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Mining on Federal Lands: Hardrock Minerals

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Summary

Mining of hardrock minerals on federal lands is governed primarily by the General Mining Law of 1872. The law grants free access to individuals and corporations to prospect for minerals in public domain lands, and allows them, upon making a discovery, to stake (or "locate") a claim on that deposit. A claim gives the holder the right to develop the minerals and may be "patented" to convey full title to the claimant. A continuing issue is whether this law should be reformed, and if so, how to balance mineral development with competing land uses.

The right to enter the public domain and freely prospect for and develop minerals is the feature of the claim-patent system that draws the most vigorous support from the mining industry. Critics consider the claim-patent system a giveaway of publicly owned resources because of the small amounts paid to maintain a claim and to obtain a patent. Congress, however, has imposed a moratorium on mining claim patents through the annual Interior spending bill since FY1995.

The lack of direct statutory authority for environmental protection under the Mining Law of 1872 is another major issue that has spurred reform proposals. Many Mining Law supporters contend that other current laws provide adequate environmental protection. Critics, however, argue that these general environmental requirements are not adequate to assure reclamation of mined areas.

Broad-based legislation to reform the General Mining Law of 1872, the Hardrock Mining and Reclamation Act of 2007 (H.R. 2262), was introduced on May 10, 2007. The bill would establish an Abandoned Locatable Minerals Mine Reclamation Fund, a Locatable Minerals Community Impact Assistance Fund, and an 8% royalty on "net smelter returns." New reclamation standards would be established, and a reclamation bond or other financial guarantee would be required before exploration and operation permits are approved.

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Background

Mining of hardrock minerals on federal lands is governed primarily by the General Mining Law of 1872. The original purposes of the Mining Law were to promote mineral exploration and development on federal lands in the western United States, offer an opportunity to obtain a clear title to mines already being worked, and help settle the West. The Mining Law grants free access to individuals and corporations to prospect for minerals on open public domain lands, and allows them, upon making a discovery, to stake (or "locate") a claim on the deposit. A valid claim entitles the holder to develop the minerals. The 1872 Mining Law originally applied to all valuable mineral deposits except coal (17 Stat. 91, 1872, as amended).

Public domain lands are those retained under federal ownership since their original acquisition by treaty, cession, or purchase as part of the general territory of the United States, including lands that passed out of but reverted back to federal ownership. "Acquired" lands — those obtained from a state or a private owner through purchase, gift, or condemnation for particular federal purposes rather than as general territory of the United States — are subject to leasing only and are not covered by the 1872 Law. Some public lands may be "withdrawn" or closed to mineral entry.

The 1872 Mining Law was one of the primary forces behind the development of mineral resources in the West, along with the industries and services that supported mineral production. Major hardrock minerals developed in the West include copper, silver, gold, lead, zinc, molybdenum, and uranium. During the 19th century, major mining districts for silver and gold were developed under the Mining Law in Colorado, California, Idaho, and Nevada. Early in the 20th century, there were major developments of porphyry copper in Arizona. Large molybdenum and tungsten deposits in Colorado were also developed. The Mining Law continues to provide the structure for much of the western mineral development on public domain lands. Western mining, although not as extensive as it once was, is still a major economic activity, and a high percentage of hardrock mining is on public lands.

The Claim-Patent System

After a prospector has conducted exploration work on public domain land, he or she may locate a claim to an area believed to contain a valuable mineral. To hold a claim on public land, claimants must pay an annual maintenance fee of $125 per

claim.[1] Claimants with 10 claims or fewer are exempt from the annual maintenance fee. There also is a $30 fee for first-time locators to locate and record a claim.[2] The fees above are to be adjusted every five years based on the Consumer Price Index (43 CFR 3833.1-5). The last adjustment was made on September 1, 2004. Prior to 2004 the fees were $100 and $25 respectively. The annual maintenance fee superseded a previous requirement that $100 of annual development work be conducted per claim.

