REPORT TO THE CONGRESS

Modernization Of 1872 Mining Law Needed To Encourage Domestic Mineral Production, Protect The Environment, And Improve Public Land Management  B-116678

Department of the Interior
Department of Agriculture

BY THE COMPTROLLER GENERAL
OF THE UNITED STATES
To the President of the Senate and the Speaker of the House of Representatives

Our report concerns the need to modernize the Mining Law of 1872 to encourage domestic mineral production, protect the environment, and improve public land management.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Director, Office of Management and Budget, and to the Secretaries of Agriculture and the Interior.

[Signature]
Comptroller General
of the United States
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ABBREVIATIONS

BLM Bureau of Land Management
GAO General Accounting Office
PLLRC Public Land Law Review Commission
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WHY THE REVIEW WAS MADE

The Mining Law of 1872 was intended to promote development of U.S. mineral resources and to induce settlement in the West.

It reaffirmed the basic mining policy of the early gold rush days (late 1840s) of rewarding mineral discovery with exclusive mineral rights to the land. This policy and the law itself have remained fundamentally unchanged for over 100 years.

GAO wanted to know whether the century-old law encouraged development of mineral resources, resulted in effective management and use of the land, and protected the environment. Growing shortages of domestically produced mineral ores also prompted GAO to make this review.

FINDINGS AND CONCLUSIONS

Contrary to its intended purpose the 1872 law is not effectively encouraging development of minerals on Federal land and has adversely affected management and use of the land.

The law's second major purpose, to induce settlement in the West, has been accomplished.

MODERNIZATION OF 1872 MINING LAW NEEDED TO ENCOURAGE DOMESTIC MINERAL PRODUCTION, PROTECT THE ENVIRONMENT, AND IMPROVE PUBLIC LAND MANAGEMENT

Department of the Interior
Department of Agriculture
B-118678

Under the mining law, a person can claim exclusive rights to certain mineral deposits on Federal land merely by "discovery" and by filing a notification of the discovery if required by State laws. This claim is called a mining claim.

Minerals such as iron, copper, and bauxite are subject to the law, but fossil fuels--such as coal, oil, gas, and oil shale--are not. The number of mining claims on Federal lands is unknown, but, according to the latest Interior estimates, six million were filed between 1872 and 1962.

Title to both the mineral and surface rights can be obtained from the Interior if the mineral deposit is valuable enough to support a profitable mining operation. This title is called a mineral patent. About 59,000 mineral patents have been issued since 1872.

GAO's visits to various Federal offices and to a randomly selected sample of 240 mining claims and 93 mineral patents in 10 counties in Arizona, California, Colorado, and Wyoming produced extensive evidence supporting the need for modernizing the mining law.

Only part of the U.S. demand for minerals is being met by domestic
production, and the situation is expected to worsen, according to the Interior.

Growing U.S. dependence on foreign supplies of many critical and strategic mineral ores and their potential cutoff for economic or political ends warrants action by the Federal Government to stimulate exploration and development of domestic mineral resources.

Lack of mining activity

Of the 240 mining claims GAO visited, only 1 was being mined. There was evidence on only three claims that minerals had ever been extracted.

On the basis of these sample results, GAO estimates that no minerals had ever been extracted on 197,000 of the estimated 200,000 claims recorded in the 10 counties during the 25-year period covered by the review. (See p. 8.)

A principal cause is that the mining law provides no Federal control to insure mineral development.

Of 93 mineral patents visited, only 7 were being mined, 66 were not being used for any apparent purpose, and 20 were being used for nonmining purposes, such as for residences and grazing operations. There was no evidence that any minerals had ever been extracted on 74 of the 93 patents. (See p. 11.)

Mineral patent land can be used for any legal purpose, and its economic value for nonmining purposes may be greater than that for mining operations. (See p. 12.)

Mining claims hinder proper management and use of Federal lands

Because of inadequate reporting and recording requirements, Federal agencies cannot readily determine the existence of mining claims filed on Federal lands. Consequently:

--Mineral exploration activity on Federal land, which such claims would indicate, cannot be assessed.

--Use of mineral lands--such as oil shale lands--is hindered by the time-consuming and costly actions needed to clear title to lands covered by dormant mining claims. Clearing title could involve many legal maneuvers, contests, appeals, and reviews. (See p. 16.)

--Federal agencies cannot readily identify claimants who have caused environmental or other damage to Federal land. (See p. 25.)

Mining claims in the 10 counties reviewed were recorded at the county recorder offices, as required by State laws. In selecting mining claims to visit, GAO reviewed county recordings for the 25-year period ended June 1972 and found that the existence of mining claims and their locations could not be readily determined from the recording systems.

By visiting known claim sites, GAO found that required site markings did not always exist. Identification of claims by means of claim markings could not be relied on, therefore, to compensate for inadequacies of the records. (See p. 19.)

Since 1968, Interior has spent over 100 man-years and $1.9 million to clear the titles to old mining claims on oil shale lands in Colorado, Utah, and Wyoming. About 50,000 of the 56,000 claims
identified as of February 1974 still had to be cleared.

Not only is the process costly, but delays in clearing these mining claims could impede future efforts to establish an oil shale leasing program for commercial production on public lands and could impede development of a new fuel source to meet energy needs. The Secretary of the Interior announced a prototype oil shale leasing program in November 1973.

Environmental damage and safety hazards not covered by Mining Law of 1872

Preextraction mining activities had caused significant environmental damage on 7 of the 240 mining claims and 19 of the 93 mineral patents. (See pp. 26 and 29.)

An example of surface damage resulting from mining activity in Wyoming is shown in the following photograph.

Carefully planned operations and rehabilitation and restoration measures could help prevent or minimize such damage. (See p. 30.)

The Mining Law of 1872 has no provision for protecting or rehabilitating lands covered by mining claims or mineral patents.

The Federal Government should be given authority to establish and enforce environmental and hazard reduction regulations for mineral exploration and development.

Federal Government not adequately compensated for minerals or land

The 1872 law does not require payments to the Federal Government for minerals mined or for use of the lands. The amount charged for land conveyed to private owners under mineral patents--$2.50 or $5.00 an acre--is only nominal and bears no relationship to the land's fair market value.

For example, the fair market value of 41 of the 93 patents GAO reviewed was about $1.1 million in February 1973, compared to the $12,000 paid to the Federal Government when the patents were issued during the period 1950-71.

Although the fair market value of the lands at the time they were patented may have been less than the current fair market value, the amounts paid for these lands, if patented today, would still be the same.

Opportunity for land speculation under the law is strong, and some individuals have capitalized on it. For example, 150 acres of land
patented in California in 1959 for $375 sold within 15 months for $43,500. Another 80 acres of land patented in Arizona in 1955 for $200 sold in 1972 for $368,000. (See p. 33.)

Although the Federal Government receives only nominal revenues on mineral patents, it receives substantial revenues for leasable minerals (mainly fossil fuels); that is, those not covered by the Mining Law of 1872.

In fiscal year 1973, the Bureau of Land Management received $4.1 billion in royalties and related land rentals from mineral leases and bonus bids (one-time payments for the privilege of obtaining permits or leases).

GAO believes the public should receive a fair return on the disposition of its natural resources and the Federal Government should be paid for the use of and exclusive rights to all mineral lands.

What needs to be done?

The administration of mineral development on Federal land needs improvement in two broad areas:

--Incentives must be provided for exploring and developing domestic minerals in a manner compatible with use of the same lands for other purposes.

--A system must be established through which the Federal Government would be paid for the use of and rights to all mineral lands. (See p. 43.)

These improvements could best be made by adopting mineral leasing legislation. GAO favors the leasing system over the present location system because the Federal Government would retain title to mineral and surface rights and could control land uses in a manner dictated by public needs and national interests.

A major segment of the mineral industry--including the coal, oil, and gas producers--operates under a leasing system.

Economic conditions, such as metal prices and mineral demands, dictate the timing and extent of mining activity to a large degree.

Lacking a viable economic climate, it appears unlikely that increased production would result merely by requiring development on lands made available for mining.

Better Federal controls over mining activity on public lands would, however, induce diligent production by legitimate mining interests--if warranted by economic conditions--and minimize abuses by those who have no intention to do so.

RECOMMENDATIONS OR SUGGESTIONS

This report contains no recommendations or suggestions for the Secretaries of Agriculture and the Interior.

AGENCY ACTIONS AND UNRESOLVED ISSUES

The Interior and Agriculture generally agreed with GAO's facts and recommendations to the Congress. (See pp. 46 and 47.)

MATTERS FOR CONSIDERATION

BY THE CONGRESS

GAO recommends that the Congress
enact legislation covering future exploration and development of all minerals presently subject to provisions of the Mining Law of 1872. This legislation would:

--Establish an exploration permit system covering public lands and require individuals interested in prospecting for minerals to obtain a permit.

--Establish a leasing system for extracting minerals from public lands.

--Require that, to preserve valid existing rights, mining claims be recorded with the Department of the Interior within a reasonable period of time after legislation is enacted and evidence of a discovery of valuable minerals be furnished before claims are recorded. (See p. 44.)

--Authorize the Secretary of the Interior to grant life tenancy permits to individuals now living on invalid claims if he determines that their eviction from the lands would cause them undue personal hardship. (See p. 45.)

