THE AVAILABILITY OF NONFUEL MINERALS ON FEDERAL LANDS;

Background on the Issue

by

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ABSTRACT

The following report reviews the laws and practices that govern the extraction of non-fuel minerals from federal lands, and the restrictions against such extractions. Moreover, the federal land management agencies that regulate such activities are identified, and their responsibilities discussed.
CONTENTS

ABSTRACT ................................................................. iii

INTRODUCTION .................................................................... 1

THE IMPORTANCE OF FEDERAL LANDS FOR MINERAL SUPPLY—MINING AS A LAND USE ... 2

FEDERAL LAND MANAGEMENT AGENCIES .................................. 3

RESTRICTIONS TO MINERAL ACTIVITIES ON FEDERAL LANDS ............... 6

Wilderness Designations ............................................... 11

BLM Wilderness ........................................................... 15

LAWS GOVERNING MINERAL DEVELOPMENT ON FEDERAL LANDS .......... 16

The General Mining Law of 1872
The Mineral Leasing Act of 1920
The Mineral Leasing Act for Acquired Lands of 1947
The Surface Resources Act (Common Varieties) of 1955
The President's Reorganization Plan No. 3 of 1946

A SPECIAL CASE—ALASKA LAND DISPOSAL AND CLASSIFICATION .......... 18

The Alaska Statehood Act of 1958
The Alaska Native Claims Settlement Act of 1971; d-1, d-2 withdrawals

LAWS AFFECTING MINERAL ACTIVITIES ON FEDERAL LANDS ............ 21

The Federal Land Policy and Management Act of 1976
The American Antiquities Act of 1906
The Mining in the Parks Act of 1976
The National Wildlife Refuge System Administration Act of 1966
The Wild and Scenic Rivers Act of 1968
The Endangered Species Act of 1973
National Recreation Areas
The Defense Withdrawal Act of 1958 (Engle Act)

BIBLIOGRAPHY .................................................................. 26

APPENDIX ........................................................................ 28

LIST OF TABLES

Table 1 - Federal Land-Management Agencies............................................4
Table 2 - Comparison of Federal Land Inventories................................. 9
Table 3 - Availability of Federal Onshore Land for Development of Hardrock Minerals ............................................................. 10
Table 4 - Wilderness Designations ......................................................... 12
INTRODUCTION

America's standard of living and economic welfare are based, among other things, upon the utilization of mineral resources. Although the U.S. has an adequate supply of most minerals, it currently imports 50 percent or more of its consumption of 25 of the major mineral commodities. While this reliance does not necessarily denote a vulnerability, concern over secure access to foreign sources of these minerals is heightened by the realization that the U.S.S.R. and several southern African nations are either the main suppliers or possess a large portion of the known reserve base of some of these minerals, especially cobalt, chromium, manganese, vanadium, and the platinum-group metals.

There is growing concern among the American public, the mining industry, and the Federal Government that U.S. dependence on foreign mineral sources could lead to a situation for minerals similar to the oil embargo of 1973-74. Several alternatives have been proposed for reducing this dependence, including development of domestic mineral resources, build-up of the National Defense Stockpile, development of substitutes, and increased recycling. Exploration and development of domestic mineral resources is viewed as one of the nation's most viable options.

Federally-owned lands contain the largest potential domestic source of mineral resources, with more than 770 million acres of surface and more than 800 million acres of subsurface mineral rights owned by the Federal Government. These lands are distinguished between public domain (lands in Federal ownership since original acquisition) and acquired lands (which are obtained from a State or a private owner through purchase, gift, or condemnation for a particular Federal purpose, such as national forest lands). Initially, government policies encouraged access to the vast Federal public domain for settlement and resource
development. However, an inventory by the Office of Technology Assessment (OTA) using 1975 data, showed that millions of acres totalling 40 percent of Federal lands are formally closed or highly restricted to mining for hardrock minerals, mainly for military, resource-conservation and environmental protection purposes.

Federal land managers are faced with the dilemma of how to balance decisions between the conflicting need to preserve some nonmineral resources (such as timber, watershed, wilderness, and fish and wildlife habitat) and the need to develop the Nation's mineral resources. Those interested in attaining the maximum public benefit from Federal lands are faced with the questions of:

--how much land to allocate among conflicting uses when multiple-use management is impossible; and

--which lands are the most valuable for each of the conflicting uses.

**IMPORTANCE OF FEDERAL LANDS FOR MINERAL SUPPLY--MINING AS A LAND USE**

Federal lands are the largest potential source of U.S. future mineral supply. President Carter's Nonfuel Minerals Policy Review estimated that approximately one-third of all metallic and nonmetallic minerals produced in the U.S. in 1977 came from former and present Federal lands; for copper and silver, current and previous Federal lands provided 94 and 93 percent, respectively, of the total U.S. production in 1977. In that year, the value of nonfuel minerals other than sand and gravel produced from public lands was 30 percent of the total value of domestic mineral production, or approximately $4 billion.