The maintenance and location fees generated revenue estimated at $47.5 million in FY2005 and $32.3 million in FY2006, according to the Bureau of Land Management (BLM). Revenues from fees have fluctuated over the years and were $35.9 million in FY1997.

Once a claimed mineral deposit is determined to be economically recoverable, and at least $500 of development work has been performed, the claim holder may file a patent application to obtain title to surface and mineral rights. Beginning January 3, 1989, a fee of $250 per patent application plus $50 per claim within each application has been required. If the patent application is approved, the claimant may purchase surface and mineral rights at a rate of $2.50 per acre for placer claims and $5 per acre for lode claims. A placer deposit is an alluvial deposit of valuable minerals usually in sand or gravel; a lode or vein deposit is of a valuable mineral consisting of quartz or other rock in place with definite boundaries.[3] A placer claim is usually limited to 20 acres but a lode claim may be slightly greater than 20 acres. These per-acre fees were substantial when the Mining Law was enacted — claimed land and minerals now far exceed these amounts in value.

The following provisions currently apply to claims:

- There is no limit on the number of claims a person can locate;
- There is no requirement that mineral production ever commence;[4]
- Mineral production can take place without a patent or royalty payments to the federal government; and
- Claims can be held indefinitely with or without mineral production, subject to challenge if not developed.

Most of the current mining activity and mineral claims under the Mining Law are in Nevada, Arizona, California, Montana, and Wyoming. As of the end of FY2005, approximately 35% of mining claims were in Nevada alone and another nearly 35% were in the other four states. According to the Bureau of Land Management, the number of active claims declined from about 1.2 million claims in FY1989 to 294,678 for FY1993. Many claims were dropped as a result of provisions of law charging a $100-per-claim annual maintenance fee. The number of active claims subsequently rose to 324,651 in FY1997, reflecting the relative strength of the

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[1] 30 U.S.C. 28f

[2] 30 U.S.C. 28g

[3] Source: *Dictionary of Mining, Mineral and Related Terms, Bureau of Mines*, 1968.

[4] However, before the enactment of P.L. 102-381, claimants were required to conduct at least $100 of development work per year.

gold and copper industries. The number of active claims fell to a low of 207,757 for FY2001, reflecting a decline in the gold and copper industries and, according to the BLM, changes in public land policy that significantly lengthened the time necessary to get permission to mine. Active claims stood at 207,241 in FY2005.

Only a small percentage of claims is ever patented, totaling about 3.4 million acres from 1867 through 2006. This represents approximately 1.5% of all public lands patented; most public lands have been patented under homestead entries, statehood grants, railroad grants, and other non-mineral public land laws. It is not required to patent a claim to mine a deposit, and a great deal of mining activity is currently taking place on unpatented claims. However, patenting a claim gives the holder legal title to both the surface and the minerals, and relieves the holder of having to pay the annual fees.

Beginning in FY1995, Congress has enacted (in the Interior appropriations laws) a series of one-year moratoria on the issuance of mineral patents. However, applications meeting certain requirements that were filed on or before September 30, 1994, are allowed to proceed, and third-party contractors are authorized to process the mineral examinations on those applications. The patent moratorium will not stop the production of valuable mineral resources from the public lands, but will prevent the further transfer of ownership of public lands to the private sector (with the exception of the 237 patent applications already in the pipeline).[5]

The annual one-year moratorium on patenting continues the uncertainty over whether efforts will continue to try to reform the 1872 Mining Law. The mining industry would like to end the uncertainty to facilitate its long-term business planning. Environmentalists, who were hoping for new environmental protection language in a major mining law reform bill, argue that the patent moratorium does not protect the environment from current mining practices.

Major Mining Legislation After the 1872 Mining Law

In 1920, the Mineral Leasing Act removed oil, gas, oil shale, phosphates, sodium, and certain other minerals on federal public domain lands from the claim-patent system of the 1872 Mining Law and set up a system of leasing in which the federal government retains ownership of the leased lands. Coal, which previously had its own claim-patent law (the 1873 Coal Act), was also included in the 1920 Leasing Act.[6] After 1955, common variety minerals such as sand, stone, gravel, cinders, and pumice were sold under the Materials Act of 1947, as amended. A strong push for an all-leasing system developed during the 1930s and 1940s, but no such legislation was enacted.

