

**A COMPARATIVE STUDY
OF INTERNATIONAL MINERAL TAXATION SYSTEMS:
CANADA'S COMPETITIVE POSITION**

by
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ABSTRACT

A comparative study of international mineral taxation systems: Canada's competitive position

The Canadian mining industry is a major gold, lead, zinc and copper producer in international mineral markets. For the industry which competes against many nations, the objective and role of mineral taxation continue to be major issues in the formulation of Canadian mineral policy.

In order to measure the impacts of taxation on mineral investment and to examine Canada's position, the mineral taxation systems of five countries -- Australia, Brazil, Canada, South Africa and the United States -- are compared. For this study, three hypothetical mine development opportunities are used. They are a small-size underground gold deposit, a medium-size underground lead-zinc deposit, and a large-scale open pit copper-molybdenum deposit. The comparison is based on before- and after-tax economic indicators of the projects, level and components of taxation, tax position of the company, sensitivity to revenue and inflation levels, and the relationship between tax structure and results.

The study results indicate that although Canada is considered to have a favourable taxation environment, it must monitor its mineral taxation policies and their impact on investment decisions. Also, it must maintain a stable and economically viable tax environment for investors.

RÉSUMÉ

Une étude comparative de systèmes d'imposition dans l'industrie minière: La position compétitive du Canada

L'industrie minière canadienne est un fournisseur important d'or, de plomb, de zinc et de cuivre au niveau mondial. Le Canada est en compétition directe avec plusieurs autres nations sur le marché mondial. En conséquence, l'objectif et le rôle de l'imposition minière continuent à être des sujets de discussion importants en ce qui concerne la formulation de politiques minérales.

Par une comparaison au niveau international, cette étude mesure l'impact de l'imposition dans l'industrie minière sur les investissements miniers et du fait même, examine la position du Canada relative à quatre autres grands pays producteurs de minéraux, soit l'Australie, le Brésil, l'Afrique du Sud, et les Etats Unis. Trois projets miniers hypothétiques sont utilisés pour ceci: un petit gisement d'or et un gisement de plomb-zinc de taille moyenne, à être exploités par méthodes souterraines, et un gisement de cuivre-molybdène de grande taille, à être exploité par méthode à ciel ouvert.

La comparaison se base sur plusieurs critères économiques, dont les indicateurs économiques des projets avant et après imposition, le niveau et les proportions relatives des impôts et droits miniers, la position fiscale de la compagnie minière, la sensibilité des systèmes d'imposition à l'inflation et au niveau de revenu, et finalement, les relations entre la structure d'imposition et les résultats observés.

L'étude se termine par des commentaires concernant l'implication des résultats observés, tout particulièrement en ce qui concerne la position compétitive du Canada par rapport aux autres pays producteurs, à ses provisions particulières visant à favoriser les investissements miniers, et aux perspectives futures de politique minière.

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CHAPTER 1

INTRODUCTION

1.1. MINERAL DEVELOPMENT PROJECTS AND TAXATION

A mining project involves an investment of a large amount of capital which in many respects is no different from other industrial investments. That is, a firm's capital is transferable from one project or region to another according to the profitability that the investment is expected to yield. The management must take a set of various parameters into consideration when making an investment decision. And the decision must guarantee the maximization of wealth to the firm through the use of the available funds. Therefore, the alternative circumstances in which investments can be made have to be investigated and ranked by management before any one is selected. This is a complicated process because investment and recovery of capital in a mining project is a long-term process, and the inherent high risk nature of the mining industry adds another dimension to the complexity of the investment decision.

For both mining firms and the government, it is essential to have a favourable environment within which the mining industry can be competitive internationally as well as among different industries. This also ensures a healthy environment to the mining sector which will in turn bring about economic development, employment, and promote and encourage mining-linked industrial activities. In these regards, the competitive position of a nation's mining industry can be considered a core aspect among decision parameters.

The term "competitiveness" is used by decision-makers in many different ways. These include: 1) Technology-related parameters such as productivity,

skilled work-force, efficiency of equipment, and method of operation, 2) Cost-advantages due to quality of reserves, availability of input material, deposit location, transportation, changes in exchange rate, and public incentives, 3) Market-related concepts such as export market share, proximity to existing or potential markets, consumers' perception of the industry, and 4) Other usages related to the financial capacity of the industry. However, these various usages are all ultimately related to the wealth motive of the investors as long as the decision is concerned with capital investment. Furthermore, the concern of wealth maximization is really the driving force of the private enterprise.

Canadian mining is primarily subject to higher costs due to lower grades of ores, transportation to and from remote areas, and higher North American labour costs (Drolet 1983). In an international market scene, the Canadian mineral industry has no monopoly position for any mineral commodity. It is often a price-taker in the market. Therefore, the cost structure of the Canadian mining industry, which includes taxation, should not be detrimental to its competitive position in international mineral markets.

Taxes levied on properties and operations of mining firms represent critical costs in the economic evaluation of mining investments and are an important determinant of the economic viability of an investment. Taxes affect a firm's decisions related to investment and production levels. The appropriate types and levels of taxation imposed upon the mining industry continue to be controversial issues of mineral policy, stimulating continuous discussions as economic conditions change. In fact, mineral taxation levels in Canada have fluctuated over recent years due to widely differing taxation philosophies.

This diversity of taxation is also found in provinces or states within

a country, and from one locality to another. It may also vary from one type of mineral commodity to another. Since the taxation system of a particular jurisdiction reflects its specific goals and the consideration of industrial situations within the regime, governments do not consult each other when formulating and implementating the systems. However, they can compete with one another by adopting alternative taxation policies which affect the relative economics of investment projects. Thus, all other factors being equal, when the overall burden of a taxation system is higher in one jurisdiction than in another, the regime is considered to handicap the project.

From an investor's point of view, the stability of government policies is particularly important. Because mining investment capital is mobile and transferable, management continues to search for investment opportunities with the lowest risk. Jurisdictions with long-term stability with respect to regulations and taxation will provide the investor with a favourable climate for sustained investment in the mining industry.

1.2. OBJECTIVE AND SCOPE OF STUDY

The objective of this study is to measure the impact of selected international mineral taxation systems on the economics of mine development, and to compare Canada's competitive position relative to other major mineral producers. The study does not attempt to cover all taxes that mining investments are subject to, nor does it consider services governments may provide that would offset part of the tax burden. Limitations associated with documenting such information on an international scale render the study of these aspects beyond the scope of this thesis. Rather, more realistic

objectives are to compare certain categories of national taxes of concern to the mining industry, and to evaluate the effects of particular combinations of tax rates and structures on project economics. Emphasis is placed on base and precious metal sectors; hence, this study only considers the taxation systems which relate to these metals.

Canada's competitive position in the world market is particularly important because its mineral industry is highly export-oriented, with over 70 percent of its total mineral production being traded in international mineral markets. The mining industry has a strong impact on Canada's national economy as well as on other industrial activities, through both forward and backward linkages.

The sources of competitiveness may rest on the specific circumstances in which a mineral industry operates in relation to the technological, cost and market factors cited above. This study, however, focuses on the analysis of taxation as an influential factor.

Previous studies concerned with comparative mineral taxation have dealt with topics varying from tax legislations regarding treatment of different kind of minerals, structures and levels of taxation in several regimes, as well as economic effects of taxation on sample case projects.

Gillis (1980) summarizes important features of mineral tax legislation in seventeen countries, focusing on Indonesia for comparative purposes. The summary of these tax legislations relates only to hard minerals which were at that time considered of potential importance to those countries analyzed. The study was made to provide some useful information to mining firms who wish to invest in foreign countries. Another similar survey was made by Envers (1985), with an interest in comparing tax incidence among Canadian provinces based on statutory regulations. Wilson (1984) introduced risk analysis into a simulation study of tax effects on existing mining projects

in Papua New Guinea, and examined the impacts of uncertainty on investment decisions.

Some studies are concerned with the economic impact of taxation on mining projects, and use representative mine development cases for analysis. However, until the recent past, these types of analyses have not been very common. Krige (1971) is an early exception in this regard. He computed after-tax rates of return of a specimen mine under the taxation systems of Canada, the U.S.A. and South Africa. Uncertainty elements were also taken into consideration in the study. Martin (1976) had a similar interest, but showed more concern about analyzing the situation through computer simulation. Most other studies have come very recently. Using a uranium mining project, Barnett and Anderson (1983) compare the tax regime of Saskatchewan with that of Northern Territory in Australia. Mackenzie et al. (1986) analyze the competitiveness among Canadian provinces while Davidoff (1985) compares eight U.S. states. The former (Mackenzie et al. 1986) characteristically consider locational aspects in addition to differences in taxation systems among the provinces.

Albert (1985) extends the scope of study to the international scene by including several foreign tax regimes in the analysis, adding to the comparisons among Canadian provinces, and provides some preliminary results on after-tax incentives, flow-through basis of analysis, and comparative levels of taxation.

Among the earlier studies focusing on the analysis of after-tax impacts, the ones by Krige (1971) and Martin (1976) are intended as guidelines in cases where taxation is a major factor in the decision-making process. The more recent studies contain increasingly varied objectives and are more concerned about tax structure and its implication for mineral

policy.

As stated earlier, this study consists of an analysis of the economic effects of taxation systems existing in major base and precious metal producing countries. The methodology embodied in this study includes the analysis of relative levels of tax incidence, taxation effects on project economics, the assessment of components and time patterns of tax payments in relation to the structure of the taxation system, and effects of variations in economic and market parameters. The study focuses particularly on Canada's competitive position in the context of mining investment opportunities on an international scale. Type of commodity and scale of operation are also considered.

More specifically, the study examines the taxation policies of five countries -- Australia, Brazil, Canada, South Africa and the U.S.A. These five countries have been selected because their taxation regimes incorporate, in one form or another, most of the types of fiscal instruments generally applicable to mineral projects. These countries are also major mineral producers on a world scale.

Three hypothetical mine development opportunities, considered to be representative of situations of interest in Canada, are used to carry out the necessary comparisons: a small-size underground gold project, a medium-size underground lead-zinc project, and a large-size open pit copper-molybdenum project. These potential mines are initially evaluated in four provinces in Canada and, then, in a number of other jurisdictions of the foreign countries of interest. Market price conditions and representative deposit characteristics are held constant throughout the analysis. A number of economic criteria are assessed for each study variant. Results, reflecting the competitive position of individual tax regimes, are presented and compared in chapter 6.

This study concentrates on the impact of various tax collection instruments. It does not attempt to assess the relative importance of the taxation regime compared to other factors that an investor would take into account when making an investment decision. International tax studies can be criticized because of their failure to account for environmental differences between jurisdictions. In fact, the application of the foreign taxation systems selected in this study does not include all domestic or local economic conditions of each country in question. Rather, the approach taken here is to use a set of various tax instruments currently in use in those countries and apply them to the mineral deposits located in Canada.

Mineral taxation continues to be a major issue in Canadian mineral policy, and Canadian mines are major world producers of gold, lead, zinc, and copper. Thus, the findings of this study should contribute to the ongoing policy debate on the role of taxation in determining the international competitiveness of the Canadian mining industry.

1.3. ORGANIZATION OF THE STUDY

Chapter 2 provides a general review of the concepts related to mineral taxation and their effects on mineral projects. Chapter 3 describes the methodology which is applied to assess the tax effects. Attention is given to the terms of reference of the study, the economic criteria utilized, and the stages of analysis.

The assembly of information for use in the study is discussed in chapter 4. General assumptions regarding economic outlook conditions and market considerations are outlined here. Case-specific descriptions are given for the representative gold, lead-zinc, and copper-molybdenum

projects. Following the deposit descriptions, before-tax economic indicators for the representative projects are established.

Chapter 5 briefly describes the characteristic features of the taxation systems for the countries selected. These systems are then applied to the representative mine development cases, and chapter 6 compares the study results. The after-tax economic effects are evaluated and sensitivity analysis with respect to revenue and inflation levels is carried out.

The study concludes with an assessment of the policy implications of the findings, with particular emphasis on Canada's competitive position among the major mineral producing countries.

Details on taxation rules, assumptions relating to cash flow estimate and some sample calculations of the cash flows given in the text are described in the appendices.

CHAPTER 2

PRINCIPLES OF MINERAL TAXATION

2.1. BASIC CONCEPTS OF MINERAL TAXATION

As in discussions about taxation in any industry, an explanation of mineral taxation requires an understanding of such basic terminology as taxpayer, tax base, and tax rating structure.

The taxpayer is usually a mining company in the case of mineral taxation. It is required to pay taxes subject to the tax regime existing in the jurisdiction in which it has mining concerns or activities.

The tax base is the ground upon which the actual calculation of tax payments is made. It is considered a proper measurement of what the company has benefited from its mining activities, or to what extent it is able to pay taxes in return for the benefits it received. The procedure used to calculate the tax base involves the government's view towards mining companies as well as objectives which the tax authority wishes to attain through taxation. Therefore, the determination of the base on which a mineral tax is levied is the most important element of a tax study. Different structures of tax base are often used in classifying types of taxation systems, e.g., mineral property tax, mine production (severance) tax, profit tax, etc.

The tax rating structure can either be a specific amount per unit of the tax base, or a rate which is multiplied by the tax base to assess the amount of tax payment. The effect of rate structure offers its own rationale for classification of progressive and regressive taxes.

Taxes can be classified based on their effect in several other ways: direct or indirect, according to whether the taxpayer bears the tax

incidence or simply passes it on to the buyer of the products; neutral or non-neutral, according to the way taxes influence the taxpayer's decisions. If the application of a taxation system does not affect decisions, it is considered a neutral tax regime. In reality, there are very few of these.

As stated earlier, the tax base imposes key aspects. The tax base has a significant effect on the after-tax economics of a project since it is calculated, where applicable, through various deductions and capital recovery instruments. The tax rating method has a direct effect on project economics as well. Since the tax base cannot be easily changed in the short-term and is generally only subject to major reforms, it imposes long-term effects. Alternatively, the tax rate structure, which can be changed more readily and frequently, has a relatively short-term effect. Therefore, the classification of taxes according to the base on which they are levied directly describes important facets of the tax structure and is considered a more common way of classifying and identifying taxes. The next section of this chapter reviews structures and characteristics of various tax systems with this in mind.

From the point of view of mineral economics, the objective of mineral taxation is to capture excessive profits accrued from the extraction of minerals, while allowing the investor to make a fair return on his capital investment.

It is also desirable for governments who are responsible for designing and enforcing tax systems to ensure that these systems reflect provisions for the characteristics peculiar to the mining industry. Some of these special characteristics are: high risk and long time periods associated with mineral exploration, large capital requirement for the development of a mine prior to the commencement of production, and depletion of a non-renewable mineral resource.

In these regards, various desirable elements have been suggested¹ for the establishment of a fair tax system. Among the goals to be considered in the formulation of tax policies are: (1) equity in distribution of tax burden, (2) economic efficiency to facilitate the use of fiscal policy for stabilization and growth objectives, (3) neutrality with respect to minimization of interference with economic decisions, (4) ease of administration and low cost of compliance, (5) revenue maximization and stability for the government, and (6) flexibility to allow the establishment of certain investment incentive programmes with minimum interference with the equity objective.

2.2. MINERAL TAXATION STRUCTURES

The various elements described above and the consideration of the industry's characteristics combine to yield a wide variety of mineral taxation structures. As stated previously, the base on which the tax is levied is one of the most important elements in understanding the structure of a taxation system. Thus, tax structures are grouped into four categories for discussion purposes. These are: property tax; production tax; profit tax; and profitability tax.

Property Tax

Almost every government is considered to have a certain form of property tax as part of its tax structure. The tax is based on the value of

1. See Church (1981) for example.

the assets of a mining company, i.e. mineral property and/or production facilities. The tax is expressed as a percentage or a monetary value per unit of the assessment base. In the United States, this is also known as an "ad valorem property tax".

The method of appraisal of the tax base differs from one tax regime to another. For mineral properties in the U.S. for example, it is based on discounted annual gross or net proceeds.

Production Tax

Production tax, or severance tax, is levied in proportion to the output of a mining operation. The base can be either the quantity produced (units of production) or the value of mineral products (gross proceeds or net proceeds). Taxation based on quantity produced is directly related to mining capacity, average grade of ore mined and recovery factors, whereas taxation based on value of production is more related to market price.

In the United States, production tax has been used by state governments to supplement property tax rather than as the principal instrument of tax collection.

Profit Tax

Taxes based on profit are the most common type of taxation in the mining industry. The amount of taxes payable is based on the net income available after deducting operating expenses and certain other allowances. As the profit decreases, so does the tax burden. Therefore, profit taxation is considered preferable to property or production taxation which do not take the firm's profit situation into consideration. However, the actual calculation of the tax is usually more complex than for other types of

taxation because it requires the determination of both revenue and the allowable deductions. In practice, the definition of allowable deductions differs widely among profit taxation systems.

Operating expenses are usually allowable deductions. Typically, material, labour, energy and overhead costs are included in this item, although details of its coverage may require reference to the specific legislation.

Depreciation allowances provide compensation to the mining firm for capital expenditures incurred. There are many different methods used for calculating depreciation charges. A widely used method is straight-line depreciation, in which the cost of a capital asset is divided into equal amounts, and each amount is used as an annual deduction. The asset's useful life or other statutory value typically defines the number of years to be used. Declining-balance depreciation, where the depreciation allowance for a particular year is calculated as a percentage of the asset's remaining book value, is another popular method of calculating depreciation. The method provides higher write-offs in the early years of the asset's life. The depreciation rate, which varies according to the type of asset, is usually specified by relevant statutes of tax legislation. Beside these methods, special provisions determined by legislation may also be used. For example, the Accelerated Cost Recovery System (ACRS), allowed for U.S. federal income tax purposes, provides a rapid depreciation over a relatively short period.

In Canada, a unique provision which is called Capital Cost Allowance (CCA) is applied to classes of assets. Every asset must be included in a class and each asset class has a specific declining-balance rate. This rate is applied to the undepreciated balance of the asset class. A taxpayer may claim any amount of desired CCA allowance from nothing up to the maximum

permitted for the class.

The depletion allowance is characteristically used for resource-based industries. Thus, mining companies are permitted a deduction for depletion, based on the cost of finding and developing mineral resources. This provides an incentive for finding new mineral resources. In Canada, for example, depletion must be earned and is one-third of the expenditures associated with exploration and new mine development.

In cases where a mining company is liable to pay taxes to more than one authority, taxes paid to one regime may be deductible from another regime's tax base. This is to prevent double taxation. Thus, federal tax payments are an allowable deduction for state income taxation purposes in some states of the United States and, similarly, state royalty payments are deductible for Commonwealth income taxation in Australia.

By subtracting all allowable costs and deductions from the gross revenues realized from the sale of mineral products, the taxable income or profit tax base is determined. The profit tax rate may be either fixed or progressive.

The amounts claimed for depreciation, amortization and depletion are not real cash expenses. They simply serve to reduce the firm's tax liability and hence, represent money available to the firm for the replacement of machinery and equipment, expansion, retirement of debt, diversification, higher dividends to shareholders, or exploration of new mineral deposits. These allowances are thus important contributions to the firm's cash flow.

The federal governments of Canada, Australia and the United States levy corporate income taxes which are based on a profit taxation structure. Mining taxation in all Canadian provinces, state corporate income tax systems of the United States, and royalty systems of some state governments in Australia have profit tax structures as well.

Profitability Tax

Profitability tax is similar to profit tax in that it uses profit as the tax base. But this system determines the tax rate applicable on the basis of the profitability of the project. Thus, the more profitable a mining operation, the higher the tax rate. There may be different measures of profit. Nevertheless, a profitability taxation system still requires the determination of taxable income as in calculation of the profit tax base described above. The definition of allowable costs and deductions are the same here.

After determining the taxable income and the profitability, the tax rate is applied to assess the taxes payable. The structure is such that no taxes would be payable below a predetermined level of profitability. The South African gold mining industry, for example, measures profitability as the ratio of taxable income to total revenue. The tax rate is only applicable when the profitability is greater than 8 percent and it progressively increases from a value of zero, when the profitability is 8 percent, up to a maximum of 75 percent.

2.3. ECONOMIC EFFECTS OF TAXATION ON MINING

One of the objectives of this study is to assess the after-tax project economics of mining investments in relation to before-tax values, to allow their comparison among the tax regimes in consideration. This objective concerns the level of taxation and the extent of deterioration of project economics resulting from the tax incidence. Since the taxation system of a regime comprises more than one component, or type of tax, the overall tax incidence from a system represents the aggregated sum of the burdens caused

by the components. It is, therefore, necessary to have an understanding of the effects of the individual types of taxation to be able to analyze the overall economic effects of a taxation system.

In this section, the effects of the different types of taxation systems described above are explained. This is to better understand how closely they achieve various objectives when comparing the systems. Profit tax and profitability tax systems are explained in the Corporate Income Tax section. These descriptions are rather general, with no reference to the assumptions made for the purpose of analyzing the representative mine development cases.

Effects of Property Taxes and Production Taxes on Cut-off Grade

Taxation of mining property is often said to induce faster extraction of mineral reserves from the ground, because mining firms who are liable for this tax tend to increase production, thereby reducing the life of the mine and total tax payments.

Property taxes levied on quantity extracted represents an additional fixed cost in a mining operation. This added cost is recovered by raising the cut-off grade, i.e. selectively mining those parts of the deposit with a higher grade in order to raise the average grade of ore mined. However, an increase in cut-off grade results in a reduced level of recovery because lower grade resources are left behind. Massive low-grade deposits are most vulnerable to this type of taxation, marginal ore being eventually forced to a sub-economic category as the cut-off grade is increased.

A typical relationship between reserves and cut-off grade shown in figure 2-1 illustrates this consequence very clearly. Assuming that a low-grade porphyry copper deposit approximates a lognormal grade distribution, the proportions of reserves and recoverable metal content above the cut-off

grade can be described as follows¹:

Tonnage proportion: $T_c = G(\ln(C/g_0)/B + B/2)$

Metal proportion: $Q_c = G(\ln(C/g_0)/B - B/2)$

where $G(Z)$ represents the Gaussian integral
from Z to infinity
 \ln signifies natural logarithm
 B = logarithmic standard deviation
of the grade distribution
 C = cut-off grade
 g_0 = average grade of total reserves

If the total in-situ reserves are 300 million tonnes at an average grade of 0.4 percent and the logarithmic standard deviation is 0.2, then the proportions of reserves and metal quantity above cut-off grade are as shown in figure 2-1. The curve shows that increases in cut-off grade from 0.2 to 0.3 percent and from 0.3 to 0.4 percent reduce the reserves by 58.4 and 105 million tonnes, or 19.5 and 35 percent, respectively. Reductions in the quantity of recoverable metal resulting from the same change in cut-off grade are 154.3 and 365.9 thousand tonnes, respectively. At today's copper price, this is equivalent to losses of approximately \$230 and \$550 million.

Property taxes based on the capitalized value of a mineral property also tend to accelerate extraction at earlier stages of the production period, thereby reducing mine life. Since this type of tax can be thought of as a cost of holding mineral reserves, it discourages speculative holding. However, it also discourages investment in exploration and development of mineral reserves in advance of mining.

