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## History and Main Elements of the Federal Onshore Mineral Land Management Systems

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In the 19th century, settlement of the vast Federal public domain was encouraged by enactment of laws providing for free or almost-free disposal of public domain land. One of these laws was the Mining Law of 1872, which originally governed the disposal of all minerals other than coal, and still authorizes the disposal of public domain land containing a valuable deposit of almost any nonfuel mineral.

Early in the 20th century, the fossil fuel and fertilizer minerals and lands containing them were reserved from disposal under the Mining Law and were made subject to leasing at the discretion of the Secretary of the Interior under the Mineral Leasing Act of 1920 and related statutes. As the concern over conservation and proper management of mineral and nonmineral resources on Federal land grew, special laws were passed reserving more minerals and lands from disposal under the Mining Law, and making the minerals subject to lease or sale.

Over the years, little consideration was given to the net effect on Federal land management of the numerous distinct mineral and nonmineral resource disposal and management laws. Recent statutes have greatly improved management of nonmineral resources on Federal land. But mineral activities under the various mineral laws are not yet coordinated effectively among themselves or with non mineral activities.

## A. Initial Policy: Revenue Generation

The earliest Federal landholdings consisted of land west of the Allegheny Mountains and east of the Mississippi River obtained through cession of territorial claims by the original colonies, followed in 1803 by the huge Louisiana Purchase from France of the territory in the center of the continent roughly east of the Rocky Mountains and north of what is now the State of Texas.

The primary goal of Federal land law in the first few decades of the Nation's existence appears to have been maximization of the revenue flowing to the Federal Gov-

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<sup>1</sup>The sources for much of the historical data in this and the following sections are P. Gates, *History of Public Land Law Development* (1968), especially ch. 7 by R. Swenson; Twitty, Sievwright, and Mills, *1 Nonfuel Mineral Resources of the Public Lands: Legal Study* (1970); Federal Trade Commission, Bureaus of Competition

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and Economics, *Report to the Federal Trade Commission on Federal Energy Land Policy: Efficiency, Revenue, and Competition*, Ser. No. 94-18 (92-118), ch. 2, Senate Comm. on Int. & Ins. Affairs, 94th Cong., 2d sess. (Comm. Print 1976).

ernment, which had incurred substantial debts as a result of the War of Independence. Land was surveyed and opened to sale by auction with set minimum prices. Mineral lands, however, after an initial auction of copper lands near the Great Lakes at the prompting of Alexander Hamilton, were reserved from sale, and known deposits were made available through lease, so that the Government could retain continuing revenue through royalties on production.

Nonmineral lands were opened to sale as far west as the Mississippi River area, where sizable deposits of lead existed. In 1807, Congress authorized the leasing of the reserved lead mines in this territory with mixed results. The leasing program in the Missouri area produced widespread resentment because of inadequate administration and the existence of conflicting or adjacent early French and Spanish land grants. Congress authorized the sale of these mines in 1829. In the Upper Mississippi Valley, however, the leasing program benefited from strong administration and was successful until 1829, when it began to deteriorate because of a shift to very lax administration, overproduction, fraudulent acquisition of mineral land under nonmineral land statutes, increasing pressure for more agricultural land, and a long period of uncertainty over the legality of the leasing system. In 1846, Congress authorized the sale of the mines at public auction.

The Preemption Act of 1841 was the first law to authorize entry on Federal land in order to obtain a preemptive right to buy a tract for a set price without having to bid against others at public auction. The Act applied only to agricultural land. But, the 1846 Lead Mines Sale statute, mentioned above, authorized similar preemptive rights for any mines not sold at public auction within a year. Two 1847 statutes created immediate preemptive rights for mineral land in northern Michigan and northern Wisconsin authorized to be sold at public auction.

Land classified as mineral land was generally sold at a higher minimum price than land classified as agricultural. However, much mineral land passed into private ownership under the agricultural laws rather than the mineral sale provisions, owing to lack of classification, fraudulent entries, and Government decisions that certain land (for example, land containing "merely" iron ore) was not mineral land.

## **B. Mid- to Late-19th Century: Rapid Development and Disposal**

### **1. Rapid Development**

The territorial holdings of the Federal Government on the American continent were completed by several treaties and purchases in the 1840's and 1850's, which extended Federal ownership to the Far West and the Southwest, and by the purchase of Alaska from Russia in 1867. Earlier, in 1819, the Florida territory was obtained from Spain.

The great size of the Federal holdings, combined with the pressure from Western States and settlers to have them rapidly settled and developed, led to the lowering of minimum sale prices, the expansion of preemptive rights, and eventually the free dis-

posals of land to settlers under the agricultural Homestead Act of 1862. There were no general provisions for the disposal of mineral land, though sales of mineral land with preemptive rights were authorized in certain areas, and much mineral land was acquired fraudulently under the agricultural land disposal laws.

## 2. California Gold and the Mining Codes

In 1848, gold was discovered in California, and the fabled gold rushes in the Far West began. In the absence of Federal law providing for the disposal of mineral land, prospectors and miners, who were technically trespassers on Federal land, relied on State property laws and the rules each mining camp developed for itself. The mining codes generally provided that the discoverer of a mineral deposit was entitled to exclusive possession, limited the size of the tract that could be held as the result of a single discovery, specified procedures for marking and claiming the tract, and required a certain amount of development work to be performed annually to hold the tract.

Congress debated Federal mineral land policy during the 1850's and into the 1860's. Eastern members generally advocated a disposal policy that would generate Federal revenue, and western members advocated free exploration and occupation of mineral land with preemptive rights to obtain title for a nominal fee. No one strongly advocated leasing, apparently because the earlier lead mine leasing program was perceived as a failure.

The Members of Congress urging rapid settlement and development of the West through free exploration and disposal of Federal land prevailed (as they had in 1862, with passage of the Homestead Law for agricultural land). 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 governmental regulation and to the local customs or rules of the mining districts not in conflict with the laws of the United States.

The 1866 law provided for acquisition of title only for "lode" deposits, which are veins or lodes of rock in place bearing valuable minerals. The Placer Act of 1870 amended the 1866 law to provide for acquisition of title to "placer" deposits, which are mineral deposits other than lode deposits. Generally, lode deposits are those confined by rock in the place where they were originally formed, while placer deposits are former lode deposits that have been broken down, transported, and redeposited in alluvial sediment as a result of being exposed to flowing water or ice.