GAO is further recommending a number of provisions designed to provide incentives for diligent mineral exploration and development, sound environmental considerations, and a fair return to the public on the disposition of its natural resources. (See pp. 44 and 45.)
**GLOSSARY**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Assessment work</td>
<td>Annual labor performed or improvements made on mining claims.</td>
</tr>
<tr>
<td>Affidavit of labor</td>
<td>Form filed with county recorder's office certifying the performance of annual assessment work.</td>
</tr>
<tr>
<td>Claimant-locator</td>
<td>Person locating and filing mining claim.</td>
</tr>
<tr>
<td>Discovery</td>
<td>Defined by the courts as the physical disclosure of minerals in sufficient quantity as to warrant undertaking further expenditure of labor with a reasonable prospect of success in developing a paying mine.</td>
</tr>
<tr>
<td>Locatable minerals (under the Mining Law of 1872)</td>
<td>Valuable minerals on public domain lands (lands that have never left Federal ownership) not specifically authorized by law for lease or sale.</td>
</tr>
<tr>
<td></td>
<td>All but the following mineral types are locatable minerals:</td>
</tr>
<tr>
<td></td>
<td>- Minerals included in the Mineral Leasing Act of 1920, as amended, which authorized the leasing of oil, gas, oil shale, phosphate, potassium, sodium, native asphalt, solid and semisolid bitumen and bituminous rock.</td>
</tr>
<tr>
<td></td>
<td>- Mineral materials included in the Materials Act of 1947, as amended, which authorized the sale of petrified wood and common varieties of sand, stone, gravel, pumice, pumicite, cinders, and clay.</td>
</tr>
<tr>
<td>Lode claim</td>
<td>Generally a mining claim where a mineral deposit is held in place by rocks so as to permit reasonably distinct identification of its boundaries.</td>
</tr>
<tr>
<td>Mineral patent</td>
<td>Federal deed granting legal title to land.</td>
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<td>------------------------------------------</td>
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<tr>
<td>Mining claim</td>
<td>Possessory right to minerals on lands open to operation under the mining laws.</td>
</tr>
<tr>
<td>Placer claim</td>
<td>Any claim not a lode claim; i.e., all forms of deposit except veins of quartz or other rock in place.</td>
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CHAPTER 1

INTRODUCTION

To promote the exploration and development of U.S. mineral resources and to induce settlement in the western part of the country, the Congress enacted the Mining Law of 1872 (30 U.S.C. 22).

Under the law, a person can claim exclusive rights to certain mineral deposits on Federal land merely by "discovery" and by filing a notification of the discovery if required by State laws. Administrative approval of a claim or proof that a mineral has in fact been located are not required, and the claimant does not have to pay for the mineral or use of the land. Also, the claimant can sell, donate, or will the possessory rights to the mining claims.

Legal title to the surface of the land can be obtained through the issuance of a Federal deed, called a "mineral patent," provided the mineral deposit is valuable enough to support a profitable mining operation. A nominal fee of $2.50 or $5.00 per acre (depending on the type of mining claim) is charged by the Federal Government for mineral patents. This system for discovering, developing, and producing mineral resources is referred to as the "location-patent system."

The Department of the Interior estimated that about 590 of the 760 million acres of land owned by the Federal Government as of June 30, 1972, were subject to the Mining Law of 1872. Of all Federal lands, about 474 million acres are administered by the Interior's Bureau of Land Management (BLM), and about 187 million acres are administered by the Forest Service, Department of Agriculture.

The total number of mining claims on Federal land is unknown, but the Interior estimated that between 1872 and 1962 six million claims were filed. Over 59,000 mineral patents have been issued since implementation of the Mining Law of 1872. Most of these were issued before 1910; only 2,047 patents have been issued during the past 25 years.
EMERGENCE OF MINING LAW OF 1872

The Mining Law of 1872 was essentially a refinement of the Lode Law of 1866, which opened Federal land to exploration and occupation and which was the first Federal law to legislate mining activities. Both laws were an outgrowth of the local customs, rules, and regulations that developed during the early gold rush days (late 1840s), when miners themselves set up procedures governing mining claims.

The basic mining policy that grew out of the early frontier law was to grant exclusive mineral rights as a reward for discovering minerals. This policy was reaffirmed by the Mining Law of 1872 and has remained fundamentally unchanged for over 100 years. The only major change in the Mining Law since 1872 has been to place certain minerals under either a leasing or sales system.

The Mineral Leasing Act of 1920, as amended (30 U.S.C. 181), authorized the leasing of public domain lands (Federal lands that have never left Federal ownership) containing oil, gas, oil shale, phosphate, potassium, sodium, native asphalt, and solid and semisolid bitumen and bituminous rock. The provisions of this act were later extended to acquired lands (those obtained by the Government through purchase or condemnation, as a gift or by exchange for public lands or for timber on public lands) by the Mineral Leasing Act for Acquired Lands (30 U.S.C. 351).

Under the leasing system there is no transfer of title to the mineral and/or surface rights. Prospectors must obtain permits to explore the public land for leasable minerals; if their exploration is successful, they may apply for leases to conduct mining operations. It is left to the Secretary of the Interior's discretion to issue leases, and they may be issued under noncompetitive or competitive procedures. Annual rents must be paid until production begins, and royalties must be paid for minerals extracted.

The sale of mineral materials, such as petrified wood and common varieties of sand, stone, gravel, pumice, pumicite, cinders, and clay, was authorized by the Materials Act of 1947 (30 U.S.C. 601).
CONCERN WITH MINING LAW

In 1970 the Public Land Law Review Commission (PLLRC), which was established in the Congress in 1964 to make a comprehensive study of public land laws, recommended to the President and to the Congress that the mining law be amended to clear Federal land of dormant mining claims and to make the law more responsive to present mining conditions.

PLLRC cited several general deficiencies in the mining law:

--The law offers no means by which the Government can effectively control environmental impact.

--Mining claims long since dormant remain as clouds on titles, and Federal land managers do not know where the claims are located.

--Individuals whose primary interests are not in mineral development and production have attempted, under the guise of the mining law, to obtain use of the public lands for various other purposes.

PLLRC recommended amending, rather than repealing, the Mining Law of 1872. PLLRC concluded in its report that the revised location system it recommended would correct the deficiencies and weaknesses of the mining law and, at the same time, would continue to provide incentives for exploring, developing, and producing valuable minerals. Of the 19-member commission, 4 members disagreed with this conclusion and submitted separate views. In their opinion, modifying the mining law would not provide an adequate legal framework for the future. The four members favored adopting a general leasing system for all minerals except those made available for outright sale.

They argued that such a system would:

--Continue to encourage orderly and needed resource exploration and development.

--Insure better management and protection of all public land values and enhance human and environmental values.
--Establish a fair and workable relationship between economic incentives and the public interest.

They also argued that a workable leasing system had been part of the Federal law since 1920 and that many States which own public lands have leasing and permit systems as part of their laws. Arizona and California are two such States.

Changing or repealing the Mining Law of 1872 has been the subject of various bills introduced in the Congress during the past few years.

On February 27, 1973, the administration submitted to the Congress the proposed "Mineral Leasing Act of 1973" which would repeal the Mining Law of 1872, the Mineral Leasing Act of 1920, and other related laws and which would create a single statute for disposing of minerals. This legislation has been introduced as Senate bill 1040 and House bill 5442. Of other related bills, Senate bill 3085, entitled "Hardrock Mineral Development Act of 1974," would only reform the mining laws for hardrock minerals, and Senate bill 3086, entitled "Mineral Development Act of 1974," also would affect only the production of hardrock minerals but would retain the location-patent system.

Although the need for some type of change in the mining law is readily acknowledged, there are opposing views on the nature and extent of the change. The crux of the controversy involves the degree of Federal control which should be legislated and the priority of mining uses over other uses of public lands.

The opposing views were expressed in testimony on proposed mineral legislation\(^1\) given in March 1974 before the Subcommittee on Minerals, Materials, and Fuels, Senate Committee on Interior and Insular Affairs.

The Secretary of Interior and the Chief, Forest Service, recommended enacting Senate bill 1040 to provide agencies with the discretion needed to insure that mineral uses are balanced and coordinated with other surface uses. Representatives of the Sierra Club and the Wilderness Society indicated that, as

\(^1\)Hearings on S. 1040, S. 3085, S. 3086, and related bills to amend the mineral leasing and general mining laws.
a general policy, they also favored the leasing of mineral resources over the location patent system embodied in the Mining Law of 1872.

In sharp contrast to these views, representatives of the American Mining Congress (the national organization of the mining industry) and State mining associations endorsed the proposed Mineral Development Act of 1974. The mining congress believed that this legislation would deal effectively with the criticisms which had been made of the existing general mining laws. The chairman of the Public Lands Committee of the mining congress voiced concern regarding two leasing issues which he believed deserved special attention: (1) competition in the allocation of resources and (2) limitations on tenure which could be imposed by the Secretary under powers vested in him in the proposed leasing bills.

The chairman stated that, although competitive bidding provides an initial economic return to the landowner—in this case the Federal Government—it is not a fair way to allocate leases because it discriminates against small miners, is an economic waste, discourages development and investment, and is an anticonservation measure.
CHAPTER 2
MINING CLAIMS AND LANDS COVERED BY MINERAL PATENTS

NOT USED FOR MINING PURPOSES

The development of mineral deposits on Federal land is not being effectively encouraged, contrary to the intention of the mining law. A principal cause is that the law provides no Federal control to insure that the land is used for mining. In the 10 counties included in our review, most mining claims and lands conveyed to private owners under mineral patents had not been mined, and some mineral patents had been used for purposes not contemplated by the mining laws. The growing shortages of domestically produced minerals necessitates new measures to encourage mineral development.

