EARTHWORKS WHITE PAPER

A HARDROCK MINING ROYALTY: CASE STUDIES AND INDUSTRY NORMS

THE NEED FOR A ROYALTY FOR MINING ON PUBLIC LANDS:

While mining on public lands in the U.S. provides essential resources to modern economies, there are too often instances where irresponsible mining has devastated public lands and water resources. According to the EPA, 40% of the stream reaches in headwaters of western watersheds have been polluted by mining, and cleaning up the all abandoned hardrock (metal) mines could cost as much as $50 billion.[1]

The lack of a royalty has left most abandoned hardrock mines unreclaimed for want of cleanup funding; they pose a continual threat to public safety and water resources. Just last month, a young girl died after falling down an abandoned copper mineshaft in Arizona.[2]

Although in public statements mining companies and industry trade associations have expressed support for a royalty, to date the hardrock mining industry has never paid a royalty on the metals they take from public lands. Since 1872, when the law that governs mining on public lands was written, at least $245 billion worth of metals like gold, silver, copper, and uranium have been mined with no return to the taxpayer.[3] The underlying debate centers on the nature and amount of the royalty.

To ensure that public safety is protected and contaminated landscapes and waterways are cleaned up a royalty or fee levied on mining on public lands must generate adequate funds from the outset.

ALL OTHER U.S. EXTRACTIVE INDUSTRIES PAY ROYALTIES FOR PUBLIC MINERALS:

Those minerals covered by the 1872 Mining Law are given away[4] without a royalty. Every other extractive industry pays 8–16.7% of the value of what they extract from public lands.

Royalties paid by other extractive industries for United States' minerals[5]

mineral type	royalty rate
underground coal	8.0%
surface coal	12.5%
onshore/offshore oil &gas	12.5%
deepwater offshore oil & gas	16.7%

ROYALTY TYPES:

A royalty is "a share of the product or profit reserved by the grantor [owner]"[6]. In the case of the 1872 Mining Law, the public, or the federal government, is the owner.

In the mining reform debate, two types of royalties have been discussed: net proceeds (also known as "net profit") and net smelter (sometimes referred to as "gross").

A net proceed/net profits royalty is calculated as a percentage of the gross income of a mine minus all the expenses occurred to produce the income.[7] This type of royalty enables a mining company to deduct their cost of doing business from their income before the royalty is charged. These royalty schemes allow extensive administrative, business and operating deduction, not just those associated with processing mined ore into marketable commodities.

A gross royalty is a value-based royalty charged on the revenue that the mining company receives from the sale of the product.[8] A *net smelter return* (NSR) royalty is a modified gross royalty where "the amount

of money which the smelter or refinery pays the mining operator for the mineral product and is usually based on a spot, or current price of the mineral, with deductions for the costs associated with further processing."[9] No deductions are made for operating costs.[10]

THE STANDARD ROYALTY IS GROSS/NET SMELTER:

The hardrock mining industry pays royalties to foreign governments, states and even to other mining companies. These royalties are most often gross or net smelter royalties (value-based).

On a state-by-state level, the majority of states (10 out of 13, or 77%) charge a gross or net smelter royalty on hardrock minerals.

U.S. state metal mining royalties:[11]

state	royalty type
Alaska	net proceeds
Arizona	gross
California	gross
Colorado	varies
Idaho	varies
Montana	net smelter
Nevada	net proceeds
New Mexico	gross
Oregon	gross
South Dakota	gross
Utah	gross
Washington	gross
Wyoming	case by case

Private interests most often charge a gross or net smelter royalty:
A review of annual reports and regulatory filings with the Securities and Exchange Commission show that private interests charge royalties that are gross or net smelter royalties. Of the 47 private royalties reviewed, 35, or 74%, were some form of gross or net smelter royalty.[12]

Foreign royalties most often charge gross or net smelter-type royalties:
The World Bank recently surveyed royalties imposed by governments around the world.[13] Excluding the United States, they surveyed 31 governments. Of those jurisdictions surveyed, 21 out of 31, or 68%, charged some form of gross or net smelter type royalty.

NET PROCEEDS ROYALTY CASE STUDIES – FLEECING THE TAXPAYER

Two states, Alaska and Nevada, charge net proceeds royalties. Analysis shows that neeither provides taxpayers a fair return and if applied to minerals on federal lands such a system would likely fall woefully short of funds necessary to make even an initial dent in addressing the legacy of abandoned mines.

Nevada:
The state of Nevada imposes a sliding scale mineral net proceeds tax[14] on mineral operations[15]. It ranges from 2 to 5% depending upon the ratio of net proceeds to gross proceeds. Data published by the state of Nevada[16] for 2000-2005 show that the mining industry in Nevada sold $16.4 billion worth of minerals.[17] Despite this large amount of revenue, the industry only paid $158 million, or less than 1%, into the Nevada treasury.

Half of the time that mining operations in Nevada were subject to this royalty during the 2000-2005 period, they declared NO PROCEEDS, exempting them from the royalty. Over this time period, the price of gold, the primary metal mined in Nevada, increased 160%.[18]

Two of the mining operations with the biggest ore bodies in the United States, Newmont's Carlin operation and Barrick's Goldstrike open-pit operation, each declared no profits for 2 of the 6 years profiled. In the years for which they declared zero profit, they collectively declared $1.98 billion in gross proceeds for those two operations.