The General Accounting Office (GAO) has stated that "examination of the best figures available on relative amounts of land area allocated to the various
uses reveals that mining is among the less extensive land uses nationally." 1/
The total amount and location of all Federal lands currently used for mineral exploration and development is not precisely known. However, in 1974, the Bureau of Mines estimated that mining involved less than one percent of the total U.S. land base. 2/

FEDERAL LAND MANAGEMENT AGENCIES

Of the 2.3 billion acres making up the surface area of the U.S., approximately 770 million acres, or one-third, are owned by the Federal Government, with about 680 million acres of public domain and 60 million acres of acquired lands. Almost one-half of the Federally-owned lands are located in Alaska, while most of the remainder are in the coterminous 41 western States of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

About 516 million acres of Federal land are under the jurisdiction of the Department of the Interior (DOI). The Bureau of Land Management (BLM) has responsibility for about 400 million of these acres, or about 52 percent of total Federal land; 3/ approximately half of this area is in Alaska. BLM is responsible for maintaining public land records and records of mining claims, and is responsible for the leasing or sale of all Federal lands. BLM has recently created a new energy and minerals program with two priorities:


3/ Federal lands administered by BLM, both public domain and acquired, except Outer Continental Shelf and Indian, Aleut, and Eskimo lands, are defined as "public lands" by the 1976 Federal Land Policy and Management Act (FLPMA).
1) streamlining existing leasing programs, and 2) stressing the availability of Federal public lands for exploration and development activities, particularly in the field of strategic and critical minerals and oil and gas resources. The main Federal land-management agencies are shown below:

Table 1

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>ACREAGE (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of the Interior</td>
<td></td>
</tr>
<tr>
<td>Bureau of Land Management</td>
<td>400</td>
</tr>
<tr>
<td>National Park Service</td>
<td>68</td>
</tr>
<tr>
<td>Fish and Wildlife Service</td>
<td>43</td>
</tr>
<tr>
<td>Bureau of Reclamation</td>
<td>6.6</td>
</tr>
<tr>
<td>Department of Agriculture</td>
<td></td>
</tr>
<tr>
<td>Forest Service</td>
<td>188</td>
</tr>
<tr>
<td>Department of Defense</td>
<td>30</td>
</tr>
<tr>
<td>Department of Energy</td>
<td>1.6</td>
</tr>
<tr>
<td>Tennessee Valley Authority</td>
<td>1.0</td>
</tr>
<tr>
<td>Other</td>
<td>31.8</td>
</tr>
</tbody>
</table>

Although DOI controls most of the public domain, the Forest Service controls the highest percentage of total acquired lands. Mineral exploration and development differ on public domain and acquired lands. Minerals on public domain are disposed of by a claim/patent system, lease, or sale. Generally, hardrock minerals are "locatable" (acquired by claims and patents), while fuel and specified nonfuel mineral compounds are "leasable". On most Federal lands, certain "common varieties" of sand, stone, gravel, and others are "saleable". All minerals on acquired lands are leasable.

The Secretary of the Interior retains final decision-making responsibilities for administering the mining and mineral leasing laws on all Federally-owned land, although most of this responsibility has been delegated to the Director of BLM, who has further delegated many technical functions to the surface-management agencies such as the Park Service. This situation has created problems of coordination both within DOI and between it and the other surface-management agencies. GAO recently reported that "many of these agencies' mineral responsibilities have been created ad hoc, are entirely decentralized, and are not directed by a structured, standardized national management policy for Federal mineral resources." 5/

Land management tools include land-use planning and regulations to protect surface (nonmineral) resources during exploration, mining, and reclamation activities. Both the Forest Service and BLM have promulgated surface-protection regulations. The Forest Service's regulations, effective September 1974, apply to locatable minerals on National Forest System public domain land that is open to operation under the mining laws (approximately 140 million acres); they also apply to mineral-related activities in wilderness and primitive areas. The regulations have no effect on minerals that are subject to the mineral leasing laws or "common variety" minerals. The Secretary of the Interior is required by the Federal Land Policy and Management Act of 1966 (FLPMA) to prevent, by regulation or otherwise, unnecessary and undue degradation to the public land from mining operations. These regulations, effective November 1980, affect exploration and development of minerals that are subject to disposition under the mining laws.

Both the Forest Service and BLM have been directed by law to manage their lands under the multiple-use/sustained-yield principle in a manner that will achieve a balance between uses, conservation, and environmental protection. A comprehensive system of land and resource management planning was established for National Forest lands by the National Forest Management Act of 1976. In that same year, FLPMA authorized the Secretary of the Interior to develop, maintain, and revise land-use plans for public lands. Both agencies place the major responsibility for management and planning at the local level. A resource inventory is made by each agency to estimate land use capabilities; these are then combined with an assessment of the demands for various resources in the area to produce a land-use plan. Eventually, a full environmental impact statement, complete with examination of alternatives, must be prepared by the appropriate agency under the National Environmental Policy Act of 1969.