DOMESTIC MINERAL PRODUCTION
NOT MEETING DEMAND

Only part of the demand for minerals is being met by domestic production, and the situation is expected to worsen, according to the Interior.

The Secretary of the Interior reported to the Congress in June 1973\(^1\) that domestic exploration in 1972 had continued its downward trend and that development of mineral resources was not keeping pace with domestic demand. In recent years U.S. imports of several major commodities, including iron, steel, bauxite, and alumina, have been increasing. The report points out that this trend poses major problems to U.S. industry and the Government. For example:

--Mineral imports have an unfavorable impact on the U.S. balance of trade and balance of payments. Over 17 billion tons of steel were imported in 1972, contributing to a deficit of $6 billion in the U.S. mineral balance of trade in 1972. On the basis of mineral production patterns of the past two decades and forecasts of future demand, this deficit could be nearly $100 billion by the year 2000.

--U.S. industry is encountering greater competition from foreign nations in developing new foreign mineral supplies and in assuring the long-term flow of minerals to the United States.

--Expropriations, confiscations, and forced modifications of agreements have severely modified the flow to the United States of some foreign mineral materials produced by U.S. firms operating abroad and have made other materials more costly.

Also, the Secretary of the Interior expressed concern in December 1973 about potential interruption of U.S. imports of strategic and critical materials by countries taking actions similar to the Arab countries' embargo on crude oil. The Secretary noted that the National Commission on Materials Policy recommended in June 1973 that the United States should prevent a dangerous or costly dependence on imports wherever necessary.

The rates of actual primary mineral production in the United States in relation to the mineral demand in 1971 for selected locatable minerals and figures projected for the year 2000, supplied by the Interior's Bureau of Mines, are shown in the following table.

<table>
<thead>
<tr>
<th>Minerals</th>
<th>Ratio of primary production to primary demand (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1971</td>
</tr>
<tr>
<td>Aluminum</td>
<td>11.4</td>
</tr>
<tr>
<td>Copper</td>
<td>93.5</td>
</tr>
<tr>
<td>Gold</td>
<td>22.8</td>
</tr>
<tr>
<td>Iron</td>
<td>72.0</td>
</tr>
<tr>
<td>Lead</td>
<td>61.2</td>
</tr>
<tr>
<td>Silver</td>
<td>40.9</td>
</tr>
<tr>
<td>Tungsten</td>
<td>62.0</td>
</tr>
<tr>
<td>Zinc</td>
<td>37.0</td>
</tr>
<tr>
<td>Uranium</td>
<td>96.9</td>
</tr>
</tbody>
</table>

As shown above, the percentage of primary production in relation to primary demand is expected to drop dramatically, even for metals such as copper and uranium for which over 90 percent of the demand was met in 1971.
Although some deposits of these minerals have been found on Federal land, the extent of these resources is not known. But, the Interior speculates, considerable mineral deposits may be found in the United States.

MINING CLAIMS

Lack of mining activity

We visited 240 randomly selected mining claims of an estimated 200,000 claims recorded during fiscal years 1948-72 in 10 counties of 4 States. We were accompanied by BLM or Forest Service specialists on most of our visits.

The claims we reviewed were filed as follows.

<table>
<thead>
<tr>
<th>Fiscal years</th>
<th>Arizona</th>
<th>California</th>
<th>Colorado</th>
<th>Wyoming</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948-52</td>
<td>2</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>1953-57</td>
<td>-</td>
<td>18</td>
<td>31</td>
<td>26</td>
<td>75</td>
</tr>
<tr>
<td>1958-62</td>
<td>7</td>
<td>18</td>
<td>11</td>
<td>2</td>
<td>38</td>
</tr>
<tr>
<td>1963-67</td>
<td>14</td>
<td>11</td>
<td>4</td>
<td>10</td>
<td>39</td>
</tr>
<tr>
<td>1968-72</td>
<td>17</td>
<td>25</td>
<td>11</td>
<td>20</td>
<td>73</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>80</strong></td>
<td><strong>60</strong></td>
<td><strong>60</strong></td>
<td><strong>240</strong></td>
</tr>
</tbody>
</table>

Of the 240 mining claims, 239 were not being mined at the time of our visits, and there was no evidence that any mineral extraction had ever taken place on 237 of the claims. Also, we found no evidence of mineral exploration work, such as pits, shafts, or cuts on the land, for 146 of the 240 claims. On the basis of our sample results, we estimate that no minerals had ever been extracted on 197,000 of the estimated 200,000 claims.

We noted nonmining activities on the lands in some cases. For example, trees on one claim were marked for logging operations, there was evidence of recent logging operations on two claims, and there was evidence that the land had been used for grazing on 28 claims. Because the users were not readily identifiable, we could not determine whether persons other than the claimants were using the lands or whether the users had received authorization from the Federal Government for nonmining activities. Such unauthorized uses by claimants would be improper.
The Mining Law of 1872 gives Federal agencies no control over the exploration or development of lands administered by them. There is no tenure or expiration date for a mining claim. A claimant can tie up Federal land indefinitely without actively mining it. Also, as discussed in chapter 3, Federal approval is not needed to file claims, nor are Federal agencies notified of claims filed.

The mining law requires the discovery of a valuable mineral before a valid mining claim can exist and that a claimant do at least $100 worth of labor or make at least $100 worth of improvements annually (assessment work). The courts have defined discovery as the physical disclosure of minerals in sufficient quantity as to warrant undertaking further expenditure of labor with a reasonable prospect of success in developing a paying mine. However, it is questionable whether enough is known about the mineral deposit at the time the mining claim is recorded to judge its economic and mineral potential.

In this regard, a Forest Service official told us that, although the United States can challenge claims at any time, practicality has dictated a certain laxness in insuring that unpatented mining claims meet the discovery requirement. He pointed out that mineral potential is never well known until thorough exploration to economic depths proves or disproves the existence of valuable deposits. BLM and Forest Service officials emphasized the high risk, high costs, and long time involved in determining the existence of a mineral deposit.

Of the four States we reviewed, two required that discovery work be done after the claim was filed to better demonstrate the existence of a valuable mineral deposit. The other two States required that either discovery work be done or a survey done and a map recorded. However, claimants were not required to report the results of the work done. Three of the four States required affidavits of annual assessment work to be filed, but the States did no followup work. Therefore, there was no assurance that the claims would ever be mined.

Some minor work--such as cuts and pits--had been done on 94 of the 240 claims, but we could not determine whether the work involved exploration, discovery, or assessment because the effect on the land is similar. Also, it is
possible that some discovery, exploration, or assessment work was done earlier on other claims included in our sample, but it was not evident during our visit because time had passed and vegetation had grown on many of the claims.

**Mining law abused through claims speculation practices**

Mining claims have been filed on Federal land apparently for speculative purposes. Those people who file mining claims on public land and who do not actively explore for and develop minerals may prevent those who wish to conduct legitimate mining activity from entering the land for that purpose; this, in effect, hinders the development of mineral resources, contrary to the intent of the mining law. Also, as discussed on page 20, the process for clearing titles to land covered by mining claims is both time consuming and costly.

Included in our sample of 240 mining claims were 7 claims in Arizona and Wyoming filed by Mr. Merle Zweifel of Oklahoma who heads Zweifel International Prospectors. According to letters mailed to prospective clients, Mr. Zweifel's organization is the largest mining claim location service in North America. Mr. Zweifel has filed thousands of mining claims in several Western States on behalf of himself and others.

Mr. Zweifel advertises his locator services through various publications and charges varying amounts for his services. One letter to a prospective client, for example, requested $50 to cover the cost of paperwork, mapping, filing claims in Wyoming, and holding them for speculation. Another letter requested $120 from an individual for filing claims in Utah and holding them for speculation.

During our visits to Mr. Zweifel's seven claims, we found no evidence of any exploration or mining activity. In 1968 BLM had similar findings involving 2,910 claims filed by Mr. Zweifel, who was acting as locator and agent for over 250 other individuals. A complaint issued by the United States in August 1968 charged that the claims, which were filed in three Colorado counties, were not located in accordance with the mining laws and that there had been no discovery of a valuable mineral deposit, within the meaning of the mining law, on any of the claims.
The administrative law judge in February 1972 concluded that the claimant's testimony on locating these mining claims was so superficial and so implausible that it was reasonable to conclude that none of the claims in the complaint met the requirements of the mining law; the judge ruled these 2,910 claims null and void. Mr. Zweifel testified that he located all the 2,910 claims without any assistance. The record showed that he purportedly located 2,063 claims covering over 287,000 acres of land during a 22-day period in 1966. He filed location notices on one of these days for 497 mining claims in Rio Blanco County, Colorado, and for 73 mining claims in Sweetwater County, Wyoming.

The Interior Board of Land Appeals upheld the judge's decision on May 29, 1973. The claimant appealed the Board's decision to the Federal courts in August 1973 but later asked that the appeal be dismissed without prejudice.

MINERAL PATENTS

We visited lands covered by 93 randomly selected mineral patents of the 437 issued in 10 counties of 4 States during fiscal years 1950-72. (See table below.) BLM or Forest Service specialists accompanied us on most of our visits. The patents included in our sample were issued throughout a 22-year period beginning with fiscal year 1950--the earliest year for which complete data was readily available.