As mentioned, acquired federal lands were never subject to the General Mining Law. The Mineral Leasing Act for Acquired Lands of 1947 authorized the leasing

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[5] P.L. 103-332

[6] 30 U.S.C. 181 et.seq.

of leasable minerals in some acquired federal lands.[7] The Reorganization Plan No. 3 of 1946 and earlier acts authorized the leasing of hardrock minerals on acquired forest lands.[8]

During the 1960s and 1970s, the Multiple Use Sustained Yield Act, Wilderness Act, National Forest Management Act, National Environmental Policy Act (NEPA), and Federal Land Policy Management Act (FLPMA) addressed environmental protection, multiple use, and management of federal land generally. By imposing new requirements on agency actions, and by withdrawing some federal lands from development, these acts have affected mineral development under both the leasing system and the Mining Law claim-patent system. The Mining Law contains no direct environmental controls, but mining claims are subject to all general environmental laws as a precondition for development. The mining industry must comply with applicable requirements of the Clean Water and Clean Air Acts, state reclamation standards where they exist, and federal and state statutes relating to the handling and disposal of certain toxic wastes, among other laws.

The evolving leasing system and later withdrawals of lands from hardrock exploration and development diminished the amount of lands under the Mining Law authority. For those hardrock minerals that remain under the Mining Law, however, the claim-patent system is essentially the same as it was when the law was enacted.

Critics argue that the West is now developed and that the 1872 Mining Law is obsolete and inconsistent with other federal natural resource policies. Supporters maintain that the combination of leasing for some resources and a claim-patent system for others works well and should be maintained. The National Mining Association (NMA) states that the "existing law more than adequately meets the four criteria essential to any mineral tenure law": free and open access to explore for minerals on unappropriated public lands, exclusive exploration rights, the right to develop the valuable minerals discovered, and security of tenure.

When oil shale was transferred from the 1872 claim-patent system to the leasing system in the 1920 Mineral Leasing Act, a large number of existing unpatented oil shale claims were continued under the terms of the 1872 Mining Law. During the 1980's, the Department of the Interior sought to invalidate these unpatented claims and refused to issue patents to claim owners. The claimants challenged the Department's actions. The U.S. Court for the district of Colorado held that any oil shale claimant who had made $500 worth of assessment work on the land in question had satisfied the requirements for issuance of a patent and that the Department could not promulgate a new policy to the contrary.[9]

Legislation to resolve oil shale issues was enacted as part of the Energy Policy Act of 1992 (P.L. 102-486). This law offers general and limited patents based on the status of the application at the time of enactment. Limited patent holders receive title

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[7] 30 U.S.C. 351-359

[8] 60 Stat. 1007

[9] Tosco Corp. V. Hodel, 611 F. Supp. 1130, (. Colo. 1985).

to the oil shale only and are required to post a reclamation bond or financial guarantee. Patent fees remain $2.50 per acre.

Analysis

Claim-Patent System: Pros and Cons

The right to enter the public domain lands and prospect for and develop minerals is the feature of the claim-patent system that draws the most vigorous support from the mining industry. Modern hardrock mineral exploration requires a continuous effort using vast tracts of land and sophisticated and expensive technology. Industry officials argue that being able to obtain full and clear title to the land enhances a company's ability to bring an economic deposit into production; financing the project, for example, may be more feasible. They contend that restrictions on free access and security of tenure would curtail exploration efforts among large and small mining firms. In their view, the incentive to develop would be lost, long-run costs would increase, and the industry and the country would suffer.

