases without the other agencies' concurrence.
11. In instances where the NDEP has issued a Reclamation Permit for a project that includes BLM notice-level activity, extra effort is required by each agency to coordinate RCE reviews (on two-year intervals) and Reclamation Bond releases (with Attachment A submittals and joint inspections).
12. The USDOJ-BLM and the NDEP will jointly develop an annual schedule for operations that require a three (3) year RCE update. The agencies will coordinate correspondence to the Operators requiring the update and providing information on when submittals are required.

13. The U.S. Forest Service and the NDEP will coordinate on an annual basis to identify operations on NFS lands requiring a RCE update. The agencies will coordinate correspondence to the Operators requiring the update and providing information on when submittals are required.

14. Within 90 days of the effective date of this MOU, the agencies will create a joint one page MOU Fact Sheet summarizing the interagency coordination actions of this MOU. Within 30 days of completion, each of the agencies will post the Fact Sheet as allowed and distribute the MOU Fact Sheet to its staff and management who receive, review or approve submittals described herein from Operators. Upon hiring of new staff or management who receive, review or approve submittals described herein from Operators, each of the agencies will provide the MOU Fact Sheet to its new staff or management.

X. **DISPUTE RESOLUTION.** In the event the agencies reach an impasse in resolving an issue addressed in this MOU, two levels of resolution will be established under this MOU. The first level will involve the Field/District Manager for the USDOJ-BLM, the District Ranger for the U.S. Forest Service and the Bureau Chief for the NDEP Bureau of Mining Regulation and Reclamation. If resolution cannot be reached at this level, the next level will involve the State Director for the USDOJ-BLM, the Forest Supervisor for the U.S. Forest Service, and the Administrator for the NDEP.

XI. **EFFECTIVE DATE.** This MOU shall become effective upon signature by the Administrator of the NDEP, the Forest Supervisor for the Humboldt-Toiyabe and Inyo National Forests of the U.S. Forest Service, and the Nevada State Director for the USDOJ-BLM, and will remain in full force and effect for a period of five (5) years from the date of the last signature, at which time it will expire. The agencies agree to implement the terms and conditions of this MOU as of the date of the last signature below.

XII. **NOTICES.** Any communications affecting the operations covered by this agreement given by the Federal Agencies or NDEP is sufficient only if in writing and delivered in person, mailed, transmitted electronically by e-mail or fax.

Notices are effective when delivered in accordance with this provision, or on the effective date of the notice, whichever is later.

XIII. **ENDORSEMENT.** Any of the parties' contributions made under this MOU do not by direct reference or implication convey endorsement of other parties' products or activities.

XIV. **AMENDMENT.** Amendments to this MOU may be proposed at any time by any agency subject to this MOU and shall become effective upon written approval by all agencies to the MOU.

XV. **TERMINATION.** Any of the agencies, after sixty (60) days written notice to the other agencies, may terminate this MOU, in whole or in part, at any time before the date of expiration. In the event this MOU is terminated, each agency agrees to maintain any existing bond(s) to the extent consistent with applicable law until such time as an agreement can be

reached between the Operator, the NDEP, and the Federal Agencies as to the disposition of such bond(s).

XVI. NON-FUND OBLIGATION DOCUMENT. This MOU is neither a fiscal nor a funds obligation document. Any endeavor or transfer of anything of value involving reimbursement or contribution of funds among the agencies to this MOU will be handled in accordance with applicable laws, regulations and procedures including those for government procurement and printing. Such endeavors will be outlined in separate agreements, such as a cooperative agreement, that shall be made in writing by representatives of the agencies and shall be independently authorized according to appropriate statutory authority. This MOU does not provide such authority. Specifically, this MOU does not establish authority for noncompetitive award to the cooperator of any contract or other agreement. Any contract or agreement for training or other services must fully comply with all applicable requirements, including for competition.