**RESTRICTIONS TO MINERAL ACTIVITIES ON FEDERAL LANDS**

The mining and leasing laws do not operate unilaterally on Federal lands because these lands contain both important mineral and nonmineral resources, and surface-management policies also exist to preserve, protect, or enhance those nonmineral resources, such as forage, scenic beauty, and recreation areas. Also, reservations of land for resource conservation (such as the petroleum and oil shale reserves), military use, Indian and Alaska Native claims, and State claims have formally closed much Federal land to mining and leasing activities.

Historically, mineral uses seem to have been preferred over nonmineral uses of Federal land, and mineral rights, once acquired, have tended to have priority over nonmineral resource values. Because the mining laws inherently lack mechanisms to ensure balancing of mineral and nonmineral resource values,
increasing amounts of Federal land have been withdrawn from operation of the mining laws, to protect nonmineral resource values, thus precluding most mineral activities (even exploration) on these lands. Because mineral leasing is discretionary, substantially fewer acres have been formally withdrawn from operation of the mineral leasing laws.

Technically, land is segregated (i.e. temporarily set aside during the administrative process) or closed to operation of the mining and mineral leasing laws in three ways:

1) **classification**, which designates land for retention or disposition under a particular statute, and may limit disposition under other statutes;

2) **withdrawal**, which renders particular public land laws inapplicable to a parcel of land, and reserves the land for specified use(s); or

3) **agency regulations, policies, and practices** that bar or severely restrict mineral exploration and development ("de facto" withdrawals).

Public domain closures or restrictions can be either **de jure** (by law), or they may be **de facto** (through exercised power, administrative policy or action, or even inaction). Exploration for and development of leasable minerals can be restricted through the discretionary power of the Secretary of the Interior to deny leasing or establish strict leasing terms. Further, on acquired land, the Interior Secretary must obtain the consent of the land management-agency prior to issuing a mineral lease. Mining exploration and locations, in turn, are a statutory (nondiscretionary) right on public domain (but not acquired) land that is not formally withdrawn or segregated from mining. Some restriction can be effected, however, through regulation of mining activities to protect
surface resources, i.e. restricting surface access to a mining site, controlling access over adjoining lands, or through delays or refusals to grant permits for mining-related facilities.

The estimates of the total land that is closed to mineral activities depend upon which lands are included in the inventory and what categories of restriction are used. Two Federal land inventories, prepared by DOI (1974) and OTA (1975), respectively, show that between 50 and 60 percent of Federal land in the "formally closed" category is withdrawn from hardrock mining for uses other than environmental protection (i.e., for military or resource conservation uses). Although the total percentages are similar, differences occur in the "highly restricted" category (16.2% vs. 6.5%) and the "moderately restricted" category (10.4% vs. 19.6%) because assignment of lands to these two categories is often a matter of judgment. (See Table 2)

It may be, however, that some of these figures are misleading. They, like other related study figures to date, stem from gross rather than net withdrawal and restriction acreage figures. Overlapping withdrawals and classifications are a common occurrence, often resulting in double and triple counting. 6/

Another OTA report (1979) inventoried Federal lands under three categories (see Table 3): 1) formally closed to mineral activity, 2) highly restricted, or 3) subject to moderate or slight restriction. The "formally closed" category includes land that is explicitly closed to mineral activities by statute (almost all national parks), or by published Secretarial land order (oil shale land).

Table 2.

Comparison of Federal Land Inventories Prepared by the Department of the Interior¹ and Office of Technology Assessment² (percent of total applicable Federal Lands)

<table>
<thead>
<tr>
<th>Mining Law</th>
<th>Closed</th>
<th>Highly Restricted</th>
<th>Moderately Restricted</th>
<th>Slight or No Restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DOI</td>
<td>OTA</td>
<td>DOI</td>
<td>OTA</td>
</tr>
<tr>
<td>Non-ANSCA</td>
<td>14.7</td>
<td>13.1</td>
<td>2.3</td>
<td>5.3</td>
</tr>
<tr>
<td>ANSCA</td>
<td>27.2</td>
<td>26.8</td>
<td>13.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Total</td>
<td>41.9</td>
<td>39.9</td>
<td>16.2</td>
<td>6.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mineral Leasing Laws</th>
<th>Closed</th>
<th>Highly Restricted</th>
<th>Moderately Restricted</th>
<th>Slight or No Restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DOI</td>
<td>OTA</td>
<td>DOI</td>
<td>OTA</td>
</tr>
<tr>
<td>Non-ANSCA</td>
<td>8.2</td>
<td>10.9</td>
<td>15.8</td>
<td>9.3</td>
</tr>
<tr>
<td>ANSCA</td>
<td>20.4</td>
<td>27.4</td>
<td>6.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>28.6</td>
<td>38.3</td>
<td>22.7</td>
<td>10.3</td>
</tr>
</tbody>
</table>


Table 3.
Availability of Federal onshore land (both public domain and acquired) for development of hardrock minerals

Status in 1975*
(Millions of acres)

