United States General Accounting Office

GAO

Report to the Honorable Dale Bumpers, U.S. Senate

March 1993

MINERAL ROYALTIES

Royalties in the Western States and in Major Mineral-Producing Countries

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GAO

United States
General Accounting Office
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Resources, Community, and
Economic Development Division

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March 29, 1993

The Honorable Dale Bumpers
United States Senate

Dear Senator Bumpers:

The Mining Law of 1872 (30 U.S.C. 22 et seq.) governs mining for most nonfuel minerals—such as copper, gold, iron, lead, and silver—on federal lands open to mining. The vast majority of these lands are located in the western states and Alaska. The law provides that, if valuable mineral deposits are discovered, persons may stake claims on federal lands open to mining and extract and sell minerals from those claims without paying the government a royalty or similar fee. Over the last several years, the Congress has been considering amending this law to, among other things, assess a royalty that would ensure that the public receives a fair return for minerals extracted from federal lands. The federal government provides for the charging of royalties for coal and natural gas pursuant to the Mineral Leasing Act of 1920, as amended.

This report responds to your request that we identify how western mineral-producing states in the United States share in the proceeds from nonfuel minerals extracted from their public lands. Specifically, this report provides information on how 12 western states—Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming—share in the proceeds from minerals mined on state lands and on nonstate (federal and private) lands within each state. These states are the principal mining states and contain nearly all the land subject to the mining law. Because of your additional interest in how other mineral-producing countries share in the proceeds from minerals produced on their lands, this report also provides information on how Australia, Canada, and South Africa—three of the largest mineral-producing countries—share in the proceeds from minerals mined in those countries.

Results in Brief

Nine of the 12 western states share in the proceeds from minerals mined on both state and nonstate lands within each state. The 11 states that lease state-owned lands for mining purposes impose a royalty on minerals extracted from those lands. Only Nevada does not lease state-owned land for mining purposes. Also, 10 of the 12 western states assess a mining-specific tax on certain minerals extracted from any land in the state, whether federally, state, or privately owned. California and Oregon do not assess such a tax.

In Australia and Canada the minerals on Crown (national, state, provincial, or territorial government) lands and on private lands are generally owned by the Crown, and the rights to those minerals are exercised by the national, state, provincial, and territorial governments. The national governments generally do not assess royalties or other royalty-like taxes on minerals mined within the states, provinces, and territories, but the individual states, provinces, and territories do. Although royalty rates and assessment methods in the states and territories in Australia show little uniformity, the most common method for assessing royalties is on the basis of the quantity produced. The provinces in Canada more commonly assess profit-based mining taxes and royalties, while the territories assess production-based royalties. In South Africa, where minerals are generally privately owned, the state governments do not assess royalties or mining-specific taxes, although the national government did assess royalties under limited circumstances. However, recently enacted legislation will end the assessment of royalties in these limited circumstances by December 31, 1993.

Background

The United States, Australia, Canada, and South Africa have various landownership patterns and laws governing mining in the countries and in their states, provinces, and territories.

Mining on Federal Lands in the United States

The U.S. federal government owns 662 million acres of land comprising about 30 percent of the nation's land area. Over 92 percent of federal lands are located in the 12 western states. The Mining Law of 1872 allows U.S. citizens and businesses to prospect for hardrock minerals—such as gold, silver, lead, iron, and copper—on federal lands not withdrawn from mining. The law allows them to file claims of about 20 acres each giving them the right to mine and sell the minerals extracted without paying the federal government a royalty or similar fee. Mining companies, like any other business, are subject to federal income taxes.

Mining on State Lands in the United States

Of the 12 western mining states, all except Nevada, which owns only a fraction of a percentage of the land in the state, allow mining on state-owned lands. Eight of the 11 states require a lease, permit, or license to begin prospecting on state lands, and 2 others require approval to initiate mechanized prospecting. All 12 states require miners to obtain a lease or mining contract before mining their lands. Table 1 shows the authority for prospecting and mining in the western states. (Details on how each state authorizes prospecting and mining on its lands are presented in apps. I through XII.)

Table 1: Authority for Prospecting and Mining on State Lands

State	Mining allowed on state lands	Authority to prospect	Authority to mine
Alaska	Yes	None	Claim[a] and lease[a]
Arizona	Yes	Permit	Lease
California	Yes	Permit	Lease
Colorado	Yes	Lease	Lease
Idaho	Yes	Written approval[b]	Lease
Montana	Yes	Land use license[a]	Lease
Nevada	No		
New Mexico	Yes	Lease	Lease
Oregon	Yes	Permit[b]	Lease
Utah	Yes	Lease	Lease
Washington	Yes	Lease	Mining contract[a]
Wyoming	Yes	Lease	Lease

[a]The meanings and rights conferred by claims, leases, licenses, and contracts are defined in appendixes I through XII, which cover each state.

[b]Casual exploration does not require prior approval.

Mining in Other Major Mining Countries

South Africa, Canada, and Australia, respectively, are the third, fourth, and fifth largest nonfuel mineral-producing countries in the world, following the former Soviet Union and the United States, according to a Bureau of Mines estimate. They are also leading exporters of various nonfuel minerals. The countries and the states, territories, and provinces within Australia and Canada have their own laws governing how mining can be initiated and how minerals can be extracted and sold. (Details on how mining is authorized in each country are presented in apps. XIII through XV.)

Western States Generally Share in the Proceeds From Minerals Extracted From All Lands in Their States

The 11 western states that lease lands for mining purposes share in the proceeds from minerals mined on state lands. These states assess a royalty that is a percentage of a specified value that varies according to the state. For example, Washington assesses a production royalty of 5 percent on every mine's gross receipts, while Alaska imposes a production royalty of 3 percent on every mine's net income. Several states assess different royalty percentages on different minerals, or they vary the base on which the royalty for various minerals is assessed. Also, Washington assesses an advance minimum royalty that increases from $5 per acre per year with a $250 minimum to $20 per acre with a $1,000 minimum as the lease ages.

In addition, 10 of the 12 western states share in the proceeds from certain minerals extracted from any lands mined in the state, whether federally, state, or privately owned, through mining-specific taxes; California and Oregon do not. Five of the states assess a severance or excise tax on certain minerals extracted.[1] For example, in Wyoming miners must pay a severance tax of 2 percent of the value of the gross products extracted from the land,[2] while in Arizona miners of metallic minerals must pay a severance tax of 2.5 percent of a designated base amount. Three states assess a mine license tax on all persons engaged in mining in the state. For example, Idaho levies a tax of 2 percent of the net value of the ore mined. In addition, two states assess more than one tax on mining operations in the state. For example, New Mexico levies both a severance tax, generally equal to one-eighth of 1 percent of the taxable value of resources severed and saved for sale, and a resource excise tax that ranges from one-eighth of 1 percent to three-fourths of 1 percent. Table 2 shows whether each of the western states shares in proceeds from mineral production.

[1]A severance tax is levied on either the quantity of natural resources mined or extracted, the value of the resources, or the income generated by the resources.

[2]The value of the gross product extracted is the fair cash market value of the minerals, except for uranium and bentonite, at the mine before processing, less any allowable deductions.

Table 2: Western States' Share In the Proceeds From Mineral Production on State, Private, and Federal Lands

State	Royalties imposed on certain minerals extracted from state lands	Mining-specific taxes imposed on state, private, or federal land
Alaska	Yes	Yes
Arizona	Yes	Yes
California	Yes	No
Colorado	Yes	Yes
Idaho	Yes	Yes
Montana	Yes	Yes
Nevada	No	Yes
New Mexico	Yes	Yes
Oregon	Yes	No
Utah	Yes	Yes
Washington	Yes	Yes
Wyoming	Yes	Yes

Australian and Canadian States or Provinces and Territories Assess Royalties, but South Africa Does Not

Australia

The Commonwealth of Australia is a national federation of six states and two federal territories. Ownership of minerals within the country usually lies with the Crown—the state/territory and commonwealth governments—whether the minerals are on Crown or private lands. In accordance with their right of mineral ownership, each state and territory has its own mining acts governing mineral exploration and mining. In general, approval must be obtained from the state to explore and prospect for minerals, and a lease or license is required to mine and sell minerals.

In accordance with Australia's ownership pattern, the national government does not generally assess a royalty or mining tax on Crown minerals mined from land in the states or territories. One exception is uranium mined in the Northern Territory. The states and territories do assess royalties, although royalty rates and assessment methods show little uniformity among jurisdictions. The most commonly used royalty methods in Australia are based on output, such as (1) a royalty levied as a dollar amount per tonne[3] of ore, concentrate, or contained metal or (2) an ad valorem royalty that is levied as a percentage of the value of output. For example, New South Wales assesses a royalty of $0.25 to $0.85 per tonne on nonmetallic minerals (not including coal, oil, and gas) and a 4-percent ad valorem royalty on metallic minerals. Occasionally, profit-based royalties are also used. These royalties are levied on assessed profits, that is, the gross value of production less certain costs. For example, the Northern Territory assesses a profit-based royalty of 18 percent on annual profits over $50,000. (The royalty methods used for each state and territory are listed in app. XIII.)

In recent years a change has occurred in the state systems for establishing royalties. State governments commonly negotiate special royalty rates with companies that are seeking mineral leases for large-scale developments. The royalty rates may vary, depending on factors such as whether the production is for export or for domestic processing.

As is the case with other countries, Australia's national government assesses an income tax on businesses, including mining; the states and territories do not assess an income tax. Federal income tax for companies is imposed at the rate of 39 percent. Income from gold mining, however, did not become subject to federal income tax until January 1, 1991. Australia's tax statutes have several features specific to mining. For example, mining companies can deduct certain capital expenditures rather than using the normally available depreciation provisions, and exploration expenses can be fully deducted.

Canada

Canada is a federation of 10 provinces and 2 territories. Ninety percent of Canada's entire land mass is made up of Crown lands; the provinces control the lands within each province and the federal government controls the lands within the territories. Similarly, the Crown owns most minerals—those on both Crown and private lands. Title to minerals on Crown lands in the provinces is vested in the provincial governments, which govern mining in the provinces. Minerals on lands in the territories are held by the federal government, which governs mining in the territories. In general a license or permit must be obtained to prospect for minerals, and a lease is required to begin mining. One exception is the

[3]A tonne is a metric measure equal to 1.102 short tons.

Yukon Territory, which does not require prior approval to prospect and which authorizes claim holders to mine.

In general, the provinces (and the Canadian government with respect to the territories) impose taxes similar to royalties on profits derived from mining. The taxes, imposed on the net income from mining, attempt to exclude income from any processing. The Canadian government, except in the territories, does not impose similar taxes.

Four provinces charge fixed-rate mining taxes, while five have a somewhat progressive tax structure in that the rates increase after capital costs are recovered or as profits exceed a specified level. With the exception of a fixed-rate tax on gold in the Yukon Territory, the tax structure for minerals in the territories is progressive. For example, British Columbia has a two-stage tax for metals and industrial minerals. The first stage applies to all such miners, who must pay a minimum tax on net current proceeds—the current year's gross revenue less operating costs—until capital costs are recovered. The tax is 2 percent for metals and industrial minerals. The second stage takes effect after capital costs are recovered, when a 13-percent tax is assessed on net revenue—the cumulative profit, which includes all revenues and costs to date. Although Ontario charges a fixed royalty for most minerals of 20 percent of annual profits, the royalty applies only to profits above $500,000. In the Northwest Territories the federal government assesses an escalating royalty that increases from 3 percent, when the net value of annual output is between $10,000 and $1 million, to 12 percent, when the net value of annual production exceeds $40 million. In both Ontario and the Northwest Territories, royalties are not payable during the first 36 months after a new mine or major expansion comes into production.