XVII. NONBINDING AGREEMENT. This MOU creates no right, benefit, or trust responsibility, substantive or procedural, enforceable by law or equity. The parties shall manage their respective resources and activities in a separate, coordinated and mutually beneficial manner to meet the purpose(s) of this MOU. Nothing in this MOU authorizes any of the parties to obligate or transfer anything of value.

Specific, prospective projects or activities that involve the transfer of funds, services, property, and/or anything of value to a party requires the execution of separate agreements and are contingent upon numerous factors, including, as applicable, but not limited to: agency availability of appropriated funds and other resources; agency and cooperator administrative and legal requirements (including agency authorization by statute); etc. This MOU neither provides, nor meets such criteria. If the parties elect to enter into an obligation agreement that involves the transfer of funds, services, property, and/or anything of value to a party, then the applicable criteria must be met. Additionally, under a prospective agreement, each party operates under its own laws, regulations, and/or policies, and any agency's obligations will be subject to the availability of appropriated funds and other resources. The negotiation, execution, and administration of these prospective agreements must comply with all applicable law.

Nothing in this MOU is intended to alter, limit, or expand the respective agencies' statutory and regulatory authorities.

XVIII. MEMBERS OF U.S. CONGRESS. Pursuant to 41 U.S.C. 22, no U.S. member of, or U.S. delegate to, Congress shall be admitted to any share or part of this agreement, or benefits that may arise therefrom, either directly or indirectly.

XIX. TEXT MESSAGING WHILE DRIVING. In accordance with Executive Order (EO) 13513, "Federal Leadership on Reducing Text Messaging While Driving," any and all text messaging by Federal employees is banned: a) while driving a Government owned vehicle (GOV) or driving a privately owned vehicle (POV) while on official Government business; or b) using any electronic equipment supplied by the Government when driving any vehicle at any time.

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All cooperators, their employees, volunteers, and contractors are encouraged to adopt and enforce policies that ban text messaging when driving company owned, leased or rented vehicles, POVs or GOVs when driving while on official Government business or when performing any work for or on behalf of the Government.

- XX. **DEBARMENT AND SUSPENSION.** Each party shall immediately inform all other parties if they or any of their principals are presently excluded, debarred, or suspended from entering into covered transactions with the federal government according to the terms of 2 CFR Part 180. Additionally, should NDEP or any of their principals receive a transmittal letter or other official Federal notice of debarment or suspension, then they shall notify the U.S. Forest Service and BLM without undue delay. This applies whether the exclusion, debarment, or suspension is voluntary or involuntary.
- XXI. **FREEDOM OF INFORMATION ACT (FOIA) AND NEVADA PUBLIC RECORDS ACT.** Public access to MOU or agreement records must not be limited, except when such records must be kept confidential as a matter of law and/or are exempt from disclosure pursuant to the Freedom of Information Act (FOIA) regulations (5 U.S.C. 552) and Nevada Public Records Act (NRS Chapter 239).
- XXII. **PARTICIPATION IN SIMILAR ACTIVITIES.** This MOU in no way restricts the Federal Agencies or the NDEP from participating in similar activities with other public or private agencies, organizations, and individuals.

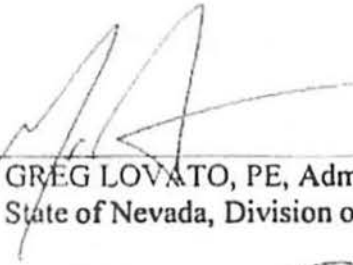
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XXIII. PRINCIPAL CONTACTS. Individuals listed below are authorized to act in their respective areas for matters related to this agreement.