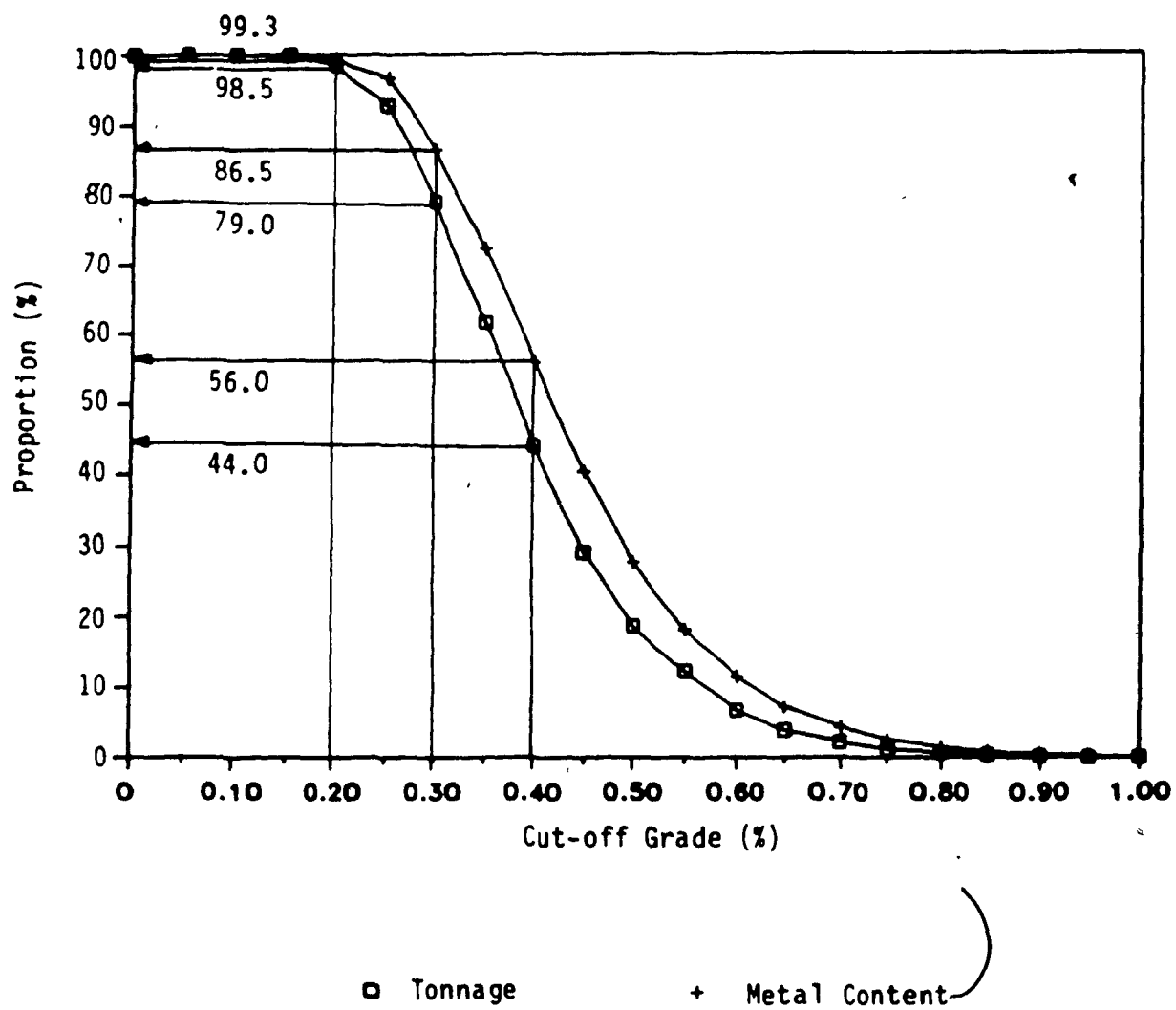
Although property taxation can be considered less preferable than

1. For details about the formulae, see David (1977) pp. 39-43.

FIGURE 2-1

EFFECT OF CUT-OFF GRADE ON MINERAL RESERVES

Proportions of Tonnage and Metal Content
Above Cut-off Grade



profit based taxes for the above reason and other possible difficulties such as those involved in assessing the value of a taxable property, it can provide the government with a stable and consistent way of raising large amounts of revenue.

Effect of Production Taxes on Production Level

Production taxes represent an additional variable cost of operation. If levied, mining firms would react in a way to minimize the impact of an increased production cost. Each of the three types of production taxes stated earlier -- unit production, gross proceeds and net proceeds -- have some common as well as some different effects on the mining operation.

If a production tax is based on quantity mined, the tax tends to reduce the optimum mining rate, thereby offsetting the additional unit operating cost. The effect of production tax on level of production is illustrated in figure 2-2. The mining company earns a profit margin of PC at production level Q with an initial level of severance tax. PC' is the new profit margin when marginal and average cost curves move up to MC' and AC' as a result of the increase in production tax. Q' becomes the new lower optimum production level assuming the same competitive market conditions and prices for before and after the tax increase. The reduction in the volume of production generally results in the exclusion of lower-grade and higher-cost parts of the deposit from current mining operations, thereby restoring short-term profitability. Such an exclusion is made in expectation of better future market conditions or cost effective extraction methods. Hence, in some cases, this may extend the life of the reserves remaining in the ground. However, a reduction of reserves similar to the case of property tax can also be expected.

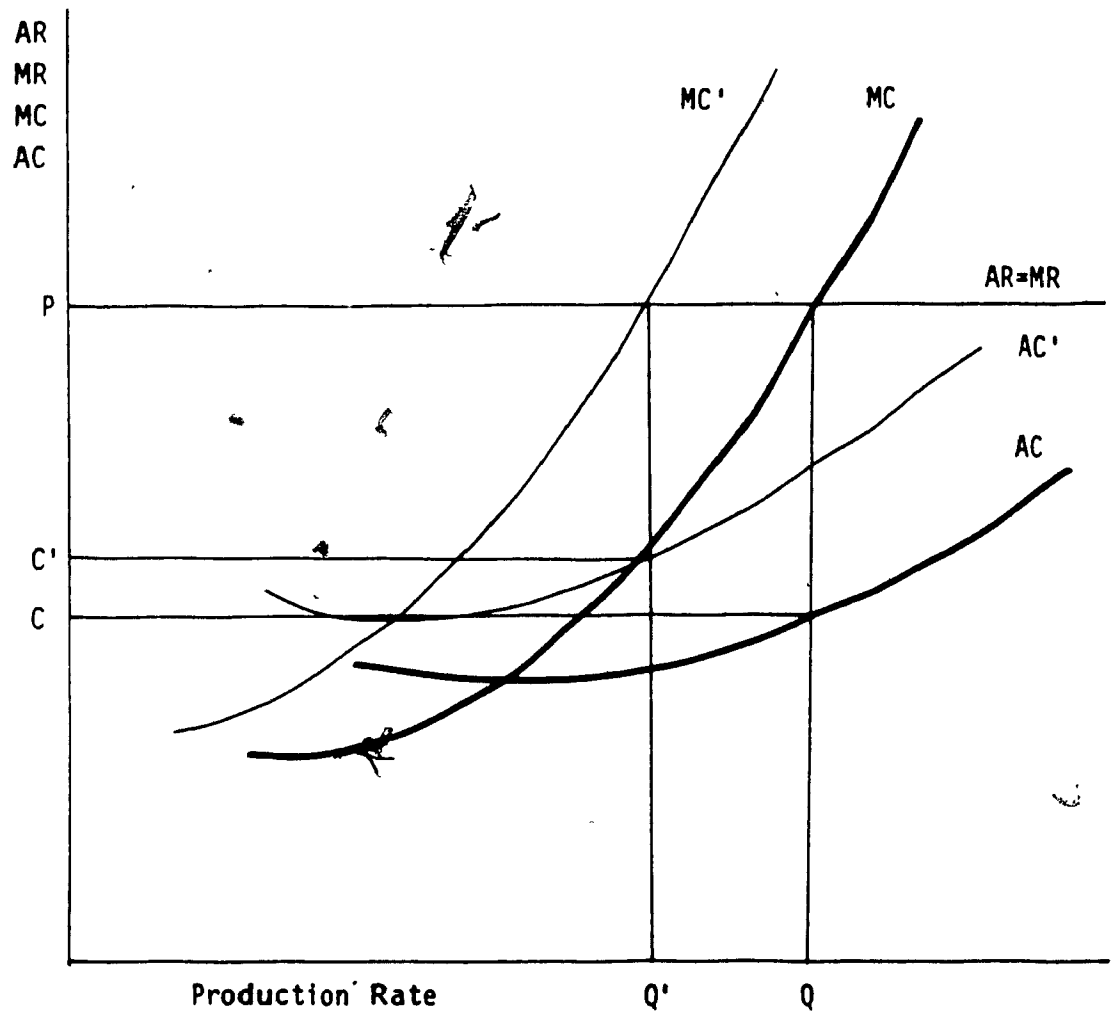
For the case of a production tax based on value of production, the burden of taxation also represents additional production cost. It may not directly affect the mining rate, because it is not volume-based, but it will demand more cost-effective mining practice to secure the profit margin, thereby discriminating against high-cost mining operations. Since low-quality ores are generally considered high-cost as well, a value-based production tax also has the effect of raising the cut-off grade.

The higher cut-off grade will tend to lower the overall level of recovery of the deposit because firstly, marginal ore as well as those parts of the deposit which are left in-situ cannot be effectively mined due to technical difficulties. Secondly, even if this material is redeveloped later when economic conditions become favourable, the ultimate recovery will be lower than that for primary mining. Thus, this tax is subject to the criticism of causing wastage of valuable natural resources. The delay in production can also be considered as a burden on the regional economy because of the reduced present value of future mineral production.

A production tax based on net proceeds has effects similar to those of a profit tax system, which is the subject of the following section.

FIGURE 2-2

EFFECTS OF PRODUCTION TAXES ON LEVEL OF PRODUCTION



Corporate Income Taxation Based on Profit or Profitability

In the mineral industry, profit or profitability based taxes are generally used for the purpose of assessing corporate income taxes. As discussed earlier, a profit tax does not directly become part of production costs.

The depletion allowance permitted in the calculation of corporate income taxes in many countries is a unique provision for non-renewable resource industries. This provision may influence management's investment decisions somewhat differently depending on which method is applicable, i.e. percentage depletion or earned depletion. Earned depletion may encourage specific capital expenses such as exploration and development expenditures which create or "earn" allowable deductions. Alternatively, percentage depletion is based on revenue or income after deduction of depreciation and other miscellaneous allowances. In any case, as many analysts have reflected (Church 1981, p. 81), depletion is akin to a negative production tax, or subsidy on output, in the manner in which it reduces the income tax burden. Thus, the economic effect, if any, is to encourage current production as opposed to production tax. If a progressive tax rate is structured to capture higher marginal profits, it could eventually raise the cut-off grade and result in a loss of low-grade reserves in the long-term. In the short-run, though, corporate income taxes have little or no effect on the behavior of the mining company with respect to grade control and recovery of ore reserves. Hence, it is considered preferable to other types of mineral taxes, although it usually involves more complexity in the definition of operating costs and allowable deductions.

The deduction of expenditures for the purpose of determining taxable income effectively reduce the after-tax cost of these expenditures. For

instance, the direct deduction of operating costs from total revenue leads to the following relationship between before- and after-tax operating costs (BTOC and ATOC, respectively):

$$ATOC = BTOC (1 - \text{effective income tax rate})$$

Allowances for capital expenditures also reduce the cost of capital assets to the mining firm according to the following relationship:

-- Using straight-line depreciation:

$$ATCC = BTCC (1 - dt(1-1/(1+i)^n)/i)$$

where ATCC = after-tax capital cost
BTCC = before-tax capital cost
d = straight-line depreciation rate
t = income tax rate
i = cost of capital
n = number of years depreciated

-- Using declining-balance depreciation:

$$ATCC = BTCC (1 - dt/(d+i))$$

where d = declining-balance depreciation rate

Thus, tax deductions for capital expenditures can be used as incentives to promote exploration and development of mineral resources, thereby encouraging capital intensive mineral development. Also, because depreciation allowances actually increases a firm's cash flow, higher depreciation rates will increase cash flows in the early years of project life, providing a further incentive to investment.

When based on profitability, a tax system does not reduce the profitability of an operation below a predetermined minimum acceptable level upon which the firm and the government have agreed. Therefore, this can be a most efficient and attractive taxation instrument for those who own marginal

ore reserves. However, a profitability tax fails to guarantee a stable source of government revenue, and its actual application is usually complicated. At present, South Africa is in fact the only nation that applies this form of taxation.

This chapter has briefly described various tax regimes, focusing on their effects upon production decisions and general economic conditions of mining enterprises. Many other factors also affect these decisions in conjunction with particular taxation systems. Among these are type and size of deposit, grade distributions within the orebody, inflation, commodity market fluctuations, and exchange rates. Some of these factors are discussed in the next chapter.

CHAPTER 3

ASSESSING THE ECONOMIC EFFECTS OF TAXATION

3.1. GENERAL APPROACH

The methodology adopted in this study is based on two fundamental principles. Firstly, in order to analyze the effects of taxation systems, deposit conditions should be held constant. Secondly, to understand and explain Canada's competitive position in the area of mineral taxation, foreign taxation systems as well as the Canadian system must be applied to these constant base case conditions. This isolates the taxation effects out of various other factors that would affect mineral development opportunities. Thus, all economic, locational and environmental factors are considered to be constant and independent of the taxation regimes under study.

Three hypothetical metal mines are assumed for evaluation purposes: a small-scale gold mine, a medium-scale lead and zinc mine, and a large-scale copper and molybdenum mine. These models are considered in order to analyze the tax effects on the combination of scale of operation and deposit type. Thus, project lives vary directly with the scale of operation, from a short life for the small-scale mine up to a long life for the large-scale mine. These lives represent the combined length of preproduction and production periods for the hypothetical mines to be evaluated. All money values are expressed in constant 1985 Canadian dollars, and various estimates used in the study are based on market outlook conditions of 1985.

For purposes of evaluating the gold, lead-zinc, and copper-molybdenum mine development opportunities, the following estimates and assumptions are required:

- Deposit type, tonnage, grade and other relevant geological information;
- Appropriate mine development method;
- Revenue and cost estimates for the hypothetical mine development cases;
- Exchange rates;
- Weighted average cost-of-capital discount and hurdle rates from government and mining firm points of view;
- General rate of inflation to correctly assess tax allowances and payments.

Specific descriptions of the representative mineral projects and other relevant economic factors, as well as before-tax economic evaluation results are given in chapter 4.

To allow the analysis of the economic effects resulting from the individual tax regimes, the representative mineral projects are evaluated under the taxation systems of:

- Four provinces in Canada: Quebec, Ontario, British Columbia, and Nova Scotia;
- Four states in the U.S.A.: Arizona, Colorado, Montana, and Nevada;
- Three states in Australia: Queensland, Western Australia, and South Australia;
- Brazil;
- South Africa.

The study considers actual taxation systems existing in January 1985. As stated above, all other locational and environmental aspects are considered constant for all tax regimes analyzed in this study. Thus, it is

as if foreign taxation systems were borrowed and applied to the deposits located in Canada. The most important features of the taxation systems are described in chapter 5, while more detailed information may be found in the appendices.

For base case conditions, it is also assumed that taxation is imposed on an individual project basis. This reflects the tax position of the organization contemplating mineral development. Taxation on an individual project basis only allows deductions from the income resulting from the sale of the mineral product(s) generated by the project itself. Thus, it is assumed that the mining company concerned has no other existing source of taxable income.

Taxation on an integrated company basis, in which a so-called flow-through allowance applies within the entire corporate structure, is considered as a variant. In this case, the mining company is assumed to have income from other operations. Thus, write-offs may be taken against this income stream as rapidly as the tax system allows. The tax credits realized on an integrated company basis will, therefore, be more immediate than on an individual project basis. The benefits of this basis of taxation to the mining company are also considered.

To measure the incidence of a particular tax system, total tax payments as well as effective tax rate are determined. Effects on project economics are shown mainly with the net present value and rate of return criteria.

Having developed an understanding of before-tax economic characteristics and taxation effects on the representative cases, the impact of other variables, such as revenue and inflation, are examined through sensitivity analysis. The revenue variant considered here represents the combined effect of variations in metal price, exchange rate and production costs.

The following section defines several important terms and outlines the economic criteria used throughout the study.

3.2. EVALUATION CRITERIA

A comparative study of a mineral industry's competitive position with respect to taxation effects mainly concerns level of taxation. Therefore, this study focuses on measuring the incidence of each taxation system considered on the representative gold, lead-zinc, and copper-molybdenum projects and assessing their impact on after-tax project economics. By doing so, it is possible to compare the tax impacts and then, accordingly, each jurisdiction's competitive position with respect to the promotion of investment opportunities necessary for mineral sector growth and development. The comparison is based on the premise that higher levels of taxes are less attractive to private investors. Hence, other factors being equal among the jurisdictions compared, higher taxes would discourage their willingness to invest in that jurisdiction. However, that does not necessarily mean that the higher tax level will actually reduce the future level of mineral investment, nor that the level of taxation is the most crucial aspect of investment decisions. Obviously, investment decisions are affected by numerous other non-tax related factors.

The main concern of the study in the assessment of tax level is not to verify the tax system's ability to raise funds, but to assess the effect of various tax incentives which exist in the system, and provide a better understanding about the possible contribution of those incentives to overall investment attractiveness. The rest of this section describes some important concepts in investment analysis which are adopted for the study.

Cash Flow

Any business activity normally embodies continuous disbursements and receipts of funds for various elements of benefits and costs. These may be portrayed as fund waves flowing in and out. Fund inflows may include sales revenues, royalties received, income from the sale of capital assets, fees and charges received, and recovery of working capital. Fund outflows may include exploration expenditures, capital costs, operating costs, royalty and tax payments. Cash flow (CF) is the difference between the fund inflows and outflows for a specified time period.

A widely accepted concept in investment analysis is that the value of a project should be based on its future monetary benefits, and that monetary benefits be measured as net cash flows and not as profit or income. Thus, the economic outcome of an investment alternative is determined from the actual cash benefits and costs anticipated if the alternative is undertaken. Non-cash allowances such as depreciation, depletion or deferred taxes, may enter into accounting statements or the assessment of actual tax payments, but they are not cash values and should not be included in cash flow analysis. Furthermore, the term 'economic evaluation' applied in this study does not intend to include financial analysis, which generally refers to the raising of funds for proposed investments, nor does it involve intangible factors that would affect management decisions.

Cash flow for a standard unit time period -- typically one year -- is determined by summing the net cash benefits and costs that occur during that period. This cash flow is then identified to one specific point in time which represents the economic outcome for the period. In this study, the end of the year is used as the specific point of time in question. This is referred to as the 'end-of-year' convention -- a convention viewed as

financially conservative. This yields a number of cash flows that corresponds to the combined preproduction and production periods of the mine development case. As such, the economic outcome of a mineral investment opportunity is initially portrayed by the anticipated time distribution of cash flows over its projected future life. The establishment of this cash flow distribution enables the computation of various economic criteria. The cash flow associated with a particular time period is typically calculated by:

$$CF = \text{Revenue} - (\text{Operating costs} + \text{Tax payments} + \text{Capital expenditures})$$

This study uses cash flows estimated on a yearly basis. Thus, annual revenues and disbursements must be determined.

Cash flow differs from net income. After-tax cash flow is calculated by either subtracting cash expenditures, including taxes, from the revenue given on an Income Statement, or by adding the non-cash deductions back to net after-tax income. Figure 3-1 depicts a typical format used to determine annual cash flow.

Most mineral projects require a preproduction period during which time no revenues are generated but major capital expenditures for construction and preparation of plant and equipment are incurred. This acts as a deferment period for various tax allowances and other financial costs. Because of the time value of money, the length of this period greatly affects the economic viability of a project. Therefore, the correct estimation of the length of the preproduction period is important. For mineral projects, it is unusual for this period to be less than one year, and for large projects it can easily reach five or more years.

FIGURE 3-1

TYPICAL FORMAT FOR CALCULATING ANNUAL CASH FLOW

Gross revenue from operations
- Operating costs
= OPERATING PROFITS

- Interest payments on outstanding loan(s)
- Depreciation
- Deferred exploration expenditures
- Deferred preproduction development expenditures
- Depletion
- Net taxable loss carried forward
= TAXABLE INCOME

- Federal income taxes
- Provincial and local taxes
= NET INCOME AFTER TAXES

+ Depreciation
+ Deferred exploration expenditures
+ Deferred preproduction development expenditures
+ Depletion
+ Net taxable loss carried forward
= NET CASH FLOW FROM OPERATIONS

- Exploration costs
- Development costs
- Plant and equipment costs
= NET CASH FLOW BEFORE DEBT REPAYMENT

- Principal repayment(s)
= CASH FLOW

Discounted Cash Flow

A discounted cash flow (DCF) is the value of an expected future cash flow brought back to the present. The method used to bring a future cash flow to the present is called discounting. Discounting takes the earning power of money into account. It removes from the future value the compounded interest which would accrue on an initial investment during the period between the present and the future date in question. An interest rate is used to represent the time value of money and the initial investment is equivalent to the present value of the future cash flow. The formula used to discount an individual cash flow associated with a project is:

$$P_j = CF_j / (1+i)^j$$

where P_j = discounted cash flow

CF_j = cash flow in year j

i = discount rate

This method is widely used for investment analysis. It is based on the rational that it reflects the time value of money, and that it yields today's equivalent of future monetary values. However, discounting does not represent an adjustment for inflation nor for risk, two factors which should be considered independently. Adjustment for inflation may be combined with discounting by way of a joint interest rate.

Economic Evaluation Criteria

For the actual assessment of the overall economic attractiveness of investment opportunities, the cash outflows and inflows associated with the potential ventures must be compared and, for this, their relationship

expressed with some meaningful criteria of profitability.

Among the numerous criteria cited in financial literature, the most common are shown in figure 3-2. There is general agreement, however, that only those criteria embracing the time value of money are valid. Accordingly, only the net present value and rate of return methods are discussed here. The rule for accepting a project in each case is based on the premise that a company would be better-off financially by accepting the project than it would be if the project were rejected.