## 3. The Mining Law of 1872

In 1872, the 1866 and 1870 mining acts were substantially revised to produce the Mining Law of 1872;<sup>2</sup> (or simply "the Mining Law") which ever since has governed the disposal of all valuable mineral deposits on the Federal public domain except for minerals whose disposal is explicitly provided for by other statutes. (The public domain consists of all land retained in Federal ownership since its original acquisition by treaty, cession, or purchase as part of the general territory of the United States, in-

<sup>2</sup> 17 Stat. 91 (1872), as amended and supplemented, 30 U.S.C. § 21 et seq. (1976).

cluding such land that temporarily passed out of but subsequently reverted to Federal ownership through operation of the public land laws, and any land obtained in exchange for such land or for timber on such land. It does not include land that has been acquired from a State or a private owner through purchase, gift, or condemnation for particular Federal purposes rather than as part of the general territory of the United States.)

The Mining Law of 1872 retains the policy of free exploration and occupation of mineral land initiated by the 1866 and 1870 mining acts. Prospecting for minerals covered by the Mining Law is a statutory right on any public domain land<sup>3</sup> that has not been removed from the operation of the Mining Law 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 the statutory right to develop, mine, and sell the mineral without obtaining approval from or paying fees to the Federal Government. Complete fee title to the surface and subsurface can be obtained by paying \$2.50 or \$5.00 per acre, depending on the type of claim, for a title document known as a "patent." Prior to issuance of a patent, use of the surface and of surface resources is limited to those uses required for the mining claimant's prospecting, mining, or processing operations, or uses reasonably incident thereto. The right to mine and make use of the surface does not depend on acquisition of a patent.

Technically, discovery of a valuable mineral deposit is required before a claim can be located. However, early in the history of the Mining Law, it became apparent that some sort of pre-discovery protection was needed for prospecting activities that required substantial sampling or excavation. Accordingly, the Supreme Court created the doctrine of *pedis possessio*, which permits location of a claim prior to discovery, and protects the locator against encroachment by other prospectors as long as the locator is in actual possession of the claim and diligently exploring for minerals. This doctrine protects the locator against other prospectors, but not against nonmineral entrants or the Federal Government, until a valid discovery has been made.

There is no legal limit to the number of claims anyone can locate. However, a valid discovery must be made on each claim in order to acquire a vested right against the Government. Similarly, the doctrine of *pedis possessio* protects only those claims actually being occupied and worked.

An unpatented mining claim must be maintained by the performance of at least \$100 worth of "assessment" (development) work each year. Assessment work can be combined for groups of claims in common ownership. There are no assessment work requirements for patented claims. There is no requirement that mineral production ever be commenced, nor any restriction on the timing or pattern of development, on either patented or unpatented claims. Claims continue indefinitely with or without mineral production,

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<sup>3</sup>Although the Mining Law refers to "lands belonging to the United States," it has been interpreted as applying, as did the

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1866 law, only to public domain land and not to acquired land

Mineral activities on a claim can preempt all nonmineral resource uses and values. The Mining Law states that Federal land is open to exploration, occupation, and purchase “under regulations prescribed by law, ” but Federal regulations covering surface resources on mining claims have been promulgated or proposed only within the last few years. These regulations recognize the priority given to mineral activities over nonmineral resource uses and values. The regulations apply only to unpatented claims, except in special areas such as national parks or wilderness areas.

The Mining Law authorizes the States to prescribe procedures for locating and recording mining claims (including requirements governing discovery work and, within limits, the width of claims), to specify the amount of annual assessment work required above the \$100 per claim minimum, and even to provide rules for working mines on patented claims necessary for their complete development. Generally, the States have only specified procedures for locating and recording claims, including discovery work requirements. The regulations vary considerably from State to State. The Federal Land Policy and Management Act, enacted in 1976, for the first time required recordation of claims and assessment work with the Federal land management agencies.

The Mining Law contains several distinctions and provisions that have caused substantial uncertainty and litigation. Among these are the distinction between lode and placer claims, the provision of extralateral or apex rights for lode deposits, the tunnel site provision, and the requirement of discovery of a valuable mineral deposit on each claim in order to obtain tenure from the Government. These problems and others are discussed in subsequent chapters,

#### **4. Extensive Ad Hoc Disposal of Mineral and Nonmineral Land**

The Mining Law of 1872 established a policy for the disposal of Federal mineral land analogous to the policies for nonmineral land in the 19th century. Like the Homestead Act of 1862 for agricultural land, it provided for free entry onto and exclusive use of small tracts of unappropriated Federal land. Like the nonmineral land preemption acts (which continued alongside the Homestead Act until almost the end of the 19th century), it provided for purchase of such tracts at fixed prices of a few dollars per acre.

From the beginning, certain mineral lands were excluded from the Mining Law. Coal lands, like many types of nonmineral land, were subject to sale at public auction, or to private entry at minimum prices under an 1864 statute. A new Coal Lands Act of 1873, which governed the disposal of Federal coal land until passage of the Mineral Leasing Act of 1920, authorized entry and purchase of coal land at a minimum price of \$10 or \$20 per acre, depending on distance from a completed railroad line. Similarly, the disposal of mineral land in Michigan, Minnesota, Wisconsin, Missouri, Kansas, and Alabama was allowed to continue under the general public land preemption and sale statutes. Federal land in those States was excluded from the operation of the Mining Law by three statutes enacted between 1873 and 1883. The same exclusion was applied to Oklahoma in 1891, although certain land ceded to the United States by Indian tribes was opened to entry under the Mining Law in 1895 and 1900.

The management of Federal land during this period consisted largely of ad hoc decisions on the disposal of numerous tracts under a bewildering set of specific-use disposal statutes. Nonmineral land was disposed of under separate statutes governing agricultural, pastoral, desert, timber, building stone, swamp, railroad, and other lands.

Theoretically, entries and sales under the nonmineral land laws could not be made on mineral land, except in the seven States (listed above) where such entries and sales were expressly authorized. Conversely, administrative and court decisions under the Mining Law held that the “valuable discovery” of minerals required for a valid mining claim must include a showing, at least where there was a contest between mineral and nonmineral claimants, that the land was more valuable for mineral than for nonmineral purposes. <sup>4</sup>Thus, the congressional intent of disposal for “highest use” provided the only organizing thread through the morass of laws.

It was recognized that proper disposal for highest use under this mass of laws required thorough investigation and classification of the public domain. In 1879 the U.S. Geological Survey was authorized to undertake such investigations and classifications. Unfortunately, however, the first Director of the Survey interpreted the classification directive narrowly, as seeking only general scientific knowledge of the public domain rather than classification for purposes of disposal under the land laws. As a result, millions of acres of Federal land intended for various mineral and nonmineral uses were obtained fraudulently under statutes providing for disposal for other uses. Not until the beginning of the 20th century were specific land classifications undertaken, and then only for reclamation (irrigation) projects, water powersites, public waterholes, and land considered favorable for the occurrence of coal, oil, oil shale, phosphate, or potash. <sup>5</sup>

## C. Early 20th Century: Resource Conservation

### 1. Reservations and Withdrawals

The massive disposals of Federal land under the nonmineral land laws, including fraudulent disposals of coal and oil land, led to increasing concern over the depletion of what had earlier seemed the endless U.S. bounty of natural resources. The concern was primarily over the dwindling stock of land, timber, water, and minerals for commercial uses, although as early as 1872 land that was not considered valuable for other purposes had been set aside for Yellowstone National Park,

With respect to mineral resources, the concern over depletion was amplified by wasteful exploration and production practices (due in part to the provisions of the Mining Law) and by the existence of monopolistic practices for both oil (the Standard Oil Company) and coal (the railroads).