AGENCY	PHONE
Nevada Division of Environmental Protection – Administrator Greg Lovato PE – glovato@ndep.nv.gov 901 S Stewart St, Suite 4001 Carson City, NV 89701	(775) 687-9373
Bureau of Mining Regulation & Reclamation – Bureau Chief Joe Sawyer PE – jsawyer@ndep.nv.gov 901 S Stewart St, Suite 4001 Carson City, NV 89701	(775) 687-9397
Humboldt-Toiyabe National Forest 1200 Franklin Way Sparks, NV 89431	(775) 331-6444
Minerals Program Manager, Humboldt-Toiyabe National Forest Susan Elliott – susan.elliott@usda.gov 660 S 12 th Street, Suite 108 Elko, NV 89801	(775) 778-6123
Inyo National Forest 351 Pacu Lane, Suite 200 Bishop, CA 93514	(760) 873-2400
Bureau of Land Management, Nevada State Office Mining Law Program Lead Kirk Rentmeister – krentmei@blm.gov 1340 Financial Blvd Reno, NV 89502	(775) 861-6451

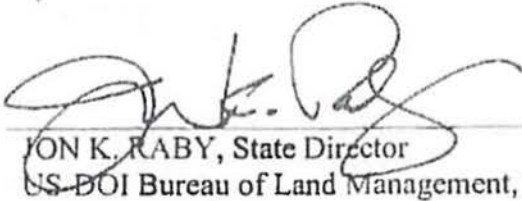
XXIV. AUTHORIZED REPRESENTATIVES. By signature on the following page, each party certifies that the individuals listed in this document as representatives of the individual parties are authorized to act in their respective areas for matters related to this MOU. In witness whereof, the parties hereto have executed this MOU as of the last date written below.

FS Agreement No. _____
NDEP Agreement No. _____
BLM Agreement No. _____



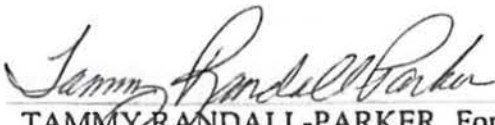
GREG LOVATO, PE, Administrator
State of Nevada, Division of Environmental Protection

May 23, 2019
Date



JON K. RABY, State Director
US DOI Bureau of Land Management, Nevada State Office

June 14, 2019
Date



TAMMY RANDALL-PARKER, Forest Supervisor
U.S. Forest Service, Inyo National Forest

8/2/2019
Date



WILLIAM A. DUNKELBERGER, Forest Supervisor
U.S. Forest Service, Humboldt-Toiyabe National Forest

6/27/19
Date

The authority and format of this agreement have been reviewed and approved for signature.



SARAH RUSSELL, Grants Management Specialist
U.S. Forest Service, Humboldt-Toiyabe National Forest

6/26/2019
Date



Digitally signed by AARON STOUT
Date: 2019.07.10 10:09:34 -07'00'

AARON STOUT, Grants Management Specialist
U.S. Forest Service, Inyo National Forest

Date

Exhibit II
Western Governors' Association June 2022 Mineral Policy Resolution



Policy Resolution 2022-08

National Minerals Policy

A. BACKGROUND

1. Federal lands account for as much as 86 percent of the land area in certain western states. These same states account for 75 percent of our nation's metals production. Few countries are as blessed with the abundance of minerals and metals as is the United States.
2. The Mining and Minerals Policy Act of 1970 formally recognized the importance of mining and domestic minerals production as a policy of the United States, including "the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries," "the orderly and economic development of mineral resources ... to help assure satisfaction of industrial, security and environmental needs," "mining, mineral and metallurgical research," "... including the use and recycling of scrap to promote the wise and efficient use of our natural and reclaimable resources; the study and development of methods for the disposal, control and reclamation of mineral waste products, and the reclamation of mined land, so as to lessen adverse impacts of mineral extraction."
3. Access to domestic minerals is increasingly important to decrease our reliance on foreign sources. Twenty-five years ago, the United States was dependent on foreign sources for 45 nonfuel mineral materials. The U.S. imported 100 percent of the Nation's requirements for 8 of these and imported more than 50 percent of the Nation's needs for another 19. By 2014, U.S. import dependence for nonfuel mineral materials had risen significantly from 45 to 65 commodities. The United States imported 100 percent of the Nation's requirements for 19 of these, imported more than 50 percent of the Nation's needs for another 24.
4. A major factor contributing to the U.S. reliance on foreign sources of minerals is a duplicative and inefficient mine permitting system that discourages development of domestic resources. While processes have improved, it can take seven to 10 years in the United States to navigate this cumbersome federal process to bring a mine into production. The same process takes approximately two years in countries that have comparable environmental standards, such as Canada and Australia. Targeted reforms to the mine permitting system are necessary to ensure a domestic supply of minerals which is sufficient to meet the rapidly growing demand.
5. Ensuring timely access to domestic minerals will strengthen our economy and keep us competitive globally as demand for minerals continues to grow, especially for manufacturing and construction. Our antiquated and duplicative permitting process discourages investment and jeopardizes the growth of downstream industries, related jobs and technological innovation that all depend on a secure and reliable mineral supply chain. Permitting delays also impede the United States' ability to meet growing demand for consumer electronics and energy technologies – both of which require minerals and metals in their manufacture.