<table>
<thead>
<tr>
<th>Fiscal years</th>
<th>Arizona</th>
<th>California</th>
<th>Colorado</th>
<th>Wyoming</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-52</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>1953-57</td>
<td>5</td>
<td>10</td>
<td>12</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>1958-62</td>
<td>8</td>
<td>7</td>
<td>8</td>
<td>20</td>
<td>43</td>
</tr>
<tr>
<td>1963-67</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>1968-72</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>93</td>
</tr>
</tbody>
</table>

Of the 93 patents, only 7 were being mined, 66 were not being used for any apparent purpose, and 20 were being used for nonmining purposes. A photograph of a mineral patent being used for nonmining purposes is on page 13.
We found no evidence that any mineral extraction had taken place on 74 of the 93 patents. The following table details the uses.

<table>
<thead>
<tr>
<th>Use</th>
<th>Number of patents</th>
</tr>
</thead>
<tbody>
<tr>
<td>No apparent purpose</td>
<td>66</td>
</tr>
<tr>
<td>Residences</td>
<td>12</td>
</tr>
<tr>
<td>Mining</td>
<td>7</td>
</tr>
<tr>
<td>Ranching or grazing operations</td>
<td>5</td>
</tr>
<tr>
<td>Land subdivision</td>
<td>1</td>
</tr>
<tr>
<td>Expansion of university complex</td>
<td>1</td>
</tr>
<tr>
<td>Oil storage site</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>93</strong></td>
</tr>
</tbody>
</table>

Under the mining law the Government must issue a patent to any claimant who makes an application and meets specified requirements. The claimant is charged $2.50 or $5.00 per acre, depending on whether the claim is a lode claim (mineral deposits in veins) or placer claim (diffused or broken mineral deposits). The claimant must furnish proof that the mining claim has been surveyed, that a valuable mineral deposit has been discovered on the claim, and that he has spent at least $500 to develop each claim covered by the patent application. Also, the U.S. Supreme Court has ruled that, to be considered valuable, the deposit must be marketable at a profit. If the claimant meets these requirements, the Government has no choice but to issue the patent.

Ordinarily a mineral patent will convey the Government's entire title to the land covered by the claim. The conveyance in fee simple transfers the property to private ownership, and the claimant may use the land as he would any other private property. In some instances, when the surface is already privately owned but the minerals have been reserved by the Federal Government, only the mineral estate is transferred by a mineral patent.

There is no requirement that the minerals for which the patent was issued ever be mined, and the land may be used for any legal purposes. Mineral patents, therefore, have been issued for land that may have been more valuable for purposes other than mining.
AREA ON SAMPLE PATENT IN SAN BERNARDINO
COUNTY, CALIFORNIA, USED AS AN OIL STORAGE
HOLDING AREA. THE LARGE DITCHES HOLD ABOUT
200,000 GALLONS OF OIL.
Using land for mineral exploitation is effectively precluded when its current use has a high value and is permanent. For example, land in Arizona which was covered by one of the patents included in our sample had been subdivided for residential development. Land in Arizona under another patent included in our sample had been used for expanding a university complex. It is highly unlikely that residences or buildings will be disturbed to carry out mining operations on these patents.

CONCLUSIONS

Available statistics show that only part of the domestic mineral demand of the United States is being met by domestic production, and the situation is expected to worsen. Therefore, one of the original objectives of the Mining Law of 1872, which was to encourage mineral development on Federal land, continues to be a legitimate objective; however, the law has not effectively met this objective. The second major objective, to induce settlement in the western part of the country, has been met.

Most mining claims and patented lands we reviewed were not being mined as intended by the Mining Law of 1872. Since the law does not require that mining take place and permits indefinite retention of exclusive rights to a claim for only $100 a year, the Government has no opportunity to induce mining of these lands.

We believe that public lands made available to individuals for mining purposes should be explored and developed within a reasonable period of time. Admittedly, economic conditions, such as metal prices and mineral demands, dictate the timing and extent of mining activity to a large degree. And, lacking a viable economic climate, it appears unlikely that increased production would result merely by requiring development on lands made available for mining. Better Federal controls over mining activity on public lands would, however, induce diligent production by legitimate mining interests—if warranted by economic conditions—and would minimize the types of abuses prevalent under the Mining Law by those who have no intention of mining the lands.
In our opinion, the objective could best be met by:

--Establishing an exploration permit system covering public lands and requiring individuals interested in prospecting for minerals to obtain permits.

--Establishing a leasing system for extracting minerals from public lands.
CHAPTER 3

MINING CLAIMS HINDER PROPER MANAGEMENT

AND USE OF FEDERAL LANDS

Because of inadequate reporting and recording requirements, Federal agencies do not know, and cannot readily determine the existence, of mining claims filed on Federal land. Consequently:

--The mineral exploration activity on claimed Federal land, which such claims would indicate, cannot be assessed.

--The use of mineral lands is hindered by the time-consuming and costly actions needed to identify and clear the titles to dormant mining claims.

Also, not knowing what land is encumbered by mining claims, individuals or mining companies may be discouraged from exploring for minerals or may run the risk of filing a mining claim on land covered by an existing claim.

LACK OF ADEQUATE RECORDS AND EVIDENCE

OF MINING CLAIMS

The mining law requires compliance with the recording requirements of State laws. All four States included in our review required that claims be recorded with the county recorder's office in the county in which the claims were located. Federal agencies do not have to approve claims on Federal lands before they are filed. Also, the Federal agencies administering the lands are not informed when claims are filed. County recordings, therefore, provide the only source of information for identifying mining claims filed on Federal lands.

Because the 10 counties' recording systems were inadequate, we could not determine the existence and current status of mining claims. Therefore, the mineral exploration activity on Federal lands, which such claims would indicate, cannot be assessed. Also, although the four States require that claims be marked at the time they are located, the markings do not have to be maintained. We found that many
claims were not identified on the ground. Identifying claims by means of claim markings could not be relied on, therefore, to compensate for the inadequacies of the records.

Lack of adequate records

We reviewed the 10 counties' records of mining claims recorded in the 25-year period ended June 1972.

Six counties recorded mining claims for the full 25-year period in "index" books; one county recorded claims in "reception" books. The remaining three counties used both types of books at some time during the period.

The index books contained alphabetical entries relating only to mining claims—the original claim, amendments to the original filing, affidavits indicating that annual work had been done on claims, and abandonment of claims. The reception books contained chronological lists of all types of county transactions, such as marriages, divorces, deaths, and property transfers, as well as mining claims. The mining claim entries usually included the name of the claim and locator, the date of filing, and the location of the claim.

Because the initially filed mining claims, in many instances, could not be distinguished from numerous other mining claim-related entries in these indexes, the number of mining claims recorded in any one county could not be readily determined. For example, in the county in which we used only the reception books to identify mining claims, we had to review about 94,000 entries to identify the total number of mining claims filed in the county during the 25-year period. Only about 1,800 of the entries appeared to represent mining claims. For the same period, we identified about 290,000 apparent mining claims from among thousands of other entries in the sources used to identify mining claims in the other 9 counties. It is noteworthy that this volume of apparent mining claims does not include those claims filed during the first 75 years of the existence of the Mining Law of 1872.

Similar difficulty would be experienced if one wanted to determine whether a specific tract of land was encumbered by a mining claim. Not knowing the name of the claim or claimant, a researcher could not refer to the alphabetical listing but would have to identify the claim by location. This process could entail a review of all the entries in the
index or reception books and, unless the location were clearly identifiable in these records, a review of the location certificates.¹

We also examined 1,015 randomly selected mining claim location certificates included in the files of the 10 counties to determine whether they contained adequate location information. The location descriptions were too vague to enable us to determine where 224 of the 1,015 mining claims were located. For example, 96 of the 246 certificates we examined in Arizona did not even show the township (a 36-square-mile area) in which the claim was located.

Status of mining claims = not readily determinable

Events affecting possessory rights to mining claims--such as abandonment and performance of annual labor--do not always have to be recorded. Therefore, the Government or a prospective claimant cannot readily determine whether a valid interest in the claim still exists.

Abandoned claims do not have to be reported to the county offices. Of 35 claim locators whom we contacted, 8 considered their claims abandoned but the county records did not indicate the abandonments.

As indicated earlier (see p. 9), under the mining law a claimant must do at least $100 worth of labor or make at least $100 worth of improvements annually. This requirement was established to provide evidence of the claimant's good faith concerning his intention to mine the claim. Failure to perform the work makes the land subject to mining claims by others. In instances when a number of contiguous claims are held in common, the work on any one claim can satisfy the requirement for all other claims.

Of the four States we reviewed, California, Colorado, and Wyoming required affidavits of assessment work which indicated annual assessment work was done. County records in these States should contain affidavits of assessment work.

¹Documents filed in the county records which certify that mining claims have been located on Federal land.
if such work was actually done. However, to determine the claim status on a particular plot of land, a person would first have to identify the name and location of the claim. As indicated earlier, in many instances this is virtually impossible or at the very least involves a very time-consuming detailed review of county records.

Affidavits under Arizona law were voluntary, so a review of county records would not necessarily disclose whether the required assessment work had been done.

Physical evidence of mining claims not found

According to mining law, when a lode claim is located, the location must be distinctly marked on the ground so that the boundary can be readily traced; the locations of placer claims must conform as nearly as possible to legal public land survey subdivisions. If the claim is on unsurveyed land, the corners must be posted.

For lode claims, the four States required that posts be located at each corner. For placer claims, each State also required that a location notice be posted on the claim and that posts be placed on the boundaries or angles of the claim.