The Canadian federal government levies an income tax on businesses, including mining. In addition, each province and territory imposes an income tax, generally along the lines of the federal income tax. The basic rate of federal corporate income tax is 38 percent of taxable income. This rate is reduced by a 10-percent abatement designed to allow for provincial corporate income taxes. Thus, the effective federal tax rate is generally 28 percent. The various provincial tax laws usually make the same federal taxable income subject to a provincial income tax. As a general rule, the various provincial acts are based on provisions contained in the federal tax law, although Alberta's, Ontario's, and Quebec's income tax laws include some significant deviations from the federal legislation. The provincial or territorial rates vary from 5.5 to 17 percent.

South Africa

Mineral ownership in South Africa is fundamentally different from that in Australia and Canada. Nearly all mineral rights belong to the landowner. However, the national government administers mining throughout the country on federal and private lands. A prospecting permit must be obtained to begin prospecting, and a mining permit or license is required to mine and sell minerals.

An estimated 90 percent or more of mineral rights in South Africa are privately owned, and it is the exception for the government to own mineral rights. The four South African provinces do not own mineral rights.

Before the Minerals Act of 1991, in the exceptional circumstances where the government owned the mineral rights, those mining precious metals (gold, silver, platinum, and platinum-group metals) and base minerals (all other metals and minerals except precious stones and oil) in South Africa were required to pay a royalty or share of their profits to the national government as were those mining precious metals on private lands. The Minerals Act of 1991 changed the requirements for payment of royalties or a share of profits in order to attract more investment in mining. Mines that began operating after January 1, 1992, will not be required to pay a royalty or share of profits. However, mines that were operating as of that date will be required to pay a royalty or share of profits until December 31, 1993. After December 31, 1993, miners will not be required to pay a national royalty or share of profits. The provinces, which do not own mineral rights, do not assess royalties.

Although South African mining operations do not pay a royalty, they do pay a higher rate of income tax than nonmining companies. Nonmining companies are taxed at 48 percent of taxable income, and companies mining minerals other than gold and diamonds are taxed at 50 percent of taxable income plus a surcharge of 9 percent. Gold mines pay a rate that is established through a formula; the rate for mines established after 1966 is slightly lower than that for mines established in 1966 or before. The tax rate for post-1966 mines could approach 67 percent as a mine's taxable income from gold mining becomes an increasing percentage of its total income from gold mining. The formula ensures that more profitable gold mines pay a higher tax rate than less profitable gold mines. Mining companies also have a special deduction not available to nonmining companies—they can deduct 100 percent of capital expenses in the year incurred against a mine's income. The deduction is on a mine-by-mine basis, rather than companywide. The provinces do not assess an income tax on businesses.

Agency Comments

Although we did not obtain written comments on a draft of this report, to ensure its technical accuracy, we sent a draft of each state appendix to state officials responsible for regulating mining operations and assessing royalties and taxes on state lands. These officials were typically in a division of state lands or mining and a department of revenue. We also sent drafts of the Australian, Canadian, and South African appendixes to officials in those countries and to the appropriate foreign mineral specialist in the Department of the Interior's Bureau of Mines, who assisted us during our work. The officials reviewed the appendixes and provided detailed technical suggestions, which we included in revisions to the report.

This report provides information on whether and how the 12 western United States, which are the principal mining states and contain nearly all the land subject to the Mining Law of 1872, and Australia, Canada, and South Africa, which are the three largest mineral-producing countries after the former Soviet Union and the United States, share in the proceeds from minerals mined on their lands. We obtained laws, regulations, handbooks, manuals, and other documents describing the requirements for mining and the assessment of royalties and taxes from state officials. We obtained similar data from embassy and other officials responsible for mining activities in the three countries, country specialists in the Bureau of Mines, and various publications. We clarified information in these documents in interviews with officials from the states, countries, and the Bureau of Mines. (App. XVI contains a more detailed discussion of our objectives, scope, and methodology.) We conducted our work between June 1992 and March 1993 in accordance with generally accepted government auditing standards.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 10 days from the date of this letter. At that time, we will make copies available on request.

Please contact me at (202) 512-7756 if you or your staff have any questions. Major contributors to this report are listed in appendix XVII.

Sincerely yours,

James Duffus III

James Duffus III
Director, Natural Resources
Management Issues

Contents

Alaska's Requirements Governing Mining and Related Royalties and Taxes

Authority to Prospect and Mine on State Lands

In Alaska persons may obtain the exclusive right to prospect on a tract of state land in several ways. Before minerals are discovered, persons may establish a "prospecting site." Once minerals are discovered, persons can obtain either a mining claim or a lease. Both a claim and a lease allow their holders to extract minerals within the claim or lease boundaries; however, a mineral lease is required for certain state lands. In addition, leases offer protection from disputes that may arise if mining claims overlap.

Prospecting Sites

Persons may freely prospect on state land open to mining, subject to any prior rights held by others. However, to obtain the exclusive right to prospect on state land, they must mark the prospecting site's boundaries and post a notice of location. This exclusive right remains in effect for 1 year and may, at the discretion of the Director of the Division of Mining, be extended for 1-year periods. Within 1 year after posting the location notice, persons must perform acceptable work amounting to at least $5 per acre within the site. Acceptable work is defined to be drilling, excavating, or geological, geophysical, or geochemical work performed by qualified persons. The amount of work required during the first 1-year extension period is also $5 per acre, but if further extensions are granted, the amount of work required during each additional year is $10 per acre.

By establishing a prospecting site, persons also obtain the exclusive right to locate mining claims or lease the land within its boundaries if valuable minerals are discovered.

Mining Claims

Mining claims give persons the exclusive right to possess and extract minerals from state land. After minerals are discovered, persons can obtain a claim that cannot exceed 40 acres by marking the claim, posting a location notice, filing a notice of location in the recording district where the claim is located, and paying a $20 rental fee. Claim holders can apply to convert a valid mining claim to a lease at any time.

To preserve the rights to their claims, claim holders must perform annually at least $100 worth of improvements or development work for each mining claim. Instead of performing the annual work requirement, the claim holder can make a cash payment to the state equal to $100.

Mineral Leases

Leases also provide the lessee the exclusive rights of possession and extraction of all minerals they have discovered within the boundaries of the lease before obtaining the lease. The state does not impose an acreage limitation on leases.

Leases are issued for any period of time up to 55 years if justified on the basis of the expected life of the mine. Lessees must pay a $50 fee when applying for a lease. A lease is renewable if all the requirements for the lease remain satisfied.

To preserve the rights to their leases, lessees must perform annually at least $100 worth of improvements or development work for each lease and for each partial or whole 40 acres of each lease. Instead of performing the annual work requirement, the lessee can make a cash payment to the state equal to $100.

For certain state lands that are classified as sensitive, a mining lease rather than a mining claim is required. These lands could be considered sensitive because they are also used for grazing or salmon might spawn in the waters that flow over them. A lease specifies the terms and conditions under which mining may be conducted.

Persons may also prefer to obtain a lease rather than a claim to avoid disputes that sometime arise when claims inadvertently overlap. Those who obtain mining leases do not have to worry about such disputes, because before the state issues a lease, public notification is required to ensure that no previous claims exist. If another claim holder raises a dispute, the lease application is denied until the issue is resolved.

Requirements for Both Mining Claim Holders and Lessees

In addition to the annual work requirement, claim holders and lessees must pay, in advance, an annual rental for the right to continue to hold the claim or lease. The rental amount is based on the number of years since a mining claim or lease was first located. See table I.1.

Table I.1: Alaska's Rental Rates for Mining Claim Holders and Lessees

Number of years since first located	Rental amount per acre for mining leases	Rental amount for each mining claim or lease
0-5	$ .50	$ 20
6-10	$1.00	$ 40
11 or more	$2.50	$100

A state official said that the rental requirements may change because the state administration is introducing a bill in the 1993 legislature that will revise rentals to a total of $20 per claim or $.50 per acre until production begins, at which point the charge would increase to $250 per claim and $6.25 per acre.

Also, when claim holders or lessees are prepared to produce minerals for sale in commercial quantities, they must apply for a production license from the Commissioner of the Department of Natural Resources. A fee of $50 must accompany the application for the license. The license grants the claim holder or lessee the right to produce minerals from the property.

Royalties and Taxes Assessed on Mining Operations

Alaska imposes a production royalty on all minerals extracted from state lands and a mining license tax on persons extracting minerals from all lands in the state, whether federally, state, or privately owned.

Assessment on State Lands

All claim holders or lessees for state land in Alaska must pay an annual production royalty on all minerals produced from the claimed or leased land. The production royalty is 3 percent of the mine's net income and is paid in addition to the mining license tax.

Annual rental fees are credited against the production royalty for that year. No refund will be made if the amount of annual rental paid exceeds the amount of the production royalty.

Assessment on All Lands

All persons engaged in such activities as owning and operating a mining property, leasing a mining property from another and operating it, or receiving lease or royalty payments, are considered to be in the business of mining and must therefore obtain a mining license and pay a license tax. Such persons must apply for this license each year. New mining operations, however, are exempt from this tax for 3-1/2 years after production begins. The tax is levied on the taxpayer's net income, above a certain amount, from all mining operations in the state. See table I.2.

Table I.2: Alaska's Mining License Tax Rates

Taxable income	Tax rate
$40,000 and under	No tax
Over $40,000 and not over $50,000	3 percent of the entire taxable income
Over $50,000 and not over $100,000	$1,500 + 5 percent of the excess over $50,000
Over $100,000	$4,000 + 7 percent of the excess over $100,000

Taxable net income is gross income (as defined by statute) less deductible mining expenses. Allowable deductions include those direct and indirect expenses, such as direct labor, supplies, interest, and corporate income tax. A 3-1/2 year tax exemption is authorized for new operations in initial production.

The lessor of a mine operated under a lease is considered to be engaged in mining, and the royalties received by the lessor are considered to be the net income of the lessor's mining operations. Taxes upon royalties are to be paid by the taxpayer receiving the royalty, and no deduction, except depletion, is allowed.

Arizona's Requirements Governing Mining and Related Royalties and Taxes

Authority to Prospect and Mine on State Lands

In Arizona persons must obtain an exploration permit to prospect on state land and, if minerals are discovered, obtain a mineral lease before they can extract and sell minerals.

Exploration Permit

To begin prospecting on state land, persons must first obtain an exploration permit. The permit grants the permittee the exclusive right to prospect on a tract of at least 20 acres and not more than 640 acres. The permit does not authorize the permittee to mine or remove valuable minerals.

Permits are issued for an initial 1-year term upon payment of a $100 fee. Permittees are required to spend at least $10 per acre on exploration during each of the first 2 years, and at least $20 per acre during each of the last 3 years. Permittees may instead choose to make cash payments to the state. Permits can be renewed annually for 4 years by filing a renewal application and an affidavit which confirms that the required exploration expenditures have been made.

Permittees must pay an initial rental of $2 per acre for the land covered by the permit. The $2 fee covers rent for the first 2 years of the permit; after that, a $1 per acre rental fee must be paid annually.

