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

Responses of James F. Cress to
Questions for the Record of Hearing Held July 27, 2021

August 10, 2021

I would like to express my thanks to the Chairman, Ranking Member and other Members of the Subcommittee for the opportunity to testify at the July 27, 2021 hearing on proposed changes to the U.S. Mining Law.[1] As I did in my testimony, I will address the Subcommittee's follow up questions in the context of the Committee's most recent proposed Mining Law bill reported out in the 116th Congress, H.R. 2579, which proposes to convert the mining location system to a mineral leasing system.[2]

The additional questions from Rep. Stauber address the proposal in H.R. 2579 to convert the mining claim location system to a mineral leasing system and a recent General Accounting Office report that describes, among other things, legal governance structures for hardrock mining in certain countries that have significant mining industries, including Canada, Australia and Chile. In my experience as an international mining lawyer for more than 30 years, I have analyzed many international mining governance structures and compared them to the U.S. Mining Law. I have also worked extensively with both the U.S. Mining Law and with the Federal mineral leasing laws for coal, potash, sodium, and hardrock minerals including the leasing system that served as the basis for this Committee's prior mineral leasing proposal, H.R. 2579. In my federal mineral leasing work, I am familiar with the type of land use planning, "known resource" and "unsuitability" provisions that are included in H.R. 2579.

A. <u>Question 1 from Rep. Stauber</u>. The recent GAO report titled "Hardrock Mining Management: Selected Countries, U.S. States, and Tribes Have Different Governance Structures but Primarily Use Leasing," found that several countries primarily use leasing systems for hardrock mining. Do the leasing systems in the countries referenced in the report directly compare to the leasing structure proposed by Chairman Grijalva's Hardrock Leasing and Reclamation Act of 2019 (H.R. 2579)? Why or why not?

The General Accounting Office released its report, "Hardrock Mining Management: Selected Countries, U.S. States, and Tribes Have Different Governance Structures but Primarily Use Leasing,"[3] on July 26, 2021, the day

[1] 30 U.S.C. §§ 21(a) et seq. (I refer to the existing U.S. mining claim location system as the "Mining Law" in this response).
[2] H.R. Rept. 116-467, 116th Cong., 2d Sess. (Aug. 4, 2020), on the Hardrock Leasing and Reclamation Act of 2019, H.R. 2579.

before the hearing and after written testimony was due. I have had a chance to review the GAO Leasing Report in more detail since the hearing.

The GAO Leasing Report describes the mining laws of Australia, Chile and Canada as "leasing systems," but does not highlight the critical features of these laws that make them successful. A number of these foreign mining laws described in the report are actually more comparable to the mining claim location system of the Mining Law than to the leasing system proposed in H.R. 2579, because they provide for

(1) open access to lands for mineral exploration,

(2) the self-initiation of mineral exploration rights, and

(3) the promise of exclusive extraction rights for discovered mineral resources to the discoverer of the resource upon compliance with technical and objective requirements (sometimes referred to as "security of tenure").

None of these essential attributes of a successful mining law is found in H.R. 2579. Whether mining rights are established under a "mining claim," "mining permit" or a "mineral lease" is not as important as *how* the mineral exploration and mining rights are obtained and *what rights* are granted by the claim, permit or lease.

The GAO Leasing Report focuses on the mining systems of Australia, Canada and Chile which, as the GAO correctly notes, are three of the top mineral producing countries whose mining laws are highly regarded.[4] The GAO summarizes these mining laws simply as "leasing" systems:

> "All three countries primarily use leasing, or agreements that are similar to a lease, to manage exploration for hardrock minerals and mine development, according to government mining documents and officials...In general, under a lease, a government maintains title to the land and establishes terms for the use of the land, including duration of use, land area limitations, and royalty terms. Countries may refer to mining agreements differently. Both Australia and Canada refer to them as licenses, permits or leases, and Chile refers to them as concessions. For the purposes of this report, we refer to Australia, Canada, and Chile's mining agreements as 'leases' unless otherwise noted."