Only 18 of the 240 claims which we visited were clearly marked. Although the laws of the four States required that the claims be marked at the time of location, they did not require that the markings be maintained. In addition, for 63 claims we found postings on the land that indicated a claim was present, but the specific claim could not be identified to the extent that another person could determine from the county records whether a valid interest in the claim still existed.

The lack of claim markings, coupled with the lack of readily identifiable recorded information, makes it virtually impossible for a Federal land management agency or a prospective claimant to determine the existence of a mining claim on some tracts of land.
PROCEDURES FOR CLEARING MINING CLAIMS
TIME CONSUMING AND COSTLY

Use of mineral lands is hindered by the time-consuming and costly actions needed to identify and clear the titles to dormant mining claims. It involves many legal maneuvers, contests, appeals, and reviews, which delay resolution of the problem.

The chart on the following page shows the extensive validation and appeal procedures for clearing mining claims.

The Interior's efforts to identify and clear mining claims on public lands containing oil shale—a potential fuel source for easing our energy demands—illustrates the long delays and high cost involved in dealing with mining claims. Delays in clearing these mining claims could impede future efforts to establish an oil shale leasing program for commercial oil shale production on public lands. The Secretary of the Interior announced a prototype oil shale leasing program on November 28, 1973.

The Secretary in 1968 declared over 8 million acres of oil shale lands in Colorado, Utah, and Wyoming as unavailable for filing mining claims (withdrawal area). An Oil Shale Project Office was established in BLM's Colorado State Office in 1968 to clear title to the oil shale lands, exchange land for consolidation purposes, lease the lands, and conduct experiments and research. Over 100 man-years and about $1.9 million were spent on this project from September 1968 through February 1974.

Most of this effort involved identifying mining claims and clearing title to the lands. As of February 1974 the office had identified about 56,000 claims in the withdrawal area of the three States. Only 5,600 claims had been cleared as of February 1974.

An undeterminable portion of the above effort involved contesting the validity of 2,910 related mining claims held by over 250 claimants. Most of the claims had been filed between May 1966 and February 1967. Many of the claimants contested complaint notices issued by BLM in August 1968, and hearings were held before the administrative law judge in June and September 1970. The judge issued a decision in
February 1972 declaring the claims null and void. The claimants filed an appeal in May 1972 but, after reviewing the case, the Interior's Board of Land Appeals affirmed the judge's decision in May 1973.

The claimants filed an appeal to the Federal courts in August 1973; the case had not yet been decided as of May 1974, although it had been under consideration for over 5 years since the time BLM issued its initial complaint.

**CONCLUSIONS**

Improvements are needed in the procedures for reporting and recording mining activity carried out on public land so that Federal land management agencies can properly monitor and control use of public land. Information on mineral exploration and development will be especially important to the Federal Government in the years ahead in assessing the United States mineral position and insuring adequate mineral supplies. The required improvements could be made if a permit-leasing system were established. To clear the public land of dormant mining claims and to preserve valid existing rights, existing mining claims should be recorded with the Interior. To retain their mineral rights under the law, claimants should be required to perfect their claims, before their claims are recorded, by furnishing evidence that they have, in fact, discovered valuable minerals. Individuals now living on land covered by invalid claims could be granted life tenancy permits if the Secretary of the Interior determined that their eviction would cause them undue personal hardship.
CHAPTER 4

ENVIRONMENTAL DAMAGE AND SAFETY HAZARDS RELATED TO MINING CLAIM ACTIVITY AND MINERAL PATENT MINING OPERATIONS

Exploration and mining operations cause some change in the earth's surface; they also can have an impact on other uses of the surface—such as for recreation and as wildlife habitat—and on the overall environmental quality of Federal lands. Also, holes in the land resulting from mining activities are safety hazards. Carefully planned operations and rehabilitation of the surface could help prevent or correct these problems. But, under present laws, the Federal Government lacks adequate authority to set and enforce regulations to deal with the problems.

ENVIRONMENTAL DAMAGE AND SAFETY HAZARDS NOT COVERED BY MINING LAW

The Mining Law of 1872 has no provision for protecting or rehabilitating lands covered by either mining claims or mineral patents.

Other statutes provide some control over particular classes of Federal land, such as national parks and forests and land containing certain leasable minerals. For example, the Federal Government has issued regulations to avoid, minimize, or correct surface damage resulting from exploration and development of public land subject to the Mineral Leasing Act of 1920 and the Mineral Leasing Act for Acquired Lands.

These regulations provide that the Government make a detailed examination of the effects proposed exploration or mining operations would have on the environment; formulate requirements for protecting the environment; require an exploration or mining plan; require a performance bond; and require specified reports and inspections.

However, in areas which are not covered by those statutes and where extensive mining and prospecting activity has occurred, the lack of any rehabilitation provisions in the mining law has resulted in scarred landscapes with potentially hazardous pits and unsightly waste material dumps. On the
basis of a 1972 study, the BLM Wyoming State office estimated that it would cost about $4 million to rehabilitate the surface and reduce the hazards of known problem areas on the 17.5 million acres of public land under BLM jurisdiction in Wyoming. BLM considers the estimate conservative because only a fraction of the hazards and deteriorating areas has been identified.

Because of inadequate mining claim records (see ch. 3), BLM cannot readily identify the claimants who have caused environmental or other damage to the Federal land.

According to the study, thousands of miles of exploration trails are unseeded and do not have any contour control or other protective measures. Most contribute heavily to runoff downstream, flooding, and sedimentation and are sources of erosion in fragile watershed areas. Also, thousands of prospecting and assessment holes constitute safety hazards.

Without authority to require restitution, the Federal Government would probably have to absorb the cost of any effort to reclaim the land. Even if the Government did have such authority, however, it would not apply to requiring restitution of damages on patented lands because they are privately owned.

Following is a photograph of environmental damage caused by mining activity in Wyoming.
A Wyoming BLM district office inventoried the major hazards caused by mining in its South Pass Historic Mining Area. The office counted 86 hazards, many of which could lead to fatal or serious accidents because they were inadequately protected; e.g., fences had not been installed and shafts had not been filled in. Rescue operations would involve the use of specialized equipment and possibly extensive search operations.

Many examples of environmental damage because of mining in Arizona, California, Idaho, Nevada, Utah, and Wyoming were brought to our attention by the land management agencies. Agency officials had observed the damage but, because they lacked adequate enforcement authority, could do little to control it and, in some cases, due to the problems discussed in chapter 3, could not identify who did the damage.

Forest Service officials told us, for example, that, in Arizona, about 3,700 cubic yards of soil had been scraped off the land just to satisfy annual assessment work requirements for 214 claims. Uranium drilling and assessment work has scarred large areas of Wyoming's countryside and has left huge open pits.

**ENVIRONMENTAL DAMAGE AND SAFETY HAZARDS ON CLAIMS VISITED BY GAO**

**Mining claims**

Significant environmental damage due to mining was evident at the time of our field visits to 7 of the 240 claims in our sample. We considered the damage significant when the lands were greatly scarred and when it appeared that erosion or siltation would result from the work. Old open mine shafts which constituted safety hazards to human and animal life were on three of the claims we visited.
THE FOLLOWING PHOTOGRAPHS DEPICT OLD OPEN MINE SHAFTS REMAINING ON TWO SAMPLE MINING CLAIMS IN BOULDER COUNTY, COLORADO.
The surface was extensively scarred on four claims—two in Arizona and one each in California and Colorado. The damage consisted of bulldozer cuts, large trenches, and open pits and was apparently the result of exploration, discovery, or assessment work. Also, potential erosion and siltation conditions, caused by road building, was evident on three claims. Minerals had never been extracted from any of these seven claims. One of the roads had been built on Forest Service land without the agency's knowledge and approval, even though the Forest Service requires that a permit be obtained for such construction. The road was built in such a manner as to cause erosion and cause siltation into a stream below the road. After our visit, the claimant told Forest Service officials that he would correct the conditions. The other two roads were built on BLM lands, for which there are no requirements for claimants to obtain agency approval.

The following photograph illustrates the land's damaged condition.

![Photograph of damaged land](image-url)

ROAD ON SAMPLE CLAIM ON BLM LAND IN FREMONT COUNTY, WYOMING, THAT SHOWS RESULTS OF EROSION.
Mineral patents

Significant surface damage had also occurred on land under 19 mineral patents--6 in Arizona, 8 in California, 3 in Colorado, and 2 in Wyoming. The damage consisted of such mining-related work as dumps, open shafts, and roads. For example, land under one patent in California contained three large ditches used for storing and disposing of contaminated fuel oil. The patentee planned to use this fuel oil to keep the dust down on roads within his adjacent mining operations. The ditches are shown in the photograph on page 13.

Mining operations on one patent in Colorado had left a large pit in the ground and had created a cliff over 100 feet high on one side of the pit which was a serious safety hazard. The following photograph shows the patent.

Another patent in Wyoming had a pit which was a part of a line of pits extending over a mile. Digging pits in this manner was a common practice to fulfill the requirements of
the Wyoming statute in earlier years. The current Wyoming statute provides for drilling small holes.

CONCLUSIONS

By their nature, mining operations cause change in the earth's surface. Some environmental damage, therefore, is a cost the public has to pay for mineral needs. However, carefully planned operations and rehabilitation and restoration measures could help prevent or minimize such damage. However, the Federal Government, under present laws, lacks adequate authority to set and enforce regulations to deal with environmental damage and hazards caused by mining operations carried out under the Mining Law of 1872.