Lease of State Lands for Valuable Minerals

Once minerals are discovered, a lease is required before mining can begin or minerals can be removed from the land. Arizona issues leases for 20 years and requires payment of a $100 fee. If, however, at the expiration of the lease term, the lessee has paid all rentals and royalties, the lessee will have the preferential right to renew the lease for an additional 20 years.

Lessees must pay an annual rental fee that is established before the lease is issued. The fee is based on the State Land Commissioner's appraisal of the value of the nonmining uses of comparable land. The annual rental, which cannot be less than $.75 per acre, and the cost of all appraisals are payable in advance of executing the lease and at the beginning of each lease year. Lessees are also required to annually expend labor or make improvements upon state lands in the amount of $100 per lease.

Royalties and Taxes Assessed on Mining Operations

Arizona assesses (1) a royalty on minerals extracted from state lands but not federal or private lands and (2) a tax on all persons mining in the state, whether on federal, state, or private lands.

Assessment on State Lands

Prior to June 28, 1989, the royalty rate was 5 percent. For leases granted on or after this date, the rate is determined in such a way that the state obtains a fair value for its minerals. However, the rate cannot be less than 2 percent of the gross value of all extracted minerals. The gross value is determined by the monthly average unit price for the minerals as cited in commercial commodity indexes. At the end of the first year, the royalty rate is reappraised to determine if the rate should be adjusted in order to ensure that the state continues to obtain a fair value for the minerals.[1]

Assessment on All Lands

Arizona assesses a severance tax on all persons mining metallic minerals and a transaction privilege tax on all persons mining nonmetallic minerals on federal, state, or private lands.

Severance Tax

Arizona levies a severance tax on all persons mining metallic minerals. The tax is 2.5 percent of a mine's net severance base, which is the greater of (1) the weighted mineral value,[2] which is the value of production associated with mining less processing costs, or (2) the Arizona value, which is 50 percent of the difference between the gross value of production (price multiplied by the quantity mined) and the out-of-state processing costs.

Transaction Privilege Tax

Arizona assesses a transaction privilege tax on persons engaged in business in the state. The tax is divided into 18 different business classifications and some businesses, like mining, may fall into more than one classification. Mining operations may be required to pay the mining tax on minerals sold to companies that will resell them and the retail tax on minerals sold to final consumers. Thus, while persons engaged in mining may pay taxes in two classifications, they are not taxed twice on the same transactions. The mining classification tax is levied at the rate of 3-1/8 percent of a specified tax base. This tax is levied on either the gross

[1]Leases granted prior to June 28, 1989, had to be appraised to determine a fair value royalty rate. Lessees must pay the greater of the 5 percent net value royalty or the appraised royalty rate.

[2]The weighted mineral value is computed by dividing mining costs (defined as production costs incurred during mining) by production costs (defined as the costs incurred in mining and processing until the point of sale). This quotient is multiplied by the gross value of production (price multiplied by the quantity mined for all extracted minerals).

proceeds received from the sale of the minerals or the gross income derived from the business. The tax base includes the value of the entire product mined or produced less any freight charges, regardless of the place of sale of the product or of the fact that deliveries may be made to points outside the state. The retail tax is 5 percent.

California's Requirements Governing Mining and Related Royalties and Taxes

Authority to Prospect and Mine on State Lands

In California persons must obtain a permit to prospect for minerals on state lands. If they discover any commercially valuable minerals on that land, they must then obtain a mineral extraction lease, which authorizes them to produce and sell minerals.

Prospecting Permit

The State Lands Commission issues prospecting permits that authorize and provide permittees the exclusive right to prospect on state lands that are dedicated to public use and that are not known to contain valuable minerals. A mineral extraction lease is required to develop and mine on lands known to contain valuable minerals.

When applying for a permit, persons must pay a filing fee of $25 plus an acreage deposit of not less than $1 per acre. Also, each permit application must be accompanied by a fee based on an estimate of the time that the Lands Commission staff will require to process the application for the proposed project. For example, the estimated fee for an application proposing geological reconnaissance limited to surface mapping and hand sampling is approximately $3,000, while the estimated fee for an application proposing an exploration drilling program is approximately $5,000. If the prepaid fee exceeds the Commission staff's costs, the excess funds are returned.

Permits are issued for a primary term of 1 year for projects that include only geological reconnaissance and 2 years for projects that include significant activity such as drilling. The State Lands Commission may extend a permit for an additional year; however, the term of any permit, including extension, cannot exceed 3 years.

Permits do not authorize permittees to extract minerals for sale, but they do allow permittees to remove a reasonable quantity to determine if the ore can be processed and if mine development is feasible. Permittees are allowed to remove these quantities of ore, but the royalty assessed on minerals extracted under a permit is much larger than the royalty on minerals extracted under a lease. This higher royalty is designed to discourages permittees from extracting minerals without a lease.

Lease of State Lands

Upon the discovery of valuable minerals, the permittee is entitled to lease up to 960 acres of the land included in the permit. The lease authorizes the lessee to extract and sell minerals from the leased land.

Lessees must pay an annual rental of not less than $1 per acre, as determined by the Commission. Leases are issued for a term not to exceed 20 years with the preferential right to renew the lease for successive terms not to exceed 10 years each.

Persons must also obtain a lease to prospect on lands known to contain valuable minerals. The Commission may lease these valuable lands through a competitive bid process to the highest qualified bidder. The lease will be awarded on the basis of either a cash bonus, royalty rate, net profit, or any other single biddable factor. Each bid and each eventual lease must also include provisions for an annual payment of a minimum royalty, separate from the rental payment, of not less than $1 per acre as specified by the Commission.

Royalties and Taxes Assessed on Mining Operations

California assesses a royalty only on minerals extracted from state lands. Lessees must pay either one of two forms of a royalty: (1) a royalty of not less than 10 percent of the gross value of all mineral production from the leased lands, less any charges that were incurred due to transporting or processing, or (2) a percentage of the net profits derived from mineral extraction operations under the lease. The percentage of the royalty is determined by the State Lands Commission.

Until permittees apply for a lease, they must pay the state a royalty of 20 percent of the gross value of any minerals secured from their permitted lands and either sold, disposed of, or held for sale or disposition.

Colorado's Requirements Governing Mining and Related Royalties and Taxes

Authority to Prospect and Mine on State Lands

In Colorado persons must obtain a mining lease to prospect or mine on state land. Leases are granted for specific minerals and give lessees the right to use as much of the surface as reasonably required to mine the covered minerals. The lessees are subject to existing third-party rights and may not mine minerals not covered by the lease.

All rights to any minerals other than those included in the lease are reserved to the state. Should a lessee discover and wish to produce any minerals of value that are not included in the lessee's original lease, that person must negotiate separate leases for each mineral or have them added to the existing lease.

A lease for general mining operations is for 10 years. However, a lease will continue in effect as long thereafter as ores are produced in paying quantities sufficient to return a predetermined minimum royalty to the state. Lessees may obtain the preferential right to extend the lease if they agree to pay an annual advance minimum royalty, furnish geological evidence that the acreage contains mineral reserves, and furnish mining plans for the new term.

Lessees must also pay the state an annual rental for the use of the land. The State Board of Land Commissioners determines the rental on a case-by-case basis before the lease is issued—usually $2 per acre. Lessees must also pay a $20 fee when filing for a lease.

Royalties and Taxes Assessed on Mining Operations

Colorado assesses a royalty on minerals extracted from state lands and a severance tax on metallic minerals extracted from all lands in the state, whether federally, state, or privately owned.

Assessment on State Lands

Miners must pay a royalty on minerals extracted from state lands. This royalty is established by the Board of Land Commissioners on a case-by-case basis. Royalties on existing leases are calculated as a percentage of the gross value of production at the mine. The Board generally follows an established schedule as a guideline in assessing the royalty. See table IV.1.

Table IV.1: Colorado's Guideline Schedule for Assessing Royalties

Gross market value per ton of ore at the mine	Royalty
$0 to $100.00 per ton	4 percent
$100.01 to $200.00 per ton	5 percent
$200.01 to $300.00 per ton	6 percent
$300.01 and up per ton	7 percent

The royalty on newly issued leases is calculated on the basis of the net smelter return. The rate has ranged between 4 percent and 10 percent.

For gems, specimens, and placer minerals, the royalty is 7 percent of the gross value of the mineral at the mine. A specimen is defined to be an exemplary mineral of its kind that has a value above its market value.

Assessment on All Lands

Colorado levies a tax each year on all mining operations in the state that extract metallic minerals. This tax is based on the gross income of the mining operation above a certain amount. Colorado statutes define gross income for metallic minerals as the value of the ore immediately after its removal from the mine. It does not include any value added subsequently by treatment processes, transportation, or marketing. See table IV.2.

Table IV.2: Colorado's Severance Tax Rates on Metallic Minerals

Amount of gross income	Percent tax on gross income
First $11 million	No tax
Amount exceeding $11 million	2.25 percent

Mining operations are allowed to use as a credit against the severance tax an amount equal to all ad valorem taxes (i.e., the state royalty) assessed or paid during the taxable year on producing mines. This credit cannot exceed 50 percent of the severance tax.

Colorado also levies a quarterly severance tax on all mining operations that sever molybdenum ore. The present tax rate is $.05 per ton of ore extracted. After July 1, 1994, the tax rate is scheduled to increase to $.10 per ton of ore.

Idaho's Requirements Governing Mining and Related Royalties and Taxes

Authority to Prospect and Mine on State Lands

In Idaho persons may obtain the exclusive right to prospect on state land by posting and filing a notice of location. If minerals are discovered, persons must obtain a mineral lease before beginning mining.

Mineral Locations

All mineral deposits on state lands in Idaho are reserved to the state, and if the state sells any of its land, it still retains title to the minerals located on that land. All state lands not withdrawn from entry are free and open to casual exploration processes, such as geophysical and geochemical exploration, which do not appreciably disturb or damage the land or resources. Exploration that disturbs the land requires a reclamation plan and approval from the Director of the Department of Lands.

Persons discovering a mineral deposit or desiring to obtain the exclusive right to prospect on a specified tract of land not to exceed 20 acres, must locate the site by posting a notice on the site and filing the exploration location notice with the State Board of Land Commissioners. This exclusive right is in effect for 2 years provided a specified amount of work is performed annually. The annual work requirement is satisfied by performing $100 worth of excavation or development activities. A notarized verification of the work must be filed with the state each year. At the end of 2 years, the exclusive right must be relinquished or converted to a lease.

Mineral Leases

A lease must be obtained from the State Board of Land Commissioners before minerals can be removed in commercial quantities from state lands. One lease can cover several different types of minerals discovered on a tract. A lease tract cannot exceed 640 acres; the length of the lease is 10 years and so long thereafter as minerals are produced in paying quantities. Lessees have the preferential right to renew the lease once it expires. A fee of $25 must accompany all general mineral lease applications, and a fee of $50 must accompany all applications for river bed leases.

Lessees must pay an annual rental for the land as determined by the state on a case-by-case basis, but in an amount not less than $1 per acre or $160, whichever is greater. The rental paid for any year is deducted from the production royalties that accrue for that year.

Before an open pit mining operation can be conducted, the mine operator must obtain a reclamation bond and obtain approval from the Department of Lands for its surface mine reclamation plan and plan of operation. No fees are required. A special reclamation permit must be obtained before conducting placer or dredge mining on state lands. Applications for such permits require a fee of $50 for each 10 acres or fraction thereof, but no application fee can exceed $1,000. An annual inspection fee of $250 is required to maintain a permit.

