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OWNERSHIP AND TAXATION OF NATURAL RESOURCES

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The natural wealth and resources of any state are its means of subsistence and these resources provide the foundation for whatever standard of living and technology it may be possible for the citizens of that state to achieve. Inherent in the sovereignty of the people is the right freely to use and exploit their natural wealth and resources.

The law of resource ownership, with particular reference to the ownership of minerals, is quite different under a common law system from what it is in most civil law jurisdictions. Some knowledge of the different legal theories is helpful in a consideration of policy questions involving the distribution of the wealth which natural resources provide.

There are actually three theories of mineral ownership in the Civil Law, (1) res nullius, (2) regalia or royalty, and (3) accession.[1] The res nullius system postulates that ownership of the surface of the earth does not carry with it proprietary interest in minerals which may be contained in the subsoil. Instead, minerals are said to belong to no one until they have been either developed or reduced to possession. Under various theories, ownership may be acquired by the first occupant who exploits the mineral and perfects his right or by the discoverer. Normally under the res nullius system the role of the state is very limited, usually amounting to little more than maintaining a system of registry, but there are some instances in which the state obtains a certain percentage of the mineral property from the time of its discovery or reduction to possession.

The regalia or royalty system has as its basis a fundamental distinction between ownership of surface and subsoil. Individual ownership of the surface is possible, but ownership of minerals which are contained in the subsoil is attached to the state. The nature of the state's ownership of these minerals differs among jurisdictions. In some civil law systems the state has absolute ownership of minerals, and holds its interest either as a juridical person or as a representative of the collective body. This is called the dominial theory. Under a different theory, ownership is attributed to the collective body, and the state has power to regulate the use of minerals through concessions or grants and, as sovereign, receives a share of the product which is obtained from the exploitation. However the regalia system is defined, it represents a system where the state's control over subsoil resources is so complete as to approximate a relation normally associated with ownership.

Today most Latin American countries have incorporated some form of the dominial system into their laws. The constitutions of the countries usually contain a provision that all minerals or certain types of minerals belong to the state, and that everything related thereto is con-

[1] Campbell, Principles of Mineral Ownership in the Civil Law and Common Law Systems, 31 Tul. L. Rev. 303 (1957).

sidered a public utility. Mineral exploitation is under concessions granted by the state for a limited time, and intervention by the state to prevent waste is justified on the basis of the protection of state property.

The accession theory prevailed in the early Roman Law.[2] According to this theory, ownership of surface property embodied ownership of all resources contained in the subsoil as well as the freedom to exploit them. The functions of the state were limited to administrative matters or the exploitation of any lands which the state owned in a proprietary sense. Later the rights of the state were conceived of as including such things as the right to police or control the exploitation of resources.

The maximum rights of the state in Roman Law were expressed in the code of Theodosius, 438 A.D. Under the Theodosian Code, the state received as a tribute one tenth of all the minerals which were exploited, and had the right to insist that the production of the exploitation be sold, with preference given to the state in the sale. The landowner's rights were recognized, but the state had a right to intervene in the public interest.[3]

The Roman conception of property began with occupation and possession, which gave one title and the right of conveyance.[4] The legal rationale behind this conception seems to have been the feeling that everything should have an owner and the occupant could therefore be presumed to have a better right to proprietorship than anyone else.

In many early societies land was considered as folk-land (a Teutonic concept, not Roman), belonging to the family, community, or state.[5] Such land was not subject to inheritance or partition, but could be used only for the general good. The Roman Military Commanders along the Rhine and Danube frontiers adopted this system. Later the Frankish and Teutonic invaders modified the system into feudal tenure. Prior to the conquest of England by William of Normandy in 1066, the Saxons had used the old German folk-land theory, but William succeeded in imposing the feudal system on England during his reign.

Although the ancient Germanic law had been well established in England prior to the conquest, it was almost completely replaced in English law by the Roman concepts of property ownership based on the theory of accession. In the early seventeenth century Sir Edward Coke oversimplified the concept with his use of the Latin maxim, *cujus est solum ejus est usque coelum et ad inferros,* which means he who owns the surface soil owns up to the sky above it and to the center of the earth beneath it.[6] The individualistic philosophers and legal scholars of the 17th and 18th centuries such as Hobbes, Locke, and Blackstone adopted the highly individualized Roman law because it suited their theories, not because it was historically well founded.[7]

The law in the United States is basically the same as the English common law so that the surface owner also owns all subsoil mineral deposits, whether solid, oil, or gas. Minerals can be owned and conveyed separately from the general title, however.[8]

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[2] Mackenzie, Roman Law 170 (6th ed. 1886).
[3] Campbell, **supra** note 1, at 308.
[4] Maine, Ancient Law 269 (10th ed., notes by Sir Frederick Pollock, 1906).
[5] **Id.** at 318.
[6] Summers, Oil and Gas 26 (1954).
[7] Maine, **op. cit. supra** at 314.
[8] 2 American Law of Property 508-509 (Casner ed. 1952).