<sup>4</sup>Brice, “Law of Discovery: Prudent Man and Marketability,” in University of Arizona, College of Mines, *Symposium on American Mineral Law Relating to Public Land Use* 19 (J.C. Dotson ed. 1966); G.O. Smith, et al., *The Classification of the Public Lands*, U.S. Geological Survey Bull. 537, at 25-26 (1913).

<sup>5</sup>U.S. Geological Survey Bull. 537, note 4, at 7-8, 11-13, 18-20, 32-33, 35-43; Bass, Smith, and Horn, *Standards for the Classification of Public Coal Lands*, U.S. Geological Survey Circ. 633, at 2 (1970).

Congress authorized the establishment of forest reserves in 1891. Administrative machinery for such reserves was created by the National Forest System Organic Act of 1897, which specified that all public domain national forests continued to be open to entry under the Mining Law for prospecting for and location and development of their mineral resources, subject to the rules and regulations governing such national forests. Millions of acres of national forests (apparently more than Congress desired) were created pursuant to this congressional authorization at the beginning of the 20th century, marking the first major closure of the public domain to nonmineral (but not mineral) private entry and settlement.

There was no comparable law authorizing reservation of public domain mineral resources. However, since early in the 19th century the President had asserted and utilized an inherent or implied power to withdraw or reserve the public domain from private entry in order to permit a particular public use.<sup>1</sup> Responding to the concern over the depletion, waste, and monopoly of the Nation's fuel mineral resources, Presidents Roosevelt and Taft withdrew millions of acres of coal and oil land during the first decade of the 20th century from entry under the agricultural land laws and, later, from entry under all the mineral and nonmineral land laws. These withdrawals touched off a storm of protest in Congress and the Western States, but they were upheld in 1915 by the Supreme Court in the *Midwest Oil Co.* case.<sup>2</sup>

At the request of President Taft and prior to the *Midwest Oil Co.* decision, Congress in 1910 had enacted the Pickett Act, authorizing Presidential withdrawal of Federal land (for classification and "other public purposes" from entry under the nonmineral land laws and from entry for coal, oil, gas, and phosphate (later expanded to include all nonmetalliferous minerals) under the Mining Law. The earlier pre-Pickett Act withdrawals were reissued by the President as withdrawals under the Pickett Act. During the following decade, substantially all the unappropriated public domain mineral land was withdrawn from nonmetalliferous entry and location under the Mining Law.

The withdrawals were made to permit investigation and classification of land on which there was a reasonable probability of the occurrence of certain mineral resources. The largest withdrawals were of coal and oil lands, although withdrawals were also made of phosphate and potash lands. Phosphate and potash are the principal fertilizer minerals, and there was concern over conservation of domestic resources in light of substantial exports of phosphate and dependence on Germany for imports of potash. If the withdrawals and classifications were not made, mineral land would continue to pass into private (and often monopolistic) control either inadvertently or fraudulently under the nonmineral land laws.

The withdrawals of mineral land were also intended to segregate such land from disposal under the Mining Law and the Coal Act of 1873, pending adoption of more ap-

<sup>1</sup>Technically, land is segregated from entry under one or more of the public land laws in three distinct ways: *classification designates land as suitable for disposition under a particular statute and hence may limit its disposition under other statutes; withdrawal removes land from disposition under one or more statutes without necessarily designating any particular preferred use; reservation dedicates land to a particular public purpose or use.* None of the three methods necessarily involves restrictions on

mineral entry. U.S. Department of the Interior, *Final Report of the Task Force on the Availability of Federally Owned Mineral Lands 10-11* (1977).

<sup>2</sup>36 U.S. 459 (1915). The Court bypassed the issue of the President's inherent withdrawal authority and held that Congress had impliedly granted withdrawal power to the President through its long history of acquiescence in the Presidential withdrawals and reservations for public purposes.

propriate legislation. The Mining Law, drafted primarily with the metallic minerals in mind, was considered to be unsuitable for the disposal of oil, phosphate, and potash, and the Coal Act was considered to be no longer suitable for the disposal of coal.

## **2. Separation of Surface and Subsurface**

The withdrawals prevented agricultural and other nonmineral entries on vast tracts of western land. In order to free this land for nonmineral entry, laws were enacted separating ownership of the surface from ownership of the subsurface. The first of these laws, passed in 1909 and 1910, permitted agricultural entries on land withdrawn or classified as valuable for coal. However, the United States reserved ownership of the coal in any land classified as valuable for coal prior to issuance of a nonmineral patent (title). Limited indemnification was provided to the surface owner for any damages caused by exploration for or development and production of the coal. A similar law was enacted in 1914, providing for agricultural entry on land withdrawn, classified, or reported as containing phosphate, nitrate, potash, oil, gas, or asphaltic minerals. In 1916, the Stockraising Homestead Act dispensed with the need for mineral land classifications for stockraising (grazing) entries by reserving all minerals to the United States whether or not the land was considered to be valuable for any mineral. For agricultural entries, however, mineral reservations continued to be made only for those fossil fuel and fertilizer minerals for which the land was considered to be valuable at the time of issuance of the patent.

This collection of separation or severance laws relieved the impact of mineral land withdrawals on nonmineral entries, but it also created a situation of separated ownership of the surface and subsurface that has caused considerable problems to the present day.

## **3. The Mineral Leasing Act of 1920**

The mineral land withdrawals remained effective to prevent disposal of the fossil fuel and fertilizer minerals under the Mining Law and the Coal Act. During the decade following 1910, the conservationists pressed continuously for a leasing system for these minerals, and bills for that purpose were introduced in each session of Congress. Finally, in 1919, even the most adamant opponents of mineral leasing recognized the political necessity of a leasing system in order to make the withdrawn land available again for exploration for and development and production of the fuel and fertilizer minerals. The Mineral Leasing Act of 1920<sup>41</sup> reopened the public domain, with certain exceptions (national parks and land withdrawn or reserved for military or naval uses or purposes), to such exploration, development, and production.