Royalties and Taxes Assessed on Mining Operations

Idaho assesses a royalty on minerals extracted from state lands and a mining license tax on minerals extracted from all lands in the state, whether federally, state, or privately owned.

Assessment on State Lands

The Board of Land Commissioners determines a set royalty rate for each type of mineral leased. The royalty is assessed on the value of the ore per ton and cannot be less than 2-1/2 percent. For metallic and nonmetallic minerals, the royalty rates vary between 2-1/2 percent and 10 percent, depending on the mineral leased.

Assessment on All Lands

Idaho imposes a mining license tax on every person or company mining on state lands or receiving royalties from any mineral deposit in the state. The license tax is assessed at 2 percent of the net value of the ore mined during that year. The net value of ore mined is defined as the amount of money or royalties received from mining after expenses, losses, and any other allowable costs are deducted.

Montana's Requirements Governing Mining and Related Royalties and Taxes

Authority to Prospect and Mine on State Lands

In Montana persons must obtain a land-use license before beginning prospecting activities that do not require machinery. A lease must be obtained to conduct mechanized exploration and mining. State lands also include those lands which have been sold but in which the mineral rights have been reserved by the state.

Land-Use License

The state issues a land-use license for nonmechanized prospecting, such as soil and rock sampling or geochemical and geophysical exploration. This license gives a prospector the exclusive right to prospect on that tract of land and also the preferential right to apply for a lease on the same tract for the same mineral at a later date if mechanical exploration, such as drilling and trenching and/or mining, are feasible. Prospectors must pay a $25 fee when applying for a license.

Metallic Mineral Leases

The Board of Land Commissioners can lease any available state lands for the purpose of prospecting or mining metallic minerals. Mineral leases give the lessee the exclusive right of possession of the lands or mineral rights leased. Leases are granted for 10 years and as long thereafter as metallic minerals are produced in paying quantities and as the lessee continues to pay all royalties and rents. The Board determines the number of acres granted in a lease. A $50 fee is required when applying for a metallic mineral lease.

Before the Board issues a lease, it investigates the lands to identify the nature and possible extent of the mineral deposits in order to determine whether the land should be leased and the amount of royalties and other rentals that should be charged. If a lessee files an application for land that has not been examined by the state, the state may require the lessee to deposit with the Department of State Lands up to $500 to reimburse the state for the cost of such examination.

The lessee must pay an annual rental to the state. The rental for the first year is at least $1 per acre and may include an additional amount per acre as a bonus, as determined by the Board of Land Commissioners. The rental for the second and third year is $1 per acre; the rental for the fourth and fifth year is $2.50 per acre; and the rental thereafter is $3 per acre. The minimum total rental for any lease is $100 per year.

Nonmetallic Mineral Leases

The Board of Land Commissioners determines the terms and conditions of leases for nonmetallic minerals on a case-by-case basis, but the lease term cannot exceed 10 years. Also, a $40 fee is required when applying for a nonmetallic lease.

Royalties and Taxes Assessed on Mining Operations

Montana assesses royalties on minerals extracted from state- owned lands, as well as two additional taxes on mining operations on any lands in the state, whether federal, state, or private.

Assessment on State Lands

Montana imposes separate royalties on metallic minerals and nonmetallic minerals extracted from state lands.

Royalties on Metallic Minerals

All lessees must pay the state a royalty on all ores bearing metallic minerals. The royalty rate, which varies between 5 percent and 8 percent, is determined by the Board on a case-by-case basis, but in no case can the royalty be less than 5 percent of the fair market value of the minerals, defined as the value of the raw minerals recovered at the mine site.

Royalties on Nonmetallic Minerals

The Board determines a fair and reasonable royalty for each mine on a case-by-case basis. All royalties are assessed on the gross value by weight or cubic measurement of the mineral.

Assessment on All Lands

Montana imposes a license tax on both metallic and micaceous minerals—vermiculite, perlite, kerrite, etc.—as well as a resource indemnity trust tax on all minerals other than metals.

License Tax on Micaceous Mines

Every person operating a mine in Montana must pay a quarterly license tax of $.05 per ton on every ton of micaceous mineral concentrates that are mined, extracted, or produced.

License Tax on Metal Mines

Montana also imposes an annual license tax on every person operating a mine in the state from which any metals or precious/ semiprecious gems or stones are extracted or produced. The annual license tax is payable for mining conducted during the preceding calendar year.

The license tax is assessed on the annual gross value of a mine's products. (See tables VI.1 and VI.2.)

Table VI.1: Montana's Tax Rates on Concentrates Shipped to Smelter, Mill, or Reduction Facility

Gross value of product	Rate of tax (percent of gross value)
First $250,000	0
More than $250,000	1.81 of the amount over $250,000

Note: Smelting, milling, and reduction are processes for removing impurities and preparing the ore for use as metal.

Table VI.2: Montana's Tax Rates on Gold, Silver, or Any Platinum-Group Metal That Is Dore, Bullion, or Matte Shipped to a Refinery

Gross value of product	Rate of tax (percent of gross value)
First $250,000	0
More than $250,000	1.6 of the amount over $250,000

Note: Dore, bullion, and matte refer to metals at various stages of processing. For example, bullion is refined, uncoined gold or silver in the shape of bars or ingots.

The gross value of the product is defined as the receipts received from all merchantable metals, gems, and stones extracted and produced each calendar year. The receipts received are the payment received from the smelter or refinery less basic treatment and refinery charges, as well as other allowable deductions. Transportation charges are not deductible.

Resource Indemnity Trust Tax

Persons engaged in mining, extracting, or producing a mineral must pay a resource indemnity trust tax, unless they have already paid the license tax on metal mines. The tax is levied at a rate of $25, plus one-half of 1 percent of the gross value of the product if in excess of $5,000 at the time of extraction from the ground and after loading. Gross value is defined as the market value of any merchantable mineral extracted or produced during the taxable year. The annual tax is payable on mining in the state during the preceding calendar year.

If any person is mining, extracting, or producing talc, the tax is $25 plus 4 percent of the product's gross value. If any person is mining, extracting, or producing vermiculite, the tax is $25 plus 2 percent of the gross value.

Nevada's Requirements Governing Mining and Related Royalties and Taxes

In Nevada roughly 85 percent of the land is federally owned. The state owns approximately one-fifth of 1 percent of all the land in the state, and that land is designated for state parks and other purposes. The state does not lease any of its lands for mining purposes. All mining that occurs in the state is on federal or private lands.

Royalties and Taxes Assessed on Mining Operations

Nevada levies a tax on the net proceeds of every mining operation in the state, regardless of whether the mining occurs on federal or private land.

Assessment on All Lands

Persons extracting or receiving any royalties from any minerals in the state must pay taxes on the net proceeds of mining. With the exception of geothermal properties, the tax rate on the net proceeds of each geographically separate extractive operation within a company increases to a maximum of 5 percent as the ratio of that operation's net proceeds to gross proceeds increases. An individual operation's net proceeds is calculated by subtracting various costs incurred during the year, such as extraction, transportation, and depreciation, from the operation's gross proceeds. Also, persons who extract minerals from lands which they lease from another party may deduct any royalties paid to the owner or lessor when calculating their net proceeds. An operation's gross proceeds is the value of any minerals extracted in the state that are sold, exchanged, or detailed in the Nevada Administrative Code, Ch. 362.010, "Method for Determining the Gross Value of Mineral Products." See table VII.1.

Table VII.1: Nevada's Tax Rates on Net Proceeds

Net proceeds as percentage of gross proceeds	Tax rate as percentage of net proceeds
Less than 10	2.0 percent
10 or more but less than 18	2.5 percent
18 or more but less than 26	3.0 percent
26 or more but less than 34	3.5 percent
34 or more but less than 42	4.0 percent
42 or more but less than 50	4.5 percent
50 or more	5.0 percent

A few exceptions exist to the above table. For example, the tax rate on an operation for which the net proceeds in a calendar year exceed $4 million, is 5 percent. In addition, the owner or lessor to whom the royalty is paid is taxed at a rate of 5 percent of the royalty received.

New Mexico's Requirements Governing Mining and Related Royalties and Taxes

Authority to Prospect and Mine on State Lands

New Mexico authorizes both prospecting and mining activities through the issuance of leases.

Leasing for General Mining of Minerals

In New Mexico persons must obtain a lease in order to prospect for and mine minerals on state lands open to mining.[1] Leases cannot exceed 640 contiguous acres, and a fee of $30 must accompany all lease applications.

Leases are initially issued for a primary term of 3 years. If minerals are not discovered, the lessee may apply for successive extensions of 2 years and two more extensions of 5 years each. Once minerals are discovered, and as long thereafter as they are mined in paying quantities, the lessee does not have to apply for subsequent leases.

Lessees must pay an annual rental that is determined by the lease term. The rental for each year of the first term is $.05 per acre, and the rental for each year in the second term is $.50 per acre, but in no case less than $10. The rental for each year in the third term is $3 per acre; and the rental for each year in the fourth term is $10 per acre. Also, lessees must pay an advance royalty in addition to the rental for each year in the fourth term. See table VIII.1. Once minerals are discovered during a lease term, the rental charge is fixed at that rate for as long as minerals are mined in paying quantities.

Table VIII.1: New Mexico's Advance Royalty Rates for the Fourth Lease Term

Year	Advance royalty rate
11th	$10 per acre per annum
12th	$20 per acre per annum
13th	$30 per acre per annum
14th	$40 per acre per annum
15th	$50 per acre per annum

However, once production of minerals in paying quantities begins, the advance royalty for the lease year in which the mineral is produced and the advance royalty paid for the 2 previous lease years is credited against the royalty payable.

[1]These requirements are for minerals other than coal, potassium, sodium, sulphur, and other minerals of similar occurrence and their salts.

Royalties and Taxes Assessed on Mining Operations

New Mexico assesses a royalty on minerals extracted from state-owned land and two taxes on mining operations on any lands in the state, whether federal, state, or private.

Assessment on State Lands

Lessees of state land must pay a minimum royalty, set when the lease is issued, of at least 2 percent of the gross returns from the smelter, mill, reduction process, or other sales, less reasonable transportation and smelting or reduction charges. Lessees must also pay a royalty of at least 2 percent on all premiums and bonuses they receive in connection with discovery, production, or marketing. However, on deposits of precious or semiprecious stone, rare earths, and minerals determined by the Department of Energy to be essential to the production of fissionable materials, the royalty rate determined at lease issuance must be at least 5 percent of gross returns and 5 percent of all premiums and bonuses.

Assessment on All Lands

New Mexico assesses both a resources excise tax and a severance tax on minerals extracted from federal, state, or private land.

Resources Excise Tax

The excise tax on all natural resources is levied in one of three ways—a resources tax, a processor's tax, or a service tax—depending on its ownership and character upon sale.

Resources Tax—For the privilege of severing natural resources, including both metallic and nonmetallic minerals, New Mexico imposes a resources tax on the taxable value of the minerals. (See table VIII.2.) The taxable value is the reasonable value of the resource, usually defined as the total amount of money or the value of other consideration received for the severed natural resource. The federal, state, and Indian royalties may be deducted. All minerals mined, quarried, extracted, or produced in the state are subject to the tax, regardless of where the minerals are sold or whether they are delivered to points inside or outside of the state.