6. Transitioning to a renewable energy economy will require a 400 to 600 percent increase in the supply of critical minerals like lithium, graphite, cobalt and nickel, either from recycled sources or new mineral development. Expanding the new or recycled domestic supply and processing capacity for critical minerals is essential to increasing the supply of renewable energy technologies such as electric vehicle batteries, solar panels, and wind turbines. Critical minerals also have non-energy applications, and increasing demand for critical minerals in the energy sector has the potential to create scarcity in the supply chain for other sectors such as consumer electronics, causing price inflation.
7. As innovations continue to occur in defense and energy industries, it is imperative that we limit our reliance on foreign markets for the rare earth minerals that support a wide range of applications throughout these important sectors. Current opportunities exist to establish domestic end-to-end rare earth material mines, and priority should be given to identifying policies that minimize foreign dependence on rare earth minerals.
8. The Mining Law has provided the framework for developing hardrock minerals on the public lands. It has been supplemented by a large body of federal, state, tribal and local environmental and reclamation laws and regulations (including regulations promulgated by the federal land management agencies) to assure protection of the environment, wildlife and cultural resources during mineral exploration and development and to ensure reclamation of lands after active mining ceases. Supplements added to the existing framework for developing hardrock minerals on public lands should reflect, and respect, traditional understanding of jurisdiction.
9. The National Academy of Sciences' National Research Council, after a comprehensive review of these laws and regulations at the direction of the Congress, concluded that existing laws and regulations are "complicated but generally effective." It also identified "specific issues or 'gaps' in existing..." regulations intended to protect the environment."
10. Hardrock mining operations on both public and private lands in the western states are subject to federal environmental laws under both the U.S. Environmental Protection Agency (EPA) and the Army Corps of Engineers. In most states, the Clean Water Act, the Clean Air Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act, and the Safe Drinking Water Act are administered by state environmental agencies with oversight by EPA. Hardrock mining operations are also subject to regulatory programs for the protection of plants and wildlife, including the Endangered Species Act, the Migratory Bird Treaty Act, and the Bald Eagle Protection Act.
11. Furthermore, the modern hardrock mining industry is extensively regulated by the federal government on U.S. Bureau of Land Management- and U.S. Forest Service-administered lands. These regulations include review of the mining plan of operations, comprehensive permit, design, operations, closure, reclamation requirements, corrective action and financial assurance requirements, to ensure that the mining operations will not result in unnecessary or undue degradation of public lands.
12. The western states also extensively regulate hardrock mining operations on both private and public lands (state and federal), and uniformly impose permit and stringent design and operating standards, as well as financial assurances to ensure that hardrock mining operations are conducted in a manner that is protective of human health and the environment, and that, at closure, the mined lands are returned to a safe, stable condition for productive post-mining use.

13. Under the federal Mining Law, no royalties are owed to the federal or state governments for hardrock minerals extracted from federal public lands. However, such mining operations, which are most often located in rural areas lacking economic opportunities, can result in significant high-wage employment, royalties from private and state lands, increased state and local tax revenues and development of infrastructure necessary to support communities.