The Federal Government should be given authority to establish environmental and hazard reduction regulations for mining operations and to insure that such regulations are met by all persons conducting mining operations on Federal lands.
CHAPTER 5

FEDERAL GOVERNMENT RECEIVES LITTLE OR NO COMPENSATION

FOR MINERALS MINED

OR FOR LANDS CONVEYED TO PRIVATE OWNERSHIP

The Mining Law of 1872 does not require payment to the Federal Government for minerals mined on public domain land or for use of the land. Also, the amount charged for land conveyed to a private owner under a mineral patent is only nominal and bears no relationship to the land's fair market value. Nor does the Government receive any royalties from minerals mined on the lands after they are patented. This contrasts sharply with the mineral leasing laws' compensation requirements for leasable minerals which result in substantial royalty and rent revenues to Federal and State Governments.

COMPENSATION NOT RECEIVED FOR MINERALS MINED

OR FOR USE OF MINING LANDS

The holder of a mining claim may extract and market minerals from Federal land without paying the Federal Government. In addition, the Government requires no royalty payments for minerals extracted from lands after they are patented. Also, claimants are not charged for the exclusive rights to use the land indefinitely for exploration and mining activities. As indicated earlier (see p. 9), claimants can hold the mineral rights to Federal lands for years without ever extracting any minerals.

Only those involved in exploring for or mining locatable minerals on public domain lands are exempt from payment. Land rents and royalties must be paid to the Federal Government for the exploration and extraction of leasable minerals on Federal land, such as coal, oil, and gas, and for leasable and locatable minerals on acquired land or from submerged land on the Outer Continental Shelf.

All four States had adopted leasing systems for exploring for and developing minerals on State-owned lands which provided for rentals and royalties.

The Federal Government and the States receive substantial amounts of revenues from lands containing minerals which,
pursuant to Federal and State laws, may be disposed of only by leasing. Royalties and related land rents from mineral leases and bonus bids (one-time payments for the privilege of obtaining permits or leases) paid to BLM in fiscal year 1973 totaled about $4.1 billion. The bonus bid on one oil shale lease in January 1974 was $210 million. As an example of State revenues, during 1972-73 copper companies paid Arizona over $2 million in royalties for ore mined from State lands.

FAIR MARKET VALUE NOT RECEIVED
FOR PATENTED LANDS

Under the present law, a claimant may obtain a deed to Federal mineral lands by paying a nominal fee for a mineral patent. The purchase price of the land, as established by the mining law, is $2.50 an acre for placer claims and $5.00 an acre for lode claims. The fee has not changed since 1872.

Data on the fair market value of 41 of the 93 patents we reviewed was available from the records of five counties--two in Arizona and three in California--as of February 1973. The 41 patents were issued from March 1950 to July 1971. The data showed that, at the time of our review, the fair market value of the 3,883 acres covered by these patents was about $1.1 million, compared to the $12,000 paid to the Federal Government for the land. Although the fair market value of the land at the time it was patented may have been less than the current fair market value, the amounts paid for these lands, if patented today, would still be the same. Details are shown in the table below.

<table>
<thead>
<tr>
<th>Arizona</th>
<th>California</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patents for which data was available</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>Acreage</td>
<td>1,153</td>
<td>2,730</td>
</tr>
<tr>
<td>Amount paid to Government for the land</td>
<td>$3,668</td>
<td>$8,473</td>
</tr>
<tr>
<td>Fair market value at time of review</td>
<td>$509,031</td>
<td>$635,160</td>
</tr>
</tbody>
</table>

Of the 41 patents, 21 were owned by other than the original patentee at the time of our review, and some had been sold several times. Few sales prices were determinable from the records, but those that were available indicate that large profits were being made on the sale of patented land.
For example, 150 acres of land patented in California in August 1959 for $375 were sold within 15 months for $43,500. Another 80 acres of land patented in Arizona in 1955 for $200 were sold in 1972 for $368,000.

CONCLUSIONS

Under the Mining Law of 1872, users of Federal lands are charged nominal or no fees for mineral exploration and extraction. This exemption from payment is enjoyed only by those mining locatable minerals on public domain lands. Land rents and royalties are paid to the Federal Government for exploring for and extracting leasable minerals on all Federal land and for locatable minerals if they are on federally acquired lands. All four States also charged land rents and royalties for the exploration and development of minerals on State-owned lands.

Amounts charged those receiving fee title to the land under mineral patents bear no relationship to the fair market value of the land, and, as discussed in chapter 2, patentees may use the land as they would any other private property, with indifference to public needs or interests.

We believe that the public should receive a fair return on the disposition of its natural resources and that the Federal Government should be paid for the use of and exclusive rights to the mineral lands.
CHAPTER 6

EXAMPLES OF MINING CLAIM USES WHICH SHOW A NEED FOR IMPROVED PUBLIC LAND MANAGEMENT

BLM and Forest Service officials brought to our attention other instances of mining claim uses which show a need for improved public land management. The following examples illustrate some of the uses and the considerable effort involved in halting them.

MINING CLAIMS USED FOR UNLAWFUL PURPOSES

A claimant began occupying mining claims on Federal lands near Baker, California, in 1944 on which he established the Zzyzx Mineral Springs complex (comprising 12,000 acres), shown in the photographs on page 35. Over the years, the claimant has operated a health resort, a taping studio for radio broadcasts, a church, and a health food manufacturing plant on this land. Both Federal and State court actions have been taken against the claimant in connection with his claims operations.

The State of California, in 1968, began a series of prosecutions against the claimant with regard to the health products he was promoting. The claimant has been convicted and sentenced twice since that time.

The acting California State Director, BLM, advised us in October 1973 that BLM officials first became aware of the Zzyzx activity as a result of inquiries by the Internal Revenue Service, and when they investigated a "desert land" application filed by the claimant in July 1951. The Desert Land Act of 1877 provided for land to be made available at a nominal price to those who would settle the land and irrigate it. Adjudication of the desert land application, including appeals and related requests by the claimant, took from 1951 to 1964.

According to the acting State Director, a trespass investigation was made concurrently, but the necessary audits of records could not be completed because of the claimant's lack of cooperation. BLM issued formal trespass complaints in June 1966 and July 1967, and the case was subsequently
ZZYX MINERAL SPRINGS COMPLEX,
SAN BERNADINO COUNTY, CALIFORNIA
20-UNIT HOTEL

ZZYX MINERAL SPRINGS COMPLEX,
SAN BERNADINO COUNTY, CALIFORNIA
LAND AREA TO LEFT OF ENTRANCE
referred to the Interior's Solicitor's office. The acting State Director said that, at that time, it appeared that court action would be necessary to abate the unauthorized use of the claim. To insure a solid foundation for litigation, the mining claims were examined and contested in 1968. He informed us also that the administrative actions required time and that during that period there were several reorganizations of BLM field and headquarters offices as well as changes in manpower and program priorities.

Federal action was brought against the claimant in the U.S. District Court, Los Angeles, in 1968 for improper use of unpatented mining claims. This action resulted in a partial summary judgment in December 1970 and an injunction in June 1971, which, among other things, prohibited the claimant from

--permitting people to come on that land for purposes other than prospecting and

--maintaining and operating buildings for uses other than mining and prospecting.

The U.S. District Court found the claimant to be in contempt of the injunction in August 1972.

On March 1, 1973, the U.S. District Court ruled, among other things, that the United States was entitled to immediate possession of the land and that the claimants, their associates, employees, tenants, and all others acting with them and/or on their behalf were permanently enjoined from trespassing upon or occupying any part of the property.

This decision was later appealed in the U.S. Ninth Circuit Court. On April 8, 1974, the Court ruled in favor of the United States and filed a writ of possession. The claimant was evicted from the property on April 16, 1974.

This example illustrates how the Mining Law of 1872 is abused and how difficult it is to halt unauthorized use of mining claims filed under the present system.
LAND UNDER MINING CLAIM USED AS JUNKYARD

Over a period of about 35 years, a claimant created a large junkyard (see photographs on p. 38) on about 40 acres of public domain land on which he had filed and/or acquired five mining claims and one millsite. The five mining claims and millsite are located in Kern County near Keysville and Lake Isabella, California. The claimant acquired title to the millsite in 1936, and filed mining claims on the property during 1940-47. His two-bedroom house is on the property, and he and his wife live there.

The BLM acting California State Director advised us in October 1973 that BLM had identified the situation in 1968 as part of its occupancy trespass and antilitter program of that year. He indicated that BLM had not observed the junkyard before then because the lands involved were somewhat sheltered and removed from the principal roads.

According to case summaries, BLM made numerous contacts with the claimant during the fall of 1968 to encourage him to remove the junk. These efforts failed and in April 1969 the matter was referred to the U.S. attorney, Eastern District of California. BLM contended that collecting and depositing such junk was in no way related to the prospecting, mining, or processing operations or uses contemplated under applicable Federal statutes and that attempts to mine on the property were not evident. In September 1969, the U.S. District Court granted BLM possession of the junk, and in April 1970 BLM issued a cleanup contract at a cost of $500 plus salvage rights.