Table VIII.2: New Mexico's Resource Tax Rates on Natural Resources

Natural resources	Tax rate
Potash	One-half of 1 percent[a]
Molybdenum	One-eighth of 1 percent
All other natural resources	Three-fourths of 1 percent

[a]Because most potash producers process their product, they usually pay the processor's rate of one-eighth of 1 percent.

Note: Natural resources include timber and metallic and nonmetallic minerals, but does not include oil, natural gas, liquid hydrocarbon, or carbon dioxide.

Processor's Tax—For the privilege of processing natural resources in the state, processors are taxed at the same rate as severers. (See table VIII.2.) Resources otherwise subject to the resources tax are exempt from that tax if the processor's tax is paid.

Service Tax—For the privilege of severing natural resources that are owned by another person and not taxed by either the resources tax or the processor's tax, New Mexico imposes a service tax on the severer at the same rate that would be imposed on an owner of natural resources performing the same functions. (See table VIII.2.)

Severance Tax

In addition to the excise tax that is imposed for the privilege of severing natural resources, New Mexico imposes a severance tax, generally one-eighth of 1 percent, on the taxable value of natural resources severed and saved for sale. The taxable value of all severed resources except uranium is the gross value of the resources less rental or royalty payments belonging to the United States or New Mexico. In general, the gross value is the sales value of the severed and saved product at the first marketable point without any deductions.

There are several exceptions to the way gross value is computed. For those products that must be processed before sale, the gross value is the sales value after deducting freight charges and the cost of processing. In addition, for those products having a posted field or market price at the point of production, the gross value is its posted field or market price less those expenses of hoisting, crushing, and loading necessary to place the severed product in marketable form and at a marketable place. Deductible expenses shall not exceed 50 percent of the posted field or market price.

Certain minerals have their gross value computed differently and have different tax rates. For these minerals, the gross value is a specified percentage of the sales price that is further reduced by 50 percent to cover expenses for hoisting, loading, crushing, and processing. Table VIII.3 shows the two deductions from the sales price that are used to determine gross value and the tax rate for each of the specially valued minerals. For the minerals in the table, the tax is assessed when the mineral is consumed, sold, or transported out of state.

Table VIII.3: New Mexico's Gross Value Calculations and Severance Tax Rates for Specific Minerals

	Gross value calculations		
Mineral	**Basic deduction**	**Deductions for costs[a]**	**Tax rate on gross value**
Potash	33-1/3 percent of sale price or value	50 percent of the 33-1/3 percent	2-1/2 percent
Silver	80 percent of sale price or value	50 percent of published price	One-fifth of 1 percent
Copper	66-2/3 percent of published price	50 percent of published price	One-half of 1 percent
Lead, zinc	66-2/3 percent of published price	50 percent of published price	One-eighth of 1 percent
Gold	100 percent of published price	50 percent	One-fifth of 1 percent
Molybdenum	100 percent of value (not below market value)	50 percent	One-eighth of 1 percent
Uranium	Actual sale price per pound of U_3O_8 in ore[b]	50 percent	3-1/2 percent

[a]Rental and royalty payments due the state and the United States and costs of hoisting, loading, crushing, processing, and beneficiation (processing to regulate size or remove impurities) are also deducted before the tax is computed for all minerals except uranium.

[b]U_3O_8 is processed uranium concentrate called "yellowcake."

Oregon's Requirements Governing Mining and Related Royalties and Taxes

Authority to Prospect and Mine on State Lands

All persons must obtain authorization from the state in order to conduct mechanized exploration and to mine minerals on state land. They must obtain a prospecting permit from the Division of State Lands in order to conduct mechanized exploration and an exploration permit from the Department of Geology and Mineral Industries to drill to depths greater than 50 feet. In order to extract and produce minerals, a mining lease and an operating permit must be obtained.

Mineral Prospecting Permit

Persons must obtain a prospecting permit before they may conduct mechanized exploration operations on land or mineral rights owned by the state and under the jurisdiction of the Division of State Lands. Permits authorize the exclusive use of the land. Persons must pay a $50 fee when applying for a permit and an annual fee during the length of the permit of $.50 per acre. They must also obtain $500,000 worth of insurance and a bond, set on a case-by-case basis.

Permits are issued for 3 years. In the event that a discovery is not obtained during the initial term of a permit, the Division may renew the permit for an additional 3 years provided that the permittee (1) pays an annual permit renewal fee of $5 per acre, (2) has commenced actual drilling before the expiration date of the initial term and agrees to continue exploration with due diligence, and (3) submits an exploration operations budget with planned expenditures equal to or exceeding nine times the annual permit fee and an exploration plan approved by the state geologist.

Permittees have the preferential right to a mineral lease if they certify that they have discovered a valuable mineral deposit and that they will begin commercial production. They must also provide personal, environmental, and technical data as required.

Exploration Permit

Any person engaging in exploration that disturbs more than one surface acre or involves drilling to greater than 50 feet must apply for and obtain an exploration permit. A fee determined by the Department of Geology and Mineral Industries, which may not exceed $400, must accompany the application. The Department may renew the permit annually provided the person does not violate any state regulations and pays a renewal fee that may not exceed $300.

Mining Lease

No person can extract, mine, and remove any mineral resources in commercial quantities from state land without a lease. Persons with a prospecting permit may apply to the Division of State Lands for a lease upon proof of discovery. They may apply for up to four mineral leases of not more than 640 acres each. Except for good cause shown, no mineral lease will be issued for a tract less than 40 acres. Persons must pay a $50 fee when applying for a lease.

Mineral leases are issued for a primary term of 10 years. The lessee may renew the lease for successive 10-year periods up to a maximum of 50 years if royalties from minerals produced during any year of the primary term equal or exceed twice the annual rental due under the lease.

Lessees must pay an annual rental of $1 per acre. A lessee must also spend at least $1 per acre during the first year, $2 per acre during the second year, and $3 per acre for every year thereafter for approved development work.

Operating Permit for Surface Mining

Miners must obtain an operating permit from the Department of Geology and Mineral Industries before engaging in surface mining, and a separate permit is required for each surface mining operation. The application must be accompanied by a fee established by the State Geologist in an amount not to exceed $575. Thereafter, the permit holder must pay the Department an annual fee established by the State Geologist in an amount not to exceed $425 for aggregate mines. There is no limit for certain metal mines. In addition, the Department may charge an additional amount not to exceed $110 for specified inspections made at sites.

Royalties and Taxes Assessed on Mining Operations

Oregon assesses a royalty only on minerals extracted from state lands.

Assessment on State Lands

Oregon assesses a royalty on all minerals removed from state lands. Royalty rates for metallic minerals and uranium are assessed on the gross value of the minerals removed from the leased premises and sold or otherwise utilized by the lessee. The rate is 5 percent. The gross value of the minerals is the gross market value at the mine's mouth. If the minerals are not sold in raw form but are furnished to a plant owned by the lessee, the gross market value may be determined by an appraisal of values for minerals of like quality and quantity. For nonmetallic minerals, the Director of the Division of State Lands determines the royalty as a rate per ton based on the determination of what is fair and reasonable under the particular lease to be issued. Lease rentals paid each year are deducted from royalties that accrue during the year.

Utah's Requirements Governing Mining and Related Royalties and Taxes

Authority to Prospect and Mine on State Lands

In Utah persons must obtain a mineral lease to prospect on and produce minerals from state lands. The Division of State Lands and Forestry issues separate leases for the following classifications of minerals: metalliferous minerals, potash, phosphate, gemstone and fossil, gypsum, and gilsonite.

Leases are issued for a primary term of 10 years. However, if mining operations are being diligently pursued at the end of the term, the lease term is automatically extended for an additional 2 years. Mineral leases cannot exceed 2,560 acres. Also, lessees must pay an annual rental fee of $1 per acre, with a minimum annual rental of $20 for each lease. The rental fee is credited against production royalties that accrue during the year. Also, a $30 fee must accompany all applications for leases.

Royalties and Taxes Assessed on Mining Operations

Utah imposes a royalty on minerals extracted from state-owned land and a tax on metalliferous minerals extracted from any lands in the state, whether federal, state, or private.

Assessment on State Lands

Utah charges annual production royalties on minerals extracted from state lands. The royalties are fixed percentages that are assessed on various tax bases, such as gross value and market price. (See table X.1.)

Table X.1: Utah's Royalty Rates on Mineral Commodities

Mineral	Royalty
Metalliferous minerals:	
Fissionable	8 percent of the gross value of the ore sold[a]
Nonfissionable	4 percent of the gross value of the ore sold
Potash	2 percent of the market price[b]
Phosphate	5 percent of the market price
Gemstone and fossil	10 percent of the gross market value[c] and at least $5 per acre
Gypsum	5 percent of the market price
Gilsonite[d]	10 percent of the market price

[a]The gross value of the ore sold is the gross value of the ores produced from the leased lands and sold by the lessee under an arms-length contract.

[b]The market price includes all bonuses and allowances received by the lessee at the point of shipment from the leased premises of the first marketable products produced from the leased substances and sold under a bona fide sales contract.

[c]The gross market value of the minerals mined or extracted is measured at the mine site.

[d]Gilsonite lessees can petition to amend their royalty rate according to the size of the vein being mined.

Assessment on All Lands

Persons mining metalliferous minerals from state, federal, and private lands in the state must pay a severance tax equal to 2.6 percent of the taxable value of all metalliferous minerals shipped out of the state, or otherwise disposed of. For all metalliferous minerals sold or otherwise disposed of, except beryllium, the taxable value is 30 percent of the gross proceeds received from the sale. For metalliferous minerals sold and shipped out of the state in the form of ore, the taxable value is 80 percent of the gross proceeds. For beryllium, the taxable value is 20 percent of the gross proceeds received. Gross proceeds, although determined somewhat differently depending on whether the minerals are disposed of through a bona fide sales contract, by shipment out of the state, or by other specified means, are the amount the producer receives from the sale. Each mine is allowed an annual exemption from the payment of the tax on the first $50,000 in gross value of the minerals.

Washington's Requirements Governing Mining and Related Royalties and Taxes

Authority to Prospect and Mine on State Lands

In Washington persons must obtain a mineral prospecting lease to prospect for minerals on state lands. The lease gives the lessee a preference over all others in obtaining a mining contract, which is required before extracting minerals.

Mineral Prospecting Lease

Persons may apply for and hold one or more mineral prospecting leases for state land in Washington. Applicants must pay a $25 fee when applying for a lease. A prospecting lease grants the lessee the right to prospect on that land, but it does not grant the lessee the right to extract minerals for commercial sale or use. Washington issues mineral prospecting leases for up to 7 years. After 7 years any prospecting lease not converted to a mining contract expires and cannot be renewed for at least 1 year. Also, a prospecting lease cannot generally exceed 640 acres.

Lessees must also pay an annual rental. The annual rental for the first through the third year is $2 per acre or $100, whichever is greater. For the fourth through the seventh year, the rent is $3 per acre or $120, whichever is greater.

Lessees must annually perform upon the land at least $3 per acre of work that contributes directly to the mineral evaluation of the property. The lessee may make a cash payment to the state in lieu of the work but may not do this for more than 3 years during the term of the lease. Any development work in excess of $3 per acre may be applied to the next succeeding year.