Referring to these varied types of mining rights as "leases" fails to identify the main characteristics of these systems that make them successful - open access, self-initiation and security of tenure. It also does not illuminate the important differences between these systems, in which the government exercises very narrow

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[3] Hardrock Mining Management: Selected Countries, U.S. States, and Tribes Have Different Governance Structures but Primarily Use Leasing (GAO-21-298 2021). ("GAO Leasing Report"). The website for the GAO Leasing Report indicates the report was published June 30, 2021, but publicly released only on July 26, 2021.

[4] GAO Leasing Report at 3, 16 & n.37.

discretion in granting permits or leases, and the limitless discretion to deny a permit or lease and multiple government consents contained in the proposed H.R. 2579 permit-lease system.[5]

The existing Mining Law, like the mining laws of Australia, Canada, and Chile, already has these three characteristics, and that is the reason the United States ranks competitively with these countries despite much longer exploration and mine permitting timelines, frequent litigation by groups opposed to mineral activities, and other obstacles.[6] The proposed leasing system in H.R. 2579 lacks all three of these important characteristics, and would destroy the competitiveness of the U.S. mining governance framework at a time when increasing production of critical minerals has become a national priority, if not a national emergency.

(1) Open Access

As several witnesses testified before the Subcommittee at this and previous hearings on the Mining Law, finding hardrock mineral deposits is like finding a "needle in a haystack." The National Research Council of the Academy of Sciences has reported that more than 1,000 hardrock mineral prospecting targets must be identified and evaluated, and 100 of those drilled (often at a cost of millions of dollars), in order to discover a single deposit that - if it can be permitted, financed and constructed at the opportune time in the commodity price cycle - could become a profitable mine.[7]

Thus, hardrock mineral discovery depends on access to large amounts of land for prospecting and exploration. This does not mean that all that land will be used for exploration or mining, or that mining use is "dominant" as is sometimes claimed. Large areas of the "haystack" can be ruled out by prospecting and exploration activities that do not disturb surface resources or interfere with other land uses. Open access to explore the "haystack" is critical precisely because so little of the land will contain minerals and so little of the mineral resources discovered will prove to be economic to extract. For example, the GAO reported to Chairman Grijalva last year that only 191,889 acres have been permitted by federal agencies for mineral exploration and mining in all of Nevada, the state with the most mining in the U.S. Those permitted acres are only 0.32 percent of the roughly 60 million acres of federal mineral estate in Nevada, and only a fraction of that fraction is being mined.[8]

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[5] As noted by the GAO, the systems within these countries are not uniform, and this discussion will necessarily be at a very general level that ignores important differences between the countries and between states and territories within those countries. The Subcommittee can and should obtain additional, more detailed information about these laws from lawyers or regulators in these countries.

[6] See Subcommittee on Energy and Mineral Resources Oversight Hearing, Testimony of James F. Cress (July 27, 2021) at 12-14, and Annual Survey of Mining Companies 2020 (Fraser Institute 2021).

[7] National Research Council, "Hardrock Mining On Federal Lands" (National Academies Press 1999). at p. 24.

[8] Subcommittee on Energy and Mineral Resources Oversight Hearing, Testimony of Debra W. Struhsacker On behalf of The Women's Mining Coalition (July 27, 2021) at 17 & nn.25-26.

In Australia, Canada and Chile, virtually all mineral rights are vested in the Crown or government, whether the surface is in government or private ownership. Public and private lands are open to mineral prospecting and exploration under mining laws administered by the national government or a state/territorial government. The extensive ownership of mineral rights by private citizens and native or indigenous communities that exists in the U.S. does not exist in these countries. Mineral exploration and mining on private lands in Australia, Chile and Canada is subject to surface damage and compensation arrangements with surface owners, but generally does not require surface owner consent.