Seven truckloads of junk had been removed when the claimant obtained a temporary restraining order prohibiting the removal of any junk and prohibiting BLM from entering the claimant's lands. The cleanup contract was canceled May 13, 1970. The case remained in the courts until May 12, 1971, at which time BLM was given permission to clear the land. BLM then encountered problems in disposing of the junk. According to Kern County's lease agreement with BLM, a maximum of 60 truckloads of material could be dumped free of charge at the county's sanitary landfill facility. However, Kern County officials, aware of the immensity of the collection, were concerned with the disposal costs involved and the possibility of overtaxing the county facility.
PART OF THE JUNK COLLECTED ON MINING CLAIMS IN KERN COUNTY, CALIFORNIA
County and BLM officials finally agreed that BLM would pay the disposal fee or provide the men and equipment to bury the junk in the county facility.

On May 30, 1972, BLM issued a $6,900 contract to clean up one-third of the area. BLM issued the final cleanup contract on April 19, 1973, at a cost of $12,000. BLM has permitted the claimant to remain on the land.

This example illustrates that, because of the remoteness of many mining claims, land abuses may not be identified by the Government for many years and that during such time the problem of clearing the claims worsens. Personal residences on the claim sites, as was the case in the above example, complicate the situation even more because of the personal hardship caused the claimants if it is necessary to force them from the lands.

**ALLEGED TRESPASS OF SALT COMPANY**

The Long Beach Salt Company has been mining salt from mining claims on Koehn Dry Lake, Saltdale, California, for about 47 years. BLM alleged that the company was trespassing during that entire time and in July 1972 BLM filed suit in the U.S. District Court to collect damages of $2.7 million, based on the value of the salt produced during the period 1926-71.

The land in question encompasses over 4,000 acres covered by 202 mining claims. A 1971 BLM mineral report indicates that the land is considered valuable for sodium, potassium, oil, and gas. Of the 202 claims, 166 are saline placer claims and 36 are placer mining claims. The saline placer claims were located by individuals during the period 1905-18 and were later owned by two salt companies until Long Beach Salt Company acquired the companies in 1927 and 1932. The company's leasehold interests (40 years) on 58 of the 202 claims have expired.

The 36 placer mining claims for gold and other minerals and metals were located in 1933 by officers, friends, and employees of friends of the company and then were sold to the company. These claims cover all of the area of the saline placer claims and some additional acreage.
The history of the case is long and complex. According to information furnished to us by BLM's acting California State Director, recommendations of adverse proceedings against the company go back to 1945. The BLM case summaries indicate that BLM believes that (1) the company violated the Saline Placer Act of 1901 by locating or entering more than one claim and (2) the mining claims located in 1933 are null and void because they were located after the passage of the Mineral Leasing Act of 1920, and at a time when the lands were closed to mineral entry under the Mining Law of 1872. The acting State Director informed us that, because of higher priority work, no action was taken on the case from 1945 until 1957, when the Geological Survey requested an investigation because of complaints made by mineral leasing applicants. According to the acting State Director, no recommendations were made to contest the claims at that time. But, in 1969 the case was assigned to a mineral specialist with instructions to pursue it to a final conclusion.

In July 1971, BLM declared the gold claims located in 1933 null and void. The company appealed this decision the same month. In July 1972 the U.S. attorney filed suit in the U.S. District Court to collect damages. Contest proceedings on the same gold claims were initiated in July 1973.

According to the attorney for the company, who said the court proceedings contain verifying evidence, no one person located more than one claim or part of a claim. Most of those located before passage of the Mineral Leasing Act of 1920 were for saline deposits, but practically all included other valuable minerals, so they may or may not have been invalid solely because of the limitation in the Saline Placer Act of 1901 against any person locating or entering more than one saline claim. He said that practical considerations made it necessary to operate the various mining claims as a unit, even if there was diverse ownership, although not as a formally unitized area, as is required and authorized for certain leasing act mineral deposits.

The company's attorney also informed us that the company had suggested settling the case by offering to accept a sodium lease on the bed of the Koehn Dry Lake, where it operates, and to simultaneously quit claim to the United States all interests in the mining claims or to relinquish all right, title, and interest in its mining claims in the
leased area to the United States. Either procedure would, according to the attorney, extinguish all such claims and quiet title in the subject area. The company would then pay rent and royalty from the effective date of the lease.

However, the Government has not accepted the proposal. Company officials told us they will not agree to pay the $2.7 million damages being asked by the Government, nor could the company afford it. They contend the mining laws applicable to the saline deposit claims authorize their past and continued mining of the area with or without patent proceedings and without any obligation to convert to lease and thereafter pay rent and royalties. In their opinion, this is the single issue in the trespass action in the Federal courts.

The example illustrates the need for agreements which would require that the Federal Government be paid royalties for materials extracted from public land. If such agreements had been in force in this instance, the potential loss to the Government of $2.7 million in salt production revenues would not have materialized.
CONCLUSIONS

Contrary to its intended purpose, the Mining Law of 1872 is not effectively encouraging the development of domestic minerals—many of which are in short supply—and is having an adverse impact on the management and use of public land. In view of the United States growing dependence on foreign supplies of many critical and strategic minerals, action is needed to modernize the present legislation to stimulate domestic exploration and development of mineral resources.

Evidence supporting the need for improvements in the mining law is extensive. Following is a list of certain conditions fostered by the Mining Law of 1872 and the resulting problems.

<table>
<thead>
<tr>
<th>Conditions fostered by Mining Law of 1872</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open and free access to public lands is encouraged. Title to mineral rights and, in some instances, surface rights of Federal lands is transferred from Federal ownership.</td>
<td>Federal land management agencies cannot adequately monitor or control exploration and development of minerals on the public lands.</td>
</tr>
<tr>
<td>Extraction of minerals is not required.</td>
<td>Many mining claims and patented lands are not being mined. The rights to mine public lands are being abused in some instances by those who, under the guise of the law, have used the land for nonmining purposes.</td>
</tr>
<tr>
<td>Mining claims are recorded under State laws and do not have to be reported to or approved by Federal agencies.</td>
<td>Federal agencies have no practicable way of determining the existence of mining claims on Federal land. Consequently, mineral exploration activity on public lands cannot be adequately assessed.</td>
</tr>
<tr>
<td>Land covered by the mining law is damaged and safety hazards are created.</td>
<td>Public lands have been left scarred with potentially hazardous pits and unsightly waste material dumps. Without legislative authority and information on who caused the environmental damage, the Federal Government cannot require restoration or rehabilitation of the lands.</td>
</tr>
<tr>
<td></td>
<td>Use of public lands is hindered by time-consuming and costly delays in clearing title to mining claim lands.</td>
</tr>
<tr>
<td>The burden of identifying and testing the validity of mining claims on public lands rests with the Federal Government.</td>
<td>The Federal Government is not adequately compensated. Also, no such exemption extends to that segment of the mining industry operating under the mineral leasing system, which is inequitable.</td>
</tr>
<tr>
<td>Payments to the Federal Government for surface rights and for mineral exploration or extraction on public lands are not required.</td>
<td></td>
</tr>
</tbody>
</table>
The administration of mineral development on Federal lands needs improvement in two broad areas:

--Incentives must be provided for exploring and developing domestic minerals in a manner compatible with use of the lands for other purposes.

--A system must be established through which the Federal Government would be paid for use of and rights to the mineral lands.

Although the need for some type of change in the mining law is readily acknowledged, there are opposing views on the nature and extent of the changes. The crux of the controversy involves the degree of Federal control which should be legislated and the priority of mining uses over other uses of public land. As indicated on pp. 3 to 5, some individuals and groups, such as the majority of PLLRC members and the mining industry, favor retaining the present location system and amending the Mining Law of 1872 to accommodate present conditions and to clear Federal land of dormant mining claims. Others, such as the Departments of the Interior and Agriculture, some members of PLLRC, and conservation groups, favor replacing the Mining Law of 1872 with a leasing act.

We believe it essential that the Federal Government retain title to mineral and surface rights so that Federal land management agencies can control land uses in a manner dictated by public needs and national interests—whether they involve mineral activity or other purposes, such as timber production and recreation. For this reason we favor adopting mineral leasing legislation with incentives for exploring and developing mineral resources.

Such a position is consistent with the congressional mandate under which a major segment of the mining industry currently operates. We note that the Land-Use Commission, created by the Alaska Native Claims Settlement Act of 1971 (85 Stat. 706), has specified in all its recommendations to the Secretary of the Interior that exploration and development of the Alaska lands should be conducted under a permit and lease system.
MATTERS FOR CONSIDERATION BY THE CONGRESS

We recommend that the Congress enact legislation covering future exploration for and development of all minerals presently subject to the provisions of the Mining Law of 1872. This legislation would:

--Establish an exploration permit system covering public lands and require individuals interested in prospecting for minerals to obtain permits.

--Establish a leasing system for extracting minerals from public lands.

--Require that, to preserve valid existing rights, mining claims be recorded with the Department of the Interior within a reasonable period of time after the legislation is enacted and evidence of discovery of valuable minerals be furnished before the claims are recorded.

We further recommend that the Congress consider including the following provisions in the proposed legislation.

--To provide uniformity and equitableness in administration, give the Department of the Interior responsibility for recording and issuing exploration permits, with appropriate provisions for coordination with other Federal land management agencies. The Geological Survey should be encouraged to engage in sufficient Government exploratory activity to insure adequate public initiative and information to protect the public interest in the leasing of public land for the extraction of minerals.

--To insure diligent exploration and to discourage speculation, (1) require explorers to perform realistic exploration activity within a reasonable period of time and to pay rent which could be reduced by the costs of the exploration work done and (2) give explorers preference in leasing the land for extraction of the minerals if they discover mineral deposits of paying commercial quantities in areas not previously known to contain such minerals. The preference given should be adequate to encourage development but should preserve elements of competition in the leasing process to assure adequate recognition of the value of the lease. One way to achieve this would be to permit the discoverer to match the high bid and win
the lease, with all or part of direct exploration costs credited against lease acquisition payments.