The regalia theory prevailed in early Spanish law, and according to legislation, the King received one tenth of the product of all mines found on private lands and two tenths from mines found on the King's land. By the sixteenth century, under the stimulation of mineral discoveries in Spain's colonies in the New World, the Spanish crown had succeeded in appropriating ownership of all the metallic mineral deposits in the realm.[9] The colonies did not produce all that had been expected of them, though, and in order to encourage discovery, the right of exploration and exploitation was given to private individuals. The crown did retain the right of supervision, however, and received one-tenth of the production.

The English, in their exploitation of colonized territories, also had some experience with the reservation of a portion of mineral resources to the sovereign.[10] Both Queen Elizabeth and Charles I granted patents to territory in the new world on the condition that a certain percentage of all the precious metals that might be mined in the territory colonized be returned to the sovereign.[11]

The adoption by America's founding fathers of the Roman absolutism was not complete, and some of the exceptions indicate a realistic understanding of the public interest in natural resources. It is likely that knowledge of the mineral reservations to the Spanish and English sovereigns had some influence in the early American policies. The Ordi-

[9] Campbell, supra note 1, at 309.
[10] 36 Am. Jur. 6, Mines and Minerals § (1952).
[11] Shoemaker v. United States, 147 U.S. 282, 307 (1893).

nance of 1785 helped provide a framework for federal ownership of mineral wealth in the Northwest Territory. One provision of the ordinance was that the federal surveyors should note on their plat books all mines, salt-springs, salt-licks, and mill-seats which came to their attention while they were running township and section lines. A second provision was that one-third of all gold, silver, lead and copper mines was to be reserved for sale or other disposal as Congress might thereafter direct.[12] This provided a system of ownership of mineral wealth in the Northwest Territory which was quite different from the system established for ordinary farm land. Land which was suited for agriculture was to be sold for settlement as quickly as possible, but land containing mineral ores was reserved for sale. There were two objectives behind enactment of the 1785 ordinance; one was to insure an ample supply of lead, a vital war material, and the other was to prevent the rise of monopoly as a result of private ownership of the mineral resources.

Following the Louisiana purchase in 1803, it became necessary for Congress to enact further legislation regarding the public ownership established in 1785. There were mines which were being worked before the United States acquired the territory, and the miners were mining lead and treating it as private property in violation of federal law. In 1807 Congress passed a leasing law[13] that omitted all reference to minerals other than lead, but which reserved all lead mines for the future disposal of the federal government. Congress apparently felt that the system which it chose for controlling the exploitation of lead resources—that of granting short term leases not to exceed five years—would provide the best method of review for insuring that resource utilization was consistent with public interest. Such a system made it possible to encourage private development, and at the same time control the growth of private monopoly.

For a variety of reasons, but primarily because of the nature of the frontier, there was never adequate administration of the federal law. Evasion was rampant, and pressure for repeal was continually exerted on Congress by mining interests, their major contention being that mineral lands should be treated the same as agricultural lands. Congress yielded to the pressures, and by the middle of the nineteenth century had sold the federal lead lands, much of the land going to the states, the states thereby being in a position to convey the land in fee to private interests.[14]

It is interesting to note the results of a movement that began in one state, Wisconsin, during the early part of the 20th century. Efforts to bring certain parts of the mineral wealth of the state back under state control led to the enactment in 1911 of a provision that:

> Every contract, certificate of sale, or grant . . . of public lands shall be subject to the continued ownership by the state . . . of all minerals in said lands, and all mining rights therein.[15]

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[12] 38 Journals of the Continental Congress 376, 378 (Fitzpatrick ed. 1785).
[13] 2 Stat. 445 (1845).
[14] Lake, **Legal Profile of the Mining Industry**, 1955 Wis. L. Rev. 399-415.
[15] Wis. Laws 1911, c. 452.

It is possible for private individuals to receive grants to prospect and mine ore on public lands, but the provision reserving mineral ownership to the state remains a part of the state's law.