(1) Net Present Value

In this method, the algebraic sum of the present values of all cash outflows and inflows is calculated using a given discount rate, usually the cost of capital or minimum acceptable return on investment. Thus, net present value (NPV) is the difference between the discounted positive cash flows and the discounted investment. The resulting value varies with the discount rate used. Mathematically, the net present value can be expressed as follows:

$$NPV = \sum_{j=0}^n (CF_j / (1+i)^j)$$

where $j = 0, 1, \dots, n$
 $n = \text{project life}$

As mentioned above, the method requires the specification of the discount rate that properly represents the time value of money to the investor. The cost of capital is the weighted average cost of different sources of funds -- common equity, long-term debt, and retained earnings. The cost of each of these sources depends on different factors. This cost of capital rate represents the break-even return on investment, and under

FIGURE 3-2

MEASURES OF PROFITABILITY USED FOR INVESTMENT ANALYSIS

Profitability Measures

Rule for Accepting
an Investment Venture

- DISCOUNTED -

- | | |
|---|--|
| 1. Net Present Value ¹ (NPV) | A positive NPV |
| 2. Internal Rate of Return (IRR)
(also known as DCF-ROI) | An IRR greater than
company's cost of capital |
| 3. Present Value Ratio (PVR) | A positive PVR |

- NON-DISCOUNTED -

- | | |
|--|---|
| 4. Payback Period (PbP) | PbP no greater than
company's maximum
acceptable period |
| 5. Return on Investment (ROI or CR) ² | ROI (CR) above company's
minimum acceptable rate |

1. Known to appraisers as the Inwood Method. This general method includes two specialized formulations used for mining: Hoskold and Morkill.

2. Capitalization rate (CR) is a synonymous term used in real estate appraisal.

Adapted from Schenck (1985) p. 80

normal circumstances, the minimum acceptable return for an investment opportunity. The investment proposal is considered favourably if the net present value is greater than zero, and is rejected if it is negative.

Since the net present value depends on the chosen discount rate, the importance of using an appropriate rate is evident. In fact, the cost of capital plays an important role in discounted cash flow methods. In the NPV method, it is considered when choosing the discount rate; alternatively, in the rate-of-return method, which is described below, it is used as a base of comparison for the calculated rate of return. Therefore, whether the project can be considered profitable depends largely on the cost of capital assumption.

Because the net present value is the difference between the benefits accrued from mineral production and the costs incurred to generate these benefits, the before-tax net present value of a mineral project can be regarded as the net value of developing a natural resource to society as a whole. As Mackenzie and Bilodeau (1979) state, this net value may also be called surplus value, economic rent or wealth created.

Earlier this century, special types of net present value formulations were developed for use in mining valuations. The most notable of these is the Hoskold method (see Parks 1957, p. 193), infrequently used today except for a few special instances where its use is still favoured by legal requirements or tradition, as in the case of the Arizona property tax.

(2) Rate of Return

The rate-of-return (ROR) method also utilizes the time value concept but does not require the choice of a discount rate. The procedure to calculate ROR is to find the discount rate (r) that renders the present value of positive cash flows generated by the project equal to the present

value of the investments. In economic terms, the rate of return is the average rate of interest earned by the unrecovered balance of an investment over the life of the project. That is, the NPV of the project computed with that rate as discount rate yields a value of zero. Thus, the rate of return represents the highest cost of capital which could be incurred to raise funds for an investment opportunity, without suffering economic loss. The investor can use this yield to compare one particular investment opportunity against other competing opportunities having equal investments and lives. The rate of return can be stated mathematically as:

$$NPV = \sum_{j=0}^n (CF_j / (1+r)^j) = 0$$

where CF_j = cash flow in year j

n = life of project in years

r = rate of return

If a minimum acceptable return has been set as hurdle rate, investments with a rate of return above the minimum level are acceptable.

From a mathematical point of view, the ROR may have as many real roots as there are changes of sign in the cash flow distribution. Thus, there can be more than one rate of return for an investment opportunity. No such problems are created with conventional investments in which a series of negative cash flows, representing the investment period, is followed by a series of positive cash flows, representing the production period. An unconventional investment is one for which the cash flow schedule involves more than one sign change between positive CF-sequences and negative CF-sequences. The pattern of negative and positive cash flows in a distribution can affect the usefulness of the various measures of profitability used in

investment analysis, and unconventional investments can create problems for the analyst trying to compare one project to another.

Mining is a typical example of an industrial activity which is likely to produce cash flow schedules with more than one change of sign. A mining project may in fact yield periods of negative cash flows within the production period, a period during which positive cash flows are normally expected. This may be caused by the extraction of a poor part of the deposit, the operation of the mine during periods of adverse market conditions, the development of a new part of the deposit requiring high capital outlays, or the costly rehabilitation of the environment destroyed by mining activities. However, this is not the case in this study, in which cash outlays only occur during the preproduction period.

Figure 3-3 shows the net present value profile in relation to the rate of return for a simple time distribution of cash flows.

Effective Tax Rate

The level of mining taxation measures the overall tax burden levied by the government in relation to the project's ability to pay taxes. A government may have established the tax rate structure in view of provisions for cost deductions, capital recovery, depletion and tax credits, with the objective of collecting the necessary amounts of tax revenues.

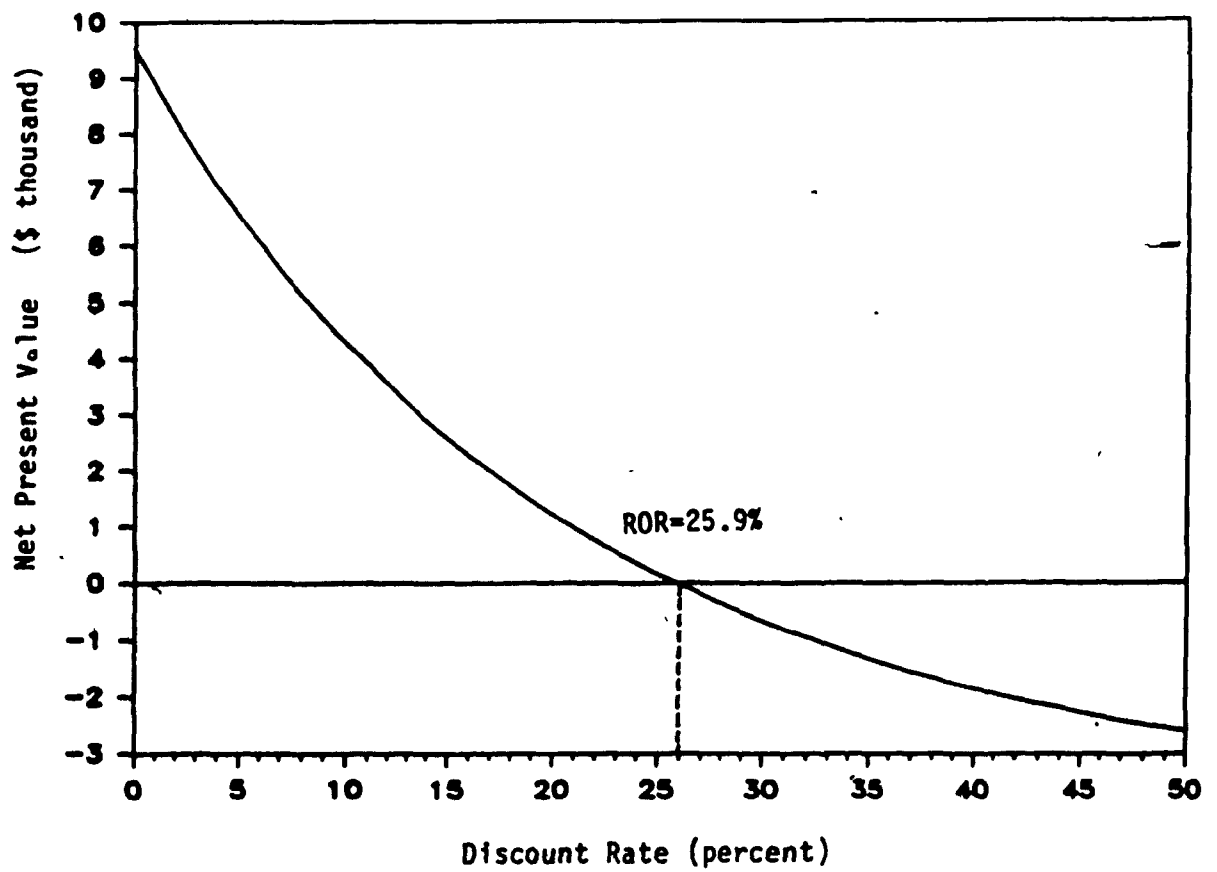
However, from the mining company's point of view, it is the overall burden and the impact of this burden on project economics which is most important. The overall burden of a taxation system may be measured by the effective tax rate. This rate represents the magnitude of taxes borne by the mining project. The incidence of taxation may be further measured by the governments' share of the before-tax value of the project. In this study,

FIGURE 3-3

RATE OF RETURN IN RELATION TO NET PRESENT VALUE

A Simple Cash Flow Schedule

End of Year	1	2	3	4	5
Cash Flow	-\$12000	5000	4500	4000	8000



before-tax net present value represents the value of the project since it is the gross amount that can be generated from the development of the deposit. Thus, the reduction in the project's net present value after applying taxation represents in fact the share going to various levels of government. The effective tax rate is determined by:

$$\text{Effective tax rate} = 1 - (\text{After-tax NPV})/(\text{Before-tax NPV})$$

Generally, a comparison of the economics of different mining projects based on effective tax rates of this kind is not possible because effective tax rates vary with the scale of the project, type of mineral, and size of the mining firm. But given the conditions adopted in this study -- constant geological and environmental conditions -- it becomes quite meaningful to compare the relative burden of the taxation systems with effective tax rates.

However, the effective tax rate cannot be regarded as an indicator of the extent to which the tax system actually influences the return on mineral investment. For that purpose, it is rather convenient to compare before- and after-tax rates of return of the project.

The effective tax rate calculated for a particular project will vary depending on the discount rate which is employed to compute the net present value. Since the representative cases used in the study involve capital outlays at the early stage of their lives followed by an anticipated stream of cash inflows, higher discount rates will tend to reduce the present values of positive cash flows more severely when taxation is applied on a project basis. Thus, this has the effect of raising the effective tax rate.

It is also obvious that effective tax rates assessed under different tax considerations will vary. These variations in effective tax rate among

systems provide the basis for explaining different views of government toward the mineral industry, in terms of its relative importance in the national economy, as a source of government revenues, and with respect to mineral development incentives.

3.3. STAGES OF ANALYSIS

The basic evaluation elements covered so far are combined in several ways in order to carry out the required stages of evaluation and analysis described below.

Before-tax Economic Conditions

In chapter 4, general economic conditions and deposit-specific characteristics are developed and initially applied to estimate revenues, capital costs and operating costs for the representative gold, lead-zinc and copper-molybdenum mine development projects. For each project, the distribution of before-tax cash flows is derived in constant dollars by aggregating the estimated revenue, capital cost, and operating cost figures. This distribution is then used for assessing the project's net present value and rate of return.

After-tax Economic Conditions

The before-tax estimates for the representative mining projects are then used for evaluation and analysis of taxation effects. Thus, the taxation systems existing in Canada, Australia, Brazil, South Africa and the U.S. are applied in turn to the standardized conditions. The elimination of locational and other environmental differences which would affect before-tax

conditions allows the isolation of tax effects.

In each country, the corresponding taxation system is applied on a project basis to the standard estimates to derive an after-tax cash flow distribution. The economic criteria assessed for after-tax economic conditions are: after-tax net present value; after-tax rate of return; total tax payments; and effective tax rate. Results from the integrated company basis of taxation are also considered in this stage of the analysis.

Tax Payment Components

Tax components result from taxation by more than one level of government or from different categories of mineral taxes levied within a jurisdiction's integrated taxation system. These are expressed as proportions of total tax payments discounted at a 3 percent riskless rate. This riskless discount rate is used for the evaluation of tax revenues from the government's viewpoint. Since the government only collects taxes, it does not share the risks associated with the investment opportunity from which it derives its revenues.¹

Time Profile of Tax Payments

In addition to the level and components of taxes, the pattern in the time distribution of tax payments is examined. This enables a better understanding of the relation between the various tax structures embodied in

1. It could be argued that government has given tax incentives to mining and it has supported the allocation of resource to mining, away from economic activity elsewhere and, to this extent, the government does share risk in mining. However, in this study, the government's role is viewed as that of a tax collector. This is a view identical to that applied in the study by Mackenzie and Bilodeau (1979, p.63).

the tax regimes and the levels of taxation.

Impact of Variations in Estimates *

The effects of factors such as inflation rate and revenue level are examined together with taxation effects. Once again, in each case, the after-tax time distribution of cash flows is assessed. Net present value and rate of return criteria are used to measure the overall impact of such factors on the mine development opportunities.

CHAPTER 4

FORMULATION OF REPRESENTATIVE MINE DEVELOPMENT CASES

4.1. GENERAL CONSIDERATIONS

The formulation of a mine development model for examining taxation effects involves a complex process. Even if economic and political risks need not to be considered for the type of analysis carried out in this study, many factors which characterize the quantitative and qualitative status of the project must be specified before it can be evaluated. Therefore, both deposit-related and general economic conditions must be sufficient to carry out the cash flow analysis using the economic evaluation criteria described above.

The deposit-specific factors consist of estimates of recoverable ore reserves, the grade composition of the reserves, production cost components, and expected long-term price level of the product(s). In order to identify the production costs, the appropriate engineering processes regarding mining and processing methods must be selected in consideration of the geological and mineralogical information at hand. By integrating these variables into revenue and cost estimates, the analysis can proceed further.

In addition, there are other economic factors such as discount rate, inflation, and monetary exchange rates, which are generally assumed and then applied to all the representative cases throughout the evaluation stages of the study. This section describes these general economic considerations while the case-specific characteristics are described in the next section.

The representative cases are evaluated with reference to economic and technological perspectives currently prevailing in Canada, and all monetary values are expressed in constant 1985 Canadian dollars. Inflation is an

inevitable factor in the economic study of taxation effects because of its direct role in reducing the real benefits of tax incentives. This occurs when non-indexed tax write-offs are deducted against inflation-affected future income. A 5-percent general inflation rate is used in the study. Hence, to evaluate the real effects of taxation, the actual tax payment computations are carried out with inflated values of revenues and costs. Cash flows are then expressed in constant dollars before computation of DCF criteria. A real 10 percent discount rate is chosen as the weighted average cost of capital. For the purpose of converting monetary tax brackets contained in foreign taxation systems, one Canadian dollar is considered equivalent to US \$0.80, AUS \$1.00 and 0.0968 Brazilian ORTN units.

The analysis is first carried out with the assumed expected revenue and cost figures. Because revenue and cost estimate components such as commodity prices, cost of inputs, and exchange and inflation rates are subject to considerable variation, it is important to perform sensitivity analysis to examine the effects of changes in these variables. Thus, sensitivity analysis is considered later in the study, in conjunction with the following variants:

- Revenues: Levels of gross revenues ranging from -25 percent to +25 percent. This variation in revenue is assumed to reflect changes in any of the parameters which affects the level of operating profits. For instance, a rise in commodity prices, a cost saving or a reduction in exchange rate will result in a positive change in revenues. Alternatively, unfavourable moves in economic and operational conditions will result in negative changes.
- Inflation rate: A range from zero percent to 15 percent in increments of 5 percent.

4.2. CASE SPECIFIC CHARACTERISTICS

Descriptions of deposit type and dimensions, as well as assumptions regarding revenue and cost elements are given here for each of the three representative mine development cases. These are formulated as being representative of the mineral endowment potential in Canada. These specifications are prepared with the view of providing the minimum required information to establish hypothetical mine models which are considered fixed throughout the study.

Representative Gold Deposit

(1) Geology: The deposit is assumed to be located in a thick sequence of folded quartzites and slates, with gold occurring in quartz veins. The quartz veins exist within elongated chutes and have an "en echelon" structure. The size of the ore zone is assumed to have an average thickness of 20 metres and a ultimate vertical depth of 50 metres, and extends over a length of 400 metres. The gold ore contains low concentrations of sulfides including arsenopyrite. The pattern of mineralization in this type of deposit is characteristically varied. Thus, the hypothetical deposit represents a typical occurrence of this type.

(2) Ore reserves:

Assuming a mine recovery factor of 90 percent and dilution factor of 10 percent, recoverable ore reserves total:

650 000 tonnes at 9.00 grams Au per tonne

(3) Mining method: underground, irregular open stoping

(4) Mineral Processing:

Capacity: 65 000 tonnes of ore per year

Process: crushing, grinding, cyanidation, carbon-in-pulp
adsorption, stripping, electrowinning, and smelting.

Mill and smelter recovery factor: 95 percent

Product specification: impure bullion (doré)

(5) Project life:

Preproduction period: 2 years

Production period: 10 years

Total project life: 12 years

(6) Annual revenues:

Annual revenues are assessed by combining estimates of gold price projections, transportation and marketing charges, mine capacity, grade of ore reserves, and the mill recovery factor. A price of US \$350/oz is assumed as the projected average gold price during the project life.

Annual revenue during production period: \$7 931 000

(7) Preproduction capital costs:

Estimated total of \$11 199 000, consisting of:

Component	Proportion (%)
Mine development	22.2
Mine plant and machinery	24.5
Mill facilities	32.8
Powerline, Road, and Housing	11.1
Working capital	9.4
Total	100.0

(8) Production costs:

Estimated to total \$4 410 000 per year. This results in unit operating cost of \$64.46 per tonne of ore. Sustaining capital represents \$220 000 per year. It is further estimated for tax purposes that 82 percent of sustaining capital costs are allocated to plant and equipment, and that the remaining 18 percent is allocated to the mill facilities.

Representative Lead-Zinc Deposit

(1) Geology: The mineralization occurs as a massive sulfide deposit in a thick and complex sequence of pillow and vesicular basalts. Above these basement rocks are flows, flow breccias, and tuffs, mainly of andesitic composition, overlain by material consisting of abundant dacitic to rhyolitic, massive and textureless flows of pyroclastics. The massive ore minerals of galena-sphalerite are deposited in a steeply inclined stratabound layer, and are closely associated with coarse fragmental pyroclastics of rhyolitic composition. As in many areas of volcanic activity, the deposit is mainly aligned along structural features.

(2) Ore reserves: The deposit consists of two types of ore reserves classified according to quality, which are expressed as category 1 and 2 in the following description. A mine recovery factor of 85 percent and dilution factor of 15 percent are assumed.

Category 1 - Recoverable ore: 2 000 000 tonnes
at 8.42% Pb and 14.59% Zn

Category 2 - Recoverable ore: 5 400 000 tonnes
at 11.10% Pb and 6.30% Zn

(3) Mining method: underground, blasthole stoping

(4) Mineral processing:

Capacity: 500 000 tonnes of ore per year

Process: crushing, grinding, flotation, dewatering

Mill recovery factor: 95 percent (both for lead and zinc)

Product specification: lead concentrate (60%)

zinc concentrate (55%)

(5) Project life:

Preproduction period: 4 years

Production period - reserve category 1: 4 years

reserve category 2: 10.8 years

Total project life: 18.8 years

(6) Annual revenues:

Considering mine development conditions in Canada, and the assumed capacity, recoverable ore reserve grades and mill recovery factors, the following annual revenues are calculated. These values are designed to yield marginally profitable after-tax economic results for this medium-size representative mine.

Annual revenue: \$60 000 000 for production years 1 to 4

\$42 500 000 for production years 5 to 18

\$34 000 000 for the last production year

(7) Preproduction capital costs:

Estimated total of \$90 500 000, consisting of:

Component	Proportion (%)
Mine development	19.8
Mine plant and machinery	12.2
Mill facilities	40.9
Powerline, Road, and Housing	17.7
Working capital	9.4
Total	100.0

(8) Production costs:

Operating costs are assumed to be \$50 per tonne of ore, consisting of \$30 mining costs, \$10 milling costs and \$10 overheads. Total annual operating costs are estimated at \$25 000 000. Sustaining capital costs represent \$1 800 000 per year, of which 77.8 percent are allocated to plant and equipment, and 22.2 percent to mill facilities.

Representative Copper-Molybdenum Deposit

(1) Geology: This hypothetical project represents a large scale porphyry type deposit consisting of low grade copper-molybdenum mineralization with trace amounts of gold and silver. It is assumed to be located in the western Cordillera of Canada. The orebody occurs in a highly fractured and faulted area within a quartz diorite intrusive. The ore minerals, consisting of chalcopyrite, molybdenite and argentite, exist as fillings in the fractures and faults. The deposit is about 300 metres thick. It shows typical copper sulfide enrichment-zoning, with grades in the upper zones slightly higher than in the lower zones of the deposit. Because the primary minerals of copper and molybdenum are very low in grade, silver and gold are of great importance for the profitable extraction of this deposit.

Deposits similar to this one are found in British Columbia. For example, Morrison, Island Copper, and Brenda Mines are of this type.

(2) Ore reserves: Recoverable reserves are classified into two categories based on grade. A mine recovery factor of 100 percent and an internal dilution of 5 percent are assumed. The reserve categories are as follows:

- Category 1 - Recoverable ore: 55 000 000 tonnes at 0.4% Cu, 0.1% Mo, and 1.5 grams Ag and 0.1 gram Au per tonne
- Category 2 - Recoverable ore: 170 000 000 tonnes at 0.3% Cu, 0.065% Mo, and 1.2 grams Ag and 0.07 gram Au per tonne

(3) Mining method: open pit

(4) Mineral processing:

Capacity: 10 000 000 tonnes of ore per year

Process: crushing, grinding, flotation (Cu, Mo) and dewatering

Mill recovery factor: copper -- 88 percent

molybdenum -- 82 percent

silver and gold -- 60 percent

Product specification: copper concentrate (25%), molybdenum concentrate (45% Mo), gold and silver are recovered in the copper concentrate

(5) Project life:

Preproduction period: 2 years

Production period - reserve category 1: 5.5 years

reserve category 2: 17 years

Total project life: 24.5 years

(6) Annual revenues:

Considering mine development conditions in Canada, the assumed capacity, recoverable ore reserve grades, and mill recovery factors, the following annual revenues are calculated. These values are designed to yield moderately profitable after-tax economic results for this large-scale representative mine.

Annual revenue: \$155 000 000 for production years 1 to 5
\$127 500 000 for production year 6
\$100 000 000 for production years 7 to 22
\$50 000 000 for the last production year

(7) Preproduction capital costs:

Estimated total of \$262 500 000, consisting of:

Component	Proportion (%)
Mine development	6.1
Mine plant and machinery	13.7
Mill facilities	45.0
Powerline, Road, and Housing	29.7
Working capital	5.5
Total	100.0

(8) Production costs:

Estimated to total \$63 500 000 per year, with a unit operating cost of \$5.80 per tonne and sustaining capital cost of \$5 500 000 per year. It is assumed that 78.2 percent of sustaining capital costs are allocated to plant and equipment, and that 21.8 percent are allocated to the mill facilities.

For all three representative cases, it is assumed that working capital is required in the final preproduction year, but that other capital costs

are spread evenly over the development period.

4.3. BEFORE-TAX ECONOMIC INDICATORS

The foregoing general economic conditions, as well as revenue and cost figures which were estimated by using the case-specific characteristics, are combined to assess before-tax economic conditions. The results given in table 4-1 reflect the study's objective in formulating the representative mine development cases. That is, the hypothetical gold project represents a small profitable mine, the lead-zinc project represents a medium size marginally economic operation and the copper-molybdenum project represents a large-scale, low-grade, and yet profitable operation under the Canadian mineral taxation system.