B. GOVERNORS' POLICY STATEMENT

1. Now is the time to build on the 1970 Mining and Minerals Policy Act with legislation and policies that will unlock our mineral potential to ensure access to the metals that are critical to U.S. economic and national security – providing vital base materials for electronics, telecommunications, satellites, aircraft, manufacturing and alternative energy technologies (particularly wind, solar, and electric vehicle batteries).
2. Western Governors recognize that the minerals mining industry is an important component to both local and national economies. Reliable supplies of minerals and metals play a critical role in meeting our economic and national security needs.
3. WGA commends efforts by the United States Geological Survey and state geological surveys to identify potential, critical minerals deposits for alternative energy technologies and other consumer products vital to modern society.
4. Congress, in consultation with the states, should develop a National Minerals Policy that truly enables mineral exploration and development in a manner that balances the nation's industrial and security needs with adequate protection of natural resources and the environment. Without reducing environmental or other protections afforded by current laws and regulations, any policy must address the length of the mine permitting process to ensure we can develop and provide the domestic resources that are critical to our national and economic security. Any policy should also take into account the potential impacts (including potential environmental effects) of mining operations and should maintain policies and procedures in place to mitigate any impacts.
5. A National Minerals Policy should address permitting delays, patenting, maintenance fees, an equitable government revenue mechanism, and the development of a clean-up fund and program for reclaiming abandoned hard rock mines. Relevant stakeholders, including the mining industry, should continue to work with Congress to determine the elements of a royalty system that is workable and fair.
6. New financial assurance requirements imposed upon the hardrock mining industry under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 108(b) would duplicate or supplant existing and proven state financial assurance regulations in this area. This is of particular concern to the western states, because CERCLA is a non-delegable federal program that provides no opportunity for implementation through state environmental agencies. The western states have developed deep experience in mine permitting, regulation, and closure. Federal preemption of state bonding programs will threaten these effective state programs.
7. The federal government should take an active role, working with western states, in the development of national minerals policies that recognizes the importance of a domestic

supply of minerals for our country while also protecting water resources which are particularly sensitive to the impacts of mining.

8. Western Governors encourage the Council on Environmental Quality to pursue improvements to National Environmental Policy Act (NEPA) regulations and policies that will provide certainty and predictability in the NEPA process. Protracted completion of NEPA reviews and excessive NEPA litigation cause delays and impose unreasonable costs on a wide range of projects on federal lands. Western Governors support timely NEPA reviews and policies that provide clear guidance as to the scope of impacts of any major federal action. Reforming NEPA procedures is an important step toward securing a reliable, domestic source of critical minerals. Such NEPA reforms should also ensure that western states with significant amounts of public land are not put at a competitive disadvantage relative to other states.
9. The United States holds approximately 55 million surface acres and 59 million acres of subsurface mineral estate in trust for tribal nations, and federal government has a responsibility to protect, administer, and account for the natural resources that it holds in trust on behalf of tribes. Tribes that are seeking to make use of trust resources deserve to be able to do so without diminution of their value caused by the federal government's actions. Governors support meaningful government-to-government consultation with Tribal sovereigns intending to make use of trust resources, and support efforts to avoid delays in approving rights-of-way applications for linear infrastructure to support mine operations, or other delays affecting mineral development that may constitute a failure to uphold this trust responsibility and affect tribes' ability to benefit from their mineral resources.