<table>
<thead>
<tr>
<th>Designated use</th>
<th>Formally closed</th>
<th>Highly restricted</th>
<th>Moderate or slight restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military</td>
<td>22.9 (2.9%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Indian (nonreservation)</td>
<td>0.9 (0.1%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>National parks, etc.</td>
<td>17.5 (2.2%)</td>
<td>7.1 (0.9%)</td>
<td>-</td>
</tr>
<tr>
<td>National recreation areas</td>
<td>1.4 (0.2%)</td>
<td>0.2 (0.0%)</td>
<td>0.4 (0.0%)</td>
</tr>
<tr>
<td>Historic and archeologic</td>
<td>?</td>
<td>?</td>
<td>-</td>
</tr>
<tr>
<td>Fish and wildlife</td>
<td>30.0 (3.8%)</td>
<td>1.3 (0.2%)</td>
<td>-</td>
</tr>
<tr>
<td>Endangered species</td>
<td>?</td>
<td>?</td>
<td>-</td>
</tr>
<tr>
<td>National forest wilderness</td>
<td>-</td>
<td>11.6 (1.5%)</td>
<td>-</td>
</tr>
<tr>
<td>National forest wilderness study</td>
<td>-</td>
<td>15.2 (1.9%)</td>
<td>-</td>
</tr>
<tr>
<td>National forest roadless</td>
<td>0.1 (0.0%)</td>
<td>2.0 (0.2%)</td>
<td>42.5 (5.3%)</td>
</tr>
<tr>
<td>BLM roadless</td>
<td>0.9 (0.1%)</td>
<td>0.1 (0.0%)</td>
<td>22.8 (2.9%)</td>
</tr>
<tr>
<td>Wild and scenic rivers</td>
<td>4.9 (0.6%)</td>
<td>2.7 (0.3%)</td>
<td>41.9 (5.2%)</td>
</tr>
<tr>
<td>Irrigation projects</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Stockraising and agricultural</td>
<td>7.8 (1.0%)</td>
<td>1.5 (0.2%)</td>
<td>-</td>
</tr>
<tr>
<td>Power sites</td>
<td>-</td>
<td>15.2 (1.9%)</td>
<td>-</td>
</tr>
<tr>
<td>Pipeline corridors</td>
<td>2.9 (0.4%)</td>
<td>-</td>
<td>24 (0.3%)</td>
</tr>
<tr>
<td>ERDA and TVA</td>
<td>3.0 (0.4%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Petroleum and oil shale reserves</td>
<td>27.4 (3.4%)</td>
<td>-</td>
<td>0.3 (0.0%)</td>
</tr>
<tr>
<td>Geothermal</td>
<td>1.1 (0.1%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Surface occupancy</td>
<td>5.4 (0.7%)</td>
<td>0.5 (0.1%)</td>
<td>-</td>
</tr>
<tr>
<td>Statewide withdrawals</td>
<td>0.4 (0.0%)</td>
<td>-</td>
<td>0.6 (0.1%)</td>
</tr>
<tr>
<td>Forest Service general</td>
<td>-</td>
<td>-</td>
<td>104.6 (13.1%)</td>
</tr>
<tr>
<td>BLM general</td>
<td>0.6 (0.1%)</td>
<td>-</td>
<td>136.9 (17.1%)</td>
</tr>
<tr>
<td>Subtotal non-ANCSA</td>
<td>127.2 (15.9%)</td>
<td>48.4 (6.1%)</td>
<td>352.4 (44.0%)</td>
</tr>
<tr>
<td>Alaska Native selections</td>
<td>49.2 (6.2%)</td>
<td>-</td>
<td>30.8 (3.9%)</td>
</tr>
<tr>
<td>Alaska State selections</td>
<td>30.0 (3.7%)</td>
<td>-</td>
<td>55.5 (6.9%)</td>
</tr>
<tr>
<td>ANCSA d-1</td>
<td>65.0 (8.1%)</td>
<td>-</td>
<td>41.4 (5.2%)</td>
</tr>
<tr>
<td>Subtotal ANCSA</td>
<td>144.2 (18.0%)</td>
<td>-</td>
<td>127.7 (16.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>271.4 (33.9%)</td>
<td>48.4 (6.1%)</td>
<td>480.1 (60.0%)</td>
</tr>
</tbody>
</table>

The Alaska situation was changed in late 1978 by major new executive withdrawals that, according to rough estimates provided to OTA by the BLM's Alaska Native Claims Office, resulted in a net increase (over prior ANCSA withdrawals noted in this table) of approximately 13 million acres (1.8%) in the land formally closed to hardrock mineral activity. See section D of this appendix.

* overlaps stricter ANCSA withdrawals and is not included in totals.

The "highly restricted" category includes land which, while formally open to mineral activities, is nevertheless restricted by statutory conditions (power sites), administrative conditions (BLM's primitive and natural areas), or both (wilderness areas and certain reclamation projects); such restrictions cause mineral activity to be greatly discouraged, although it sometimes occurs. The "moderate to slight restriction" category includes all other Federal onshore land which is generally open to mineral activities, although there will usually be some requirement to mitigate the impact of mineral activities on the surface resources of the land. The differences in these three inventories point up the need for the Federal Government to develop a comprehensive and periodic land-use inventory of Federal land to ensure that informed governmental land-use decisions are made.