The Act removed all deposits of coal, phosphate, sodium, oil, oil shale, or gas, and public domain land containing such deposits (including public domain land for which some or all mineral rights had been reserved by the United States upon patenting of such land under the nonmineral entry laws) from disposal under the Mining Law or the Coal Act of 1873, and made such deposits and land subject to disposal only through

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<sup>41</sup> Stat. 437 (1920), as amended and supplemented, 30 U.S.C. § 181 et seq. (1976).

prospecting permits and leases. The United States henceforth would retain title to the deposits and the surface (the latter only for so long as the surface was not disposed of under the nonmineral entry laws).

Earlier, in 1917, a hybrid patent-leasing law had been enacted as a wartime measure for potash, which was important for explosives as well as fertilizer. Under the 1917 law, a successful mineral explorer could obtain a patent (full title) to one-fourth of the land embraced in his prospecting permit, and the remaining three-fourths could be leased by advertisement, competitive bidding, or such other methods as might be adopted in general regulations by the Secretary of the Interior. These provisions were lifted from the 1917 version of the general leasing bill, and were similar to the provisions for oil and sodium. By 1920, however, a full leasing policy had been adopted, and in 1927 potash itself was made completely leasable and incorporated into the general provisions of the Mineral Leasing Act.

Similarly, in 1926, sulfur in Louisiana was placed under the Mineral Leasing Act. In 1932, sulfur in New Mexico was added. The most recent additions, in 1960, were native asphalt, solid and semisolid bitumen, and bituminous rock.

The Mineral Leasing Act of 1920 was a major departure from the earlier policy for disposal of Federal minerals. The absolute right to enter, locate, develop, and (if desired) purchase mineral land under the Mining Law and the Coal Act of 1873 was replaced, for the fossil fuel, fertilizer, and chemical minerals only, with a discretionary permit and leasing system. The Secretary of the Interior was authorized to issue prospecting permits and leases for the exploration, development, and production of such minerals and, within broad statutory limits, 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.

The Mineral Leasing Act has been amended often since its initial passage in 1920, especially with respect to oil and gas. However, its fundamental structure and purpose remain unaltered. Certain general provisions apply to all the minerals covered by the Act, while specific lease periods, rentals, royalties, and other terms and conditions for each mineral follow the same general format. The pervasive theme of the Act is protection of the public interest through grants of broad discretion to the Secretary of the Interior. As shall be seen, however, defects in the Act itself and in its administration have impeded achievement of the intended purposes.

All permits and leases under the Act are discretionary. The Secretary may grant prospecting permits for phosphate, potash, sodium, or sulfur for a specified maximum acreage and time to the first qualified applicant. Similar prospecting permit provisions for oil and gas were eliminated in 1935 and replaced by a provision authorizing issuance of noncompetitive leases to the first qualified applicant. Prospecting permit provisions for coal were eliminated in 1976.

Prospecting permits for phosphate, potash, sodium, or sulfur (or, prior to 1976, coal) can be issued for land where the existence or workability of the mineral in question is not already known. If the permittee discovers a valuable deposit of the mineral for which the permit was issued, and (for sodium, sulfur, and potash permits) if the

land is chiefly valuable for the mineral thus discovered, the permittee is entitled to a preference-right lease for development and production of the mineral. Similarly, for oil and gas, noncompetitive leases may be issued to the first qualified applicant for land outside the known geologic structure of a producing oilfield or gasfield,

Land known to be valuable for sodium, sulfur, or potash, known to contain workable deposits of phosphate, or desired for development of oil shale, native asphalt, solid and semisolid bitumen, or bituminous rock, may be leased by the Secretary of the Interior through advertisement, competitive bidding, or such other methods as the Secretary by general regulation may adopt. Land within the known geologic structure of a producing oilfield or gasfield or (after 1976) desired for development of coal may be leased only through competitive bidding,

For each mineral, maximum acreages are specified for each permit or lease and for aggregate State or National holdings by a single individual or company. Rentals and royalties are also specified, with minimum rentals and/or royalties being established for some minerals, fixed rentals and/or royalties being established for others, and open-ended rentals and/or royalties being established for a few minerals. Prospecting permits are generally limited to 2 years' duration, although permits for potash (and coal prior to 1976) and phosphate may be renewed by the Secretary for an additional 2 or 4 years, respectively. Leases are generally limited to 20 years (10 years for noncompetitive oil and gas leases and 5 years for competitive oil and gas leases), but continue after the initial period as long as commercial production continues or as long as the terms of the lease are complied with, depending on the mineral. Oil shale and, apparently, sulfur leases may be issued for indeterminate periods, and coal leases issued prior to 1976 had to be issued for indeterminate periods. Lease terms for minerals other than sulfur or oil and gas can be readjusted after 20 years and periodically thereafter,

The acreage limits, combined with specific antitrust provisions, were intended to ensure competition in the exploration for and development and production of federally owned leasable minerals. The rentals, coupled with other lease terms and conditions, were intended to ensure that land would not be held under the Mineral Leasing Act when it was more valuable for other purposes. The royalties were intended to ensure a fair return to the Government for the use of its mineral resources. The rentals and limits on permit and lease durations, together with minimum production requirements and general and specific diligence requirements, were intended to ensure timely exploration, development, and production.

The Secretary was given broad discretion to establish lease terms and conditions and, for most of the minerals, rentals and royalties to fulfill these purposes. More specifically, the Act requires that:

The Secretary of the Interior shall reserve and may exercise the authority to cancel any prospecting permit upon failure by the permittee to exercise due diligence in the prosecution of the prospecting work in accordance with the terms and conditions stated in the permit, . . .<sup>9</sup>

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<sup>9</sup>30 U.S.C. § 183 (1976)

Each lease shall contain provisions for the purpose of ensuring the exercise of reasonable diligence, skill, and care in the operation of [the] property; a provision that such rules for the safety and welfare of the miners and for the prevention of undue waste as may be prescribed by said Secretary shall be observed . . . ; . . . and such other provisions as he may deem necessary to insure the sale of the production of such leased lands to the United States and to the public at reasonable prices, for the protection of the interests of the United States, for the prevention of monopoly, and for the safeguarding of the public welfare. 10

The Secretary of the Interior is authorized to prescribe necessary and proper rules and regulations and to do any and all things necessary to carry out and accomplish the purposes of this Act. . . .<sup>11</sup>

The scope of discretion afforded the Secretary is extensive, particularly with respect to preference-right leases resulting from discoveries under prospecting permits. The terms and conditions of such leases, including rentals and royalties for most of the minerals, can be established at the time of lease issuance, after exploration has been completed. If justified in the public interest, they apparently can be so severe as to render development and production uneconomic.<sup>12</sup> The “valuable discovery” rule for acquiring entitlement to a preference-right lease is subject to the same uncertainties and difficulties that exist for the same rule under the Mining Law. Even the “right” to a preference-right lease may be only a right of first refusal. The Secretary may, in his complete discretion, refuse to issue any prospecting permit or nonpreference-right lease. He also may issue regulations to protect the public welfare binding on all existing as well as new leases.