Similarly, under Section 22 of the Mining Law,[9] "public domain" U.S. federal lands were made "free and open" to mineral prospecting, exploration and, if a "needle" is found, mining. This "open access" has been considerably scaled back over time, however, and is much more limited than in Australia, Canada and Chile. Unlike countries with government or "Crown" mineral ownership, the U.S. never made private mineral rights subject to the Mining Law, and Native American mineral rights are not open to hardrock mining unless the Tribe and U.S. government consent under a written agreement.[10] Over the last 150 years, "open access" to federal lands for mineral activities has been eliminated or strictly limited by other laws authorizing mineral withdrawals, designation of Wilderness Areas, National Parks, recreation areas, wildlife refuges and other categories of "preferred" surface use. Only the lands not so prioritized by Congress or government land agencies remain "free and open" to mineral activities, but these lands are important for finding increasingly-difficult to locate hardrock mineral deposits.

H.R. 2579 eliminates "open access" on all remaining public domain by closing all federal lands to mineral prospecting, exploration and mining.[11] Jettisoning 150 years of Congressional and agency balancing of mineral access with other "preferred" surface uses, H.R. 2579 substitutes a permit-leasing system under which the Department of the Interior *may, in its sole discretion*, grant a prospecting license on any specific acre of federal land, but only *after* (1) determining that the land covered by the license is "suitable for mineral activities," (2) conducting nationwide land-use planning, (3) obtaining surface agency consent, and (4) determining which of the hundreds of millions of acres of federal mineral estate are "known to contain deposits of valuable minerals" (as required to determine whether they must be leased using competitive bidding).[12] Moreover, H.R. 2579 adds many additional categories of lands where no mineral activities at all will be allowed, each category of which will require identification and evaluation in nationwide land use planning.[13] Some categories are so vague and subjective as to defy identification or description (for example, all mineral activity is banned on lands in the vicinity of national parks or monuments on which mineral activities might create any "diminution" in a "citizen's experience.")

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[9] Mining Law, § 1, 17 Stat. 91 (30 U.S.C. § 22).

[10] The BIA reports that almost none of the 57 million acres of tribal minerals are currently subject to hardrock mineral exploration or mining, because few tribes allow hardrock mineral activities of any kind. GAO Leasing Report, pp. 15, 35.

[11] H.R. 2579, § 101(a).

[12] H.R. 2579, § 103(b), 104.

[13] H.R. 2579, § 111.

H.R. 2579's approach is the polar opposite of the "open access" policy employed by Australia, Canada and Chile, and to a more limited extent under the current Mining Law and other federal land laws. As further discussed in my hearing testimony,[14] H.R. 2579 removes the entire "haystack" and substitutes a series of comprehensive, nationwide land use and planning procedures that will take decades to design, implement and litigate.

(2) Self-initiation

The Mining Law provides a right of self-initiation to locate, occupy and prove a discovery of a valuable mineral deposit. Rights are acquired by entry on the remaining federal land that is open to location, under the "open access" invitation of Section 22 of the Mining Law. No discretionary act by the government is needed, because the government has already (1) identified which lands are open (or which should be closed, in an ongoing process), and (2) identified the procedures in the Mining Law and regulations to locate a claim on the ground, document the location in public land records, and maintain the claim by payment of annual fees while working towards a discovery.

Self-initiation is a critical aspect of successful mining governance regimes. Self-initiation allows a mineral explorer or prospector to quickly and clearly obtain the exclusive right to explore for minerals on a particular tract of land, including the right to exclude other rival explorers while diligently exploring the land. All of these mining regimes provide procedures to adjudicate disputes if two claims overlap, often by awarding land claimed by more than one party to the first claimant that complied with the required procedures to initiate a valid right.