Mining Law critics consider the claim-patent system a giveaway of publicly owned resources because of the absence of royalties and the small charges associated with keeping a claim active and obtaining a patent. They maintain that although such generous terms may have been effective ways to help settle the West and develop minerals, there is no solid evidence that under a different system minerals would not be developed today. They also believe the current system, by conveying title and allowing other uses of patented lands, creates difficult land management problems through the creation of private inholdings on public land, and that current law does not provide for adequate protection of the environment.

In the claim-patent system, mineral claims may be held indefinitely without any mineral production. Once lands are patented to convey full title to the claimant, the owner can use the lands for a variety of purposes, including non-mineral ones. However, using land under an unpatented mining claim for anything but mineral and associated purposes violates the Mining Law. Critics believe that many claims are held for speculative purposes. However, industry officials argue that a claim may lie idle until market conditions make it profitable to develop the mineral deposit.

Another issue surrounds "discovery" and "prediscovery" protection. The law requires that "no location of a mining claim shall be made until the discovery of the mineral within the limits of the claim." If a discovery is made and a valid location established, the claimant has a valid possessory right against all other parties. One purpose of the discovery requirement was to help reduce speculation. However, demonstrating discovery of a valuable mineral deposit often requires considerable time, effort, and expense on the part of a prospector. The prospector may find indications of a deposit, but demonstrating its value may involve exploration over a large area and drilling and analyses of core samples to define the quality and extent of the mineral. Typically, in practice, the federal government has allowed claims based on general indications that a mineral deposit exists, and required proof of

discovery only upon application for a patent unless circumstances warrant full proof sooner, for example, mineral claims in sensitive areas.

The industry has indicated it wishes to avoid major challenges to the principle of free access and the right to obtain a patent. The industry generally opposes placing hardrock minerals under a leasing system because this would give the federal government discretionary control over development, impose royalty payments, and retain government ownership of surface and/or mineral rights.

Past Amendment Proposals

Proposals to amend the 1872 Mining Law have fallen under the following broad categories.

- Modify the claim-patent system to retain the patent feature, but require payment of fair market value for all or part of the value of the land. The Government also would collect some percent of the value of mineral production as royalties.

- Convert the claim-patent system to a permitting system, and prohibit further patenting. Advocates of this proposal argue that a permitting system would be effective in achieving a fair market value return to the federal Treasury for public lands. This system would collect royalties and add new environmental standards to mining operations. Mineral industry supporters, on the other hand, contend that the Department of the Interior is already overburdened with the current leasing system and that comprehensive hardrock mining reform would only add to its inefficiency and ultimately increase costs through royalty and rents.

- Continue the current claim-patent system, but with some amendments. Proposed changes have included eliminating the distinction between lode and placer claims, imposing a time limit within which claims must be developed, expanding the size of a claim, providing better prediscovery protection, and opening more public lands to mineral exploration.

Proposals to Eliminate Subsidies

The Mining Law currently allows a claimant to produce minerals without a patent and without paying royalties or rents to the federal Treasury. This is considered a subsidy or give-away by many because the miner does not pay for a factor of production (i.e., land and mineral resources). By contrast, royalties are paid to the federal government for oil, gas, coal and other leasable minerals on federal lands, and non-federal land owners (e.g., private and state owners) typically receive a royalty from those who produce minerals on their lands. Also, if the claimant patents the surface and mineral estate for the $2.50 or $5.00 per acre, this too can be considered a subsidy because the claimant is paying less than fair market value for the surface and mineral estates. Various tax incentives, such as the percentage

depletion allowance (a tax deduction for the depletion of a mineral resource) and "expensing" (writing off in the year of expenditure) the costs of exploration and development, have been characterized as subsidies to the industry as well.

Eliminating some of the natural resource subsidies, in the Clinton Administration's view, would have been one way to increase revenues to the Treasury and help ensure a fair return to the taxpayer for the development of public lands. In its FY2001 budget request, the Clinton Administration proposed charging mining companies a 5% fee on net smelter production from hardrock mining on federal lands. The Bush Administration has not made a similar proposal in any of its budget requests.