TABLE 4-1
BEFORE-TAX ANALYSIS RESULTS

Representative Case	Rate of Return (%)	Total Cash Flow (\$ million)	Net Present Value discounted at 10% (\$ million)
GOLD PROJECT	25.1	24.6	8.3
LEAD-ZINC PROJECT	19.4	209.7	45.7
COPPER-MOLYBDENUM PROJECT	25.4	860.9	216.1

The rates of return shown in this table indicate that the three representative mine development cases are profitable on a before-tax basis. However, as shown in chapter 6, taxation of these operations under Canadian provincial systems reduce these rates of return to values ranging from 15.8 to 18.9 percent for the gold project, 11.4 to 13.6 percent for the lead-zinc project, and 14.0 to 17.3 percent for the copper-molybdenum project. Hence, the lead-zinc project becomes marginally economic, while the other two remain profitable on an after-tax basis.

CHAPTER 5

GENERAL DESCRIPTION OF SELECTED TAXATION SYSTEMS

5.1. TAX REGIMES AND TAXATION MODEL

The direct effects of taxation on the representative gold, lead-zinc, and copper-molybdenum projects are evaluated in this study, based on the estimates discussed in the previous chapter. Thus, taxation systems existing in Australia, Brazil, Canada, the United States, and South Africa at the beginning of 1985 are imposed to measure the after-tax incentive for investment as well as the level, structure and incidence of tax payments. These five countries have been selected because their taxation systems incorporate most of the types of fiscal instruments that are generally applicable to mineral projects. These countries are also major mineral producers on a world scale.

In addition to the federal tax systems of these nations, systems of states or provinces must also be considered. The states and provinces selected for this purpose are: Queensland, Western Australia and South Australia in Australia; Quebec, Ontario, Nova Scotia and British Columbia in Canada; and Arizona, Colorado, Montana and Nevada in the United States.

In applying provisions of each taxation system, the individual project basis of taxation is assumed. The integrated company tax base is considered as a variant with exceptions for some cases which will be specified later.

Regulations and provisions of individual taxation systems have been incorporated into computerized models which are used for deriving actual cash flow schedules and economic indicators in accordance with tax calculation formats. The models have been built using a commercial integrated spreadsheet software called Lotus 1-2-3 developed for personal

computers. These models consist of ten separate worksheets, each accomodating one of five taxation systems on either a project or an integrated company basis of taxation. When loaded, the largest of the models, i.e., the Canadian Mineral Taxation Model which embodies a federal as well as four provincial regimes, uses up to 470 k-bytes of working memory. The smallest model uses about 190 k-bytes of memory. Thus, for running these models effectively along with the software's system program, a full 640 k-bytes of memory is desirable.

The taxation systems of the five countries considered in the study are outlined in the following section. More details on the regulations and assumptions are provided in the appendices.

5.2. DESCRIPTION OF TAXATION SYSTEMS

Canadian Mineral Taxation

The Canadian taxation system is a relatively complex tax regime. This is partly because of the fact that frequent and profound changes to the taxation of the mineral industry have been implemented by the federal and provincial governments. These changes have been made in conjunction with major reforms of mineral taxation legislation during the early 1970's and the subsequent refining of the new systems through to the 1980's (Price Waterhouse, 1983). Despite the complexity involved in its enforcement, this system offers fairly generous incentives to the mining industry through various tax provisions.

The Canadian mining industry is currently subject to three kinds of mineral taxation: the federal corporate income tax, the provincial corporate income tax, and the provincial mining tax (or royalty). The federal

corporate income tax is levied at a rate of 36 percent of the taxable income remaining after subtraction of all production costs and allowable deductions from the company's revenue. A provincial corporate income tax is levied on the same tax base at a rate ranging from 5.5 to 16 percent, depending on the province in which the mine operates. In addition, each province or territory imposes a mining tax or mineral royalty, levied on the taxable income determined according to its own particular rules. Provincial mining taxes and royalties are generally intended to be levied on profits derived from mining operations before the further processing stage.

The current Canadian taxation system incorporates generous provisions towards its resource sector, particularly the mining industry. In the context of federal and provincial income taxation, various special deductions are granted: rapid recovery of exploration and development expenditures, depletion allowance and resource allowance. The investment tax credit is also provided, which directly reduces the amount of income tax otherwise payable. This tax credit is a given percentage of eligible capital expenditures incurred for the production facilities and equipment of a mining project. These deductions and tax credits obviously reduce the overall tax burden, hence decreasing the effective average tax rate on accounting income.

In the Canadian taxation system, none of the three tax payments are deductible in the computation of the other taxes. Thus, a mining firm's overall tax burden with respect to a mining operation is the total amount of these three separate tax components. The system usually distinguishes between the preproduction and production phases of a mining operation, especially for the depreciation of capital expenditures incurred during the preproduction period. It can be generally said that those expenditures are

accorded a more generous treatment in applying the CCA classes than the equivalent expenditures incurred during the production period.

In order to understand Canada's position among other countries more clearly, four provinces are chosen to show the variability of taxation effects within Canada. The provinces of Quebec and Ontario are chosen because they are the most important economic centres in Canada, and also because they involve major Canadian metal mining districts. Nova Scotia and British Columbia are also selected since in recent years these provinces have been considered as the most and least favourable, respectively, in terms of the tax incidence imposed on the mining industry.¹

The federal corporate income taxation system, as well as the income tax, mining tax and royalty systems of the selected provinces are detailed in appendix A.

Australian Mineral Taxation

Australia is among the world's largest producers of iron ore, alumina, zinc, nickel and lead. It also has significant reserves of copper and uranium. Therefore, the importance of the mining industry for Australia is comparable to that of the Canadian mining industry with respect to the Canadian economy.

In order to increase exports as well as encourage industrial research and development, the Australian government, both at the federal and state levels, provides incentives to industry. For the mining industry, these incentives are provided through tax provisions, as an accelerated

1. A recent study by Mackenzie et al. (1986) also shows the same result.

depreciation and special deductions for petroleum and mining operations. Except for exploration write-offs, depreciation is generally based on the straight-line method with a three-, five-, or ten-year depreciation period. The immediate write-off of exploration expenditures incurred during a particular year is permitted, up to the amount of income available from mining after all other deductions have been taken. The scheme allows the immediate depreciation of capital expenditures regardless of the state of the project. Thus, during the preproduction period, or when profits are not sufficient to absorb the depreciation, a loss may be generated and carried forward.

The commonwealth corporate income tax at the federal level allows the deduction of state royalty payments and is imposed at a rate of 46 percent. Foreign companies operating in Australia, but not incorporated in Australia, are subject to an additional 5 percent tax rate. Notably, the commonwealth income tax, when applicable, is payable in the year following the year for which it is assessed.

Each of the state governments imposes its own mining tax, which is referred to as a state royalty. Most state royalty calculations are based on the value of the commodity(ies) produced (concentrate or metal), with rates ranging from 1.25 to 5 percent, but certain are based on net income as well.

The Australian system provides an exceptional incentive to its gold mining industry. Because most gold deposits are generally low-grade, the federal government has removed all income taxes from gold mining operations in order to attract and generate investment in this sector. For the purpose of this exemption, a gold mine is defined as one having more than 50 percent of its gross income derived from gold, or as a gold-copper mine in which more than 40 percent of gross income is derived from gold. In fact, Australian gold production has been flourishing mainly as a result of this

provision. Gold mining is also exempted from state royalties in two states: Western Australia and Victoria. Therefore, for these states, after-tax economic results for a gold mine are the same as before-tax results.

States selected for the comparison of state taxation effects are:

- Queensland: levies 5 percent of concentrate revenue as 'rail freight' royalty, plus the lower of 2 percent of concentrate revenue or 5 percent of net income after all deductions (exceeding AUS \$30 000 for both the concentrate revenue and the net income)
- South Australia: levies 2.5 percent of concentrate revenue for all metals
- Western Australia: nil for gold, 2.5 percent of metal revenue for nickel and tin, 2.5 percent of concentrate revenue for cobalt, silver and platinoids, and 5 percent of concentrate revenue for other metals

Particular characteristics of these state royalty regulations were considered as a basis of selection. As shown above, Queensland (except for the case of a Mount Isa Mines deposit) combines value of production taxation with profit-based taxation, but South Australia uses solely a value of production basis. Furthermore, while these two systems do not distinguish between types of metal, Western Australia applies different rates to various metals, but the royalty structure is based on value of production. More details on commonwealth income tax as well as state royalties are given in appendix B.

Brazilian Mineral Taxation

Two levels of taxation are associated with Brazilian mineral taxation: the federal corporate income tax (Imposto de Renda, IR), and the mining tax

(Imposto Unico Sobre Minerais, IUM). Before describing this system, it should be emphasized that Brazilian accounting systems are inflation adjusted. In other words, all costs and revenues are updated by the National Financial Board Index (Obrigações Reajustáveis do Tesouro Nacional, ORTN), which is linked to inflation. This is due to the very high rates of inflation which have prevailed in the Brazilian economy until the beginning of 1985.

For corporate income tax assessment, a number of allowances may be deducted to determine taxable income. These include production costs, depreciation, amortization and depletion. Depreciation and amortization allowances are deducted on a straight-line basis and are assumed to begin in the first year of production.

For mining projects, depreciable assets consist of mining equipment, mill plant and facilities, and certain types of infrastructure. Although there are detailed regulations concerning the rates to use in depreciating specific types of mine or mill equipment, this study assumes the following simplified rate structure: 20 percent for mill capital costs, 25 percent for mine capital costs, and 5 percent for infrastructure. Amortization is applicable to exploration and mine development expenditures. In this case, the rate is 20 percent on a straight-line basis. For the depletion allowance, a new mine entering production is assumed to be entitled to a deduction of 20 percent of mine revenue for a period of 10 years.

The mining taxes are initially collected by the federal government and then redistributed to state governments (70%) and to municipalities (20%). The remaining 10 percent is retained by the federal government for general purposes.

In the case where concentrates are sold to domestic smelters, the net

mining tax paid is usually nil. However, the tax is first levied from the mine at a given percentage of the value of the commodity produced. The smelter then reimburses the mine and receives credit against federal and state sales taxes for the full amount of original tax payments. If the minerals are exported, the tax rate for precious metals is lower than that for base metals, i.e., 1 percent for precious minerals as opposed to 7.5 percent for iron ore and manganese, and 4 percent for other mineral commodities.

Thus, for the analysis of the representative mine development cases, two variants are considered: 1) domestic consumption and 2) export of the concentrates produced from the mine. In the case of domestic consumption, mining taxes are not applicable, whereas both the corporate income tax and the mining tax are considered for the export case. More details concerning assumptions and computational procedures are provided in appendix C.

South African Mineral Taxation

South Africa is one of the largest producers of gold, gem diamonds, platinum, manganese, asbestos, uranium and nickel. It also has large deposits of copper, zinc, iron and titanium, among many others. The mineral industry has been rapidly growing and has taken a very important position in the country's economic development, mainly through the export of mineral commodities, which have accounted for anywhere between one quarter to one third of South Africa's GNP. This growth is partly attributed to the industry's unique structure, which provides advantages for mining companies as well as their investors. Most mining companies in South Africa are managed by six major private corporations or mining finance houses: Anglo American Corporation Limited, Anglovaal Limited, General Mining Union

Corporation Limited, Gold Fields of South Africa Limited, Johannesburg Consolidated Investment Company Limited, and Rand Mines Limited. These mining houses and the individual mines which they manage cooperate through the coordination of the Chamber of Mines of South Africa, which is a privately organized central body of the mining industry.

Formulation and execution of mineral policies are based on arrangements between the government and the industry to a significant extent. Taxation basically involves two layers of taxing instruments: the corporate income tax and the lease payment. The lease payment is levied by government only if the mine is located on state-owned ground. Otherwise, this payment depends on the agreement between the mine operator and the owner of the property. For the convenience of analysis, a state-owned ground location is assumed for the mine site.

Income taxes and lease payments are levied on annual profits. Characteristically, as mentioned in chapter 2, the system has a profitability structure of taxation for both the corporate income taxes and the lease payments in the case of new gold and uranium mines. Tax rates are on a sliding scale and are basically dependent on the ratio of profit to revenue. Profit is determined by deduction of costs and allowances from gross mine revenues. In the case of base metal, platinum and coal mines, a flat rate of 57.5 percent is used as the overall income tax rate.

In calculating taxable profit for a mining project, yearly capital expenditures are deducted in full as a redemption allowance. This deduction is allowed only against income derived from mining operations and only from the income generated by the particular mine for which the expenditure was made. Lease payments are deductible for the purpose of calculating profit for corporate income tax assessment.

In the computation of corporate income tax for the case of new gold and

uranium projects, an interest adjustment for the carried loss from the previous year is applied. This is called the taxation capital allowance and it is deducted from net income along with other allowances. The analysis on an integrated company basis is meaningless in this case. For other minerals, the taxation capital allowance is not applicable. Hence the study will deal only with the integrated company basis variant in the case of the lead-zinc and copper-molybdenum projects. Gold and uranium projects, as opposed to base metal projects, are the cause of major differences within the South African taxation system. The formula used in determining the annual income tax rate applicable for the representative gold mine is:

$$Y = 75 - 600/R$$

where Y = tax rate in percent
R = (taxable profit)(100)/(revenue)

According to this formula, the maximum tax rate is 75 percent. The rate becomes zero when the profitability index (R) equals or falls below 8 percent.

Lease payments are in fact determined through an agreement with the owner of the land or the government, based on the anticipated profitability of individual mine development projects. However, the following formula represents a typical agreement:

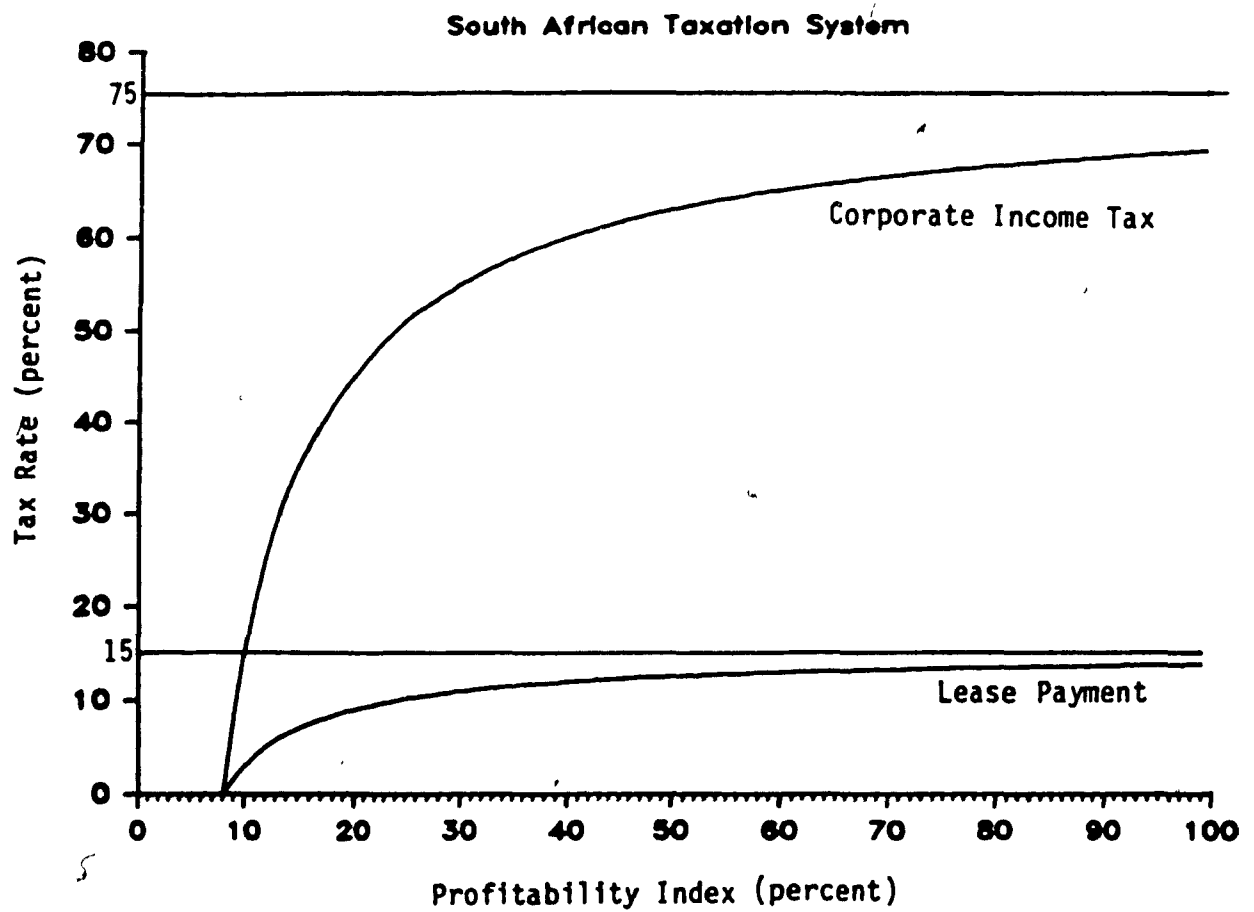
$$Y = 15 - 120/R$$

where Y = lease payment rate in percent
R = (profit for lease payment)(100)/(revenue)

Thus, this formula is used for all the representative mine development cases. As in the previous formula, the lease payment rate cannot exceed 15 percent and becomes zero when R equals or falls below 8 percent.

FIGURE 5-1
PROFITABILITY TAX RATE

Relationship between Profitability and Tax Rate



The relationships between profitability index and tax rate for these two formulae are shown in figure 5-1. Although the tax bases are different, the relationships are similar. The South African taxation system is detailed in appendix D.

Mineral Taxation of the United States

The mineral taxation system of the United States is comparable to that of Canada in that it is imposed by two levels of government: federal and state levels -- as federal and provincial levels in Canada. The U.S. federal government levies corporate income taxes on mining operations. Individual state governments have their own taxing regimes by which they levy ad valorem taxes, severance taxes, and ~~state~~ corporate income taxes in many cases. Taxes levied by states are deductible for federal income tax purposes.

For the federal corporate income tax, the government levies a tax ranging from 15 percent of total taxable income under US \$25 000, up to 46 percent of taxable income over US \$100 000. Similarly to Canadian federal income tax, taxable income is computed by deducting operating costs, depreciation, depletion, and amortized capital expenditures from gross revenue. Exploration expenditures are deductible either through current write-offs or by including them in the base of a cost depletion account, which is used in this study. Capital expenditures for mine development are deferred for each specific mine or deposit. Amortization of these costs is then allowed as an ordinary deduction on a unit-of-production basis as the deposit is mined. Depreciation may be based on one of the common depreciation methods such as straight-line, declining balance, sum-of-the-years digits, etc. The study applies the Accelerated Cost Recovery System

(ACRS) for calculating depreciation allowances. Under the ACRS, recovery of capital costs for depreciable property is made using accelerated methods of cost recovery over statutory recovery periods, that is, over a 3-, 5-, 10-, or 15-year period, depending on the type of property. In this study, a five-year recovery period is applied for most mining and processing equipment, while a ten-year period is used for infrastructure. A depreciation rate schedule for each of the recovery periods is also specified by the system. Generally, the lowest rate of the series applies to the year of acquisition of the asset. This is followed by the highest rate of the series in the following year. The rate then gradually decreases during the remainder of the period. The depletion allowance is derived from the product of gross revenue and the depletion rate, varying from 5 to 22 percent depending on the mineral, with an upper limit set at 50 percent of income for depletion. The federal system also levies a minimum tax of 15 percent of total tax preference items reduced by US \$10 000. The 'tax preference items' refer to the excess of tax deductions, if any, over the amount that would have been allowed if the straight-line method of depreciation had been used.

Arizona, Colorado, Montana and Nevada are selected for analysis in this study. These four western states of the U.S. are major metallic mineral producers of the country, notable for the production of gold, copper, molybdenum, lead and zinc.

Arizona is an important copper producer. Davidoff (1985) shows that Arizona imposes the highest tax incidence on mining operations among the U.S. states. It levies an ad valorem property tax based on the present value of the net annual proceeds of a mining operation, a severance tax based on the value of concentrate produced, and a state income tax based on taxable profits. Severance and property taxes for the current year, as well as federal income taxes from the previous year are allowed as deductions in the

calculation of taxable profit for state income tax purposes.

Colorado produces molybdenum, silver, lead and zinc as major mineral commodities. It levies an ad valorem tax based either on proceeds from producing mines, or on the present value of the future net income from nonproducing mines. A severance tax is levied on gross income. The tax rate depends on whether income is derived from molybdenum, iron or other minerals. Ad valorem taxes may be credited up to a maximum of 50 percent of the estimated severance tax. Colorado uses the federal income tax base for calculating state corporate income taxes.

Montana is one of the most important metal producing states in the U.S. Its ad valorem property and severance taxes are based on gross revenues, and state income taxes are levied on the same base as that of federal corporate income taxes.

Nevada is the primary gold producing state in the country. State ad valorem and severance taxes are based on net proceeds. The ad valorem tax is based on the net proceeds of the previous year of operation. No state income taxes are levied from mining operations.

Calculation formats and rates applicable in the U.S. taxation system are provided in appendix E of the study.

CHAPTER 6

ECONOMIC ANALYSIS OF SELECTED TAXATION SYSTEMS

6.1. AFTER-TAX INVESTMENT INCENTIVE

The three representative mine development projects are evaluated in this chapter on an after-tax basis by incorporating the taxation environments of the selected regimes. The results from this after-tax economic evaluation are compared with the before-tax economic characteristics of these projects, which have been developed in chapter 4. Because all other benefits and costs apart from taxation are considered to have already been reflected in the before-tax economic outcomes, the comparison of before- and after-tax results reflects solely the effects of taxation on the projects. Changes in economic viability of the projects, tax incidence, share of project value between government and mining concern, and ranking among the regimes are used to show these effects. The range of after-tax economic results associated with a particular mine development case shows the integrated impacts of tax provisions and limitations such as tax brackets, levy points, layering of taxing authorities, and rate structures embodied in the individual taxation systems. This comparison thus measures the degree of after-tax incentive provided by a particular jurisdiction through the formulation and execution of mineral policies.

Net present value and rate of return are employed as indicators of after-tax investment incentive. A positive net present value or a rate of return greater than the cost of capital imply a positive after-tax incentive to the investor. As reviewed previously, these criteria measure the economic viability of investment proposals based on the level of investment required and the time value of money. Thus, projects with greater and earlier

benefits are generally favoured. As a general rule, the higher these after-tax economic indicators, the greater the incentive to invest. In addition, all other factors being equal, a regime with lower tax incidence in the early years of production is necessarily preferred.