In the United States, and in certain parts of Canada, self-initiation is obtained by performing certain acts on the ground to locate a claim and giving notice of the location of the claim by recording it in the appropriate records. In a permit-leasing system, such as those found in other Canadian provinces, in Australia, and in Chile, the act of *applying* for a prospecting permit, exploration permit, exploration concession or other agreement gives the applicant priority over other rival applicants.

In Chile, self-initiation is accomplished by filing an application (called a pedimento) with a local court for an exploration license. The court only adjudicates whether the application meets the requirements of the Mining Code and allows for a conflicting (overlapping) claimant to protest an application that affects his prior valid rights. Publication of the claim in the national mining bulletin is required to give notice and an opportunity to be heard to other potentially conflicting claimants.

The permit-lease system in H.R. 2579 is different than the Mining Law and the systems in Australia, Chile and Canada, because there is no non-discretionary right to obtain a prospecting permit upon complying with objective procedures (meeting citizenship or other eligibility requirements, staking the land to be explored, recording a claim or filing an application). Instead, H.R. 2579 gives at least two agencies the *absolute discretion* whether to issue the prospecting permit -

[14] Testimony of James F. Cress at pp. 5-8.

the mineral-managing agency (the BLM) and the surface -managing agency (which will often be a different agency, such as the Forest Service).[15] Because two agencies have the discretion whether or not to issue a prospecting permit, each agency will have to evaluate each permit issuance under the National Environmental Policy Act (NEPA), and the resulting decisions of each agency will be appealable by any party interested in the land, all prior to the prospecting permit becoming effective.

Moreover, the ability of the BLM to grant a prospecting permit is conditioned on the agency first determining that the land covered by the license is "suitable for mineral activities," conducting land-use planning, determining whether the lands are "known to contain deposits of valuable minerals,"[16] and confirming that the lands are not "special places" where no mineral activities are allowed.[17] Each of these determinations will also trigger NEPA review, both at the program level (such as in the revision of a land use plan) and at the specific location where the permit is requested, with attendant rights of interested parties to appeal those programmatic and site-specific determinations.[18]

If the prospecting permit is granted after all of this agency review, NEPA and other analysis, and related appeals and litigation, the permit has a term of only two years under H.R. 2579. To extend the permit for a few more years, the same gauntlet of discretionary mineral and surface agency consent, land use and other review and appeals must be run.

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*,"[19] self-initiation simply does not exist under the proposed H.R. 2579 permit-leasing system. No mining company that has not already discovered a valuable mineral deposit on nearby lands (for example, on private lands in the federal-private "checkerboard," or on one of the few permitted mining claims grandfathered under H.R. 2579) would have any incentive to jump through these hoops just to get a two-year right to prospect or explore. Discovery of new mineral deposits, currently declining but still incentivized by the "open access" and self-initiation features of the Mining Law, will wither under such a system.

(3) Security of Tenure

The third critical feature of a mining governance system is that exclusive extraction rights for mineral resources are awarded to the discoverer of the resource (sometimes referred to as "security of tenure"). The key element for security of tenure is that the mining right is not conditioned on the discretion of the

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[15] H.R. 2579, § 103(b)(1) ("The Secretary *may*, *under such rules and regulations as the Secretary may prescribe and with the concurrence of the relevant surface management agency*, grant an applicant a prospecting license...")(emphasis added).
[16] H.R. 2579, § 103(b), 104.
[17] H.R. 2579, § 111.
[18] See, for example, the pending prospecting permit litigation in Northern Minnesota referred to in my testimony.
[19] H.R. Rept. 116-467, 116th Cong., 2d Sess., p. 1 (Aug. 4, 2020)(emphasis added).

government; the right must arise by law based on performance of acts that are related solely to mineral exploration and discovery of a valuable mineral deposit.