**Incentives for mineral development**

--To promote competition, award leases on a competitive basis except when the discoverers of mineral deposits exercise their preference rights. The leasing method to be used--bonus, royalty, or other alternatives--should be designed to insure a fair return to the public on the disposition of its mineral resources.

--To insure equity in lease awards, specify what factors the Secretary of the Interior should consider when deciding whether to lease available land and give a right of judicial review.

--To insure diligent development, require that lessees (1) pay a minimum rent until production begins and (2) begin production in paying commercial quantities within a specified period of time or relinquish the lease.

**Environmental protection**

--Require submission of an exploration plan detailing the nature of exploration activities and measures which would be taken to minimize environmental damage and to reclaim the land.

--Require that permits and leases contain provisions for protecting and rehabilitating public lands.

**Preserving existing rights**

--Require that, to preserve valid existing rights, mining claims be recorded with the Department of the Interior within a reasonable period of time after the legislation is enacted and that claimants perfect their claims, before their claims are recorded, by furnishing evidence that they have made a discovery of valuable minerals.

--Authorize the Secretary of the Interior to grant life tenancy permits to individuals now living on land held under invalid claims if he determines that their eviction from the land would cause them undue personal hardship.
CHAPTER 8
AGENCY COMMENTS AND OUR EVALUATION

DEPARTMENT OF THE INTERIOR

The Interior, in commenting on this report on April 12, 1974 (see app. I), stated that the report brings to light the great difficulties in administration now encountered under the Mining Law of 1872 and presents a strong case against continuing that statute. The Interior noted that it had been working with the committees of Congress so that an improved mineral resource development statute would be enacted and expressed hope that the Congress would act favorably on the legislation before it (S.1040, Mineral Leasing Act).

The Interior expressed some reservations about the methodology and results of the selection process for claims and mineral patent sites visited and about certain details and philosophies in the report.

After we received the comments, we met with officials of the Interior and discussed in detail the sampling methodology and characteristics of the claims and patents visited. The officials agreed, as a result of that discussion, that the claims and patents selected were representative of those filed during the period covered by our review. Also, where appropriate, we made changes to the report to recognize the officials' comments.

FOREST SERVICE, DEPARTMENT OF AGRICULTURE

The Forest Service, in commenting on this report on April 5, 1974, stated that the report's factual data was accurate and well presented. The Forest Service noted that the report proposed a method of managing and disposing of federally owned minerals similar to that supported by the Department of Agriculture and the Forest Service (S.1040).

However, the Forest Service believed that the report was incomplete because it contained no evidence that the views of representatives of the mineral industries were solicited. Also, the Forest Service did not believe the situations needing correction could be validly represented by the random sampling
method used and believed the data in the report could support amendments to the Mining Law of 1872 equally as well as the proposal for mineral leasing.

Because industry views concerning legislation for a mineral leasing system were well documented by public testimony presented on proposals similar to those which we recommend, we did not believe it necessary to solicit their views. The industry's general views as expressed during the March 1974 hearings on proposed leasing legislation are recognized in the report. (See p. 5.)

Forest Service officials told us that their comment regarding the sampling method used referred to the conclusions drawn from the results and that they do not question the validity of the results. The officials took issue, however, with the implication in the report that a leasing system would encourage mineral development more than the present location-patent system. They pointed out that, regardless of the system for administering mineral development on public lands, development would be encouraged principally because of economic conditions.

We agree that encouragement of mineral development is influenced by existing economic conditions and that, lacking a viable economic climate, Federal control of mining activities will not in itself encourage mineral production. However, among other things, the leasing legislation we suggest would induce diligent production by legitimate mining interests if warranted by economic conditions and would minimize abuses by those who have no intention to mine the land.
CHAPTER 9

SCOPE OF REVIEW

Our review of mining activities under the Mining Law of 1872 included visits to a randomly selected sample of 240 mining claims and 93 mineral patents in 10 counties in Arizona, California, Colorado, and Wyoming. We were accompanied on most of our visits by BLM or Forest Service specialists, including engineers, mining geologists, forest rangers, and realty specialists. We selected the mining claims and mineral patents from mining claims recorded in county records between July 1947 and June 1972 and from patents issued between July 1950 and June 1972. We selected the four States because they had the greatest number of mineral patents issued during the past 22 years. We selected the counties from among those having

--over 25 percent of the land in Federal ownership,

--Federal lands available for location of mining claims, and

--known mineral deposits, according to reliable geological sources.

We examined the pertinent laws and regulations governing mining activities on Federal lands and the related procedures and practices of the four States and the Departments of Agriculture and the Interior. We interviewed Federal officials of the two Departments and reviewed various publications--including some manuscripts of the studies undertaken for PLLRC--to obtain views and comments on mining activities carried out under the Mining Law of 1872.
Mr. Henry Eschwege  
Director, Resources and Economic Development Division  
U. S. General Accounting Office  
Washington, D. C. 20548

Dear Mr. Eschwege:

We have reviewed the proposed report to the Congress on "Modernization of 1872 Mining Law Needed to Encourage Domestic Mineral Production, Protect the Environment and Improve Public Land Management". The report brings to light the great difficulties in administration now encountered under the Mining Law of 1872 and presents a strong case against continuation of that statute.

The Mining Law, like the homestead laws, was intended to encourage settlement of the West and provide a supply base for the mineral production needed to move our Nation out of the infant stage. This the law accomplished, but like the infant who grew to maturity, so did the society which this mineral production nurtured. Thus, while the law has contributed significantly to the settlement of large areas of the West and has provided much of the mineral base of our industry and technology, it is in need of reform. In short, a substantial body of our citizens is calling for a change in how we hold out public land for use by individuals who would like to develop the mineral resources it contains.

Clearly this was the objective of the Administration and the Department of the Interior in recommending to the Congress that the Mining Law of 1872 be made to conform to our contemporary society. This is not to say that we are opposed to private development of mineral or any other resources on what we now prefer to call natural resource lands as opposed to public lands. Our main concern is to assure a public which has, since 1872, changed its view as to the uses of the land its government holds in trust. This call for a change dictates that we will do our best to balance demands on these lands to provide not only mineral resources but timber, wildlife habitat, recreation, grazing, and watershed protection, to mention only a few more contemporary uses.

We have been working with the committees of Congress so that a more improved mineral resource development statute will be enacted. This has been a lengthy process; but when you recognize that we must take into
account all of the legitimate interests which have a stake in the 1872 law, a short delay is the best way to achieve the best workable compromise.

Therefore, we welcome your report to the Congress and hope that the Legislative branch will see the substantial public policy issues involved in the legislation before it (S. 1040, Mineral Leasing Act), and move speedily to provide us with a law more in keeping with the times.

We do have some reservations about the methodology and results of the selection process for claims and mineral patent sites visited; and about certain details and philosophies in the report. These, which have been discussed with your staff, do not, however, detract from our overall evaluation of the report. We appreciate the opportunity you provided us to comment on the draft report, work with your staff on the technical differences, and thus permit this letter to focus on the principal public policy issues involved in the subject of the report.

Sincerely yours,

[Signature]

Assistant Secretary of the Interior
Dear Mr. Eschwege:

Following are our comments on your draft report "Modernization of 1872 Mining Law Needed to Encourage Domestic Mineral Production, Protect the Environment and Improve Public Land Management." Your February 26 letter requested our reply by March 25. We were unable to meet that date. However, our Messrs. Banta, Caruso, and Schessler held an informal discussion with Messrs. Boland, Reick, and Rother on March 26.

The Department of Agriculture and the Forest Service are on record in support of S. 1040, the Administration's 'all mineral leasing' bill. Your draft report proposes a similar method of managing and disposing of Federally owned minerals.

The factual data of the report are accurate and well presented. They are, however, incomplete. There is, for instance, no evidence in the report that the views of representatives of the minerals industries were solicited. Neither do we think the situations needing correction can be validly represented by the random claim sampling method used. It also appears that the data presented in the report can support amendments to or modifications of the present mining laws of 1872, as amended, equally as well as the proposal for all mineral leasing. This is particularly true in view of the objectives of your recommendations as expressed in the title of the draft report.

Sincerely,

[Signature]

REX FORD A. KESLER
Associate Chief

Enclosure
APPENDIX III

PRINCIPAL OFFICIALS OF THE DEPARTMENTS OF AGRICULTURE AND THE INTERIOR RESPONSIBLE FOR ADMINISTRATION OF THE ACTIVITIES DISCUSSED IN THIS REPORT

<table>
<thead>
<tr>
<th>Tenure of office</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
</table>

DEPARTMENT OF AGRICULTURE

SECRETARY OF AGRICULTURE:
Earl L. Butz Dec. 1971 Present

ASSISTANT SECRETARY, CONSERVATION RESEARCH AND EDUCATION:
Robert W. Long Mar. 1973 Present

CHIEF OF THE FOREST SERVICE:
John McGuire Apr. 1972 Present

DEPARTMENT OF THE INTERIOR

SECRETARY OF THE INTERIOR:
Rogers C. B. Morton Jan. 1971 Present

ASSISTANT SECRETARY FOR LAND AND WATER RESOURCES:
Jack O. Horton Mar. 1973 Present

DIRECTOR, BUREAU OF LAND MANAGEMENT:
Curt Berklund July 1973 Present
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