Mining Contracts

Lessees must obtain a mining contract before commercial mining can begin. Mining contracts are issued for a 20-year term and may be renewed for a subsequent 20-year term if the mine is producing. The prospecting lessee has a preferential right to obtain a mining contract on the leased land. A fee of $25 must accompany all applications for mining contracts. Just as with the prospecting lease, the amount of land contracted cannot generally exceed 640 acres.

Contract holders must annually perform upon the land at least $5 per acre of work that contributes to mineral development and production from the property or may make a cash payment to the state in lieu of performing the development work. Development work in excess of the total work requirement may be applied to the next succeeding year.

Royalties and Taxes Assessed on Mining Operations

Washington imposes a royalty on minerals extracted from state lands and a Business and Occupation Tax on all persons who extract and sell minerals from all lands in the state, either federal, state, or private.

Assessment on State Lands

Mining contract holders must pay an advance minimum royalty yearly. The royalty for the first through the fifth year of the contract is $5 per acre or $250, whichever is greater. The royalty for the sixth through the 10th year is $10 per acre or $500, whichever is greater, and the royalty for the 11th through the 20th year is $20 per acre or $1,000, whichever is greater.

Contract holders must also pay a percentage of the miner's gross receipts as a production royalty. The rate is the effective rate at the time the prospecting lease was signed. The current rate is 5 percent. Gross receipts include all bonuses and allowances received at the sale of the first marketable minerals produced from the contracted premises, less a deduction for approved transportation costs. The production royalty is payable on all materials or associated products mined or removed. The miner's advance minimum royalty payments are credited toward production royalties payable during the contract year for which the advance minimum royalty is paid. However, for certain specified materials, such as industrial minerals, the royalty is based on the volume removed.

Assessment on All Lands

All persons who engage in business in the state must pay the Business and Occupation Tax. Miners are classified as both extractors and either retailers or wholesalers when they sell the minerals they extract. While miners are classified in two taxable categories—extractors and retailers or wholesalers—they pay only the larger tax. They receive a multiple activities tax credit that cancels the extractor tax on any minerals sold at retail or wholesale. Miners who extract minerals from the land either directly or by contracting with others, must pay an extractor Business and Occupation Tax equal to .484 percent of the gross proceeds of the sale of the products and byproducts extracted, regardless of whether the products are used or sold inside or outside of the state, plus any subsidies or bonuses received from the purchaser. In some circumstances, such as a sale for less than market value, the taxable amount must be approximated.

Every person who sells to final consumers in the state must pay a retailing Business and Occupation Tax equal to .471 percent of the gross sales proceeds, while every person who sells to persons who will resell them in the normal course of their business must pay a wholesaling Business and Occupation Tax equal to .484 percent of the gross sales proceeds.

Wyoming's Requirements Governing Mining and Related Royalties and Taxes

Authority to Prospect and Mine on State Lands

In Wyoming persons must obtain a mineral lease to explore for and produce minerals and any other subsurface resource under state land. The state issues separate leases for each tract of land and for each class of mineral resources. The nonfuel mineral classes are defined as (1) bentonite, (2) zeolite, (3) gold, silver, diamonds, and precious minerals or metals, and (4) metallic and nonmetallic rocks (this class includes trona, uranium, and most other minerals for which no separate lease is available).

Leases for subsurface resources are issued for a primary term not exceeding 10 years, as determined by the State Board of Land Commissioners. Lease terms may be extended in 10-year increments beyond their primary term if minerals are actually being produced from the land or if the lessees show that they are committed to or are in the process of developing the land's mineral resources. Lessees must pay a $25 fee when applying for a lease.

Lessees must also pay an annual rental payment on all classes of leases. The rental payment is $1 per acre for each of the first 5 years and $2 per acre for the remaining years of the primary term.

Royalties and Taxes Assessed on Mining Operations

Wyoming imposes a royalty on minerals extracted from state-owned lands and an excise tax and a gross products tax on the value of minerals extracted from any lands in the state, whether state, federal, or private.

Assessment on State Lands

Wyoming charges an annual royalty on minerals extracted from state lands. The royalty for some minerals varies according to the mineral's price per ton. For example, bentonite is assessed a per ton royalty that increases as the average sales price per ton increases. (See table XII.1.)

Table XII.1: Wyoming's Royalty Rates Assessed on Bentonite

Average sales price for bulk bentonite products	Cents per ton royalty rates
$15.00 - $20.99/ton	$.55/ton
$21.00 - $23.99/ton	$.60/ton
$24.00 and above	$.60/ton plus $.05/ton for each dollar or fraction thereof above $24

Royalties on other specified minerals are assessed at a fixed percentage. However, the base value on which they are assessed varies according to the mineral. (See table XII.2.)

Table XII.2: Wyoming's Royalties Assessed on Other Specified Minerals

Mineral	Royalty
Zeolite	10 percent of gross sales value but not less than $.30 per ton
Uranium	5 percent of the value of the ore mined
Trona, potash, phosphate, etc.	5 percent of gross sales value

Royalties on other unspecified minerals are assessed on the adjusted sales value per ton. (See table XII.3) The adjusted sales value is determined by multiplying the gross sales value per ton[1] by a price index factor.[2] The royalty rate increases as the adjusted sales value per ton increases, and the actual dollar amount of the royalty payment is the product of the royalty rate and the gross sales value. The Board of Land Commissioners can reduce these royalty rates for specific leases if necessary to continue economic production of the mineral.

Table XII.3: Wyoming's Royalties Assessed on Other Unspecified Minerals

Adjusted sales value/ton	Royalty
$00.00 to $50.00	5 percent
$50.01 to $100.00	7 percent
$100.01 to $150.00	9 percent
$150.01 and up	10 percent

Assessments on All Lands

Wyoming imposes an excise tax for the privilege of severing any valuable deposit of nonfuel minerals in the state. The tax is assessed at 2 percent of the value of the gross product extracted from the land. This value is defined as the fair cash market value of the minerals at the mouth of the mine before any processing functions are performed less any deductions and exemptions allowed by Wyoming law. Uranium and bentonite are valued differently under state law.

In addition to the above excise tax, the state assesses an additional excise tax on uranium and trona. The tax is 2 percent for uranium and

[1]The gross sales value per ton is obtained by dividing the actual sales value of marketable products by the tons of ore processed to produce the products sold.

[2]The price index factor is obtained by dividing the Bureau of Labor's constant price index for the month and year of the lease by the current price index for the month for which the royalty is calculated.

3-1/2 percent for trona, and it is assessed on the value of the gross product extracted . However, through 1994 uranium will be exempt from excise taxation as long as its market price does not exceed $17 per pound for 6 months or more.

In addition to the above excise taxes, Wyoming imposes a county gross products tax, also based on the value of the gross product extracted from the land as described above. The county gross products tax is computed by multiplying the value of the gross product extracted by the appropriate mill levy from the county where the mineral was produced. These mill levies, set by the counties each year, generally range from 60 to 80 mills (from 6 percent to 8 percent). This tax is billed and collected by the counties.

Australia's Requirements Governing Mining and Related Royalties and Taxes

In 1991 Australia's total mineral production amounted to $20 billion—about 5 percent of its $440-billion gross domestic product. The Bureau of Mines estimates that Australia ranks fifth in the value of nonfuel mineral production after the former Soviet Union, the United States, the Republic of South Africa, and Canada. In 1990 it was the world's leading producer of alumina, bauxite, diamond, ilminite, mined lead, monazite, opal, rutile, sapphire, and zircon. Australia is also among the world's leading exporters of alumina, coal, ilmenite, refined lead, monazite, rutile, and zircon. Total mineral exports in 1991 amounted to about $21.6 billion, with coal accounting for the largest share of mineral exports—about $5 billion. Other important exports are aluminum—mainly alumina and bauxite—gold, and iron ore.

Governmental Structure

The Commonwealth of Australia is a national federation of six states—New South Wales, Victoria, Queensland, South Australia, Western Australia, and Tasmania—and two federal territories—Northern Territory and Australian Capital Territory. Governing powers and responsibilities are divided between the national and the state and territorial governments. Collectively these governments are referred to as the Crown.

Mineral Ownership

Minerals, including minerals located under privately owned land, are generally owned by the Crown. An important feature of Australian Crown ownership is that Crown mineral resources located in the states and territories are owned by the states and territories rather than the national government. The relevant state/territory government owns minerals found onshore or offshore within the 3-mile territorial limit. There are exceptions to state/territory mineral ownership; the most important occurs in the Northern Territory, where the Commonwealth government retains property rights for uranium. Minerals found beyond the 3-mile limit or in the external territories are the property of the Commonwealth.[1]

Obtaining Authority to Prospect and Mine

Because the Crown owns minerals on Crown and private lands, the minerals and the land above them may be held by different entities. In general, where a potential developer desires access to unoccupied Crown land, the main consideration in determining whether to grant authority to explore or mine is whether access for mining conflicts with other potential public uses of the land, such as for forestry or national parks. In the case

[1]External territories under Australian administration include Norfolk Island, the Ashmore and Cartier islands, the Heard and McDonald islands, the Cocos Islands, Christmas Island, and the Australian Antarctic Territory.

of occupied Crown or private land, authority to mine may be granted provided that agreement has been reached between the miner and the current occupier or owner. As a general rule, private landowners have no veto over mineral development on their property, but they are entitled to compensation for damages to their land. However, they are not compensated for the mineral extracted.

Consistent with its right of mineral ownership, each state and territory has its own mining acts and regulations governing the exploration for and extraction of minerals on Crown and private land. Mining acts cover matters such as leases, licenses, and permits for prospecting, exploration, and mining.

State and territory acts and regulations are similar in principle—they provide for a miner's right to prospect and for obtaining mining leases for mineral production. Generally, these acts and regulations are intended for small-scale and labor-intensive mining. According to the Australian Bureau of Statistics, some jurisdictions have modernized their laws, but in many respects they remain unsuited for large-scale, capital-intensive modern mineral development.

Examples of Updated Mining Laws

Western Australia, a leading mining state, updated its mining laws and regulations with the Mining Act of 1978 and Mining Regulations 1981 of Western Australia. Under the act and regulations, miners must apply for a prospecting or exploration license, which allows them to occupy land in return for a nominal fee. A prospecting license is required for developments of less than 200 hectares.[2] The license has a 2-year term that may be extended for a further 2-year period. Minimum expenditures of $A40 (Australian dollars) per hectare, with a cumulative expenditure of $A2,000 per license, are required during each year.[3] An exploration license is required for developments larger than 10 square kilometers. The license is for a 5-year period extendable in exceptional circumstances for 1-year periods. It requires minimum expenditures of $A300 per square kilometer, with a cumulative expenditure of $A20,000 for the exploration license per year. A rent of $A18 per square kilometer—about $A0.07 per acre—is also payable annually.

To produce minerals in Western Australia, miners must obtain a mining lease, which generally gives the lessee title to the minerals. The lease is

[2]One hectare = 10,000 square meters.

[3]In 1991, $1 Australian equaled $.7791 U.S.

granted for 21 years and is renewable, though not as a matter of right, for successive periods of 21 years. The lessee must expend $A100 per hectare with a minimum of $A1,000 per year and pay a rent of $A6 per hectare. The area under lease may not exceed 10 square kilometers.