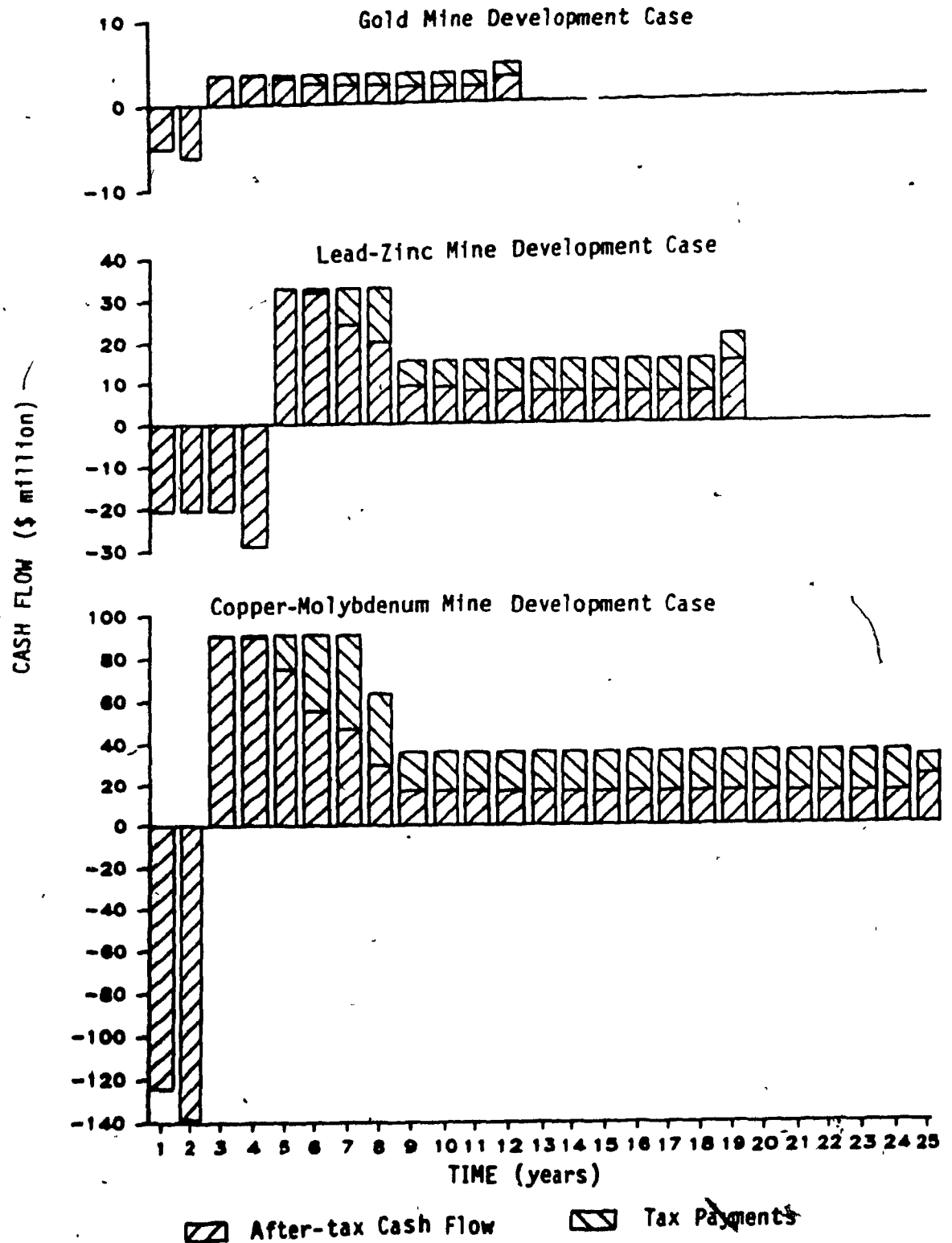
To illustrate the analysis technique used in this economic study, after-tax cash flow distributions for the three mine development projects are depicted in figure 6-1. Taxation in Canada under the Quebec provincial regime is used to illustrate the incidence of tax payments on the representative gold, lead-zinc, and copper-molybdenum projects. The total length of each bar in the graph represents the before-tax cash flow of a particular year. Tax payments are isolated at the top of each bar, thus leaving the lower portion as the after-tax cash flow. Working capital requirements and recovery are shown in the last year of preproduction and final year of production, respectively, as slight extensions of the bars. All three cases show typical cash flow profiles, in which a series of positive cash flows follows a period of intensive cash outflows.

For the gold mine development case in figure 6-1, tax payments are shown as an increasing proportion of before-tax cash flows. The lower levels of tax payments in the earlier years result from the higher depreciation in the earlier stage of production as well as the investment tax credit provided by the Canadian mineral taxation system.

The lead-zinc and copper-molybdenum mine development cases illustrated in the same figure clearly show the change which takes place when the mining operations undergo a transition from higher grade to lower grade ore. As stated in chapter 4, the reserves of the lead-zinc and copper-molybdenum deposits consist of two categories: category 1 which represents a high grade part of the deposit, and category 2 which represents a lower grade part. This is well reflected in the graphs, as a sudden drop in the overall level

FIGURE 6-1

TIME DISTRIBUTION OF CASH FLOWS AND TAX PAYMENTS



of the cash flow distribution. In the later two cases as well, the level of tax payments increases gradually as production proceeds further within the individual grade categories of the deposit.

The after-tax cash flow distributions shown here as well as all others determined by applying the other taxation systems are used to derive economic criteria which allow the comparison of investment incentive. After-tax results for the entire series of tax regimes are presented in tables 6-1 through 6-3. In all cases, except the gold project taxed under the regime of Western Australia, after-tax indicators fall below the before-tax values. However, the extent of the decrease varies significantly among regimes.

Comparisons of the tax regimes on the basis of ROR and NPV generally agree. However, the relative positions of Arizona (U.S.) and South Africa in the case of the gold project do not agree. While the ROR associated with South Africa (13.7%) is slightly higher than that associated with Arizona (13.3%), the NPV's suggest the inverse ranking -- 1.4 million dollars for South Africa versus 1.8 million for Arizona. The same contradiction occurs between Queensland and South Africa, Quebec and Colorado, and Ontario and Arizona, in the case of the copper-molybdenum project. As is the case here, contradictory results can occur in the ranking of investment projects using these two particular evaluation criteria. This is mainly due to the different discount rates embodied in each of the criteria. A preset cost-of-capital discount rate is used in the net present value method, whereas the discount rate used in the rate-of-return method is the rate of return itself. In the case of the gold project, for instance, the rates of return associated with Arizona and South Africa are both higher than the 10 percent discount rate applied in the net present value calculation. This implies that Arizona's tax system, which shows a higher after-tax net present value but a lower after-tax rate of return, embodies a time distribution of tax

TABLE 6-1
EFFECTS OF TAXATION ON ECONOMIC INDICATORS:
GOLD PROJECT

	Rate of Return (percent)	Net Present Value (\$ million)
=====		
BEFORE-TAX INDICATORS	25.1	8.3
AUSTRALIA		
Queensland	20.6	5.6
Western Australia	25.1	8.3
South Australia	23.5	7.3
BRAZIL		
Domestic consumption	21.7	6.0
Export	21.3	5.8
CANADA		
Quebec	18.9	4.0
Ontario	16.4	2.7
Nova Scotia	16.7	2.9
British Columbia	15.8	2.4
UNITED STATES		
Arizona	13.3	1.8
Colorado	17.0	3.6
Montana	19.2	4.5
Nevada	20.3	5.0
SOUTH AFRICA	13.7	1.4

TABLE 6-2

EFFECTS OF TAXATION ON ECONOMIC INDICATORS:

LEAD-ZINC PROJECT

	Rate of Return (percent)	Net Present Value (\$ million)
=====		
BEFORE-TAX INDICATORS	19.8	47.5
AUSTRALIA		
Queensland	9.7	-1.1
Western Australia	8.3	-6.4
South Australia	9.3	-2.6
BRAZIL		
Domestic consumption	15.0	22.1
Export	13.8	16.4
CANADA		
Quebec	13.6	13.9
Ontario	11.4	5.1
Nova Scotia	13.0	11.4
British Columbia	12.0	7.2
UNITED STATES		
Arizona	9.7	-1.5
Colorado	12.1	10.1
Montana	15.2	23.0
Nevada	16.1	27.3
SOUTH AFRICA	9.7	-0.9

TABLE 6-3

EFFECTS OF TAXATION ON ECONOMIC INDICATORS:

COPPER-MOLYBDENUM PROJECT

	Rate of Return (percent)	Net Present Value (\$ million)
=====		
BEFORE-TAX INDICATORS	25.4	220.6
AUSTRALIA		
Queensland	13.1	36.6
Western Australia	11.5	18.0
South Australia	12.7	31.7
BRAZIL		
Domestic consumption	19.1	116.0
Export	17.7	95.8
CANADA		
Quebec	17.3	78.8
Ontario	14.0	43.2
Nova Scotia	16.8	76.2
British Columbia	15.7	60.1
UNITED STATES		
Arizona	13.8	54.3
Colorado	16.8	95.7
Montana	19.3	121.5
Nevada	20.1	132.0
SOUTH AFRICA	13.5	35.5

payments which is relatively more weighted towards the earlier years of the project as compared to the South African taxation system.

For the gold project, the taxation systems in Australia and Brazil provide the most favourable after-tax investment incentive, whereas Arizona and South Africa provide the least favourable incentive. With respect to base metal projects, a large contrast exists in the Australian taxation system. For the lead-zinc and copper-molybdenum projects, Australian states rank last in terms of investment incentive. This is because gold mining operations are exempted from income taxation in Australia. In fact, Western Australia imposes the most severe taxation regime on base metal mines, but mineral taxes are non-existent for gold operations. Hence, after-tax indicators are equal to before-tax indicators, reflecting the maximum investment incentive. Nevada and Montana taxation systems rank highest for the base metal projects.

The overall ranking of the taxation systems is given in table 6-4, where 1 indicates the most favourable tax regime and 13 represents the least favourable system. After Australia, Brazil provides the best overall incentive, while Canadian provinces, as well as Arizona and Colorado in the U.S. offer an average incentive. South Africa assumes a low overall position, resulting from the low incentives associated with the lead-zinc and copper-molybdenum projects.

Integrated Company Tax Base

The integrated company basis of taxation is examined as a variant of the base case analysis. Because an integrated company is generally capable of claiming tax allowances as soon as they become available, it is anticipated that the integrated company basis of taxation will yield better

TABLE 6-4
RANKING AMONG TAX REGIMES
BASED ON ECONOMIC INDICATORS

	Using Rate of Return			Using Net Present Value		
	Au	Pb-Zn	Cu-Mo	Au	Pb-Zn	Cu-Mo
=====						
AUSTRALIA						
Queensland	5	11	12	5	11	11
Western Australia	1	14	14	1	14	14
South Australia	2	13	13	2	13	13
BRAZIL						
Domestic	3	3	3	3	3	3
Export	4	4	4	4	4	4
CANADA						
Quebec	8	5	5	8	5	6
Ontario	11	9	9	11	9	10
Nova Scotia	10	6	7	10	6	7
British Columbia	12	8	8	12	8	8
UNITED STATES						
Arizona	14	12	10	13	12	9
Colorado	9	7	6	9	7	5
Montana	7	2	2	7	2	2
Nevada	6	1	1	6	1	1
SOUTH AFRICA	13	10	11	14	10	12

economic indicators than the project basis. The effects of such a taxation basis on the gold, lead-zinc, and copper-molybdenum projects are shown in tables 6-5 to 6-7, respectively.

As compared to tables 6-1 to 6-3, the after-tax economic indicators obtained from the integrated company basis of taxation are significantly higher than those obtained from the individual project basis in most regimes, except for the U.S. cases. Thus, the level of taxation, or the government's share of before-tax value of the project is reduced accordingly. This general relationship clearly shows the advantageous tax position of an integrated company.

For all three projects assessed under the U.S. system, the economic indicators are lower because of the minimum tax rule embodied in federal corporate income taxation. As stated earlier, this rule levies 15 percent of all tax preference items reduced by \$10 000. Hence, taxpayers are not better-off from an integrated-company position as long as the minimum tax rule is applicable, as assumed in this study. Nevada and Montana, which provided the best incentive on a project basis, now offer average incentives on an integrated company basis.

The results obtained from the consideration of the integrated company basis of taxation reveals approximately the same ranking among the tax regimes as that observed with the project basis. However, Canadian provinces shift from average to very favourable positions, especially for the base metal projects. This suggests that the advantages resulting from the utilization of flow-through deductions are greatest in the Canadian taxation system.

Results from the integrated company basis of taxation also indicate that the ranking among Canadian provinces as well as Australian and U.S. states remain essentially the same.

TABLE 6-5
EFFECTS OF TAXATION ON ECONOMIC INDICATORS:
INTEGRATED COMPANY BASE -- GOLD PROJECT

	Rate of Return (percent)	Net Present Value (\$ million)
=====		
BEFORE-TAX INDICATORS	25.1	8.3
AUSTRALIA		
Queensland	20.6	5.6
Western Australia	25.1	8.3
South Australia	23.5	7.3
BRAZIL		
Domestic consumption	23.7	6.6
Export	23.2	6.4
CANADA		
Quebec	25.9	5.3
Ontario	22.9	4.1
Nova Scotia	24.9	4.5
British Columbia	24.3	4.0
UNITED STATES		
Arizona	13.1	1.6
Colorado	16.4	3.3
Montana	18.5	4.1
Nevada	19.3	5.0
SOUTH AFRICA	n.a.	n.a.

TABLE 6-6

EFFECTS OF TAXATION ON ECONOMIC INDICATORS:
 INTEGRATED COMPANY BASE -- LEAD-ZINC PROJECT

	Rate of Return (percent)	Net Present Value (\$ million)
=====		
BEFORE-TAX INDICATORS	19.8	47.5
AUSTRALIA		
Queensland	10.8	2.9
Western Australia	8.5	-5.4
South Australia	9.6	-1.5
BRAZIL		
Domestic consumption	17.0	28.8
Export	15.8	23.2
CANADA		
Quebec	18.5	24.0
Ontario	15.3	14.2
Nova Scotia	19.0	23.9
British Columbia	17.9	19.3
UNITED STATES		
Arizona	9.6	-1.9
Colorado	11.6	7.5
Montana	14.6	20.1
Nevada	15.2	23.2
SOUTH AFRICA	10.4	1.2

TABLE 6-7

EFFECTS OF TAXATION ON ECONOMIC INDICATORS:
 INTEGRATED COMPANY BASE - COPPER-MOLYBDENUM PROJECT

	Rate of Return (percent)	Net Present Value (\$ million)
=====		
BEFORE-TAX INDICATORS	25.4	220.6
AUSTRALIA		
Queensland	14.1	46.0
Western Australia	11.8	21.0
South Australia	13.0	34.7
BRAZIL		
Domestic consumption	21.1	132.1
Export	19.6	112.0
CANADA		
Quebec	23.1	101.9
Ontario	17.8	60.0
Nova Scotia	23.7	105.0
British Columbia	22.3	87.1
UNITED STATES		
Arizona	13.4	47.5
Colorado	16.0	84.0
Montana	18.4	110.1
Nevada	18.9	118.3
SOUTH AFRICA	15.0	45.7

6.2. LEVEL OF TAXATION

This section examines the level of taxation, more specifically through observation of total tax payments and components, time profiles, and effective tax rates.

Tax Payments

Tables 6-8, 6-9 and 6-10 show total tax payments levied by the tax regimes. The tables give total undiscounted tax payments, i.e. the sum of annual tax payments, as well as their present values discounted at rates of 3 percent and 10 percent. The 3 percent rate represents a riskless discount rate from the government's point of view. The present value of tax payments is simply the difference between before-tax and after-tax project values discounted back to the beginning of preproduction. Thus, a tax regime which is found to offer a low after-tax investment incentive can be considered as one which will collect relatively high amounts of taxes. Hence, ranking of the tax regimes according to these values is apparently opposite to that using net present value as presented in the previous section. To illustrate variations in tax payments among the regimes, total tax payments presented in tables 6-8 to 6-10 are depicted in figures 6-2 to 6-4.

In the case of the gold project shown in table 6-8, South Africa collects the most taxes, followed by Arizona and the Canadian provinces. At the other extreme, Western Australia collects no taxes at all. On the other hand, Western Australia is the toughest tax collector when it comes to base metal mining. South Australia, South Africa and Arizona are also among those who impose the heaviest tax burden on base metal mining, and Nevada and Montana collect the least. Here again, changes in ranking based on the magnitude of discounted tax payments may occur. For instance, in the case of

TABLE 6-8
PRESENT VALUE OF TAX PAYMENTS:
GOLD PROJECT

	PV of Tax Payments		
	Undiscounted Total (\$ million)	Discounted at 3% (\$ million)	Discounted at 10% (\$ million)
=====			
AUSTRALIA			
Queensland	5.4	4.3	2.7
Western Australia	0.0	0.0	0.0
South Australia	2.0	1.6	1.0
BRAZIL			
Domestic consumption	5.0	3.9	2.3
Export	5.5	4.3	2.5
CANADA			
Quebec	10.1	7.8	4.3
Ontario	12.7	9.8	5.6
Nova Scotia	12.2	9.4	5.4
British Columbia	13.7	10.5	5.9
UNITED STATES			
Arizona	12.3	10.0	6.5
Colorado	9.4	7.5	4.7
Montana	8.3	6.6	3.8
Nevada	7.2	5.6	3.3
SOUTH AFRICA	16.0	12.3	6.9

TABLE 6-9
PRESENT VALUE OF TAX PAYMENTS:
LEAD-ZINC PROJECT

PV of Tax Payments			
	Undiscounted Total (\$ million)	Discounted at 3% (\$ million)	Discounted at 10% (\$ million)
=====			
AUSTRALIA			
Queensland	134.5	96.4	48.6
Western Australia	150.7	107.7	53.9
South Australia	140.9	100.5	50.1
BRAZIL			
Domestic consumption	71.0	50.6	25.4
Export	86.4	61.7	31.1
CANADA			
Quebec	105.8	73.1	33.6
Ontario	126.9	89.0	42.4
Nova Scotia	110.1	76.7	36.1
British Columbia	124.0	86.3	40.3
UNITED STATES			
Arizona	112.1	84.8	49.0
Colorado	88.6	66.2	37.4
Montana	68.7	49.1	24.5
Nevada	57.1	40.7	20.2
SOUTH AFRICA	145.0	101.7	48.4

TABLE 6-10
PRESENT VALUE OF TAX PAYMENTS:
COPPER-MOLYBDENUM PROJECT

	PV of Tax Payments		
	Undiscounted	Discounted	Discounted
	Total (\$ million)	at 3% (\$ million)	at 10% (\$ million)
=====			
AUSTRALIA			
Queensland	514.9	360.4	184.0
Western Australia	560.7	394.0	202.6
South Australia	524.8	368.4	188.9
BRAZIL			
Domestic consumption	316.8	215.8	104.6
Export	373.0	255.1	124.8
CANADA			
Quebec	457.0	307.5	141.8
Ontario	536.6	367.2	177.4
Nova Scotia	446.7	304.0	144.4
British Columbia	501.5	340.4	160.5
UNITED STATES			
Arizona	411.9	299.0	166.3
Colorado	319.5	229.0	124.9
Montana	283.1	196.8	99.0
Nevada	254.7	176.8	88.6
SOUTH AFRICA	563.9	386.2	185.1

FIGURE 6-2

TOTAL TAX PAYMENTS:

GOLD PROJECT

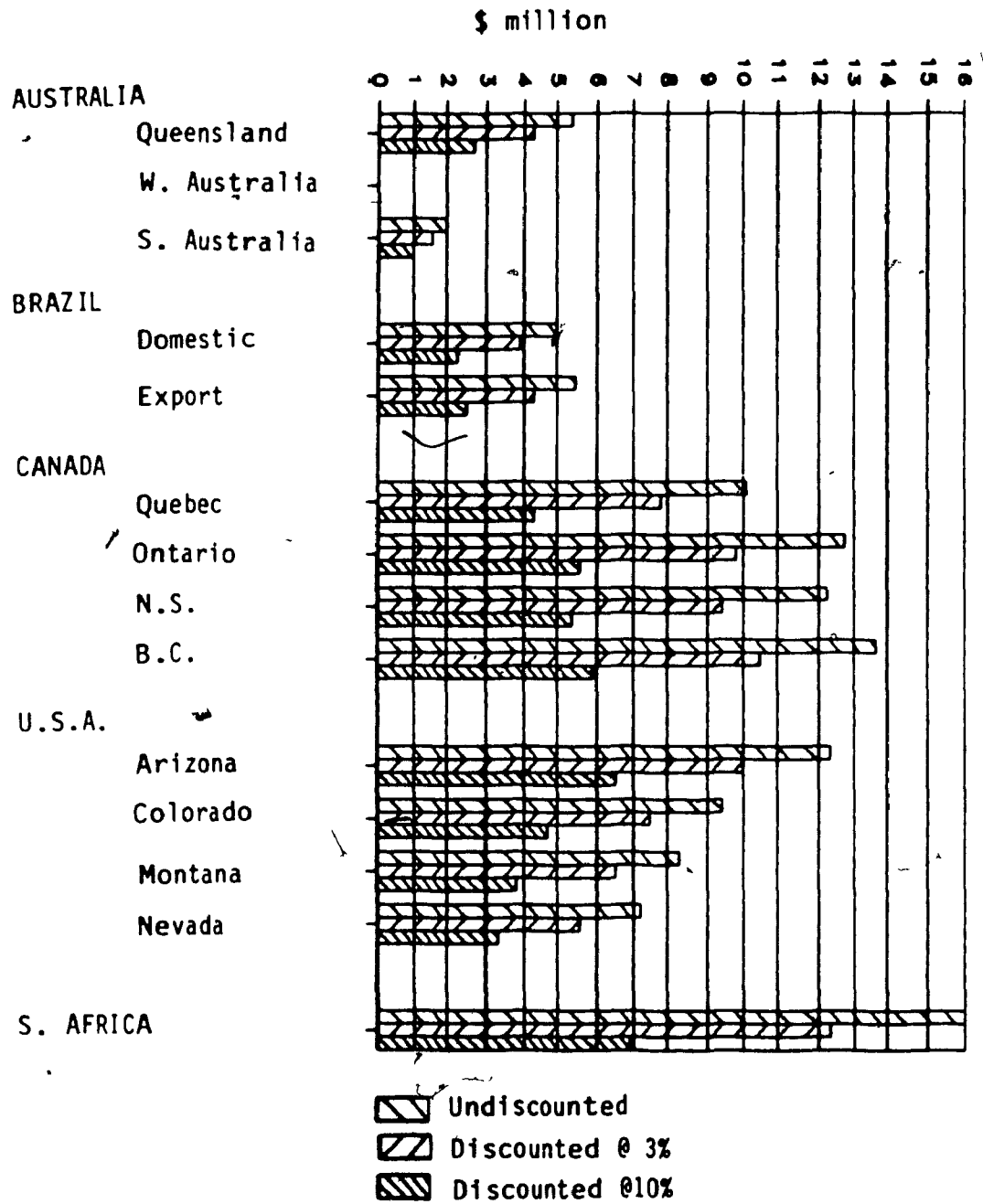


FIGURE 6-3
TOTAL TAX PAYMENTS:
LEAD-ZINC PROJECT

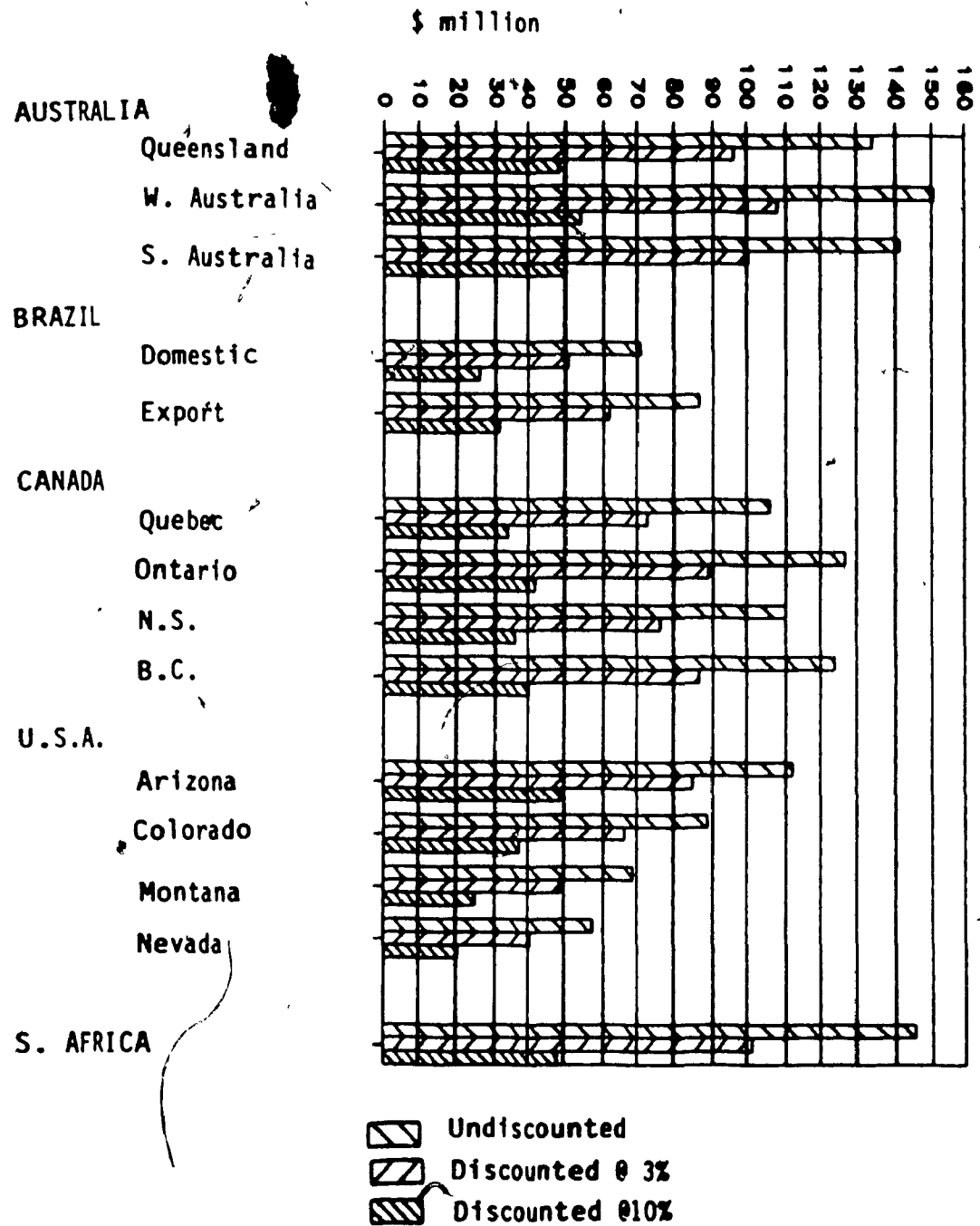
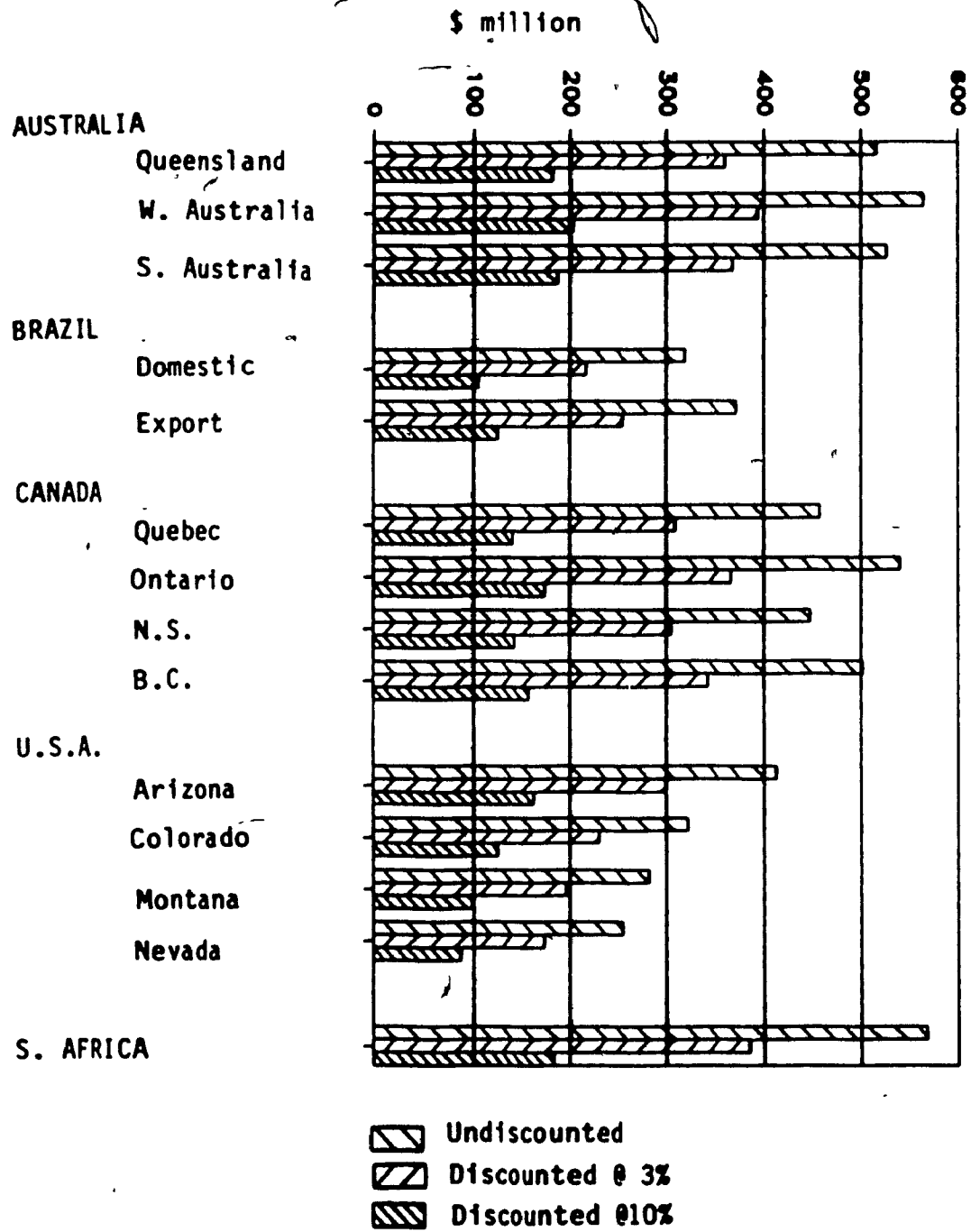


FIGURE 6-4
TOTAL TAX PAYMENTS:
COPPER-MOLYBDENUM PROJECT



the lead-zinc project, South Africa ranks fifth from the top at a 10 percent rate, but it ranks second at the 3 percent and zero percent (undiscounted) rates. Changes between Ontario and Arizona, and between Nova Scotia and Colorado also occur with respect to the discount rate. As discussed earlier, this problem is due to a different distribution of tax payments through time. The taxation system which yields lower tax payments than another at a high discount rate, but higher tax payments at a low discount rate, embodies a time distribution of greater tax payments during the earlier years of production.

Results obtained from the analysis on an integrated company basis are shown in tables 6-11 to 6-13. The results here are more favourable for all tax regimes except for those of the U.S. states. The reason for this was explained in the previous section. Here again, the improvement over the project basis of taxation is notably greater in the case of the Canadian provinces.

TABLE 6-11

PRESENT VALUE OF TAX PAYMENTS:
 INTEGRATED COMPANY BASE -- GOLD PROJECT

	PV of Tax Payments		
	Undiscounted Total (\$ million)	Discounted at 3% (\$ million)	Discounted at 10% (\$ million)
=====			
AUSTRALIA			
Queensland	5.4	4.3	2.7
Western Australia	0.0	0.0	0.0
South Australia	2.0	1.6	1.0
BRAZIL			
Domestic consumption	4.3	3.2	1.7
Export	4.7	3.6	1.9
CANADA			
Quebec	9.5	6.8	3.0
Ontario	12.1	8.9	4.2
Nova Scotia	11.3	8.3	3.8
British Columbia	12.9	9.4	4.3
UNITED STATES			
Arizona	12.8	10.3	6.7
Colorado	10.1	8.1	5.0
Montana	9.0	7.1	4.2
Nevada	8.1	6.3	3.7
SOUTH AFRICA	n.a.	n.a.	n.a.

TABLE 6-12

PRESENT VALUE OF TAX PAYMENTS:
INTEGRATED COMPANY BASE -- LEAD-ZINC PROJECT

PV of Tax Payments			
	Undiscounted Total (\$ million)	Discounted at 3% (\$ million)	Discounted at 10% (\$ million)
=====			
AUSTRALIA			
Queensland	131.2	92.6	44.6
Western Australia	149.6	106.6	52.9
South Australia	139.8	99.4	49.0
BRAZIL			
Domestic consumption	62.4	42.6	18.7
Export	77.8	53.7	24.4
CANADA			
Québec	102.6	66.8	23.6
Ontario	127.3	85.0	33.3
Nova Scotia	105.3	68.4	23.7
British Columbia	120.8	79.0	28.2
UNITED STATES			
Arizona	114.7	86.4	49.4
Colorado	94.2	70.6	40.0
Montana	74.7	53.8	27.4
Nevada	64.7	46.9	24.3
SOUTH AFRICA	143.7	100.1	46.3

TABLE 6-13

PRESENT VALUE OF TAX PAYMENTS:

INTEGRATED COMPANY BASE -- COPPER-MOLYBDENUM PROJECT

	PV of Tax Payments		
	Undiscounted Total (\$ million)	Discounted at 3% (\$ million)	Discounted at 10% (\$ million)
=====			
AUSTRALIA			
Queensland	507.3	351.7	174.6
Western Australia	557.5	390.9	199.6
South Australia	521.7	365.2	185.9
BRAZIL			
Domestic consumption	298.0	197.8	88.5
Export	354.1	237.1	108.6
CANADA			
Quebec	461.9	299.9	118.7
Ontario	563.3	373.7	160.5
Nova Scotia	449.2	292.4	115.6
British Columbia	510.3	333.0	133.5
UNITED STATES			
Arizona	427.3	311.0	173.1
Colorado	341.3	246.9	136.6
Montana	304.6	214.4	110.4
Nevada	278.8	196.9	102.3
SOUTH AFRICA	559.0	379.1	174.9

Tax Payment Components

Tax components, expressed as a percentage of total tax payments discounted at 3 percent are shown in tables 6-14 to 6-16. Each table indicates four categories of taxes: federal corporate income tax (the Commonwealth income tax for Australia), provincial or state corporate income tax, mining tax (provincial mining tax for Canada, state royalty for Australia, mining tax for Brazil, and state severance tax for the U.S.), and ad valorem property tax (for the U.S. only). Mineral taxation systems of Australia, Brazil and South Africa contain only two of these categories: the federal income tax and the mining tax. The provincial systems of Canada involve provincial corporate income taxes as well. The states systems of the U.S. contain all four categories.

Significant differences in the tax components are observed among the taxation systems. In the case of the gold project, the federal corporate income tax component varies from 33.2 percent in Arizona to 100 percent for the domestic processing case in Brazil. Provincial or state corporate income taxes vary from 0 percent in Nevada to 32 percent in British Columbia. Mining taxes vary from 0 percent in Western Australia and for domestic processing in Brazil, to 100 percent in Queensland and South Australia. Less extensive but significant differences in tax components are shown in the case of the lead-zinc and copper-molybdenum projects. The federal corporate income tax component varies from about 30 percent in Arizona to 100 percent for domestic processing in Brazil. The provincial corporate income tax component varies from 0 percent in Nevada to 33 percent in British Columbia. Mining taxes range from 0 percent for domestic processing in Brazil, to 40 and 43 percent for the lead-zinc and copper-molybdenum projects in Quebec, respectively. A zero percent share associated with a

particular tax component reflects a tax exemption provided by the system. Ad valorem taxes, which are only levied in the U.S. state systems, are high in Arizona and Colorado, ranging from 36 to 56 percent, and are lowest in Montana and Nevada, with levels below 10 percent.

Shares between federal and provincial (or state) governments within a country are only meaningful for the Canadian case, because provincial taxation is independent of federal taxation. In Australia and the U.S., state taxes are deductible for the purpose of calculating the federal income tax base. Thus, the federal income tax share in these countries is quite sensitive to any increase in state taxes.

To contrast the level of corporate income taxes with mineral or mining taxes, provincial (or state) income taxes are added to federal income taxes in the Canadian and the U.S. systems, and the ad valorem taxes are added to the severance taxes in the U.S. Thus, payments are classified into two major components: income taxes and mining taxes. These modified tax components are given in table 6-17. In most systems, corporate income taxes account for a relatively high portion of total taxes. Exceptions to this rule are Australia, where corporate income taxes are not levied from gold operations, and Arizona and Colorado, where property taxes play an important role in government revenue, especially during periods of non-production. Hence, income-related taxes are major concerns in all tax regimes considered except in those of Arizona and Colorado.

Tax payments and components discussed so far are depicted in figures 6-5 through 6-7. In the case of base metal taxation, these graphs clearly show the approximate equivalences of the Australian and South African systems on the one hand, and of the Brazilian and U.S. systems on the other. Such equivalences are not evident in the case of gold taxation.

TABLE 6-14

TAX PAYMENT COMPONENTS:

GOLD PROJECT

Components in percent				
	Corporate Income Tax Payments		Mining Tax, Royalty or Lease Payment	Ad Valorem Property Tax Payment
	Federal	Provincial or State		
=====				
AUSTRALIA				
Queensland	0.0		100.0	
Western Australia	0.0		0.0	
South Australia	0.0		100.0	
BRAZIL				
Domestic	100.0		0.0	
Export	85.1		14.9	
CANADA				
Quebec	57.9	10.6	31.5	
Ontario	46.0	21.7	32.3	
Nova Scotia	47.6	23.9	28.5	
British Columbia	42.7	32.1	25.2	
UNITED STATES				
Arizona	33.2	7.5	7.5	51.7
Colorado	53.8	7.3	0.1	38.8
Montana	63.2	11.6	18.7	6.5
Nevada	85.1	0.0	7.0	7.9
SOUTH AFRICA	80.6		19.4	

TABLE 6-15

TAX PAYMENT COMPONENTS

LEAD-ZINC PROJECT

Components in percent				
	Corporate Income Tax Payments		Mining Tax, Royalty or Lease Payment	Ad Valorem Property Tax Payment
	Federal	Provincial or State		
=====				
AUSTRALIA				
Queensland	64.8		35.2	
Western Australia	76.6		23.4	
South Australia	87.5		12.5	
BRAZIL				
Domestic	100.0		0.0	
Export	67.3		32.7	
CANADA				
Quebec	50.2	9.4	40.4	
Ontario	41.3	20.1	38.6	
Nova Scotia	47.9	24.5	27.6	
British Columbia	42.6	32.5	24.9	
UNITED STATES				
Arizona	30.0	6.6	7.1	56.3
Colorado	43.9	5.9	7.1	43.0
Montana	62.0	11.4	19.8	6.8
Nevada	83.0	0.0	7.7	9.3
SOUTH AFRICA	81.1		18.9	

TABLE 6-16

TAX PAYMENT COMPONENTS:

COPPER-MOLYBDENUM PROJECT

	Components in percent			
	Corporate Income Tax Payments		Mining Tax, Royalty or Lease Payment	Ad Valorem Property Tax Payment
	Federal	Provincial or State		
=====				
AUSTRALIA				
Queensland	66.3		33.7	
Western Australia	77.3		22.7	
South Australia	87.9		12.1	
BRAZIL				
Domestic	100.0		0.0	
Export	72.0		28.0	
CANADA				
Quebec	47.8	9.0	43.1	
Ontario	40.0	19.2	40.7	
Nova Scotia	48.4	25.1	26.6	
British Columbia	43.2	33.0	23.8	
UNITED STATES				
Arizona	31.9	6.6	7.5	53.9
Colorado	52.8	7.1	3.6	36.6
Montana	64.7	11.7	17.6	6.0
Nevada	85.2	0.0	6.6	8.1
SOUTH AFRICA	81.0		19.0	

TABLE 6-17

TAX COMPONENTS:

INCOME TAXES AND MINING TAXES

	Components in percent					
	Gold project		Pb-Zn project		Cu-Mo project	
	Income taxes	Mining taxes	Income taxes	Mining taxes	Income taxes	Mining taxes
=====						
AUSTRALIA						
Queensland	0.0	100.0	64.8	35.2	66.3	33.7
Western Australia	0.0	0.0	76.6	23.4	77.3	22.7
South Australia	0.0	100.0	87.5	12.5	87.9	12.1
BRAZIL						
Domestic	100.0	0.0	100.0	0.0	100.0	0.0
Export	85.1	14.9	67.3	32.7	72.0	28.0
CANADA						
Quebec	68.5	31.5	59.6	40.4	56.9	43.1
Ontario	67.7	32.3	61.4	38.6	59.3	40.7
Nova Scotia	71.5	28.5	72.4	27.6	73.4	26.6
British Columbia	74.8	25.2	75.1	24.9	76.2	23.8
UNITED STATES						
Arizona	40.8	59.2	36.6	63.4	38.5	61.5
Colorado	61.1	38.9	49.8	50.2	59.9	40.1
Montana	74.8	25.2	73.4	26.6	76.4	23.6
Nevada	85.1	14.9	83.0	17.0	85.2	14.8
SOUTH AFRICA	80.6	19.4	81.1	18.9	81.0	19.0

FIGURE 6-5
TAX PAYMENTS AND COMPONENTS
DISCOUNTED AT 3 PERCENT:
GOLD PROJECT

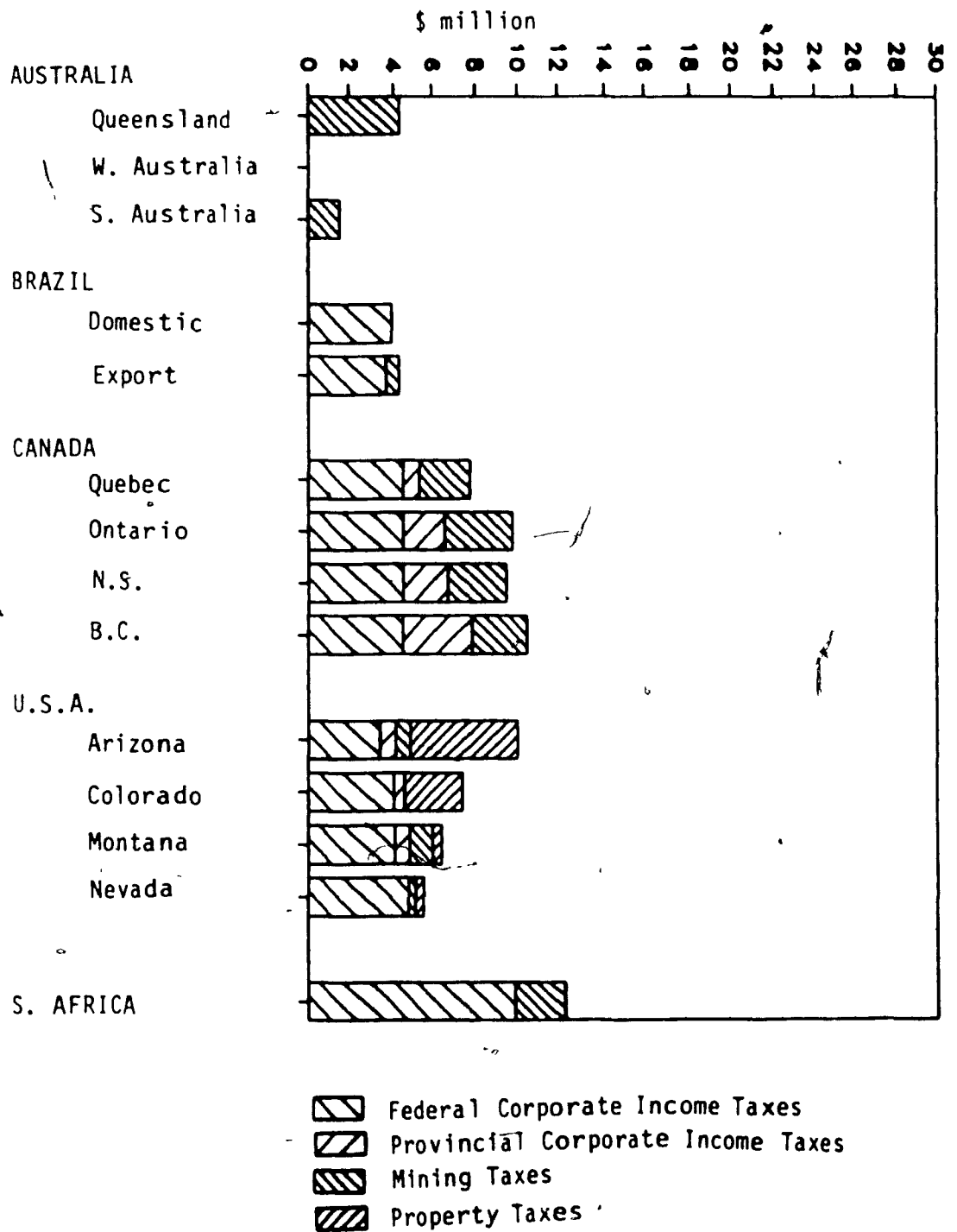
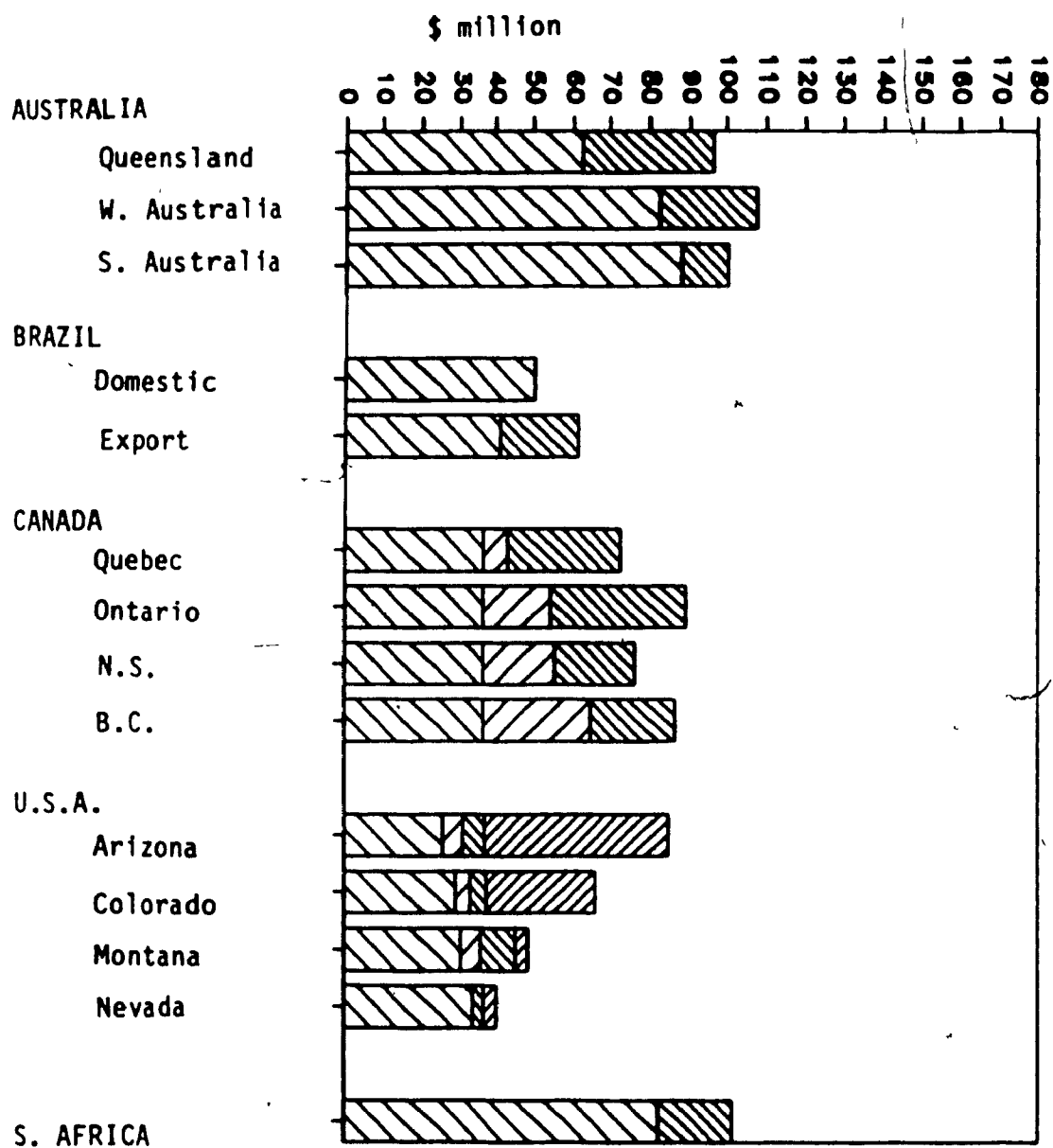