**Wilderness Designations**

A major withdrawal policy which affects minerals policy goals is the designation of Federal lands as wilderness areas. The Wilderness Act of 1964 created the National Wilderness Preservation System, consisting of lands in national parks, forests, wildlife refuges, and game ranges. Congress designated 9.1 million acres as the initial components; presently there are approximately 80 million acres in the wilderness system. (See Table 4) The Act requires that all areas designated by Congress as wilderness be administered so as to preserve their wilderness character, unless otherwise specified. This designation adds another dimension to the protection that already exists on these lands. The Act requires the Secretary of the Interior to review national park and wildlife refuge units, and the Secretary of Agriculture to review Forest Service lands previously classified as "primitive", for addition to the wilderness system.
Table 4.
Wilderness Designations
(As of 12/31/80)

National Wilderness Preservation System

<table>
<thead>
<tr>
<th>Agency</th>
<th>Units</th>
<th>Federal acres*</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Service, USDA</td>
<td>158</td>
<td>25,132,725</td>
<td>31.5</td>
</tr>
<tr>
<td>National Park Service, USDI</td>
<td>34(a)</td>
<td>35,334,482(b)</td>
<td>44.3</td>
</tr>
<tr>
<td>Fish and Wildlife Service, USDI</td>
<td>71</td>
<td>19,331,328</td>
<td>24.2</td>
</tr>
<tr>
<td>Bureau of Land Management, USDI</td>
<td>(4)(c)</td>
<td>12,206(d)</td>
<td>--</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>263</strong></td>
<td><strong>79,810,741</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Some acreage estimated pending final map compilation.
(a) Does not double count Indian Peaks Wilderness with the Forest Service.
(b) Includes NPS portion (2,922 acres) of Indian Peaks Wilderness.
(c) Does not double count Santa Lucia, Weminuche, Wild Rogue Wildernesses with the Forest Service, and Oregon Islands Wilderness with the Fish and Wildlife Service.
(d) Includes BLM portion of Santa Lucia (1,733 acres), Weminuche (200 acres), Wild Rogue (10,160 acres) and Oregon Islands (113 acres) Wildernesses.

Source: Recreation Management Staff, Forest Service, USDA.
The Act provides that the mining and mineral leasing laws shall, to the same extent as applicable prior to the effective date of the act, extend to those national forest lands designated by this Act as wilderness areas until Dec. 31, 1983; but no new mining locations may be made nor mineral prospecting permits or leases issued after that date. [Legislation introduced in the 97th Congress would extend the Dec. 31, 1983 deadline.] Subsequent acts designating additional wilderness areas generally contain some statement to the effect that these areas are subject to provisions of the Wilderness Act. Also, effective on the date of enactment, all patents issued under the Mining Law of 1872 on these wilderness areas shall reserve surface title to the United States. 7/ Both mineral development on any valid claim located prior to Jan. 1, 1984, and mineral exploration (including prospecting) may proceed beyond 1983, although exercise of these existing rights may be regulated by the Forest Service to preserve the wilderness characteristics of the area. The Secretary of the Interior is also authorized to direct the U.S. Bureau of Mines and the U.S. Geological Survey (USGS) to develop and conduct mineral surveys on such wilderness areas so as to determine if any mineral values are present. [However, there are questions as to whether USGS can do an effective job on such large acreages with its present staff, and whether these inventories are detailed enough to be useful to the mining industry.]

The Department of Agriculture's Forest Service began a study in 1972 of all national forest areas (including Alaska) in its Roadless Area Review and Evaluation program (RARE I). In 1979, a new, expanded review, RARE II, was concluded by allocating 62 million acres of roadless and undeveloped Forest

Service System lands to three categories. The acreage figures were revised in February 1981:

1) Out of 15.4 million acres recommended by the Secretary of Interior for wilderness designation, 8.5 were so designated by Congress and 6.9 were still to be acted on by Congress;

2) Held for further planning were 8.1 million acres, plus 4.4 million acres which were designated by Congress for further study;

3) The remaining acres were either allocated to multiple uses other than wilderness, or held for further study if there was no release language in the bill. 8/

The Department of the Interior was directed by the Wilderness Act to conduct a review within ten years of all roadless areas of at least 5,000 contiguous acres within the National Park System or the National Wildlife Refuge System, and all roadless islands within the National Wildlife Refuge System. Neither the mining provisions nor the requirement for mineral surveys of the Wilderness Act apply to wilderness areas designated within the National Park System and the National Wildlife Refuge System; upon designation by Congress within the system, these areas, unless otherwise specified, are immediately closed to the acquisition of any new mineral development rights. 9/