As has been previously noted, the original intention of the Mining Law was to develop the nation's minerals and to develop the West. Proponents of retaining the current system contend that an incentive still is necessary for those who take substantial financial risk to develop a mineral deposit. Mining is a capital-intensive process that often takes years of development before minerals are produced.

Imposing royalties, increasing holding fees, and repealing the percentage depletion allowance would have some impact on domestic hardrock mineral production, but the level of any production decline attributable solely to new fees is difficult to estimate. The mining industry generally has opposed legislation to repeal the percentage depletion allowance. The elimination of some incentives to the industry would come at a time when the West is already developed and mineral/metal demand is relatively good. However, hardrock mineral prices fluctuate and often are cyclical. Also, several mineral-producing nations are reportedly rewriting their mining laws to attract more U.S. and western investment. Mineral investment in developing countries, however, face a political risk. The industry argues that a new cost increases in one area, without cost reductions in others, may make U.S. mineral deposits less competitive or uneconomic.

Fair Market Value

Critics point out that the federal government does not receive fair market value for land and resources transfers under the Mining Law. It receives no royalties or rents from mining activities conducted under the law. In addition, the $2.50 and $5.00 per-acre price for clear title to the surface and mineral rights has not changed since the law was enacted. The per-acre price appears to be based on the value of Western farmland and grazing land before the enactment of the law in 1872.

Determination of fair market value of mineral-bearing lands is complex because many geologic, engineering, and economic factors must be considered, and fair market value determinations typically are controversial. According to a 1989 report by the General Accounting Office (GAO), the fair market value of mineral-bearing lands is substantially more than the $2.50 and $5.00 per acre that a claimant pays for patenting a claim. GAO estimated that, for 20 patents it reviewed, the federal

government had received less than $4,500 since 1970 for lands valued between $13.8 million and $47.9 million.[10]

The GAO appraisal method, however, was criticized by the Bureau of Land Management (BLM) in a May 1989 Report to the Secretary of the Interior. The GAO report obtained information on land values from BLM, Forest Service officials, and local real estate brokers. GAO's estimates were based on recent sales of comparable land, not the value of the land at the time claims were patented; much of the land may have had very little value at the time it was claimed or patented. BLM argues that sales of adjacent tracts that either have no mineral development potential or are sold for mineral rights alone cannot be used to establish fair market value of the surface of patented mining claims and that data on comparable sales are rare.

The Congressional Budget Office estimates the value of hardrock mineral production on federal land at $600 million for FY2005, a decrease from an Interior Department estimate of $1.8 billion in FY1993. The decline can be attributed in part to acreage conveyed out of federal ownership through patenting, according to the BLM.

Environmental Protection

The lack of direct statutory authority for environmental protection under the Mining Law of 1872 is another major issue that has spurred reform proposals. Many Mining Law supporters contend that other current laws, as noted above, provide adequate environmental protection. Critics, however, argue that these general environmental requirements are not adequate to assure reclamation of mined areas and that the only effective approach to protecting lands from the adverse impacts of mining under the current system is to withdraw them from development under the Mining Law. Further, critics charge that federal land managers lack regulatory authority over patented mining claims and that clear legal authority to assure adequate reclamation of mining sites is needed. In addition, cleaning up the reportedly over 500,000 abandoned hardrock mine sites in the United States[11] is an ongoing and major concern for many in Congress. The BLM's Abandoned Mine Lands Program has inventoried 11,000 of the estimated 70,000 abandoned mine sites on public lands and has initiated cleanup efforts in Western states in cooperation with state and local governments, mining companies, and public interest groups.[12] In addition, the U.S. Environmental Protection Agency lists over 40 abandoned hardrock mine or processing sites on its National Priorities List for cleanup.[13]

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[10] *The Mining Law of 1872 Needs Revision*, United States General Accounting Office, GAO/RCED-89-72, March 1989, p. 24. This report is GAO's most recent investigative study of potential abuse of the Mining Law.