Policy such as that represented by the Wisconsin statute has been the exception rather than the rule, and the alienation of the public domain has, as a rule, been without the reservation of any public right. Subsequent attempts to recover some semblance of public right in the interest of conservation and scientific utilization of resources have been met with a legally recognized and often very powerful private interest.

Because of the inherent limitation on the supply of any given resource, and because of the dependence of society on the resource base, there exists an undeniable public interest not only in the extent of resources but in the methods of exploitation and utilization. Conservation is often equated with the prevention of waste, and though this in itself is too narrow a definition of conservation, the prevention of waste is certainly an important aspect of conservation. Difficulties arise, however, when groups or individuals representing different interests and points of view attach different meanings to the concept of waste. To one group, waste may be considered from the economics of production or exploitation of the natural resource itself. From this approach it might be concluded that the method of resource utilization which involves the least waste is that method which accomplishes the most rapid and most complete exploitation of the resource. Frequently such a view has been the result of reliance, for determination of resource policy, on the economic self interest of those who had either ownership or control of our natural resources.

Obviously, waste, when considered in terms of public or social values, is a very different thing. Although historically the attitude of the general American public has been one of complacency toward natural resources, there is a public concern in preservation for the future of a share of our exhaustible resources, and the concern over any single resource increases the nearer that resource is to exhaustion. It is very likely that there will be conflict between the different concepts of waste over what the future should have in the way of a balanced supply of natural resources. It is not necessarily true that just because a given resource is cheaper in terms of its current availability it should be used to the exclusion of its alternatives up to the point at which costs are equal to those of its closest substitute.

To a large extent, problems of this type arise because of the character of property ownership. It may be impossible to eliminate the problems, but through the proper use of taxation it is possible for the state to mitigate objectionable aspects of private property such as the use of property for private profit without regard to community purposes.

Our mineral resources, once consumed, are gone. They cannot be renewed. A continuous supply of resources is necessary if the United States is to maintain its position as a nation capable of leadership in the modern world. Long-term planning in resource conservation will be necessary to insure that resources will be available in sufficient quantities when they are needed, but the question is, whose responsibility is it to conserve our natural resources? Extensive national security pro-

grams have brought many new forces to bear on the economy generally and on the resource base, and have expanded the role of the federal government in our economic life. Even though the major portion of our irreplaceable resource is in private hands, there has been little objection from the owners to the increasing role which the federal government has played in discovering new sources, developing new processes, stockpiling, and even allocating available supplies. But the demands of national security are not the only ones which have been increasing. There has been a general demand by the people for an increase in the services afforded by government at all levels, and all the agencies of government have had to increase their functions accordingly.

All these factors mean an additional load on the resource base, with the result that we are constantly increasing the rate at which our irreplaceable supply of natural resources is being used up. This increased rate of resource exploitation represents quite a different problem for a state than it does for the nation as a whole. Considered at the national level, the exhaustion of a given resource may be of little significance if an adequate substitute is available at an equivalent cost. For example, exhaustion of our petroleum resources might not be important in terms of overall resource availability if products from either shale or coal could be produced in large enough quantities to meet the nation's needs without an appreciable difference in costs. Similarly, the technological obsolescence of a given resource may be an outgrowth of developments which will bring about a higher quality product or a more efficient operation and consequently an increase in total national output. A possible example of this is at issue in the question currently being raised as to whether thorium or hydrogen may replace uranium as a nuclear fuel.

Although either of these situatons, in terms of national aggregates, might represent no worsening of our resource position, it could hardly be said that a state which has large petroleum reserves now, and no significant deposits of coal or shale, or a state with a major industry currently engaged in the production of uranium would be unaffected. The state as such has more than a casual interest in the value of mineral deposits within its borders and in the activities which affect the ability of the resource base to contribute to the well-being of the citizens of that state. It is the responsibility of the appropriate policy making agencies within any state to make sure that the wealth represented by its natural resources contributes sufficiently to the support of state functions. It is a

further responsibility incumbent on state officials to insure sufficient continuity in resource development so that the legitimate claims of future generations to their share of the state's natural wealth can be met.

The resources of a state are an important part of the tax base of the state and must be considered as such. An equitable apportioning of the tax burden which is necessary to support state functions may require a different form of taxation for resources which are non-renewable from that which applies to renewable resources. The state and its citizens incur a loss to the extent that non-renewable resources within the state are consumed. This loss can only be compensated for by requiring a contribution to the state from the benefits yielded by private resource exploitation which is in reasonable proportion to the depletion of the state's source of wealth.