The Act explicitly preserves the rights of the States to exercise their police and taxing powers over Federal mineral lessees, so that controls and burdens stricter than the Federal terms and payments may be imposed by the States and, through delegation from the States, local governing bodies.

Almost all the revenue collected by the Federal Government under the Act is returned to the producing States either directly or for irrigation projects.

## **D. Middle Third of the 20th Century: Retention of Land Under Single-Purpose, Commercially Oriented, Ad Hoc Management**

### **1. Termination of Disposal Policy for Nonmineral Land**

By the **1930’s the best agricultural** and grazing land had been disposed of to private entrants under the 1862 Homestead Law, the 1909 Enlarged Homestead Act, and the 1916 Stockraising Homestead Act. The remaining public domain, chiefly suitable for grazing only, was being destroyed by overgrazing and was being broken up by homesteading of the choicer parcels, leaving useful grasslands without water. To halt the destruction of the rangelands and provide for their management and improvement, Congress passed the Taylor Grazing Act of 1934, under which, as amended, practical-

<sup>10</sup>30 U.S.C. § 187 (1976).

<sup>11</sup>30 U.S.C. § 189 (1976).

<sup>12</sup>See ch. 5, subsecs. E(3) and E(4)

ly all the remaining vacant and unreserved public domain in the lower 48 States was withdrawn from further homesteading entries. The Act provided for continuing entry and sale of land found after classification to be suitable and more valuable for raising agricultural crops than native grasses, of isolated or disconnected tracts, and of small tracts in mountainous or rough terrain. Also, entries initiated prior to the withdrawals could continue to be prosecuted to patent. Thus, homestead and other nonmineral land entries and issuance of patents continued, although in a steadily decreasing amount, with entries after 1955 being made almost entirely in Alaska.

The Taylor Grazing Act marked the end of the Federal policy of disposal of its non-mineral land, although it was worded as an interim management measure “[p]ending its [the public domain’s] final disposal. ” The policy of bountiful ad hoc disposal, first eroded by the creation of the National Forest System in **1897** and the National Park Service in **1916**, was dealt its final blow by the closure of the remaining vacant public domain under the Taylor Grazing Act in 1934.

## 2. Ad Hoc Land Management

Although, except for the Mining Law, the disposal policy for the Federal public domain had been phased out, ad hoc single-purpose management took its place under the (by then) bewildering array of mineral and nonmineral land laws. As problems and conflicts arose, case-specific legislative or administrative adjustments were made. Grazing lands were administered for (and practically by) the ranchers. Forest land was administered for its timber, and secondarily for its watershed and grazing values. The uncoordinated initiation of mineral activities under the mining and mineral leasing laws added to the ad hoc nature of land decisions.

When particular areas of the public domain were desired for specific nonmineral resource uses, they were often withdrawn completely from availability under the Mining Law and the Mineral Leasing Act. Since the President’s statutory withdrawal authority under the Pickett Act did not permit withdrawals of land from location of metaliferous minerals under the Mining Law, such withdrawals were usually made under the President’s inherent or implied authority (held by the Attorney General in 1941 to continue to exist independently of the Pickett Act).

Adjustments were made to the provisions of the Mining Law and the Mineral Leasing Act, mostly the latter, without changing their basic purposes or structures. As was indicated earlier, a few minerals were added to the list of Leasing Act minerals, and acreage limits and other provisions were revised, usually at industry initiative. Oil and gas prospecting permits were replaced by noncompetitive leases in 1935, when there was great concern about overproduction. Prospecting permits for phosphate were authorized in 1960.

As for the Mining Law, the courts had adopted the *pedis possessio* doctrine, which protects a prospector who is in actual occupation of a claim and diligently searching for minerals, against fraudulent, forcible, or clandestine entry by other prospectors. Legislative adjustments were minor, consisting primarily of clarifying the periods during which assessment (development) work had to be performed, the allowable types of

assessment work, the suspension of assessment work requirements for certain (usually wartime) periods, the procedures for processing adverse claims, and the description of patented ground. Almost all these adjustments were made at industry initiative.

### **3. Mineral Leasing on Acquired Land: The Mineral Leasing Act for Acquired Lands of 1947 and Reorganization Plan No. 3 of 1946**

The Mining Law and the Mineral Leasing Act of 1920 apply only to the Federal public domain. As was stated above, this is land that has been retained in Federal ownership since its original acquisition by treaty, cession, or purchase as part of the general territory of the United States, including such land that has temporarily passed out of but subsequently reverted to Federal ownership through operation of the public land laws, or any land obtained in exchange for such land or for timber on such land. The two laws do not apply to so-called “acquired land,” which is land obtained from a State or a private owner through purchase, gift, or condemnation for particular Federal purposes rather than as part of the general territory of the United States.

Land was acquired for Federal offices and similar purposes from the beginning of the Republic, particularly in the States carved from the 13 original colonies in which the Federal Government never had any territorial property. The first acquisition of major land areas, however, was undertaken under the Weeks (Appalachian Forest) Act of 1911, which authorized the purchase of forested, cutover, or denuded land within the watershed of navigable streams to be placed in national forests. Subsequent acts provided more general land acquisition authority for the National Forest System and for other Federal land systems.

In 1917, the Secretary of Agriculture was authorized to permit mineral exploration, development, and production on lands acquired under the Weeks Act. Similar authority was granted under certain other national forest and national grassland acquisition statutes. This authority extended to all minerals, and it was exercised through a permit and leasing system, since ownership of the land was to be retained by the Federal Government.

In 1947, Congress passed the Mineral Leasing Act for Acquired Lands. \*3 In substance, the Act made the fossil fuel, fertilizer, and chemical minerals on all acquired land (including acquired land in the National Forest System) subject to permit and lease by the Secretary of the Interior under the provisions of the Mineral Leasing Act of 1920, which was already applicable to such minerals on the public domain. However, permits and leases on acquired land can be issued only with the consent of the surface management agency and subject to such conditions as it may prescribe to ensure the adequate utilization of the land for the primary purposes for which it was acquired or is being administered. Similar consent requirements have recently been legislated for coal and geothermal steam on the public domain. Sulfur can be leased on acquired land in any State, but on the public domain in Louisiana and New Mexico only. Native asphalt, solid and semisolid bitumen, and bituminous rock, which were

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<sup>3</sup>61 Stat. 913 (1947), 30 U.S.C. §§ 351-359 (1976).

added in 1960 to the list of leasable minerals on the public domain under the 1920 Mineral Leasing Act, were not at the same time made leasable on acquired land.