Under the U.S. Mining Law, security of tenure exists because there is no need to obtain another form of mineral right if mineral exploration is successful - the mining claim is both an exploration right and a right to mine if a discovery of a valuable mineral deposit is made (subject, of course, to obtaining required environmental permits to operate and reclaim the land after mining under other applicable laws). In Australia, Chile and Canada, the exploration right is separate from the mining right, but the mining laws clearly define the right to a lease (or in Chile, an exploitation concession) upon discovery of a valuable mineral deposit and meeting other technical requirements.

In Canadian jurisdictions that use mining claims or prospecting permits, the successful explorer applies for a right to mine under a mining lease. In Australia, the holder of an exploration license or retention license has the right to apply for a mining lease. In Chile, the holder of an exploration concession may apply for an exploitation concession (although applying directly for an exploitation concession is also permitted). However, the holder of the prospecting or exploration claim, permit, license or concession in all of these jurisdictions has the exclusive right to apply for a mining right on the lands granted in the exploration right, so the resulting security of tenure is effectively the same as under the Mining Law. The requirements to obtain the lease are objective and technical, having to do with proving the discovery of a mineral deposit, defining the boundaries of the deposit, and providing a technically sound plan to extract the minerals. There are no discretionary agency consents or third party rights to prohibit issuance of the mining right.

Under H.R. 2579 , issuance of a hardrock lease to mine a deposit discovered under a prospecting permit requires both (1) proof of discovery of a valuable mineral deposit and (2) *a second, discretionary consent from the surface managing agency*. Security of tenure does not exist, because the surface agency can refuse to consent, after millions, tens of millions, or hundreds of millions of dollars are spent discovering and delineating a mineral deposit. No mining governance system in Australia, Canada or Chile, or in almost any other country in the world that I am familiar with, conditions the right to mine on a second, post-discovery, discretionary consent of a mineral or surface management agency. Adoption of such a system would result in little or no new mineral activity on federal lands.[20]

B. <u>Question 2 from Rep. Stauber</u>. You noted in your testimony the challenges associated with locating and developing hardrock minerals. I also understand that the United States currently lacks a complete comprehensive, national resource assessment for minerals and metals. Does the lack of a comprehensive resource assessment in the United States for metals and minerals provide a disincentive to mine project proponents under a leasing system, as proposed in

[20] H.R. 2579 also contains other disincentives in the mining lease that erode security of tenure, including unrealistic acreage limitations and a limited term for extraction, that are not found in the Mining Law.

Chairman Grijalva's Hardrock Leasing and Reclamation Act of 2019 (H.R. 2579)? Please describe why or why not.

Unfortunately, not only does the United States lack a complete, comprehensive national resource assessment for hardrock minerals, it does not even know where or how much mineral exploration and production is currently occurring on the 650 million acres of federal mineral estate.[21] The United States seriously lags other mining countries in its recent investment in developing mineral resource data on its pubic lands. A leasing system of the type proposed in H.R. 2579 would be hamstrung by this chronic underinvestment in basic mineral resource data, because the bill depends on the existence of that data to categorize lands in a number of ways. Mining companies would likely greatly decrease their activity on U.S. public lands for years or even decades until this gap was addressed and the new system implemented.

The United States Bureau of Mines formerly conducted world-renowned research and development and gathered detailed information on mining activities in the U.S., including mineral resource assessments. After the Bureau of Mines was abolished in 1996, some of its activities were assumed by the United States Geological Survey, but investment in mineral resource assessments, and specifically generation of data on public lands, has taken a back seat to other USGS earth science priorities.