In 1990 Victoria also revised and streamlined its mining laws and regulations by enacting the Mineral Resources Development Act. The act requires an exploration license to conduct activities such as geological, geochemical, and geophysical surveying. The exploration license may be issued for 2 years and may be extended, but it does not permit mining. Mining requires a mining license, which may be issued for a term of up to 20 years and requires a two-step approval. The first step is application for and granting of the mineral rights under the act. The second step, designed to ensure that the landowner's rights and the environment are protected, requires the operator to obtain the planning permits and other approvals necessary to carry out mining.

Ratified Agreements for Large-Scale Mining

The Australian Bureau of Statistics, in its annual publication entitled Year Book Australia 1991, points out that the inadequacy of existing laws to provide for modern mining has increasingly resulted in contracts for large-scale mineral development that are negotiated outside the terms of the mining laws and are then ratified by acts of the state legislature. These agreements, commonly known as "ratified agreements," have been used for iron ore production in Western Australia, for coal and bauxite in Queensland, and for bauxite in the Northern Territory. These agreements provide authority to prospect over a defined area and specify the prospecting methods, amount of money to be spent, and the tenure of the agreement. The tenure of such agreements is usually limited to 1 or 2 years, and if the agreement is renewed for a further period, it is only for a selected portion of the original area—usually 50 percent. Unless specifically stated in the agreement, the discovery of minerals gives the discoverer no legal rights except the right to apply for a mining lease for the area in which the discovery was made.

Royalties

The Australian national government, although it could, does not generally assess a royalty on minerals mined in the states and territories, except in special cases such as for uranium mined in the Northern Territory. Each state and territory does assess a royalty on minerals production. There is little uniformity in either the royalty rates or the royalty methods.

The most commonly used royalty methods in Australia are based on output. These are (1) a specific royalty levied as a dollar amount per unit of output, such as tonnes of ore, concentrate, or contained metal, or (2) an ad valorem royalty that is levied as a percentage of the value of output. Occasionally, profit-based royalties are also used. These royalties are levied on assessed profits, that is, the gross value of production less certain costs. The royalty method used for each state and territory is listed in table XIII.1

In recent years an important basic change has occurred in the system of establishing royalties. State governments commonly negotiate special royalty rates with companies that are seeking mineral leases for large-scale developments. The royalty rates may vary depending on factors such as whether the production is for export or for domestic processing. Some of these rates are shown in the exception column of table XIII.1.

Table XIII.1: State and Territorial Royalty Systems in Australia

State	Metallic minerals	Nonmetallic minerals[a]	Main exceptions
New South Wales	4 percent ad valorem or specific rates ($0.35 per tonne[b] bauxite, iron ore)	$0.25 to $0.85 per tonne	Broken Hill Mine: 20 percent (variable) profit Cobar Mine: progressive profit
Victoria	2.75 percent ad valorem	$0.70 to $2.30 per tonne	Gold exempt
Queensland	Greater of 2 percent ad valorem or 5 percent profit	$0.25 to $1.00 per tonne	Bauxite: greater of 10 percent ad valorem or specific rate. Mt. Isa Mine: specific rate (min. $1.00 per tonne)
South Autralia	2.5 percent ad valorem	5 percent ad valorem	Roxby Downs Mine: 2.5 percent ad valorem plus profit component
Western Australia	Approx. 10 percent ad valorem (ore value)	$0.30 or $0.50 per tonne	Argyle Mine: greater of 7.5 percent ad valorem or 22.5 percent profit Gallum: 25 percent ad valorem Gold exempt Mineral sands: 5 percent ad valorem (min. specific rate)
Tasmania	1 percent ad valorem plus profit component	$0.50 to $5.00 per unit (tonne or cubic meter)	Hellyer Mine: 2.5 to 3.5 percent ad valorem plus profit component
Northern Territory	18 percent on profit over $50,000	1.25 percent on Crown or private land or 2.5 percent on Aboriginal land	Alumina/Bauxite: $0.40 or $0.50 per long ton Copper: 1.25 percent ad valorem Tin: 1.25 percent ad valorem (or 2.5 percent on Aboriginal Land) Uranium: 1.5 percent ad valorem to Territory (plus 4.25 percent to Commonwealth)
Australian Capital Territory[c]	1 percent ad valorem	$0.20 per cubic meter for sand and gravel	Australian Capital Territory is a small territory with little mining

[a]Nonmetallic minerals do not include coal, oil, and gas.

[b]A tonne is a metric measure equal to 1.102 short tons.

[c]Australian Mineral Industry Annual Review for 1986.

Source: Mining and Minerals Processing in Australia, Vol. 3, Feb. 25, 1991.

Taxes

As is the case with other countries, Australia assesses an income tax on businesses, including mining operations. Federal income tax for companies is imposed at the rate of 39 percent. Before January 1, 1991, gold had been exempt from income tax. As of that date income from gold mining also became subject to federal income tax. The tax has several special features for mining. Mining activities can deduct certain capital expenditures rather than using the normally available depreciation provisions, and exploration expenses can be fully deducted for calculating assessable income. The states and territories do not assess an income tax.

Canada's Requirements Governing Mining and Related Royalties and Taxes

In 1991 Canada's total mineral production was worth $30.4 billion. Mineral production accounted for 5.2 percent of Canada's $582.1-billion 1991 gross domestic product. Canada ranks fourth in the value of nonfuel mineral production; gold, copper, nickel, zinc, and iron ore are the leading nonfuel minerals by value. It was the world's third largest copper producer with production valued at $1.8 billion. It was also the fifth largest gold producer with production valued at $2.1 billion. Canada is also a leading nonfuel minerals exporter. Such mineral exports accounted for about $10.7 billion in 1991. Gold and copper were two of Canada's largest value nonfuel mineral exports during that period.

Governmental Structure

Canada is a federation of 10 provinces—Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward Island, Quebec, and Saskatchewan—and two territories—Northwest Territories and Yukon Territory. The central authority is the federal government of Canada. Each province has its own government, which exercises a large degree of autonomy in specifically defined areas such as education, roads, and administration of mineral rights. Collectively, these governments are referred to as the Crown. The territories are administered by the federal government, although they have local elected councils.

Land and Mineral Ownership

Ninety percent of Canada's entire land mass is made up of Crown lands—Canadian public lands. In general the provincial legislatures control Crown lands within the provinces, and the federal government controls Crown lands in the territories as well as in Canada's offshore areas, except for certain offshore areas where it shares jurisdiction with adjacent provinces.

The Crown owns the rights to most minerals—those on Crown lands and those on most private lands. The cases where minerals are privately held generally derive from early land grants in which the title to minerals was transferred with title to land. Currently, when the Crown sells land, it retains the minerals rights.

Title to minerals on Crown lands in the provinces is vested in the provincial governments. Title to minerals in the Northwest Territories, the Yukon, Indian Reserves (in trust), and national parks is held by the federal government. Each of the provincial governments has its own mineral laws, but mineral activities in the territories are governed by federal statutes, although those statutes are different for the Northwest Territories and the Yukon Territory.

Obtaining Authority to Prospect and Mine

In general, those wishing to prospect for minerals owned by the Crown must obtain a prospecting or exploration license and, for private land, may have to obtain permission of the surface owner. The license generally grants a right to explore for minerals and may allow the extraction of limited quantities for testing, but not for sale. The license term may vary from 1 year to the life of the licensee. One exception to these requirements is the Yukon Territory, which does not require prior government approval to prospect for minerals.

Some provinces allow persons to obtain the exclusive right to explore for minerals in specific areas. In New Brunswick and Quebec persons can obtain exclusive exploration rights by obtaining a mining claim. Their terms are 1 year and 2 years, respectively. In Manitoba an exploration permit grants exclusive prospecting rights for 3 years. Claims and permits can usually be renewed provided annual assessment work is done.

Those wishing to extract and sell minerals in the provinces must obtain a lease. Lease terms vary by province. For example, the lease terms in Alberta, Nova Scotia, and British Columbia are 10, 20, and 30 years, respectively. A rental fee is often charged for leases on Crown lands. In the Yukon Territory a claim rather than a lease gives the claim holder the right to the minerals on the claim.

Governmental Revenues From Mining

The provinces and territories impose special levies—variously called taxes, duties, or royalties—on mining. Most of the provincial mining levies bear some resemblance to a tax on profits rather than output. The federal government, except for the territories, does not assess such mining taxes. The federal government and the provinces and territories also assess business income taxes. Since the royalties are not deductible in computing the taxable profits or other base to which the income taxes are applied, an operator's total tax burden is the total amount of these separate royalties and taxes.

Royalties

In general, the provinces (and the Canadian government with respect to the territories) impose a tax—similar to a royalty—on profits derived from mining operations. The general approach for computing the tax is to determine a mining company's total income from mining and processing operations and to deduct a processing allowance to arrive at the income which, in theory, is attributable only to the extraction of ore. Specifically enumerated expenses are also deducted to arrive at the annual profit. All operating expenses of the mine, mill, smelter, and other installations that have been incurred to realize the gross value of minerals are allowable expenses.

The individual provinces levy their profit-based royalties in various ways:

- British Columbia has a two-stage tax that is intended to begin taxing a mine when the operator begins to have a positive cash flow. The first stage requires all operators to pay a minimum tax on net current proceeds—the current year's gross revenue less current operating costs. The tax is 2 percent for metals and industrial minerals and 7.5 percent for coal. The second stage of the tax is assessed on net revenue—the cumulative profit, which includes all revenues and costs, including capital costs to date. The stage-two tax is 13 percent of net revenues for metals and 17.5 percent of net revenue for coal. The stage-two tax is intended to recognize that a large capital investment is required at the beginning of a mine's life and that these costs must be recovered before this tax is payable. The cumulative stage-one tax is creditable against stage-two tax. It is thus a minimum tax that can be recovered totally from the stage-two tax.
- Alberta's statutes and regulations are also intended to recognize the intensive capital investments of the early years of a mine's life and to allow lessees to recover their capital costs before full royalties are assessed. The royalty rate is 1 percent of mine-mouth revenue until total allowable capital and start-up costs are recovered. A 12-percent net profits royalty is payable after costs are recovered subject to a minimum royalty of 1 percent of mine-mouth revenue.
- Ontario imposes a flat tax of 20 percent of mining profits on every mine whose profits for the year from mining operations exceed $500,000. In addition, for tax years ending after May 20, 1987, Ontario provides a 3-year tax holiday for new mines and major mine expansions.
- The Northwest Territories exempts income of the first 36 months after production starts and then imposes an escalating royalty for operations producing more than $10,000 of output. The royalty rate increases as output increases—from 3 percent for production between $10,000 and $1 million to a maximum of 12 percent for production over $40 million.

The royalties and mining taxes for the provinces and territories are summarized in table XIV.1.