A year prior to enactment of the Mineral Leasing Act for Acquired Lands, the mineral leasing authority of the Secretary of Agriculture for acquired national forest land and grassland was transferred to the Secretary of the Interior by Reorganization Plan No. 3 of 1946. " Mineral development on such lands, however, could be authorized only upon the Secretary of Agriculture's certification that it would not interfere with the primary purposes for which the land was acquired, and only in accordance with conditions specified by the Secretary of Agriculture to protect such purposes.

This transfer of authority was superseded in 1947 for the fossil fuel, fertilizer, and chemical minerals (other than native asphalt, solid and semisolid bitumen, and bituminous rock) by the Mineral Leasing Act for Acquired Lands; but it continues to be the basis for the Secretary of the Interior's authority to lease all other minerals (that is, the minerals disposed of under the Mining Law on the public domain) on much of the acquired national forest land. The Secretary of the Interior has made the leasing of these minerals subject to the regulations that govern the leasing of the fossil fuel, fertilizer, and chemical minerals on acquired land.

#### 4. Special Leasing Acts

As has been mentioned earlier, the Mining Law does not apply to the public domain in certain States. In 1950, Congress authorized the Secretary of the Interior to lease mineral resources in public domain national forest in one of those States, Minnesota, subject to the consent of the Secretary of Agriculture.<sup>15</sup> Although the National Commission on Materials Policy stated in its 1973 report that hardrock minerals are leased on public domain land in Kansas, Missouri, Minnesota, Nebraska, and Wisconsin,<sup>16</sup> there is apparently no other statute authorizing such leasing.

Other acts provide for leasing mineral resources (a) reserved from certain private Spanish land grants or Federal grants to the States of California and Nevada and (b) in certain other areas (for example, some national recreation areas).<sup>17</sup>

Regulations under these special acts have generally followed or been incorporated in the general leasing regulations of the Department of the Interior.

#### 5. Sale of Common-Variety Minerals

To reduce abuse of the Mining Law by those using it to gain ownership of Federal land for nonmineral purposes, common varieties of sand, stone, gravel, pumice, pumicite, or cinders were removed from location under the Mining Law and, together with common varieties of clay and other mineral materials, made subject to disposal (the minerals only, not the surface) through competitive bidding by the Surface Resources Act of 1955. '8 The Secretary of Agriculture disposes of such common-variety minerals

<sup>15</sup>60 Stat. 1097 (1946).

<sup>16</sup>30 USC, § 508b (1976).

<sup>17</sup>National Commission on Materials Policy, Material Needs and the Environment Today and Tomorrow 7-10 (1973).

<sup>18</sup>See 43 CFR §3500.0-3 (1976); app. B, sec. F(2); Twitty, Siev-

wright, and Mills, 1 Nonfuel Mineral Resources of the Public; Lands: Legal Study 56-57(1970).

<sup>19</sup>69 Stat. 367 (1955), as amended, 30 U.S.C. §§601, 611 (1976). An amendment to the Act in 1962 also removed petrified wood from location under the Mining Law.

on land under his jurisdiction. Those on all other Federal land, except national parks and monuments and Indian land, are disposed of by the Secretary of the Interior. If the land involved has been withdrawn for the use of a department or agency other than the Departments of Agriculture or the Interior, or for the use of a State or local government, no disposal may be made without the consent of that department, agency, State, or local government.

## 6. Resolving Intersystem Conflicts: The Multiple Mineral Development Act of 1954

Because claims under the Mining Law can develop into full title to the surface and subsurface, including fossil fuel, fertilizer, and chemical minerals in the subsurface that are normally covered by the mineral leasing acts, the Mining Law and the mineral leasing acts were construed as being mutually exclusive with respect to the same tract of land. Hence a prospecting permit or lease could not include land encompassed by a mining claim. Conversely, a mining claim could not be located on land that was leased, covered by a permit or an application for a permit or lease, or known to be valuable for a mineral covered by the mineral leasing acts (“the conflict-producing conditions”).

This mutual exclusivity did not cause substantial problems until the development of uranium as a (nonfossil) fuel mineral in the 1940’s, because Mining Law and Mineral Leasing Act minerals generally occurred in geographically distinct locations. Uranium, however, which is located under the Mining Law, occurs in sedimentary regions also favorable for the occurrence of oil, gas, and coal, which are leased under the Mineral Leasing Acts.

The conflict was removed in part by the Multiple Mineral Development Act of 1954,<sup>19</sup> which (a) provides procedures for validating mining claims subject to the conflict-producing conditions and located after July 31, 1939, (b) reserves to the United States the Leasing Act minerals (and the right to enter and remove such minerals) in all such claims and in every claim located after August 13, 1954, (c) preserves the reservation into the patent for any claim still subject to the conflict-producing conditions when the patent is issued, and (d) authorizes location of mining claims after August 13, 1954, on land subject to the conflict-producing conditions.

The intermixture of coal and uranium deposits (found in North Dakota, South Dakota, and Montana) was given specific treatment in the Uraniferous Lignite Act of 1955.<sup>20</sup> Mining of the uranium would necessarily cause considerable disturbance to the lignite coal deposits. Uncertainty about the legal status of the deposits caused a slow-down of private research on the processing of uranium from the mixed minerals. The 1955 Act provided that valid locations under the Mining Law could be made on the intermixed minerals as long as they were not covered by a coal prospecting permit or lease. Leasing Act minerals were reserved, except for any lignite which it was necessary to mine in order to develop the uraniumiferous materials. A royalty of \$0.10 per ton was levied on all such lignite mined. The 1955 Act was valid for only 20 years, and it expired on August 11, 1975. Any claims not patented by, or for which no patent application was pending on, the date of expiration automatically terminated.

<sup>19</sup>68 Stat. 708 (1954), 30 U.S.C. §§ 521-531 (1976).

<sup>20</sup>69 Stat. 679 (1955), expired August 1975

These **acts** resolved some of the conflicts created by the existence of two major distinct mineral disposal systems. Problems still remain, however, and are discussed in chapter 4.

## **7. Lax Administration of the Mineral Laws**

Although the legislative history and provisions of the Mineral Leasing Acts clearly indicate that the Secretary of the Interior **was to use** the broad discretion given **to** him in the Acts to ensure diligent and competitive exploration for and development and production of the Leasing Act minerals on Federal land, a fair return to the public for the appropriation of those minerals, and proper conservation of mineral and non-mineral resources, administration of the Acts was exceedingly lax. Permits and leases were issued to any applicant, at the minimum rentals and royalties specified in the Act. Diligence provisions were not enforced. Mere geologic evidence of mineralization was accepted as proof of valuable discoveries. Provisions to safeguard the public welfare (including nonmineral resource values) were practically nonexistent. This situation persisted until very recently, except for moratoriums on the issuance of oil and gas prospecting permits and leases in the late 1920's and early 1930's and coal prospecting permits and leases in the 1970's. Even today, rentals and royalties for most of the Leasing Act minerals are set at or near the statutory minimums prescribed more than 50 years ago.