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BLM Wilderness

Section 603 of FLPMA authorizes the Secretary of the Interior to review within 15 years those roadless areas of 5,000 acres or more and roadless islands of the public lands identified during the inventory (required in Sec. 201 of FLPMA) as having wilderness characteristics. Twenty-five million acres (not including Alaska) have been identified as wilderness study areas and BLM must analyze the resources to determine the suitability or nonsuitability of each such area or island for preservation as wilderness, and to make such recommendations to the President. Prior to any recommendation for wilderness designation, any such area or island must be surveyed by the U.S. Bureau of Mines and USGS to determine its mineral values. During the review period, and until Congress has determined otherwise, existing mining and leasing shall continue in the same manner and degree as existed prior to approval of the act. Any claims made or permits or leases issued after passage of FLPMA are subject to restrictions made so as to prevent impairment of wilderness suitability. 10/ Once an area has been designated by Congress as wilderness, the provisions of the Wilderness Act shall apply with respect to administration and use of such designated areas, including mineral development.

LAWS GOVERNING MINERAL DEVELOPMENT ON FEDERAL LANDS

Following the California gold rush of the 1840's and 50's, Congress debated Federal mineral land policy, and in 1866, a mining law was enacted declaring "the mineral lands of the public domain... to be free and open to exploration and occupation" subject to government regulation and to the local customs or rules of the mining districts. 11/

Subsequently, several other mining laws were passed, and in 1872 Congress enacted the General Mining Law. These mining laws have governed exploration and mining of such "hardrock" mineral deposits as gold, silver, iron, copper, lead and zinc in the public domain. Prospecting for minerals covered by the mining laws is a statutory right on any public domain land that has not been withdrawn from operation of the mining laws by congressional or executive action.

Upon discovery of a "valuable mineral deposit" and physical "location" (staking) of a mining claim encompassing the deposit, a prospector has a statutory right to develop, mine, and sell the mineral without obtaining approval from, or paying royalties or fees to, the Federal Government. Complete fee title (ownership) to the surface and subsurface can be obtained by paying a fee for a title document known as a "patent". (Under FLPMA, all patents issued in wilderness areas after 1976 reserved surface title to the U.S.) For protection during prospecting activities that require substantial sampling or excavation, provisions were made to protect the locator against other prospectors (but not against nonmineral entry or the Federal Government) until a valid discovery has been made. 12/


12/ Ibid, p. 81-82.
The Mineral Leasing Act of 1920 regulates exploration, development and production of the so-called "leasable" minerals on the public domain—except for lands withdrawn or reserved for certain Federal uses or purposes. The Act removed all deposits of coal, oil, oil shale, gas, native asphalt, solid and semisolid bitumen, phosphate, sulfur (in specified states), sodium and potassium, and the public domain land containing such deposits, from operation of the mining law and made them subject to disposal only through discretionary prospecting permits and/or leases. The U.S., in such cases, retains title to the deposits and surface rights. The Act authorizes the Secretary of the Interior to issue prospecting permits for minerals on lands not known to contain these minerals. If a valuable deposit is discovered, the permittee is entitled to a preference right lease for development and production of the mineral. Land known to contain mineral deposits can be leased through competitive bidding. The Secretary is also authorized to establish rentals, royalties, and other conditions to ensure competition, diligent development, highest use of the land, and a fair return to the public for the use of its mineral resources. 13/

Minerals on acquired lands are governed by two Acts. The Mineral Leasing Act for Acquired Lands of 1947 makes the fossil fuel, fertilizer, and chemical minerals in acquired lands subject to permit and lease by the Secretary of the Interior under the provisions of the above-mentioned Mineral Leasing Act of 1920. However, permits and leases can be issued only with the consent of the surface-management agency, and must ensure adequate utilization of the land for the purposes for which it was acquired or is being administered. The President's Reorganization Plan No. 3 of 1946 authorizes the Secretary of

13/ Ibid, p. 87.
the Interior to lease, subject to consent of the Secretary of Agriculture, the hardrock minerals in acquired national forest land and grassland by noncompetitive bidding. 14/

Under the terms of the Materials Sales Act of 1947 and the Surface Resources Act of 1955, (Common Varieties Act), certain "common varieties" of minerals were removed from operation of the mining law. These laws provide for sale (subsurface only) of common varieties of sand, stone, gravel, pumice, pumicite, or cinders, together with common varieties of clay and other mineral materials by competitive bid.

A SPECIAL CASE--ALASKA LAND DISPOSAL AND CLASSIFICATION

The Federal Government originally owned all of Alaska (365.5 million acres), having purchased it from Russia. By 1976, approximately 90.6 million acres of public domain and 18,000 acres of acquired land had been designated for Federal use; one million acres had passed into private ownership. The remaining 273 million acres, as well as some portions of the existing Federal reserves, are the subject of an extensive land selection process under the 1953 Alaska Statehood Act (P.L. 85-508) and the 1971 Alaska Native Claims Settlement Act (ANSCA) (P.L. 92-203).