FIGURE 6-6

TAX PAYMENTS AND COMPONENTS

DISCOUNTED AT 3 PERCENT:

LEAD-ZINC PROJECT



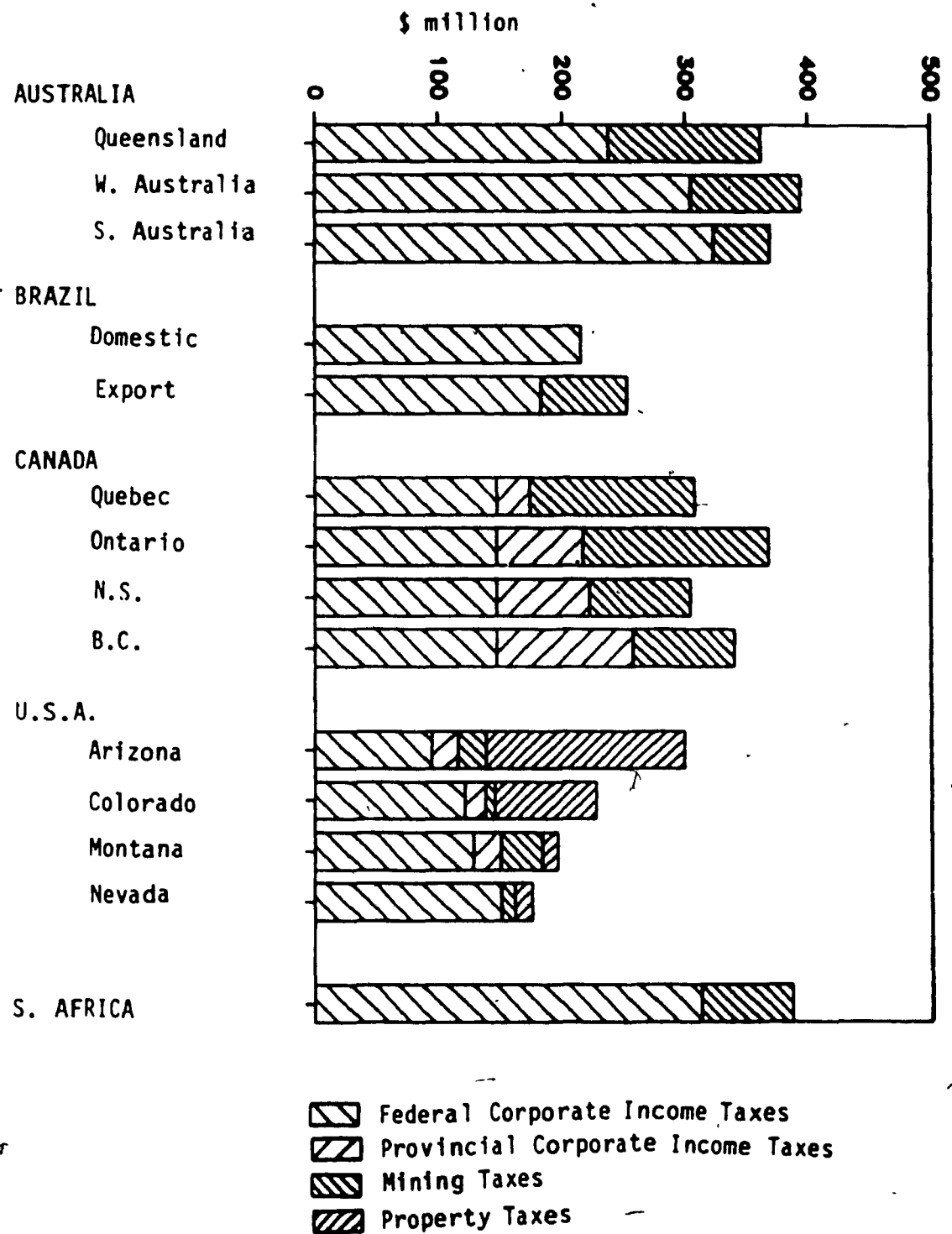
- Federal Corporate Income Taxes
- Provincial Corporate Income Taxes
- Mining Taxes
- Property Taxes

FIGURE 6-7

TAX PAYMENTS AND COMPONENTS

DISCOUNTED AT 3 PERCENT:

COPPER-MOLYBDENUM PROJECT



Time Distribution of Tax Payments

To better understand the effects of different tax structures on the stream of tax payments, distributions of annual tax payments, expressed in constant dollars, are examined. When combined with the time value factor, the time pattern of tax payments has a significant impact on the economics of a mine development project. Thus, the pattern of tax payments may provide an important incentive to the taxpayer. Annual tax payment streams are presented in figures 6-8 to 6-11 for the gold project, in figures 6-12 to 6-15 for the lead-zinc project, and in figures 6-16 to 6-19 for the copper-molybdenum project. The figures associated with foreign tax regimes also show a typical Canadian tax payments schedule, obtained by averaging the annual tax payments of the four provinces. This schedule is considered to be representative of the Canadian situation because of the similarity in tax profiles associated with the four provincial regimes, as shown in figures 6-8, 6-12 and 6-16. A detailed account of the tax payments used for the construction of these figures can be found in appendices A to E.

Given that constant annual revenues are considered for the projects, the Canadian regimes show a characteristic trend of tax payments. This trend begins with low levels of tax payments and a slow growth rate during the early stages of production. Then the growth rate sharply increases as the tax allowance pools are depleted. The level of tax payments reaches a plateau, where it rises very slowly up until the end of production. Thus, this characteristic growth pattern consists of three phases: a period of slow growth at first, a period of rapid growth during an intermediate phase, and finally, another period of slow growth for the rest of the production period. The slow growth phase during the earlier years of production results from delays in the implementation of full-scale taxation due to the

accelerated deduction of capital expenditures. As the amount of allowances decreases, the magnitude of tax payments increases sharply in the second phase of the pattern. Finally, when depreciation pools are exhausted, tax payments reach a plateau. As long as there are no major capital investments during the production period, as is assumed in this study, this type of tax distribution pattern is typical of profit based taxation systems. The patterns in figure 6-8 showing taxes under the systems of Quebec, Ontario, Nova Scotia and British Columbia are more or less parallel to each other. This is because the provincial taxation systems of Canada are in most part profit-based. Moreover, the federal income taxation system represents a common base for all four provincial systems. As can be seen in figure 6-8, British Columbia has higher tax level than the other provinces, and Quebec has the lowest.

The tax payment profiles associated with the gold project provide other examples of tax patterns for a fixed level of revenue during the production period. The Australian states display only production tax profiles, because no Commonwealth income taxes are levied. Hence, the patterns in figure 6-10 reflect the difference in royalty rates applied in Queensland, South Australia and Western Australia -- 7, 2.5 and 0 percent, respectively. Thus, taxes are higher than the Canadian average for the first two years of production, and then lower thereafter. The curves associated with U.S. state systems shown in figure 6-11 are examples of those which result from a combination of profit (income), production and property taxes. Taxes in Arizona show a decline in the later years due to the exhaustion of the mineral property tax base. The resulting curves reveal that the U.S. systems levy taxes which are more heavily weighted toward the early years of the life of a project as compared to the Canadian system. Brazil and South Africa offer a marked contrast in relation to the Canadian system. Brazilian

taxes are generally lower than Canadian taxes, but South African taxes are relatively higher in the latter part of the production period. The patterns associated with the Brazilian system reflect federal income taxation. The South African tax schedule clearly shows that when allowance pools are exhausted, i.e., as soon as capital expenditures are recovered, tax payments increase sharply to a very high level.

In the case of the lead-zinc and copper-molybdenum projects, the characteristics and relative positions of the taxation systems remain basically similar to the ones observed for the gold project. A notable exception is the Australian Commonwealth income tax levied on base metal operations. It is characterized by a very high level of taxation compared to the Canadian average, especially during the early years of production. The profile associated with the Canadian systems in both the lead-zinc and copper-molybdenum project cases may look somewhat abnormal. However, these base metal cases actually have two levels of revenue which depend on the quality of ore reserves. Hence, the curves shown in figures 6-12 to 6-19 display a joint schedule, resulting from the combination of two different time patterns of tax payments.

FIGURE 6-8

YEARLY TAX PAYMENTS:
GOLD PROJECT -- Canadian Provinces

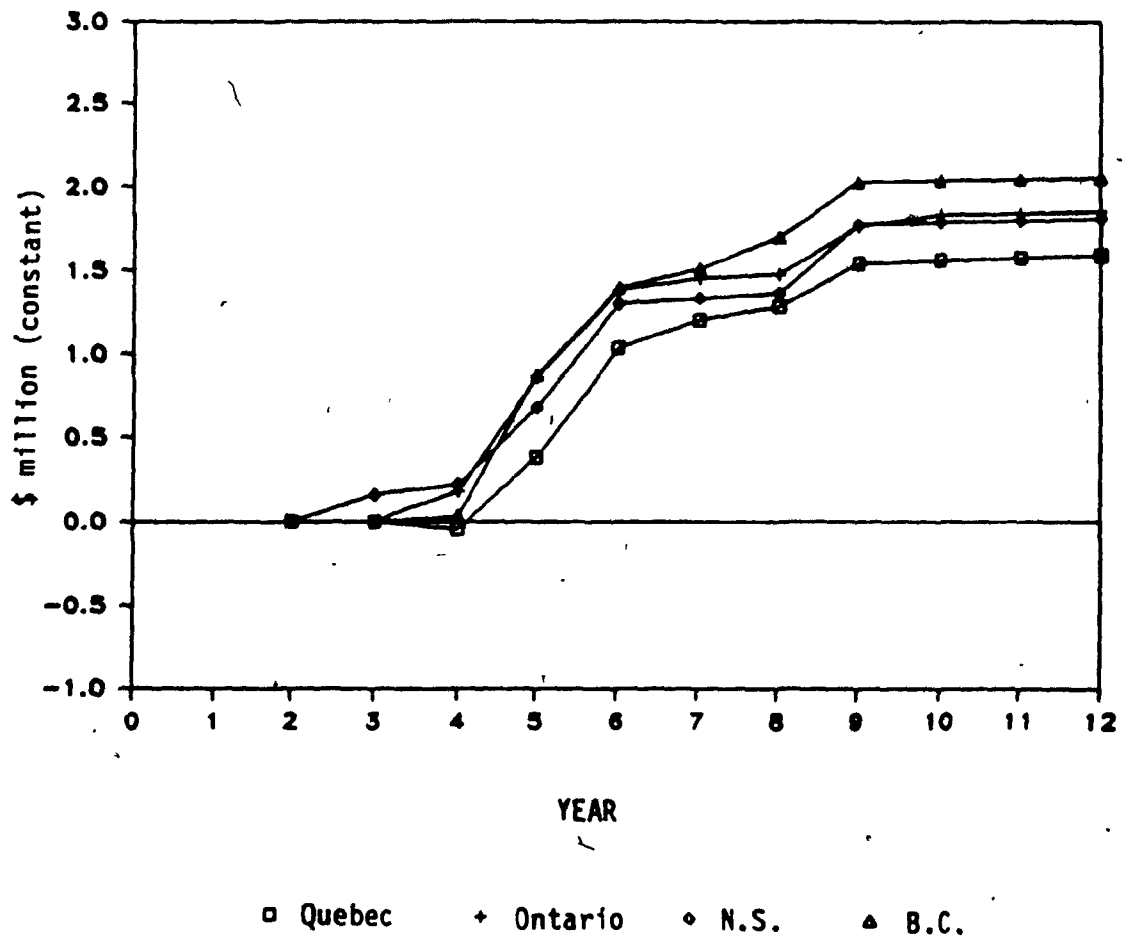


FIGURE 6-9

YEARLY TAX PAYMENTS:

GOLD PROJECT -- Brazil and South Africa

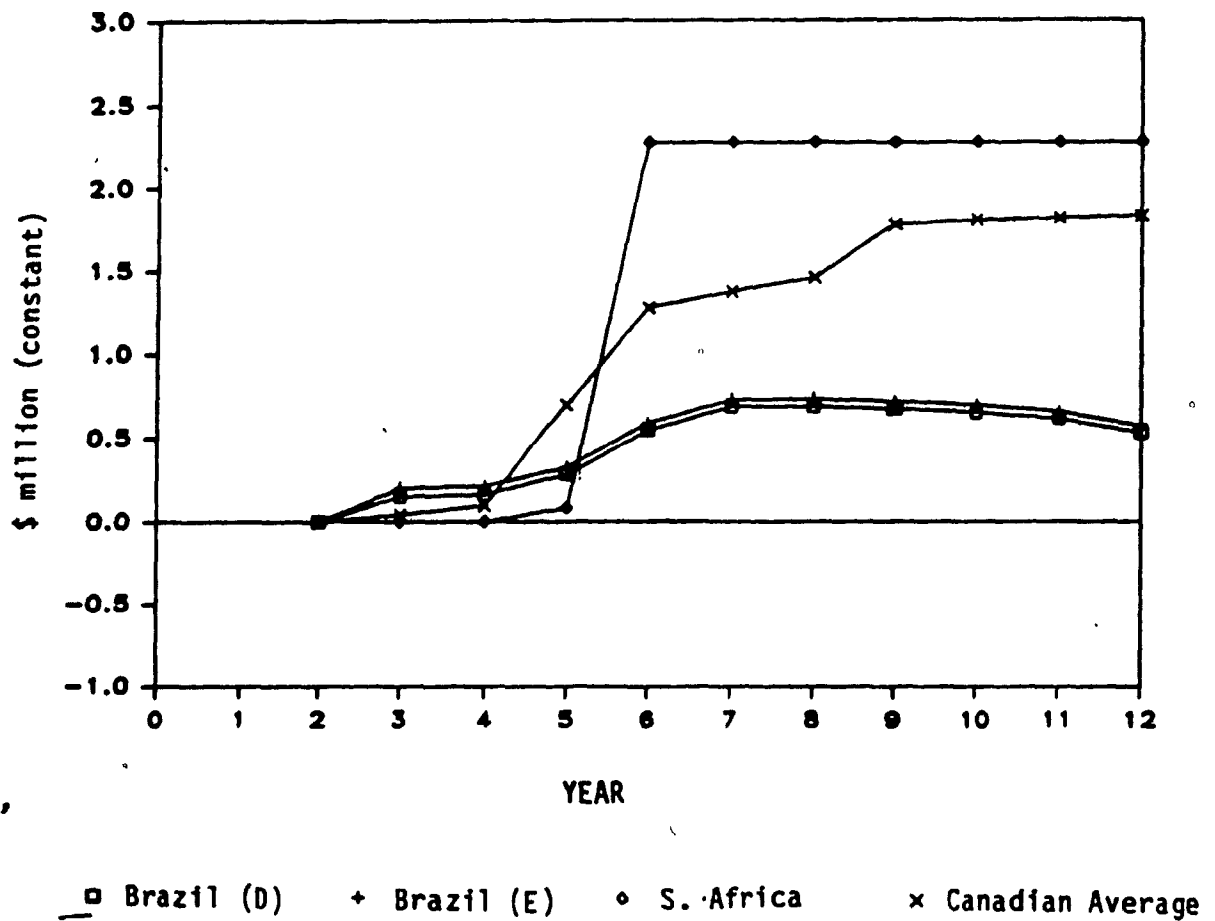


FIGURE 6-10
YEARLY TAX PAYMENTS:
GOLD PROJECT -- Australia

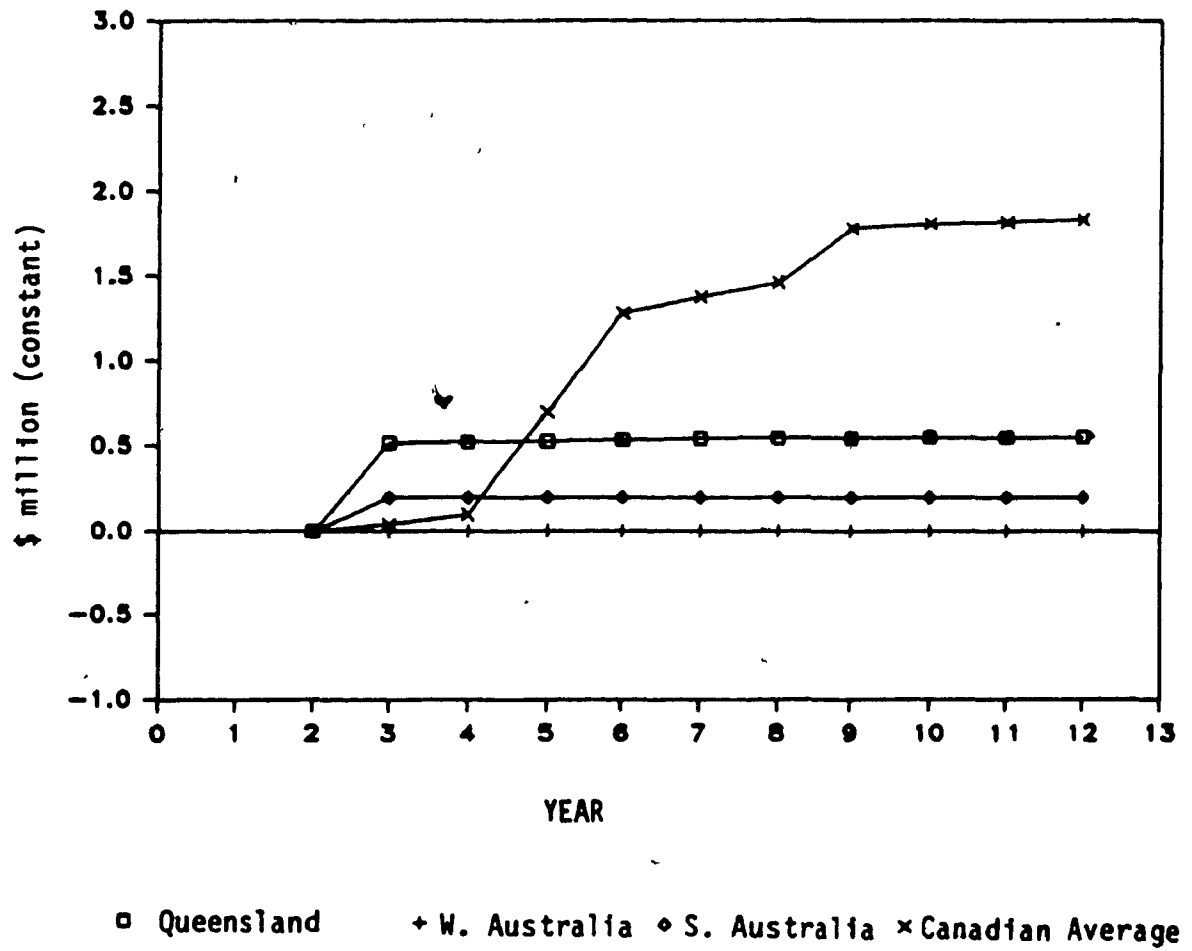


FIGURE 6-11

YEARLY TAX PAYMENTS:
GOLD PROJECT -- U.S.A.