C. **GOVERNORS' MANAGEMENT DIRECTIVE**

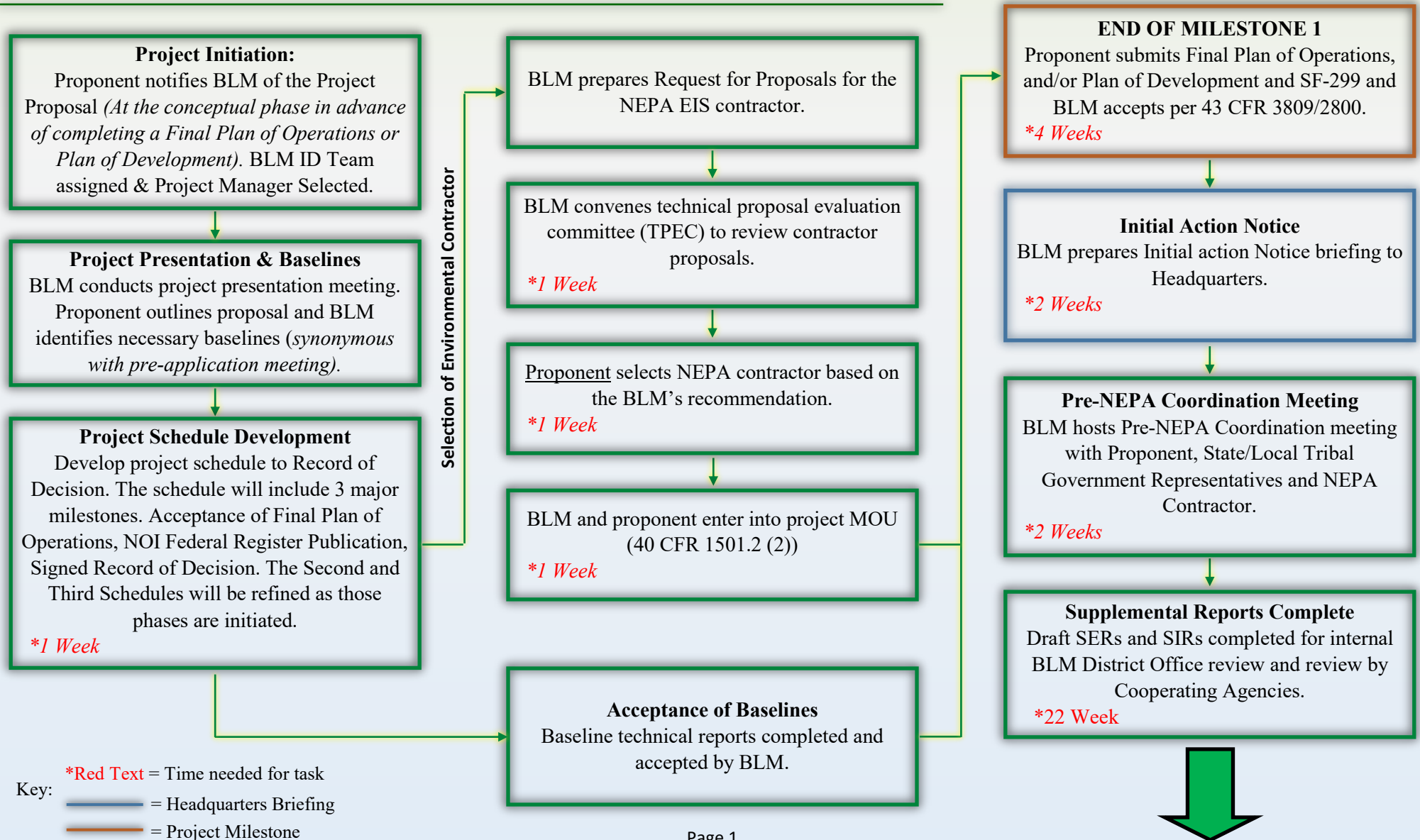
1. The Governors direct the WGA staff, where appropriate, to work with Congressional committees of jurisdiction and the Executive Branch to achieve the objectives of this resolution.
2. Furthermore, the Governors direct WGA staff to develop, as appropriate and timely, detailed annual work plans to advance the policy positions and goals contained in this resolution. Those work plans shall be presented to, and approved by, Western Governors prior to implementation. WGA staff shall keep the Governors informed, on a regular basis, of their progress in implementing approved annual work plans.