The Alaska Statehood Act, as amended, provides for approximately 104.5 million acres of unreserved Federal land to be granted to the State under various selections. The State has sought to select land with the highest mineral and other resource potential (it owns the Prudhoe Bay oil field), and it appears that the State will allow development of its mineral resources. 15/

14/ Ibid, p. 91-92, 94

At the end of 1975, approximately 80 million acres were segregated from availability for mineral activities under the Federal mining laws as a result of Native selections under ANCSA. Of these 80 million acres, around 44 million will eventually pass into Native ownership, and although this acreage will no longer be available under Federal mineral laws, it will be available for development or disposal as the Natives see fit. \footnote{16/}{\footnote{Ibid, p. 365.}}

The Native regional corporations will control the subsurface (mineral) rights to 40 million acres, with surface rights to only 16 million. However, some 3.5 million of these acres underlie Federal surface, and therefore may be subject to certain restrictions on minerals by the Federal surface-management agency. The U.S. retains the subsurface rights to such lands, but the regional corporation is authorized to select in-lieu subsurface estate in an equal acreage from other Federal land available for selection in the region, if possible. \footnote{17/}{\footnote{Ibid, p. 365.}}

Subsection 17(d)(1) of ANCSA directed the Secretary of Interior to review the public lands of Alaska for withdrawal to ensure that the public interest in the lands was protected. In 1972, Secretary Morton withdrew almost all unreserved public land in Alaska, but most of these "d-1" withdrawals simply backed up other segregations, such as those stemming from the Native selection. Thus, any areas not selected for inclusion in other selections remain withdrawn under d-1 authority; these lands are withdrawn from mineral leasing but permit metalliferous location. Such withdrawals must be specifically revoked by the Secretary, and DOI has announced plans to open 400,000 acres to mining and mineral leasing in December 1981.
Subsection 17(d)(2) of ANCSA directed the Secretary of Interior to withdraw as much as 80 million acres of unreserved public land in Alaska for inclusion in one of four conservation systems: 1) National Parks, 2) National Forests, 3) National Wildlife Refuges, or 4) Wild and Scenic Rivers. The act required the land to be withdrawn from all forms of appropriation under the public land laws, including the mining and mineral leasing laws. The d-2 withdrawals remained in effect until Dec. 8, 1978. However, in late 1978, because of Congressional inaction, Secretary Andrus used the emergency withdrawal authority provided by FLPMA to withdraw approximately 116 million acres for another three years. In addition, President Carter designated 56 million acres as permanent new national monuments (52.5 million of which were already affected by the emergency withdrawal).

The executive withdrawals creating Alaskan monuments and wildlife refuges were later revoked by passage of the Alaska National Interest Lands Conservation Act of 1980 (P.L. 96-487) on Dec. 2, 1980, when the issue of Alaska d-2 lands was closed. This legislation established a total of 102 million acres of new conservation units including parks, wildlife refuges, national forests, wild and scenic rivers, and BLM-managed recreation areas. In addition, wilderness protection was extended to about 56 million acres in new and existing conservation units. The law permits development of mineral resources in selected areas:

1) Wildlife refuges are generally closed to location but open to leasing;
2) National forests are open to both location and leasing, with certain noted exceptions;
3) BLM-managed recreation areas are subject to land-use plans and may be open to both location and leasing, and
4) Both national parks and wild and scenic rivers are closed to mineral location and leasing, subject to existing valid rights.
Additionally, the law directs the Secretary of the Interior to assess the oil, gas, and other mineral potential on all public lands (defined in the act as Federal land) in the State. The law also finalized State selections of 98 million acres granted under the Alaska Statehood Act. 18/

LAWS AFFECTING MINERAL ACTIVITIES ON FEDERAL LANDS

In 1976, the Federal Land Policy and Management Act (FLPMA) (P.L. 94-579), also known as the BLM Organic Act, established a basic policy of managing lands in Federal ownership for multiple use and provided for specific provisions regarding land-use planning and withdrawals. The act has many mineral implications:

1) It authorizes the Secretary of the Interior to prepare and maintain an inventory of all public lands and their resources and other values, giving priority to areas of critical environmental concern.

2) It authorizes the Secretary to develop, maintain, and review land-use plans which provide by tracts or areas for use of public lands. Once a land-use plan is approved for an area, it is open to mining location and leasing unless specifically withdrawn from this use by management decisions issued by the Secretary to implement the land use plan. If this withdrawal decision is effective for two or more years, and involves areas of 100,000 acres or more, Congress must be notified of the action.

3) It calls for review of any classification of public lands or any land use plan in effect prior to FLPMA. Generally, these classifications were authorized by acts no longer in existence, and were made informally. The review will examine 1,227 BLM classifications for 124.7 million acres of

public land, of which about 1.5 million acres are closed to the mining and mineral leasing laws. 19/

4) The Act repeals numerous withdrawal laws and the implied Executive withdrawal authority, and specifically authorizes the Secretary of the Interior to make, extend, or revoke withdrawals subject to limitations of the act and spells out the withdrawal application procedures. The Secretary of the Interior may not make, modify or revoke any withdrawals created by Congress, or modify or revoke any withdrawals creating national monuments or adding lands to wildlife refuges.

