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
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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 a 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 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.

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 <u>not</u> 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 <u>any</u> 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 in come 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.