In the taxation of mineral resources, the various states have generally followed one or the other of two principal methods, (1) the property (al valorem) tax, (2) the severance (output) tax. The property tax has been in more widespread use over a long period of time, but there has been a definite trend toward increased use of the severance tax in recent years.

Most states have applied the general property or ad valorem tax to all property on the same basis, with no special distinction made concerning mineral deposits. A few states, Colorado[16] among them, have not applied the property tax to metal mines on a true ad valorem basis, but instead have used net revenue, gross revenue or some multiple thereof as the assessment base. The reason most frequently advanced in support of the property tax is that it provides equity and uniformity in taxation. This assumes that market value can be used as a common denominator for all wealth, be it agricultural, industrial, commercial, or mineral, regardless of whether it is in the form of land, buildings, personal property, or underground deposits. A further assumption implicit in the argument favoring uniform application of the property tax is that society has no greater interest in the use to which any certain type of property is put or the way in which it is used than it has in any other. Such an assumption is quite unrealistic when a distinction is made between renewable and non-renewable resources or property. State authorities are gradually recognizing that various kinds of property may represent different tax paying abilities, and consequently that all property need not be assessed uniformly or even taxed in the same manner.

There is an additional problem related to the application of a property tax to mineral deposits. The very nature of mineral deposits makes satisfactory appraisal or valuation extremely difficult if not impossible. The fact that mineral deposits and mines do not have a readily acsertainable market value, since sales of such properties are infrequent, means that assessors must use some other criteria for making appraisals. This usually requires far more technical training, if it is to be done accurately, than the average assessor can be depended on to have. The value of non-renewable resources will depend on a variety of factors including the future cost of extraction, and the selling price of the product. These in turn will depend on such things as technological development in extraction and production methods, possible product

[16] Colo. Rev. Stat. Ann. § 137-5-4 (1953).

usages, the extent of the market, and the rate of exhaustion. The almost invariable result in this situation has been an under evaluation of the property involved, with changes in assessed value lagging considerably behind changes in current market value. To the extent that the assessed value is below actual value, the property in question does not bear its share of the tax burden, and increased tax loads elsewhere will be necessary to support governmental functions. Furthermore, when the taxable property is a non-renewable resource, there is a permanent loss of a part of the tax base.

The severance tax is a levy placed on the production resulting from exploitation of natural resources. The tax may be applied according to units of output or as a percentage tax based on the value of gross output. Both methods are similar relative to administration, revenue, and effects on industry, and can be considered together in terms of their advantages and disadvantages.

First of all, the severance tax has the advantage of simplicity: it is easily collectable. It can be made to yield large amounts of revenue, the yield of course depending on the rate applied. Furthermore the severance tax can be used to implement conservation policy. An increase in the tax rates will tend to discourage production, while more rapid exploitation to meet urgent needs can be encouraged by lower rates. This use of the severance tax in protecting the public interest in natural resources is in contrast to the operation of an ad valorem tax on property, which often operates in the opposite direction from the one desired.

There is a real disadvantage to the severance tax as a revenue measure since it does not affect mines and mineral resources which are

not producing. As a solution, some states have applied both a severance tax and a property tax in a complementary way, thus eliminating the possibility that owners of resources might hold them idle in anticipation of speculative profits, paying no taxes in the meantime.

Objections have sometimes been raised to the severance tax because the public revenue derived from it fluctuates from year to year as production varies. This it is said works a hardship on local governments that must depend on the revenue to support their operations. There is validity to this objection, but there is also a definite need for balancing the interests of local governments with the proper conservation of the state's natural resources. A severance tax administered by the state tax commission could provide revenue to be used as an equalization fund for the support of local governments. The funds from such a tax could also be held as a reserve to alleviate problems that might arise if and when certain of the state's resources are exhausted.

Another important aspect of the tax treatment of natural resources is the taxation of income derived from resource exploitation in the form of a federal or state income tax. In this area the depletion allowance is by far the most significant concept that has been developed in the tax structure. Soon after the enactment of the federal income tax law in 1913, efforts were begun to obtain special tax treatment for the oil industry. It was represented to Congress that prospecting for oil is done mostly by individuals or small concerns. When the prospectors or wildcatters struck oil, they sold out and moved on to new and undeveloped territory. Indications were that sometimes for years a wildcatter had no income from which to deduct losses, and that when he did find oil, the tax rate was so high that it prevented him from even recouping losses from former years.[17]

Representatives of the oil industry further represented that under the pressures of the (first) World War, the United States was consuming 60,000 barrels of oil a day more than it was producing. On the basis of these conditions, Congress included in the 1918 revenue act[18] an emergency measure providing for a depletion allowance for certain minerals. As the law was passed, however, discovery value was not an allowable deduction from the profits arising out of the sale of an oil well or mine, but it was deductible only from the income arising out of the operation of the well or mine. It appears from this that the very ones for whose

[17] S. Rep. No. 27, 69th Cong., 1st Sess. 21 (1926).
[18] 40 Stat. 1078 (1918).

relief the exemption was supposedly provided—the wildcatters—were allowed no benefit from it.