Table XIV.1: Royalties and Mining Taxes by Province and Territory

Province	Mineral	Royalty/tax
British Columbia	Metals, industrial minerals (asbestos, graphite, mica, phospate, sulphur, and others), and coal	2 percent on net current proceeds until capital costs are recovered (7.5 percent for coal) 13 percent on net revenues after capital costs are recovered (17.5 percent for coal)
	Other minerals (sand, gravel, limestone, marble, shale, and others)	12.5 percent of taxable profits
Alberta	Metallic minerals	1 percent of mine-mouth revenue until capital and start-up costs are recovered 12 percent of net profits after costs are recovered, subject to a minimum 1 percent of the mineral's value before processing
	Industrial minerals (limestone, shale, granite, slate, gypsum, and building stone)	$4.41/tonne[a]
Saskatchewan	Uranium	5 percent on gross value of sales plus graduated royalty levied on annual profits after capital recovery
	Most minerals	12.5 percent of net profit
	Sand and gravel:	
	Shipped raw	6 percent of selling value
	Processed	15¢/cu. yard
	Other quarriable substances:	
	Shipped raw	2 percent of selling value
	Processed	5¢/cu. yard
	Potash	A monthly base of $11/tonne adjusted by an index factor, plus a profit-based tax $ Profit/tonne $0-$35 (15% tax rate) 35 $35-$65 (35% tax rate) over $65 (50% tax rate)
Manitoba	Metallic minerals	20 percent of mining income—mining profits are tax exempt until capital costs are recovered
	Quarriable minerals	6¢-75¢/tonne depending on mineral
Ontario	Most minerals (excludes limestone, marl, peat, clay, building stone, sand and gravel, and some sodium chloride)	20 percent on profits for mining operations whose profits exceed $500,000 for the year Ontario has a 3-year tax holiday for new mines and major operations for tax years ending after May 20, 1987
Quebec	All minerals	18 percent on annual profits attributable to extraction of ore
New Brunswick	Most minerals (excludes coal, shale, limestone, granite, slate, marble, gypsum, salt, potash, clay, gravel, sand, and others)	2 percent royalty on net revenue, plus a 16-percent tax on net profit in excess of $100,000

(continued)

Province	Mineral	Royalty/tax
Nova Scotia	Barite	15¢/short ton
	Gold	1 percent of net value
	Silver	1 percent of net value
	Celestile	2 percent of net value of concentrated produce
	Dolomite	2 percent of net value at mine
	Limestone	2 percent of net value at mine
	All minerals	The Minister may impose an alternative royalty of the greater of 2 percent net smelter return or 15 percent of net income
	Gypsum	33.3 percent of annual income for operations with annual income over $5,000
Newfoundland	Minerals including coal but excluding petroleum	15 percent on first 80 percent of mining income and 20 percent on the remaining 20 percent of income
	Iron ore and limestone (not for agricultural purposes)	The greater of: 5 percent of net profits or 10¢/ton of minerals mined, plus 10¢/ton of limestone quarried
Northwest Territories	Metallic and nonmetallic minerals (excluding fuel, building materials, etc.)	Net value of output Less than $10,000 (0% tax rate) $10,000 to $1 million (3% tax rate) Above $1 million to $5 million (5% tax rate) Above $5 million to $10 million (6% tax rate) Over $10 million (a proportional increase of 1 percent for each $5 million to a maximum of 12 percent)(6-12% tax rate) No royalties are payable for 36 months after a mine commences production
Yukon Territory	Gold	2.5 percent of the value of gold shipped from Yukon; gold value is designated by the Governor-in-Council to be $15/oz.
	Precious and base minerals (excludes industrial minerals such as limestone, marble, clay, gypsum, stone, sand, and gravel)	Net value of output Less than $10,000 (0% tax rate) $10,000 to $1 million (3% tax rate) Above $1 million to $5 million (5% tax rate) Above $5 million to $10 million (6% tax rate) over $10 million (a proportional increase of 1 percent for each additional $5 million)

[a]A tonne is a metric measure equal to 1.102 short tons.

Source: Canadian Mining Taxation, Robert B. Parsons, 1990.

Taxes

As is the case with the other countries in this report, the Canadian federal government levies an income tax on businesses, including mining. In addition, each province and both territories impose an income tax, generally along the lines of the federal income tax.

The Canadian federal corporate income tax is levied on taxable income, generally at a rate of 38 percent, which is reduced by a 10-percent abatement designed to allow for provincial corporate income taxes. Thus, the effective net rate of basic federal income tax is generally 28 percent. The provincial income taxes generally are based on provisions in the federal tax law, although Alberta, Ontario, and Quebec have their own comprehensive income tax laws, which include some significant deviations from the federal legislation. The provincial tax rates vary from 5.5 percent to 17 percent.

South Africa's Requirements Governing Mining and Related Royalties and Taxes

In 1991 South Africa's crude mineral sales amounted to $15.8 billion—about 16 percent of South Africa's $96.6 billion gross domestic product—and its primary (nonprocessed) mineral exports were worth about $12.5 billion. South Africa is estimated to rank third in the world in the value of nonfuel mineral production and is a world leader in the production and supply of minerals such as gold, platinum, chrome, manganese, andalusite, vanadium, uranium, fluorspar, asbestos, antimony, and vermiculite. Gold accounted for about $7 billion worth of South Africa's exports; coal, platinum-group metals, and diamonds were the next most valuable mineral exports.

Governmental Structure

The Republic of South Africa has a highly centralized government, with authority divided between its national government and four provinces—Transvaal, Orange Free State, Natal, and Cape. The provinces have appointed administrators responsible for providing services such as health and environmental protection.

Mineral Ownership

Mineral ownership in South Africa is governed by the common law principle that the owner of the land owns everything on top of the land and everything beneath it. Thus, the minerals or proceeds thereof are generally attributable to the owner of the respective piece of land. Most mineral rights are privately owned, and it is an exception for the state (the national government) to own mineral rights. While no accurate data exist on the percentage of state-owned mineral lands, an estimate made in support of 1991 mining legislation is that the state owns less than 10 percent of mineral rights. Mineral rights owned by the state include minerals on state land, minerals on private land where the state retains mineral rights, and, in exceptional cases, minerals which the state and any person hold in undivided shares. The provinces do not own mineral rights.

Authority to Prospect and Mine

The Minerals Act of 1991, which became effective on January 1, 1992, regulates prospecting and mining for state- and privately owned minerals. The act is administered by the national government's Department of Mineral and Energy Affairs, directed by a minister. The act authorized the minister to divide the country into regions, each administered by a director.

The act requires persons wishing to prospect for minerals to obtain a permit from the director of the mining region. The prospecting permit may be issued to the holder of a mining right—the owner of the land—or to one who has the holder's consent to prospect on the particular land. The prospector must also provide information on how prospecting will be carried out and how the resulting disturbance will be rehabilitated.

To obtain authorization to mine for and dispose of any mineral, a mining authorization must be obtained from the regional director. The mining authorization—either a permit or a license—will be issued if the regional director is satisfied that the mineral will be mined optimally and safely and that the disturbance will be rehabilitated. A mining permit may be issued if the regional director is satisfied that the mineral to be mined occurs in limited quantities, will be mined on a limited scale, or will be mined for a limited time. If the regional director is satisfied that there are reasonable grounds to believe that the mineral occurs in more than limited quantities, or will be mined on a larger than limited scale, and will be mined for more than 2 years, a mineral lease may be issued. The terms of permits and licenses are determined by the regional director.

Royalties

The Minerals Act of 1991 contains no provision for the payment of a lease consideration or state share of profits to the national government under any mining authorization issued. Thus, starting on January 1, 1992, the national government no longer assessed a share of profits or a royalty on new operations. However, the royalty or national government share of profits on existing mining leases continues to be payable for a period of 2 years from the commencement of the Minerals Act of 1991 (i.e., until Dec. 31, 1993). The provinces do not assess royalties on minerals mined within their boundaries.

Before the Minerals Act of 1991, those mining state-owned precious (gold, silver, platinum, and platinum-group metals) and base (all other metals and minerals except precious stones and oil) minerals, as well as privately held precious metals, were required to pay a royalty or a share of their profits to the state. Those mining for base minerals on privately owned land were not required to pay a rent, a share of profits, or a royalty to the national government for the right to mine. The 1991 act eliminated the royalty provisions of prior legislation in order to attract more investment into mining and permit lower-grade ore to be economically exploited, according to a South African official.

The royalty rate varied for precious metals and base minerals. Precious metals are gold, silver, platinum, and any other metals of the platinum group and include the ores of these metals. Base minerals comprise all other metals and minerals with the exception of precious stones and oil. The royalty rates for precious metals were based on a sliding scale designed to increase the rate payable as profits increased. The rates were determined through one of two formulas. The primary formula allowed the first 6 percent of income to be exempt from payment, while the second formula, authorized in certain cases, exempted the first 8 percent of income. By applying the primary formula, for example, a mine with the first 6 percent of profit exempt and a 20-percent rate of profit, would pay a royalty of 10.5 percent. A mine with a 40-percent rate of profit would pay a royalty of 12.75 percent.[1]

For base minerals occurring on state land, the Mining Leases Board, created by the Mining Rights Act of 1967 to administer various aspects of the act, established a royalty based on a percentage of the selling price. Depending on circumstances, the rate could vary from 1 percent to 4 percent of the "Free on Mine" selling price. Normally, the consideration amounted to 10 percent of profit, before tax.

Income Tax

South Africa's nonmining and mining companies are subject to an income tax. The tax rate for nonmining companies is 48 percent. The rate for mining companies mining minerals other than gold and diamonds is 50 percent of taxable income plus a surcharge of 9 percent. Gold mines pay a rate that is established through a formula, with the rate for post-1966 mines slightly lower than that for mines established in 1966 or before. The rate for post-1966 mines could approach 67 percent as a mine's taxable income from gold mining becomes an increasing percentage of its total income from gold mining. The formula ensures that more profitable gold mines pay a higher tax rate than less profitable gold mines. Mining companies have a special deduction not available to nonmining companies. Mines in production can deduct 100 percent of capital expenses in the year incurred against a mine's income. The deduction is on a mine-by-mine basis, rather than companywide. The provinces do not assess an income tax on businesses.

[1]The lease consideration with respect to precious metals is calculated according to the primary formula: $Y = a-(6a/x)$ where "Y" represents the percentage of profits payable to the state, "X" is the ratio of profits to revenue, and "a" is an allowance for the redemption of capital investment. The value of "a" is usually 15 percent or less.

Objectives, Scope, and Methodology

To assist in the congressional debate on hardrock mining policy and the Mining Law of 1872, Senator Bumpers asked us to examine how the western mineral-producing states and other major mineral-producing countries share in the proceeds from hardrock minerals extracted from their public lands.

The western mineral-producing states are Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. These are also the states with the vast majority of federal lands subject to the mining law and hardrock mining claims. To determine the extent to which mineral-producing states assess royalties or similar charges on minerals extracted from their public land, we identified and reviewed state legislation on mineral royalties (including severance taxes and similar fees). In addition, we interviewed officials in each state's department of taxation to ensure that we identified all royalties assessed on mining and to determine whether states have any specialized taxes that are imposed on mining companies. We focused on taxes that are specific to mining and did not include any taxes that would be applicable to all companies in the state, such as a sales tax.

To determine the extent to which other mineral-producing countries assess royalties on minerals extracted from their land, we chose South Africa, Canada, and Australia because they are the third, fourth, and fifth largest mineral-producing countries, respectively, after the United States and the former Soviet Union. We did not, however, review and compare with the U.S. system how these countries and their states, provinces, and territories divide responsibilities for providing and funding government services. We identified and obtained from country and Bureau of Mines officials, legislation and information on mineral royalties and specialized taxes that may be imposed on mining companies. We reviewed this information and obtained clarification through interviews with both embassy officials and specialists at the Bureau of Mines.

To identify the process by which the states and countries authorize mining on their lands, we obtained and analyzed legislation that authorizes mining in each state and country. In addition, we clarified various aspects of this information with each state's department of state lands and with each country's embassy and other officials in the selected countries.

Our work was conducted between June 1992 and March 1993 in accordance with generally accepted government audit standards.

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