5) The Act mandated a review, by 1991, of existing withdrawals in the 11 coterminous western States (excluding Alaska) of all Federally-owned lands, except Indian lands, the National Park System, the National Wildlife Refuge System, other lands administered by the FWS or the Secretary through the FWS, the National Wild and Scenic Rivers System, the National System of Trails, and certain lands in the National Forest System. [In addition, BLM decided to review its wilderness land.] Approximately 6,300 withdrawals, encompassing some 76.5 million gross acres, 20/ are included in the review; about half of these acres are closed to mining. The review is to determine the need for the withdrawals. Since October 1, 1980, and directly as a result of this review program, over 300 withdrawals have been revoked or modified, affecting approximately 20 million acres. 21/


20/ Again, these are gross acreage figures, i.e., double or triple counting has occurred because of overlapping withdrawals. Net existing withdrawal figures are unavailable.

The **American Antiquities Act of 1906** authorizes the President to establish places of historic or scientific value as national monuments. This Act also provides protection to historic and archaeological sites and objects on or adjacent to Federal lands. National parks and monuments are generally withdrawn from entry under the mining law, except for six units which were opened to mineral exploration and recovery by Congressional acts (Crater Lake National Park, Mt. McKinley National Park, Death Valley National Monument, Coronado National Memorial, Organ Pipe Cactus National Monument, and Glacier Bay National Monument.)

Public Law 94-429, **Mining in the Parks Act**, approved September 28, 1976, provides for the regulation (including a four-year moratorium on mineral activity) of existing mineral rights on patented or unpatented mining claims within these national parks and monuments, withdraws these lands from any future location under the mining law, and establishes new recordation requirements for mining claims. (National parks and monuments have been excluded from operation of the **Mineral Leasing Act of 1920** by subsequent amendments to that Act.)

Several statutes authorize establishment of **National Wildlife Refuges**. In 1934, Congress gave the President general authority to establish refuges within national forests, and most refuges have been established by executive action. In 1966, Congress enacted the **National Wildlife Refuge System Administration Act** to give formal recognition to the system under the U.S. Fish and Wildlife Service. The Act states that mining and mineral leasing laws shall continue to apply to lands within the system, to the same extent prior to date of enactment, unless

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withdrawn under other authority; however, few refuges were left open to the mining law upon their establishment. Under Fish and Wildlife Service regulations, essentially no mineral development is allowed, except some oil, gas, and mineral leasing, subject to restrictions. 23/

The Wild and Scenic Rivers Act of 1968 (P.L. 90-542) created a system of wild, scenic, and recreational rivers, administered by the National Park Service, Forest Service and the States. At present there are 61 rivers within the system, 25 of which are in Alaska; only 29 rivers have been surveyed, totalling 727,716 acres. Under the act, land within one-quarter mile of the bank of any wild river segment is withdrawn from location and mineral leasing. Land within one-quarter mile of the bank of any river designated by Congress for study for inclusion in the system is withdrawn from location but not from mineral leasing, until designated by Congress or determined to be unsuitable for inclusion in the system. 24/

The Endangered Species Act of 1973 may temporarily or permanently restrict mineral exploration and development on Federal lands. The Act authorizes the Secretaries of the Interior and Commerce to identify endangered or threatened species of all animals and plants, and directs all Federal departments and agencies to take whatever action is necessary to ensure that their programs do not jeopardize the continued existence of endangered or threatened species or result in the destruction or modification of their critical habitat. The Secretaries of the Interior and Commerce have delegated authority to the Fish and Wildlife Service and the National Marine Fisheries Service, respectively, to administrate and implement the Act. The potential impacts are that this


Act may reduce the total land area open to mineral exploration and development, or that any restrictions or delays imposed by this Act may create uncertainties and so increase the costs of mineral leasing, exploration, and development. 25/

National Recreation Areas (NRAs) have been established by both statute and executive action as units of the National Park System and also within areas of the National Forest System. Decisions to permit mining activity are generally decided on a case-by-case basis as the NRAs are created.

The Executive branch has withdrawn land to establish military reservations and bases under various authorities. In 1958, Congress passed the Defense Withdrawal Act, the Engle Act, (P.L. 85-337) for the express purpose of modifying the asserted non-statutory authority of the executive to make withdrawals for military purposes. The Act requires that all proposed military withdrawals of more than 5,000 acres be established only through specific congressional authorization. All lands withdrawn for the military, except naval petroleum, oil shale, or coal reserves, are subject to the operation of the mining and mineral leasing laws, unless inconsistent with the military use of the lands so withdrawn. The Secretary of Defense has generally determined that land withdrawn for strictly military purposes should be closed to mineral exploration and development for safety and security purposes, and in practice, very little mineral exploration and development is permitted. 26/


BIBLIOGRAPHY


The Federal Land Policy and Management Act of 1976 (FLPMA) defines multiple use as:

"the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output."

A withdrawal is defined by FLPMA as:

"withholding an area of Federal land from settlement, sale, location, or entry, under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or reserving the area for a particular public program or purpose..."