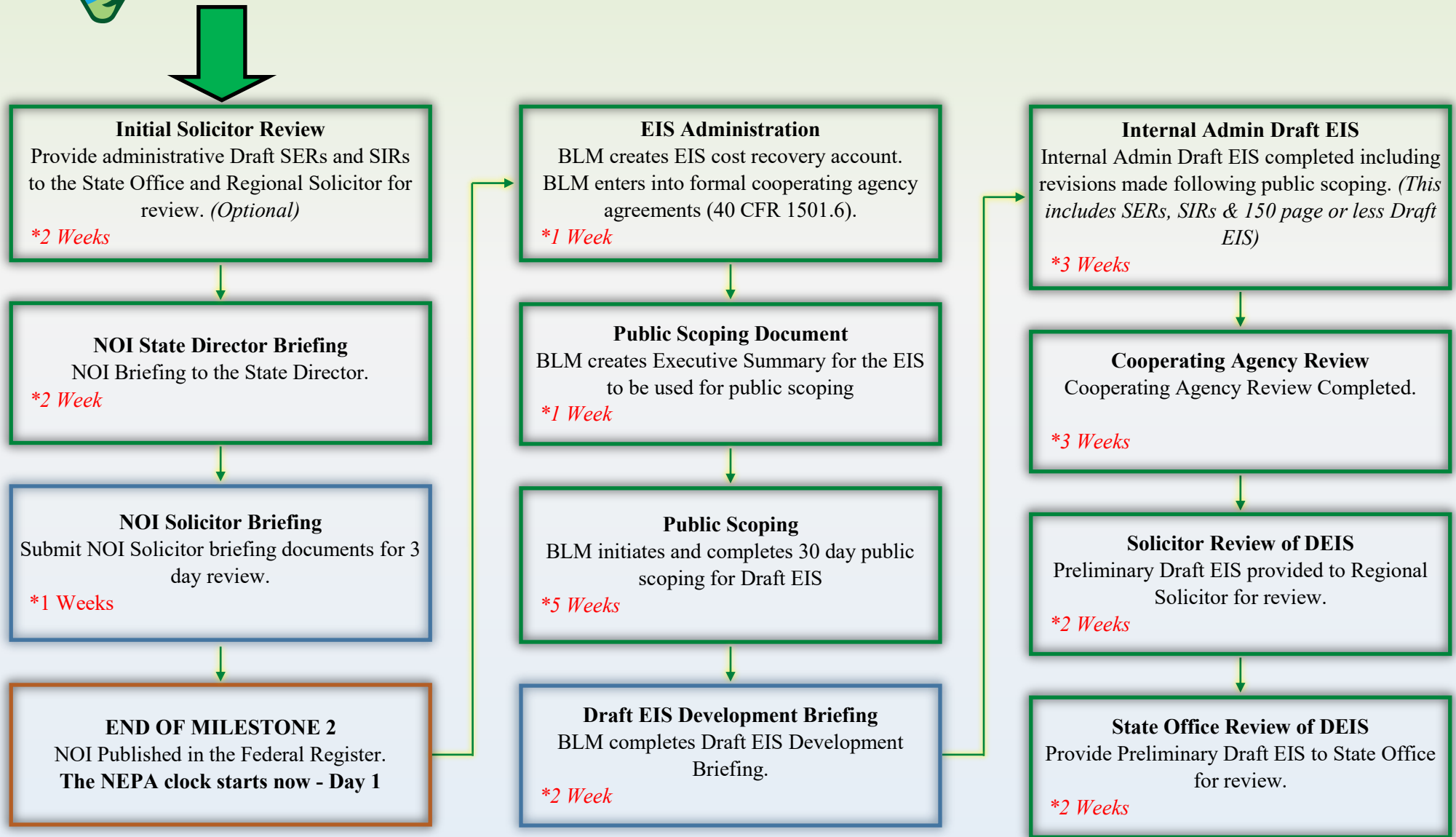
This resolution will expire in June 2025. Western Governors enact new policy resolutions and amend existing resolutions on a semiannual basis. Please consult <http://www.westgov.org/resolutions> for the most current copy of a resolution and a list of all current WGA policy resolutions.