For example, mine and mineral deposit databases were developed by the Bureau of Mines and USGS, but much of the work was performed prior to the development of modern geospatial mapping technologies, lidar, satellite reconnaissance and the internet. Even this old data is currently not compiled, updated and accessible online, although the USGS Mineral Resources Program is working on a national-scale, geospatial mineral database.[22]

In the last two years, USGS has implemented an Earth Mapping Resources Initiative designed to compile geological, geophysical and topographical mineral resources information in partnership with industry and academic partners.[23] The initiative was spurred by the increasing dependence of the U.S. over the last three decades on imports of critical minerals and the need to identify new domestic deposits of critical minerals for national security and clean energy development. While there is new funding aimed at identifying new sources of critical minerals, thanks to Section 7002 of the Energy Act of 2020, the Earth MRI program (which is broadly applicable to identification of mineral resources) does not benefit from that budget increase.[24]

By comparison, Australia, Canada and Chile all have well-funded, government-generated national-scale, geospatial mineral databases and invest millions of dollars in mining-related data compilation and research and development, making that information available to mining companies. For

[21] Testimony of Debra W. Struhsacker, at pp. 15-16.
[22] USGS, USMIN Mineral Deposit Database project
[23] USGS, Earth Mapping Resources Initiative (Earth MRI)
[24] See, e.g. American Institute of Physics, FY22 Budget Request: US Geological Survey (Other Programs; Critical Minerals).

example, the state of Western Australia created an "Exploration Incentive Scheme" (EIS) which invested A$130 million between 2009 and 2017 to promote private mining industry exploration aimed at discovery of unknown mineral deposits ("greenfields" exploration, which the Biden Administration hopes to increase for critical minerals). The EIS funding paid for geophysical and geochemical surveys, including airborne magnetic and radiometric data collection, government co-funding of private industry exploration drilling, 3D geological mapping, R&D funding, collaboration with indigenous communities, and improvement of online mining tenement application processes.[25] The EIS program, funded by a single Australian state, had approximately ten times the current funding level of the USGS Earth MRI initiative.

The lack of comprehensive federal mineral data is not crippling to mineral exploration under the current Mining Law, because the "open access" and "self-initiation" features of the law incentivize private companies to generate mineral resource data at their own expense. Private companies locate, explore for, discover and mine hardrock minerals using modern geological and geophysical techniques and private capital, largely without the help of the government, because they have secure and well-understood rights under the Mining Law to keep what they find. One downside of this privately-funded approach is that the government remains largely ignorant of the privately-generated data on exploration and production of hardrock minerals on federal lands and can't use the data to generate additional "greenfields" exploration.

By contrast, the leasing system proposed by H.R. 2579 will create an enormous "mineral resource data bottleneck" and will likely bring the current mineral exploration and mining activity on federal lands to a screeching halt. This is in part due to the provisions discussed above that require (1) comprehensive land use planning prior to leasing, which will require mineral resource data, and also data to determine whether any new mineral activity conducted after the date of enactment is located on "lands are suitable for mineral activities,"[26] and (2) 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.[27] All of these determinations and planning will require comprehensive national mineral resource assessments specific to federal lands for dozens of hardrock mineral commodities, which do not currently exist and which will likely take years for USGS to generate at current budget levels.[28]

Private industry will also likely stop generating mineral exploration data on federal lands for free, because, as discussed above, the permit-leasing system proposed in H.R. 2579 provides no security of tenure over any discovered mineral deposits due to the multiple stages of surface agency and BLM consent between initial prospecting and the issuance of a lease. Mineral exploration dollars that

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[25] See Exploration Incentive Scheme Economic Impact Study (ACIL Allen Consulting 2015)

[26] H.R. 2579, § 112. Presumably lands with mineral potential will be deemed more "suitable" for mineral activities, though the bill is silent about this aspect of "suitability."

[27] H.R. 2579, §§ 103(b)(4), 104.

[28] Mineral commodity data collected by USGS does not currently specify which minerals are found on federal lands versus private or state lands. See, e.g. USGS Mineral Commodity Summaries (2021).

would have been spent in the U.S. will instead flow to countries like Australia, Canada and Chile, which have established and well-understood mining governance systems based on open access, self-initiation and security of tenure to discovered mineral deposits.

I thank the Chairman, Ranking Member and the other Members of the Subcommittee for the opportunity to address these questions and I am happy to answer any additional questions you may have.