[11] Earthworks, Cleaning up Abandoned Mines, [http://www.earthworksaction.org/aml.cfm]

[12] U.S. Department of the Interior, Bureau of Land Management, *The Cooperative Conservation Based Strategic Plan for the Abandoned Mine Lands Program*, March 2006.

[13] U.S. Environmental Protection Agency, NPL Sites, Abandoned Mine Lands, Superfund, April 2005. See [http://www.epa.gov/aml/amlsite/npl.htm]

Federal Land Withdrawals

BLM is responsible for approximately 700 million acres of federal subsurface minerals, and supervises the mineral operations on about 56 million acres of Indian trust lands. Some of these lands are withdrawn from mineral development; a withdrawal is an action that restricts the use or disposition of public land. In some cases land is reserved for a specific use that may preclude locating mining claims and granting leases.

A BLM study determined that of the approximately 700 million acres of federal subsurface minerals under the agency's jurisdiction, approximately 165 million acres have been withdrawn from mineral entry, leasing, and sale, subject to valid existing rights. Lands in the National Park System (except National Recreation Areas), the Wilderness Preservation System, and the Arctic National Wildlife Refuge (ANWR) are among those that are statutorily withdrawn. Also, of the 700 million acres, mineral development on another 182 million acres is subject to the approval of the surface management agency, and must not be in conflict with land designations and plans, according to the BLM. Wildlife refuges (except ANWR), wilderness study areas, and roadless areas, among others, are in this category.[14]

The Federal Land Policy Management Act (FLPMA) mandated review of public land withdrawals in 11 Western states to determine whether, and for how long, existing withdrawals should be continued. According to the BLM, the retention of a withdrawal requires a compelling show of need, and an agency manager must convince the BLM Director, Secretary and the public that certain lands should not be opened to multiple use, including mining and mineral leasing, and that there is no reasonable alternative to continued withdrawal.[15]

Mineral industry representatives maintain that federal withdrawals inhibit mineral exploration and limit the reserve base even when conditions are favorable for production. Mineral reserves are not renewable. Thus, they argue that whether minerals are in the public or private sector, without new reserves or technological advancements, mineral production costs may rise. They further contend that higher domestic costs may lead to greater exploration on foreign soil, boosting import dependence. Mining industry supporters also assert that too much land has been unnecessarily withdrawn from mining, through administrative actions, to pursue preservation goals.

Critics of the Mining Law argue that mining often is an exclusive use of land in as much as it can preclude other uses and that in many cases there is no way to protect other land values and uses, short of withdrawal of lands from development under the law. They point to unreclaimed areas that have been mined for hardrock minerals in the past, Superfund sites related to past mining and smelting, and instances where development of resources could adversely affect or destroy scenic, historic, cultural, and other resources on public land.

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[14] *Public Lands, On-Shore Federal and Indian Minerals in Lands of the U.S.*, Bureau of Land Management, U.S. Department of the Interior, December 1, 2000.

[15] 43 U.S.C. 1714

Current Legislative Activity

A broad-based bill to reform the General Mining Law of 1872, the Hardrock Mining and Reclamation Act of 2007 (H.R. 2262), was introduced in the House on May 10, 2007. The bill would limit the issuance of patents to claimants whose patent applications were filed with the Secretary of the Interior on or before September 30, 1994, and met appropriate statutory requirements by that date. The bill would establish an Abandoned Locatable Minerals Mine Reclamation Fund, a Locatable Minerals Community Impact Assistance Fund, and an 8% royalty on "net smelter returns." Two-thirds of the royalty revenues would be deposited into the proposed reclamation fund, and one-third would be deposited into the proposed community impact assistance fund. An operations permit, which would include, among other things, a reclamation plan, would be required of any claim holder to carry out mining or related activities on mining claims. New reclamation standards would be established, and a reclamation bond or other financial guarantee would be required before exploration and operation permits are approved. A provision in the bill allows for civil suits to be filed in U.S. District Courts should a person feel adversely affected. The bill was referred to the Committee on Natural Resources.

For Additional Reading

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