Exhibit III
Nevada BLM NEPA Flowchart

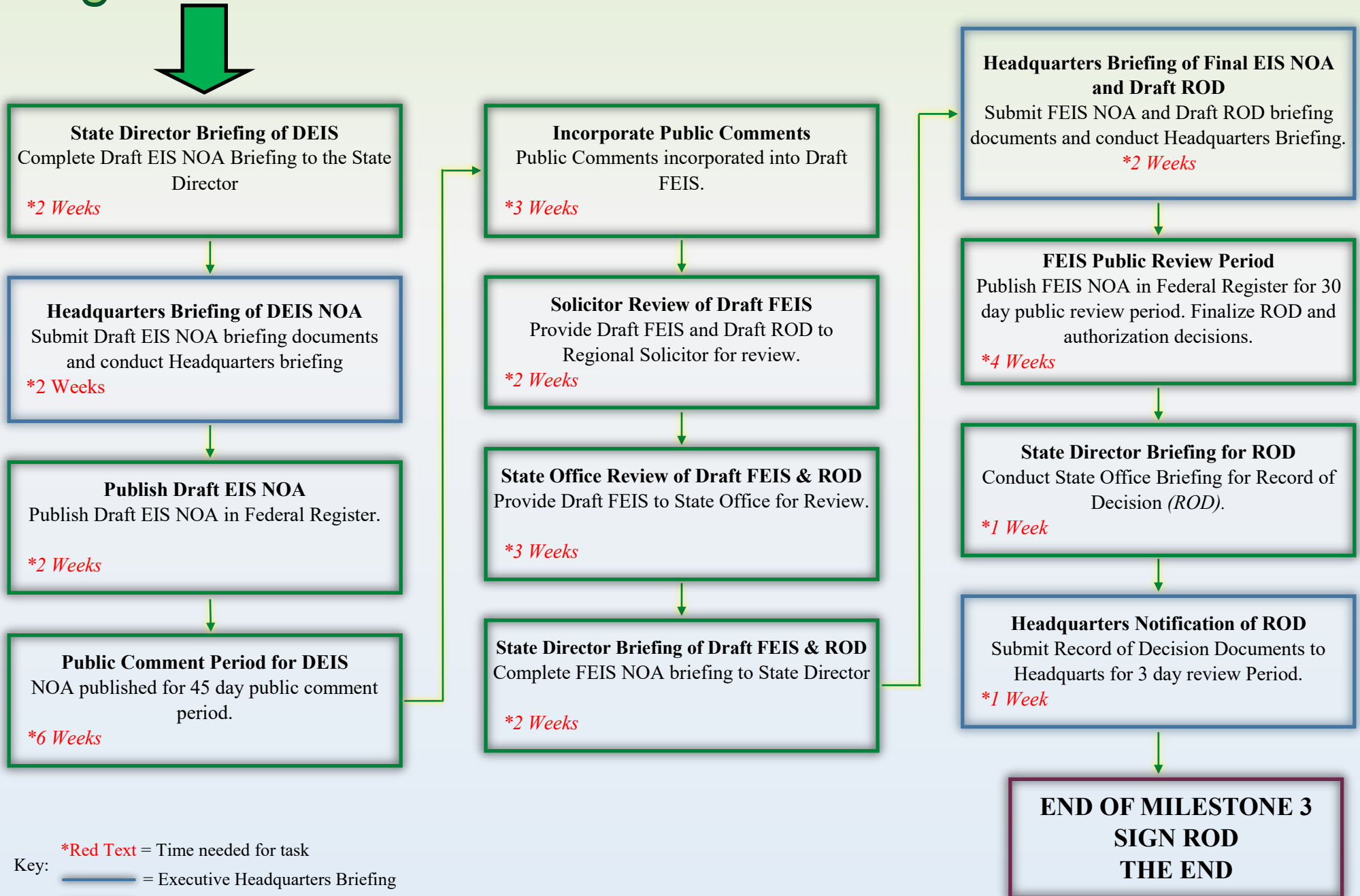


Attachment 1: EXAMPLE Project Management Flowchart





Key:
*Red Text = Time needed for task
= Headquarters Briefing
= Project Milestone



**Red Text* = Time needed for task

- Key:
- = Executive Headquarters Briefing
 - = Project Milestone