Alaska:
The state of Alaska imposes a 3% net proceeds royalty on minerals taken from lands owned by the state.

According to the Alaska Department of Natural Resources, the State of Alaska has received $1.2 million over the last 10 years from the net proceeds royalty.[19] Over that time, more than $1.2 billion worth of gold was extracted from mines operating on state lands – meaning less than 0.10% of the value of gold mined was returned to Alaskan taxpayers.[20]

ONLY A VALUE-BASED ROYALTY WILL ENSURE A FAIR RETURN TO THE TAXPAYER, AND FUND SUBSTANTIAL CLEANUP OF ABANDONED MINES

A royalty on public minerals must ensure a fair return to the taxpayer to ensure there is enough money to truly tackle the $50 billion abandoned mine cleanup problem.

Experience with the Alaska and Nevada net proceeds royalty/fee demonstrates that a net proceeds approach will not generate a fair return to the taxpayer. On the other hand, the fact that the vast majority of U.S. states, foreign governments, and private parties charge gross/net smelter type royalties demonstrate that value-based royalties provided a fairer return to the public.

Real and meaningful reform of the 1872 Mining Law must include this type of gross/net smelter royalty, bringing the hardrock mining industry into line with the other extractive industries currently operating on our public lands.

---

[1] *Liquid Assets 2000: America's Water Resources at a Turning Point*. U.S. Environmental Protection Agency, May 2000. EPA-840-B-00-001

[2] "1 dead, 1 hurt after girls fall in mine shaft," by Katie Nelson in the *Arizona Republic*. 9/3/2007.

[3] *Golden Patents, Empty Pockets: a 19th century law gives miners billions, the public pennies*. Mineral Policy Center/EARTHWORKS, June 1994. Updated 1998.

[4] 30 U.S.C. 22

[5] Federal Coal Leasing Amendments of 1976, http://www.blm.gov/ut/st/en/prog/energy/coal/coal_facts.html; http://www.mms.gov/ooc/press/2007/pressdoi0109.htm

[6] Merriam-Webster: http://mw1.merriam-webster.com/dictionary/royalty

[7] http://www.lawsonlundell.com/resources/UnderstandingRoyaltyStructures.pdf, p5.

[8] http://www.minval.com/royalty_mineral.html

[9] http://www.minval.com/royalty_mineral.html

[10] http://www.lawsonlundell.com/resources/UnderstandingRoyaltyStructures.pdf, p4.

[11]

Alaska	AK Statute 38.05.212 http://tinyurl.com/ytpxxa
Arizona	AZ Rev. Stat 27-234, http://tinyurl.com/2zxl8g
California	CA PUB. RES. CODE ß 6895, http://tinyurl.com/yuxlsh
Colorado	CO Revised Statutes 36-1-113, http://tinyurl.com/2dcf4j
Idaho	ID Code 47-404, http://tinyurl.com/2dnd77

Montana	MT Code Annotated, 77-3-116 and 77-3-101, http://tinyurl.com/397d2v
Nevada	NRS Chapter 362, http://law.justia.com/nevada/codes/NRS-362.html
New Mexico	NM Statute Annotated 19-8-22, http://tinyurl.com/2zvlaf
Oregon	GAO-RCED-93-109
South Dakota	S.D. Codified laws 5-7-55, http://tinyurl.com/2rbrm8
Utah	personal communication with Will Stokes, Utah School Trust Lands Administration, 9/2007
Washington	WAC 332-16-035, http://apps.leg.wa.gov/WAC/default.aspx?cite=332-16-035
Wyoming	personal communication with Diana Wolvin Office of State Lands and Investment, 9/2007

[12] EARTHWORKS original research, 2005 and 2007, accumulated by reviewing the annual reports and regulatory filings of major metal mining companies (as identified by the USGS Mineral Year Book) for mention of royalties either paid to or paid by private interests.

[13] Otto, Andrews, Cawood, et al. *Mining Royalties: A Global Study of Their Impact on Investors, Government, and Civil Society*, p 80. World Bank, 2006.

[14] NRS Chapter 362. It is a "tax" and not a "royalty" because the state of Nevada does not own the minerals upon which they impose the fee. The fee applies to all minerals mined within the state of Nevada, whether on public (i.e. federal) or privately owned lands.

[15] The tax is assessed operation by operation, not company by company.

[16] Nevada Department of Taxation, Division of Assessment Standards. 2000-2005 reports are available at http://tax.state.nv.us/DOAS_Archive_page.htm. 2006 data will be published in November. These reports represent the only publicly available hardrock mining fee/royalty data on an operational level. It is more detailed than company annual reports and SEC filings.

[17] Nevada produces 82% of United States' mined gold according to the U.S. Geological Survey. If Nevada were its own country, it would be the fourth largest gold producer in the world. Although Nevada also produces other minerals, most notably copper, the value of its non-gold production is about 1/10th of its gold production.

[18] http://www.kitco.com

[19] $1,221,541.24 generated by the mining production royalty for the period 1/1/1997 – 9/28/2007. Alaska Department of Natural Resources, Financial Services.

[20] Most mineral production from Alaska state-owned lands arises from Kinross' Ft. Knox mine and Teck Cominco's Pogo mine. Production data gathered from Kinross' and Teck Cominco annual reports. Minerals prices gathered from kitco.com.