As early as 1925 a congressional investigative committee found that the situation intended to be met by the depletion allowance provision had changed to such an extent that every reason advanced for its enactment had disappeared. It was pointed out that except in the case of mines and oil and gas wells, no investor was permitted to set up the value of his business, after its success had been demonstrated, as a deduction from the profit derived from that business for the purpose of determining net income.[19]

In apparent oblivion to the findings and recommendations of its own committee, Congress, in the 1926 revenue act,[20] not only continued, but expanded the provisions for depletion allowances. For mines the allowance remained virtually the same—a deduction not to exceed 50 per cent of net income, and applicable only to mines discovered after 1913. The provision for depletion of oil and gas wells represented a significant departure from the earlier law. In the case of oil and gas wells, the allowance for depletion was set at 27½ per cent of gross income from the property, but not to exceed 50 per cent of net income. This allowance was not related in any way whatsoever to exploration or discovery, nor was it made contingent upon any other condition. It was purely and simply a tax deduction equal to 27½ per cent of gross income which Congress saw fit to grant to the oil and gas industry. Neither justification nor explanation was offered.

Since 1926, the depletion allowance has remained a part of the federal tax structure; naturally so lucrative a privilege could not go unnoticed by other industries. Pressures have been brought to bear, and gradually Congress has extended the privilege of tax exemption to other mineral industries. In 1950[21] gross income from mineral property was redefined so as to include value added as a result of transportation costs between points of extraction and plants or mills. In 1951[22] the list of minerals covered was expanded and percentages were generally revised upward. The 1954 internal revenue code[23] brought another general expansion of the number of minerals covered, and again raised the percentages. While oil and gas have remained at 27½ percent, most metals and ores are now given a 23 per cent deduction, and with a few exceptions all other minerals are allowed 15 per cent. The only minerals not included are those from sea water or air or other sources generally regarded as inexhaustible.

It has not been uncommon for the states to incorporate schedules for percentage depletion allowance into their tax structures. In most instances, justification at the state level has been by reference to the existence of the federal system, with little or no question raised as to the necessity of such allowances or the purposes they might serve. The percentage granted to each mineral often varies from state to state, reflecting to some extent the importance of different industries in each state's economy. Colorado, as an example, allows 10 per cent for coal

[19] S. Rep. No. 27, 69th Cong. 1st Sess. 18 (1926).
[20] 44 Stat. 16 (1926).
[21] 64 Stat. 931 (1950).
[22] 65 Stat. 497 (1951).
[23] Int. Rev. Code of 1954, § 611.

mines, 27½ per cent for oil and gas wells, and 40 per cent for metal and other mines.[24]

It is unfortunate that the states have been so willing to adopt the use of the depletion allowance, for there is reason to believe that the tax immunity it affords depletes the public revenue, creates social injustice, and produces distortions in the economy to an extent that far outweighs any benefits it might offer. The loss of potential revenue which the depletion allowance imposes on the federal treasury alone have been estimated to be as high as $1 billion per year.[25] Less information is available in terms of state revenue, but there can be no doubt that the losses are considerable.

The original purpose of the depletion allowance was to stimulate exploration, but why, it can be asked, are not private profit incentives and a free price system sufficient to insure adequate supplies. If assistance to the mineral industries is necessary to meet emergency needs, a more selective method with performance requirements would serve the public interest better than such a generalized privilege of tax immunity. If the risks are greater in the mineral industries than in business enterprise generally even after all the modern scientific methods and the institutional devices for spreading risks are considered, a higher return to capital, as determined in a free market should be sufficient to compensate for them. It is unwise to use special privilege to divert economic resources into extractive industries, while failing to maintain controls which would make it possible to protect and expand the natural resource base on which the whole economy depends.

[24] Colo. Rev. Stat. Ann. § 138-1-23 (1953).
[25] Joint Committee on the Economic Report, **Federal Tax Policy for Economic Growth and Stability**, Joint Committee Print, 84th Cong., 1st Sess., 413 (1955).