Similarly, the "valuable discovery" **test was** applied loosely under the Mining Law, and almost no effort **was** made to control or mitigate the adverse impacts that resulted from mineral activity under the law.

## **E. Present Trends: Protection, Preservation, and Coordinated Management of Nonmineral Resources; Uncertain Policy for Mineral Resources**

### **1. Preliminary Steps: The Surface Resources Act of 1955, the Forest Service Multiple Use Act of 1960, and the Classification and Multiple Use Act of 1964**

The ad hoc single-purpose management and use of Federal land resulted in needless damage to and waste of surface resources. Dissatisfaction with these results led to enactment between 1955 and 1965 of three statutes that took preliminary steps toward coordinated and planned multiple-resource management.

The Surface Resources Act of 1955,<sup>21</sup> in addition to providing for sale of common-variety minerals rather than their disposal together with the surface under the Mining Law (see subsection D(5)), restricted surface uses of mining claims, prior to issuance of a patent, to those uses required for mineral exploration, development, or production or reasonably incident thereto, and declared the right of the United States to manage and dispose of the surface resources not so required. Although the Act itself applies only to

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<sup>21</sup>69 Stat. 368 (1955), 30 U.S.C. § 612 (1976).

claims located after July 23, 1955, it has been held that a similar surface use restriction has always been applicable to unpatented claims under the Mining Law.<sup>22</sup>

The Multiple Use-Sustained Yield Act of 1960<sup>23</sup> directed the Secretary of Agriculture to develop and administer the renewable surface resources of the national forests for multiple use and sustained yield, giving due consideration to the relative values of the various resources in particular areas, but not necessarily adopting that combination of uses that would give the greatest dollar return or the greatest unit output. Resources specifically listed in the Act include outdoor recreation, range, timber, watershed, wildlife, and fish; and the establishment and maintenance of areas of wilderness are declared to be consistent with the purposes and provisions of the Act.

The Classification and Multiple Use Act of 1964<sup>24</sup> temporarily provided similar direction to the Bureau of Land Management (BLM) for the bulk of the vacant and unreserved public domain (mainly in grazing districts) under its jurisdiction. The Act, which expired in December 1970 after submission of the report of the Public Land Law Review Commission established by the Act, authorized the Secretary of the Interior to classify and manage BLM land for multiple use, including specification of dominant uses and preclusion of uses inconsistent with the dominant use specified for any particular area.

As a result of these Acts, the Forest Service and BLM initiated or expanded multiple-use land classification and management efforts based on inventory and analysis of the surface resources on Federal land. Mineral resources continued to be treated as an entirely distinct factor outside the inventory and planning process.

## **2. Coordinated and Planned Management of Nonmineral Resources: The Forest and Rangeland Renewable Resources Planning Act of 1974 and the Federal Land Policy and Management Act of 1976**

Building on earlier experience with multiple-use management, Congress has recently enacted comprehensive statutes requiring detailed inventorying, analysis, planning, and management of the nonmineral resources on Federal onshore land. The Forest and Rangeland Renewable Resources Planning Act of 1974, as amended,<sup>25</sup> governs management activities on Forest Service land, while the Federal Land Policy and Management Act of 1976<sup>26</sup> governs management activities on BLM land. Both Acts provide for extensive public participation.

Both Acts continue to treat mineral activities as activities independent of and outside the basic land use planning and management process. The BLM Act requires recordation of mining claims, specifies more carefully controlled withdrawal procedures, and reaffirms the authority of the Secretary of the Interior to “take any action necessary to prevent unnecessary or undue degradation of the lands.” These provisions, as discussed in chapter 5, do not accomplish balanced coordination of mineral and nonmineral uses and activities on Federal land.

<sup>22</sup>*United States v. Etcheverry*, 230 F.2d 193 (10th Cir. 1956).

<sup>23</sup>74 Stat. 215 (1960), 16 U.S.C. §§ 528-531 (1976).

<sup>24</sup>78 Stat. 986 (1964), expired December 1970.

<sup>25</sup>88 Stat. 476, as amended, 16 U.S.C. §§ 1600-1614 (1976)

<sup>26</sup>90 Stat. 2743 (1976), 43 U.S.C. §§ 1701-1782 (1976).

### 3. Environmental Concerns About Mineral Activity

During the last decade, the dramatic rise in public awareness of and concern about environmental quality focused attention on mineral activity. In the space of a few years, the almost automatic distribution of mineral permits and leases to applicants and the slight attention paid to surface impacts have been almost reversed. The discretion formerly exercised routinely in favor of mineral activity under the mineral leasing acts is now often used to block such activity or to delay it pending reassessment of resource values and options. The issuance of permits and leases has practically ceased for several of the leasable minerals.

The previous lax enforcement of the valuable discovery rule under both the Mining Law and the mineral leasing acts has been tightened. Environmental regulations, although fairly rudimentary, have been promulgated under the mineral leasing **acts** and for mineral activities in the national forests and certain other areas under the Mining Law.

However, there is great uncertainty as to the actual extent of authority that can be exercised under the various mineral laws, and no procedures have been devised for the integration of mineral and nonmineral resource management. The prevailing procedures rely on case-by-case negotiation of mitigating measures in reaction to the plans of mineral explorers and producers. The result is substantial uncertainty for the mineral industry and frustration on the part of the surface management agencies,

The National Environmental Policy Act of 1969,<sup>27</sup> which requires environmental impact statements to be prepared for any major Federal action that may have a significant impact on the human environment, has been applied to issuance of permits and leases under the mineral leasing acts but usually not to exploration activities or acquisition of tenure under the Mining Law. Environmental impact statements are prepared for incidental aspects of major mine developments under the Mining Law—for example, land exchanges, rights-of-way, or stream-crossing permits.

### 4. Natural Area Preservation

The public concern over environmental degradation supplements a longer history of concern over the preservation of unique scenic and natural areas, evidenced as early as 1872 (the same year the Mining Law was enacted) with the reservation from entry under the Federal land laws of Yellowstone Park “as a public park or pleasuring ground for the benefit and enjoyment of the people.” Earlier, in 1832, the Hot Springs in Arkansas had been set aside for “future disposal,” and by 1900 additional acreage considered to have superlative natural beauty or uniqueness had been reserved and set aside in what are now Yosemite, Kings Canyon, Sequoia, and Mount Rainier National Parks.

The parks, however, were valued mainly for their scenic characteristics rather than their basic ecology, natural diversity, or primitive character. Not until well into the 20th century did the Forest Service begin to designate and manage certain national

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<sup>27</sup>83 Stat. 852 (1970), as amended, 42 U.S.C. §§ 4321 et seq. (1976).

forest areas as wilderness or primitive areas. But mineral activity under the Mining Law remained a preemptive use in such areas. In 1964, the preservationists obtained congressional acceptance of the wilderness concept through passage of the Wilderness Act of 1964. The national forest wilderness areas were designated as the first units of a National Wilderness System. Wilderness areas are to be closed to new entries under the Mining Law and new permits or leases under the mineral leasing acts in 1984.

Similarly, the earlier interest in fish and wildlife as game, evidenced by establishment of national wildlife refuges across the country, has developed into concern over entire biological and ecological communities and in the preservation of endangered species. The result has been the closing of almost all existing refuges to mineral activity, the creation of new refuges, and the passage of the Endangered Species Act of 1973, which prohibits the taking of any endangered plant or animal species and forbids any Federal action modifying a critical habitat of any such species (unless approved by a special Cabinet-level committee).

Withdrawals and reservations under these and other acts, and potential future withdrawals and reservations under the Alaska Native Claims Settlement Act and the wilderness study provisions for BLM land under the Federal Land Policy and Management Act of 1976, are often in geologic areas favorable for the occurrence of mineral resources. In general, these areas were not developed in the past because of their complex geology and the hidden nature of their deposits, but they are now being looked to as areas with major potential for future mineral supply.

## 5. Mineral and Nonmineral Coordination: Recent History

Some recent efforts have been made to coordinate mineral and nonmineral resource management. Principal examples are the prototype oil shale leasing program, the Federal Coal Leasing Amendments Act of 1976,<sup>28</sup> and the Surface [Coal] Mining Control and Reclamation Act of 1977. Coal and oil shale resources, however, are fairly unique in that their location and characteristics are generally known, so that trade-offs between mineral and nonmineral values can be made more reliably than is the case with other mineral resources, and can be based on existing land use plans. Even for coal and oil shale, there are few explicit ties between specific nonmineral resource characteristics and conditions on mineral activity.

Moreover, the Department of Energy Organization Act<sup>30</sup> increases the difficulty of coordinating mineral and nonmineral resource management. It artificially separates the economic and land management aspects of fuel mineral leasing and places them in two different departments.

<sup>28</sup>90 Stat. 1083 (1976), amending 30 U.S.C. §§ 201 et seq. (1976).

<sup>29</sup>91 Stat. 445 (1977), 30 U.S.C. §§ 1201-1328 (Supp. I 1977).

<sup>30</sup>91 Stat. 565 (1977), 42 U.S.C. §§ 7101-7352 (Supp. I 1977).

## 6. Mineral Conservation and Multimineral Development: The Geothermal Steam Act of 1970

The Geothermal Steam Act of 1970<sup>3</sup> provides for the leasing of geothermal steam and associated resources in public domain and acquired land administered by the Secretary of the Interior or the Forest Service and in areas where such resources have been reserved by the United States. The provisions of the Act are similar to those for oil and gas under the Mineral Leasing Act of 1920, but include more detailed provisions relating to required and allowed multimineral development, prevention of waste, and protection of surface resources. Leases can be issued for land withdrawn or acquired in aid of the functions of the Department of Agriculture, or subject to powersite applications before the Federal Power Commission, only with the consent of the head of the respective department or agency, and subject to such conditions as he or she may prescribe to ensure adequate utilization of the land for the purposes for which it was withdrawn, acquired, or applied for.

## F. Conclusion

Legislation concerning the disposal of minerals and mineral land owned by the Federal Government has been shaped by the predominant national concerns at various periods of the Nation's development. Until the beginning of the 20th century, the predominant concerns affecting Federal mineral and nonmineral land law were generation of revenue and settlement of the western frontier. During the 20th century, concern developed initially over the conservation of commercially valuable mineral and nonmineral resources on Federal land, and subsequently over preservation of noncommercial nonmineral resources.

Laws affecting the disposition of Federal mineral and nonmineral land were enacted from time to time in response to these and other more specific concerns. Separate laws were enacted for various types of resources and lands, usually with little consideration of the net effect on Federal land management. The resultant collection of laws contained duplicative and often conflicting provisions, significant gaps in coverage, and nonuniform treatment of physically identical tracts of land.

Nonmineral resource management on Federal land has been improved significantly by enactment of recent laws such as the Forest and Rangeland Renewable Resources Planning Act of 1974, which applies primarily to National Forest System lands, and the Federal Land Policy and Management Act of 1976, which applies primarily to the great bulk of Federal onshore land managed by BLM and not specifically reserved for national systems such as the parks and forests. Both laws establish procedures for implementing an overall national program to coordinate nonmineral resource management on Federal land. The 1976 Act repealed and replaced almost all of the preexisting laws governing acquisition and disposal of nonmineral rights on Federal land. Neither law, however, provides explicit criteria for the resolution of competing resource uses.

<sup>3</sup>84 Stat. 1566 (1970), 30 U.S.C. §§1001-1025 (1976).

Procedures have not been legislated for implementing an overall national program of coordinated mineral resource management, or coordinated mineral and nonmineral resource management, on onshore Federal land. Mineral activities continue to be governed by a patchwork system developed over more than a century in response to various goals, problems, and pressures,

For example, sulfur in acquired land in any State is leased. But sulfur in the public domain is leased in Louisiana and New Mexico only; it is disposed of by entry under the Mining Law in almost all other States; and it is not available under any law in a few States (see table 4.1 in chapter 4). Similarly, copper is disposed of by lease on most acquired land, and by entry under the Mining Law on most of the public domain. Yet copper on public domain national forest in Minnesota is leased. Copper on acquired land outside the national forests, on the public domain in Wisconsin, Missouri, Michigan, Kansas, Alabama, or Oklahoma, or on the public domain outside the national forests in Minnesota is not available under any law (again see table 4.1).

Consider also the results of the recent transfer of control over the economic (mineral) aspects of fuel mineral leasing from the Secretary of the Interior to the Secretary of Energy. When any agency other than the BLM has jurisdiction over the surface of the land to be leased, the BLM ordinarily will issue the lease only with the consent of, and subject to surface protection conditions specified by, that agency. Consent must be obtained and the conditions must be included if the mineral lease is on acquired rather than public domain land, if it is on land withdrawn or reserved for military purposes, or if it is for geothermal steam or coal. In such situations, the surface management agency would control the surface aspects of the lease and the Secretary of Energy would control the mineral aspects, leaving the BLM with only the paperwork. On the other hand, the BLM could override the surface management agencies with respect to surface stipulations for noncoal, nongeothermal, energy mineral leases on nonmilitary public domain lands, even though it had no interest in either the surface or the energy minerals.

The foregoing examples illustrate the complexity and contradictions of present laws governing the management, use, and disposal of minerals on Federal onshore land.