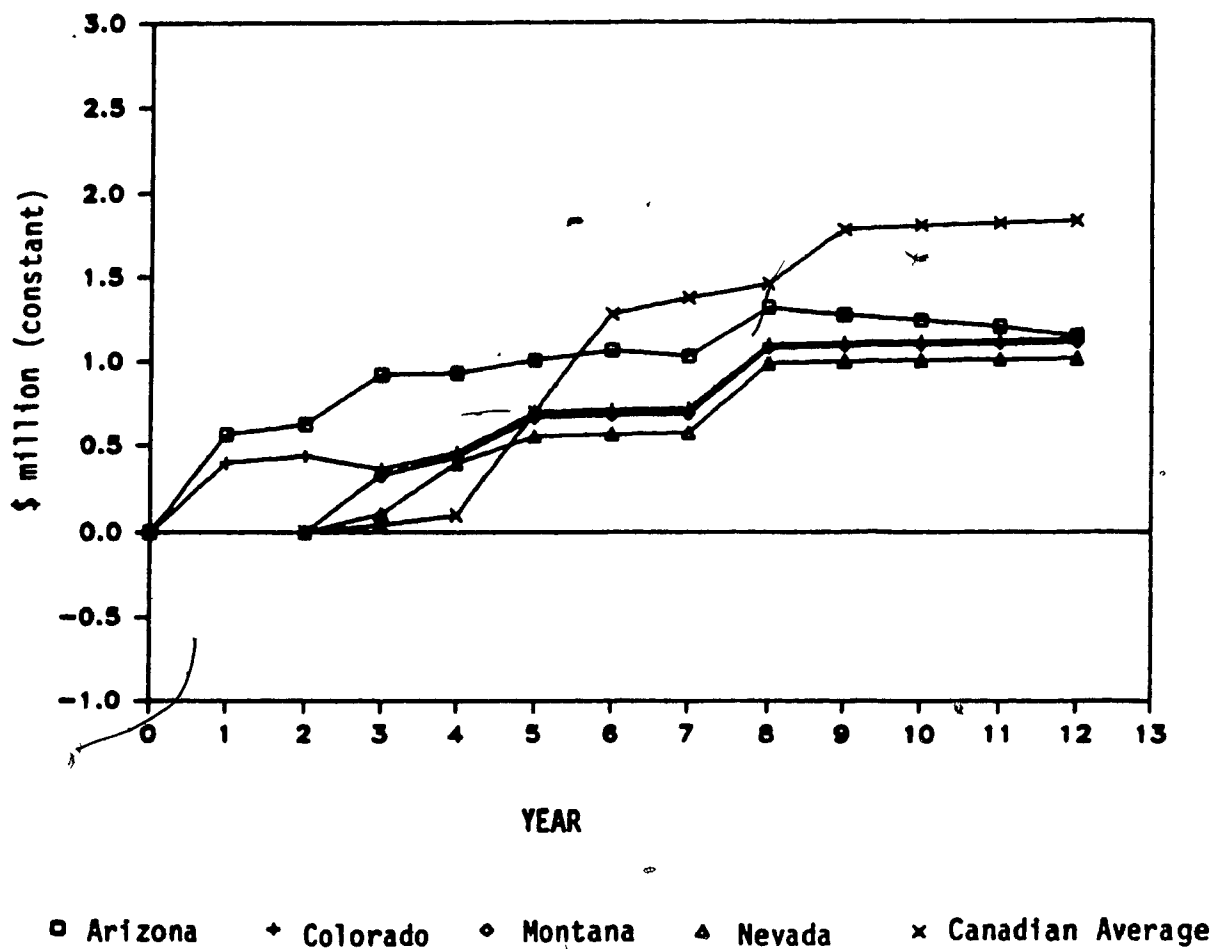


FIGURE 6-12

YEARLY TAX PAYMENTS:
LEAD-ZINC PROJECT -- Canadian Provinces

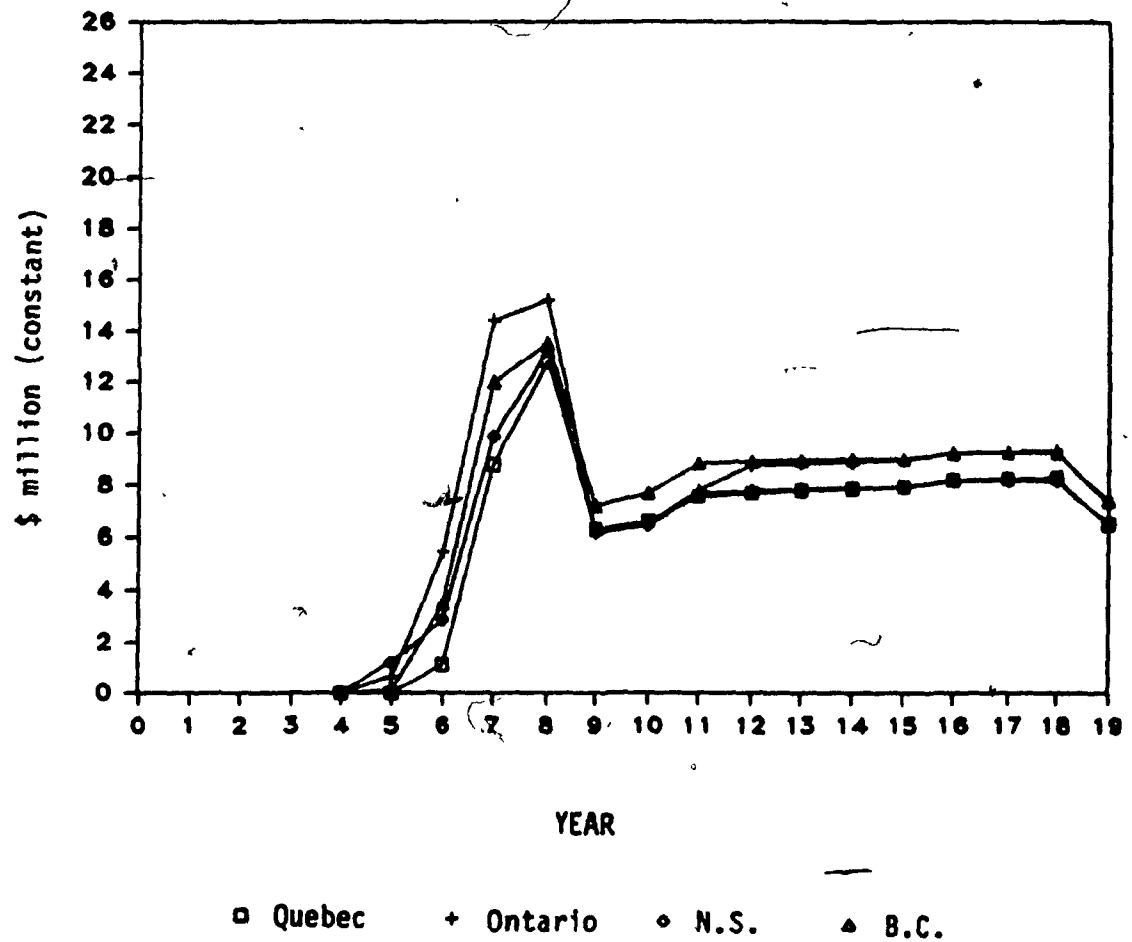


FIGURE 6-13

YEARLY TAX PAYMENTS:

LEAD-ZINC PROJECT -- Brazil and South Africa

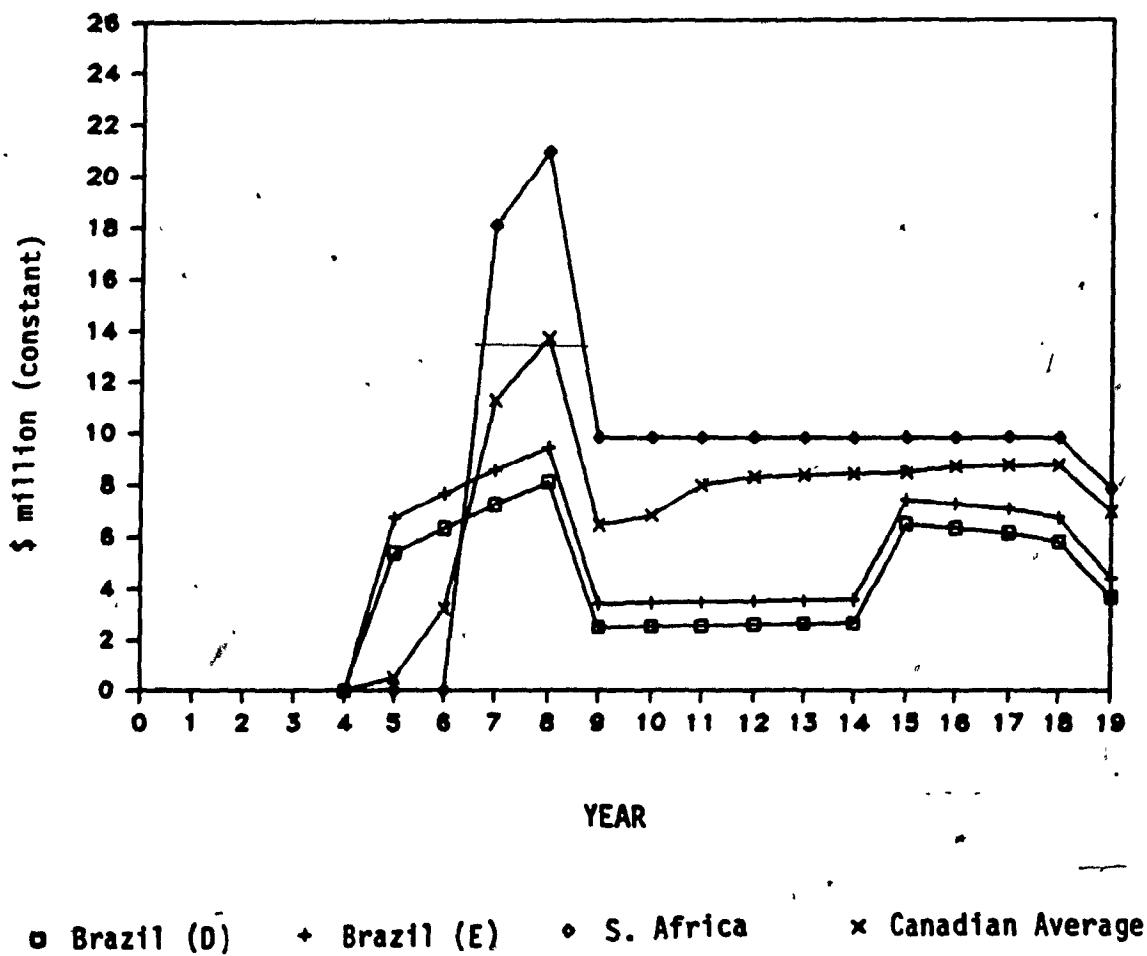


FIGURE 6-14

YEARLY TAX PAYMENTS:

LEAD-ZINC PROJECT -- Australia

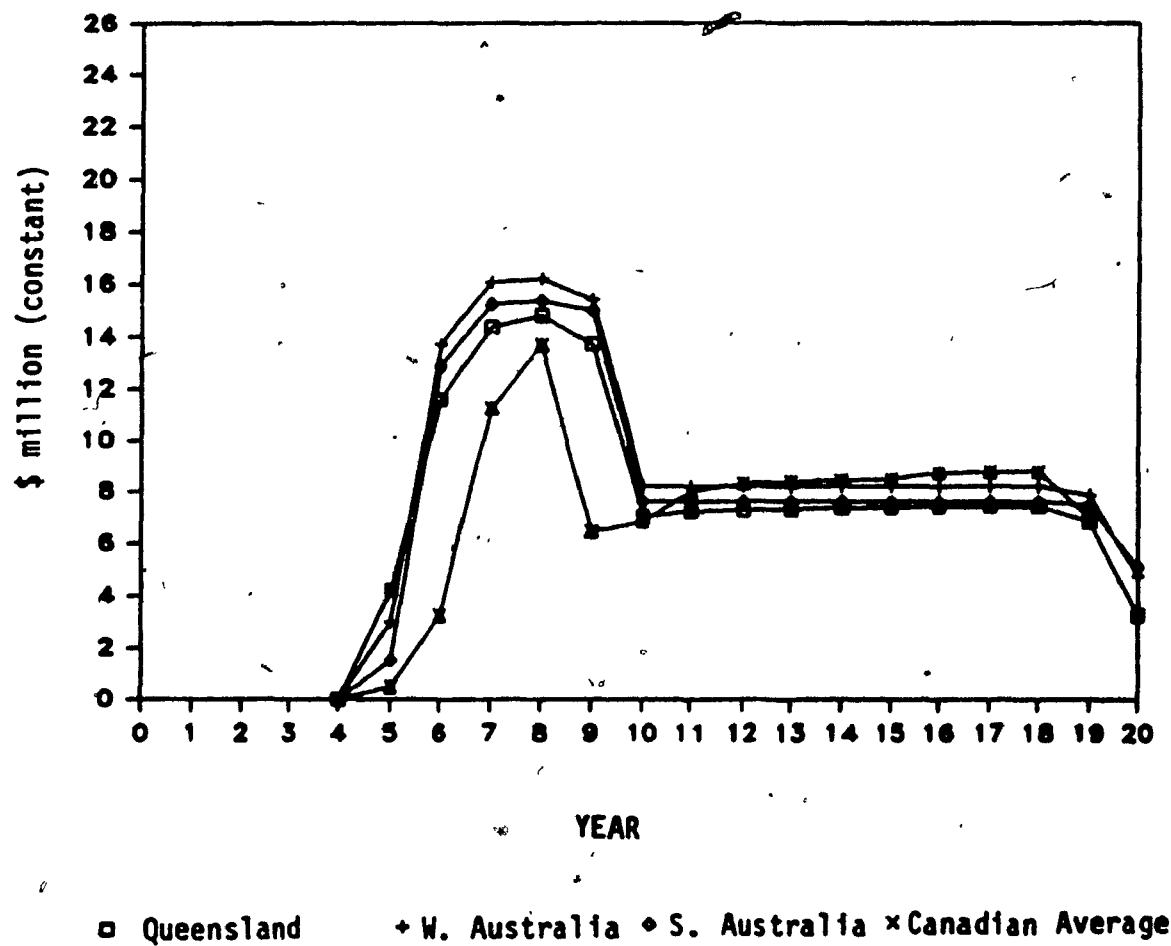
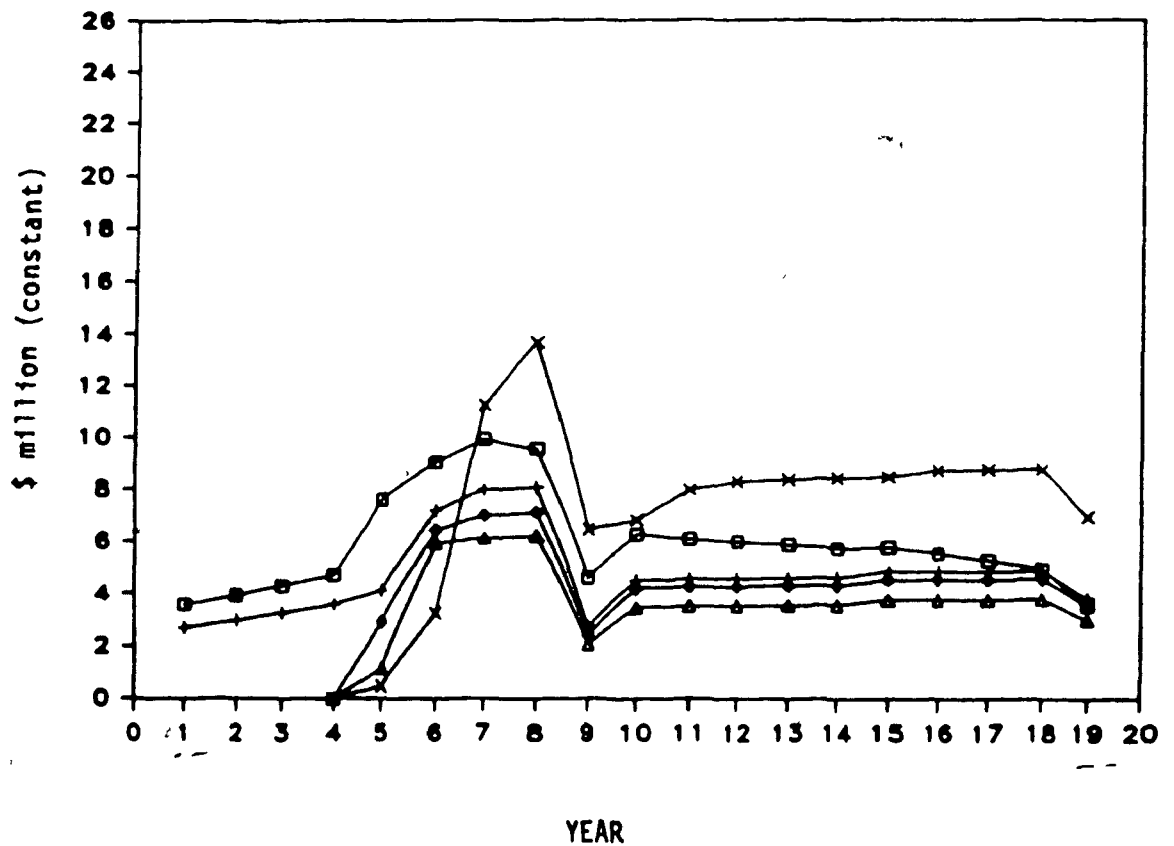


FIGURE 6-15

YEARLY TAX PAYMENTS:
LEAD-ZINC PROJECT -- U.S.A.



Arizona
 Colorado
 Montana
 Nevada
 Canadian Average

FIGURE 6-16

YEARLY TAX PAYMENTS:

COPPER-MOLYBDENUM PROJECT -- Canadian Provinces

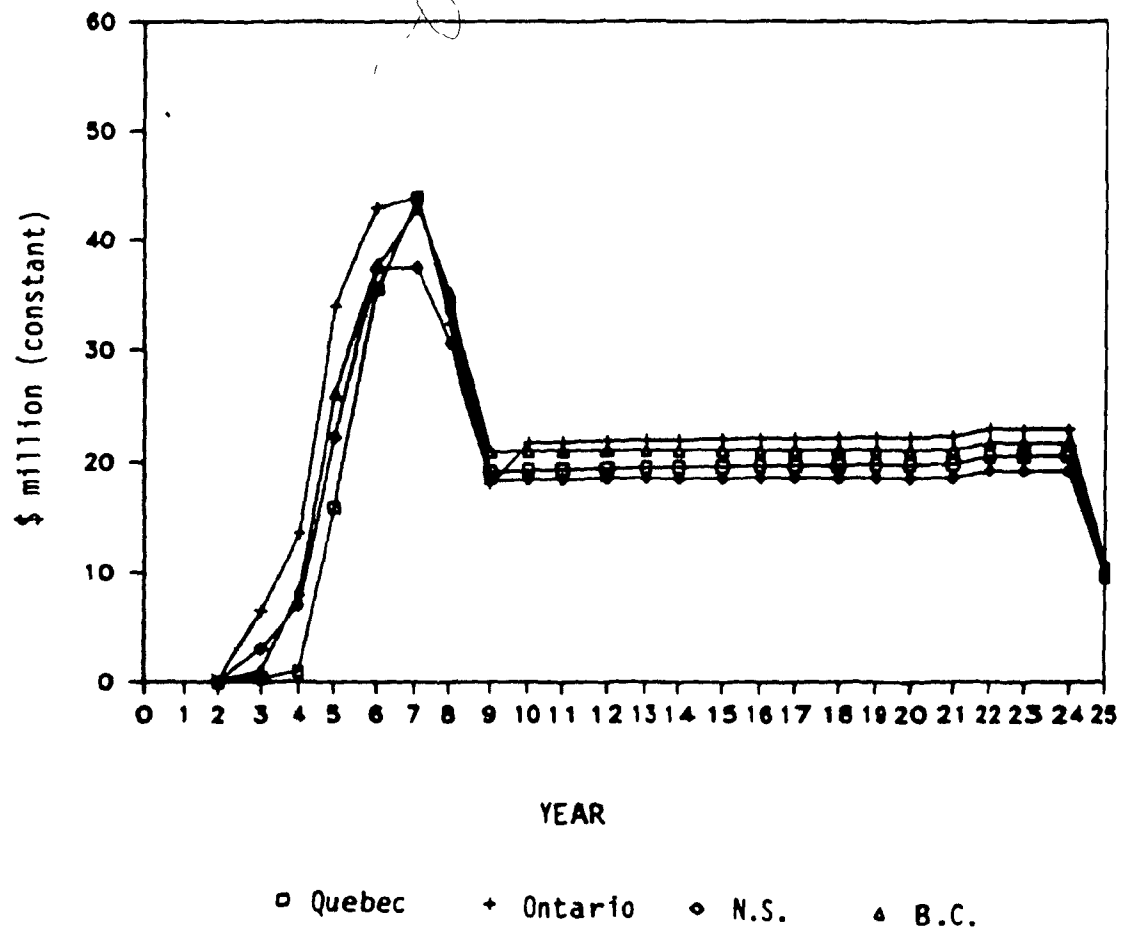
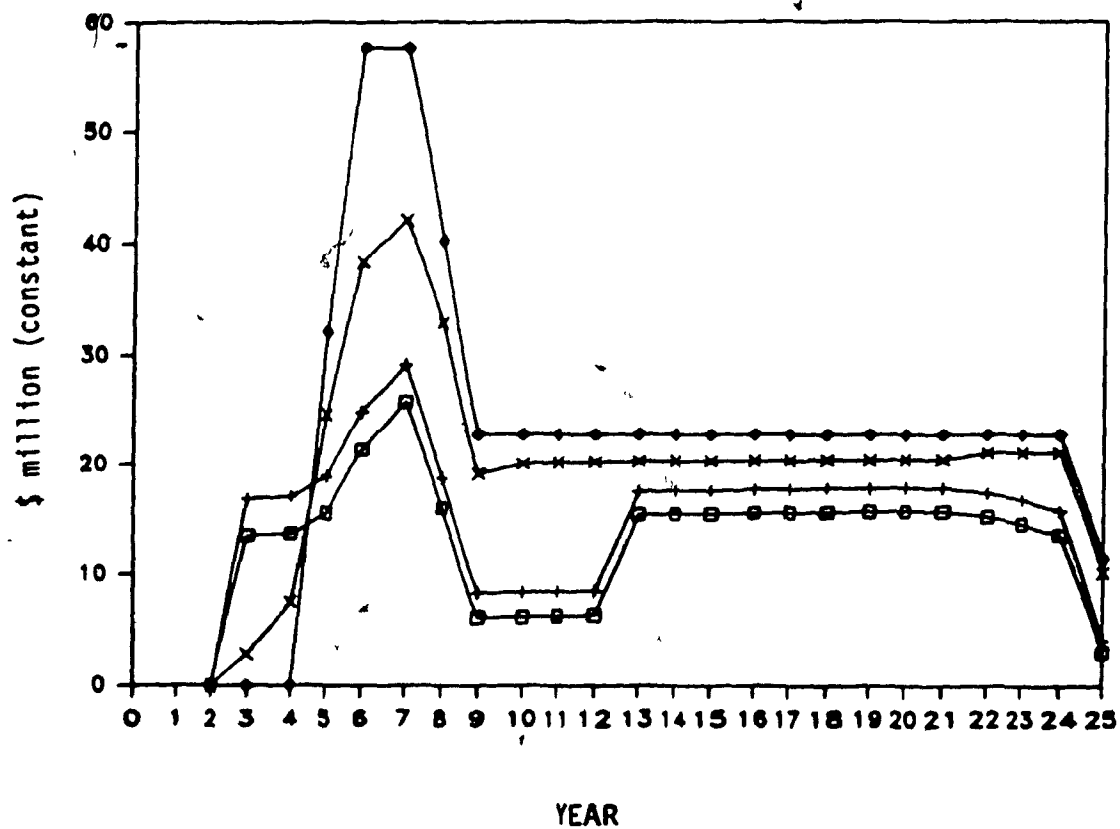


FIGURE 6-17

YEARLY TAX PAYMENTS:

COPPER-MOLYBDENUM PROJECT -- Brazil and South Africa



□ Brazil (D) + Brazil (E) ♦ S. Africa × Canadian Average

FIGURE 6-18

YEARLY TAX PAYMENTS:

COPPER-MOLYBDENUM PROJECT -- Australia

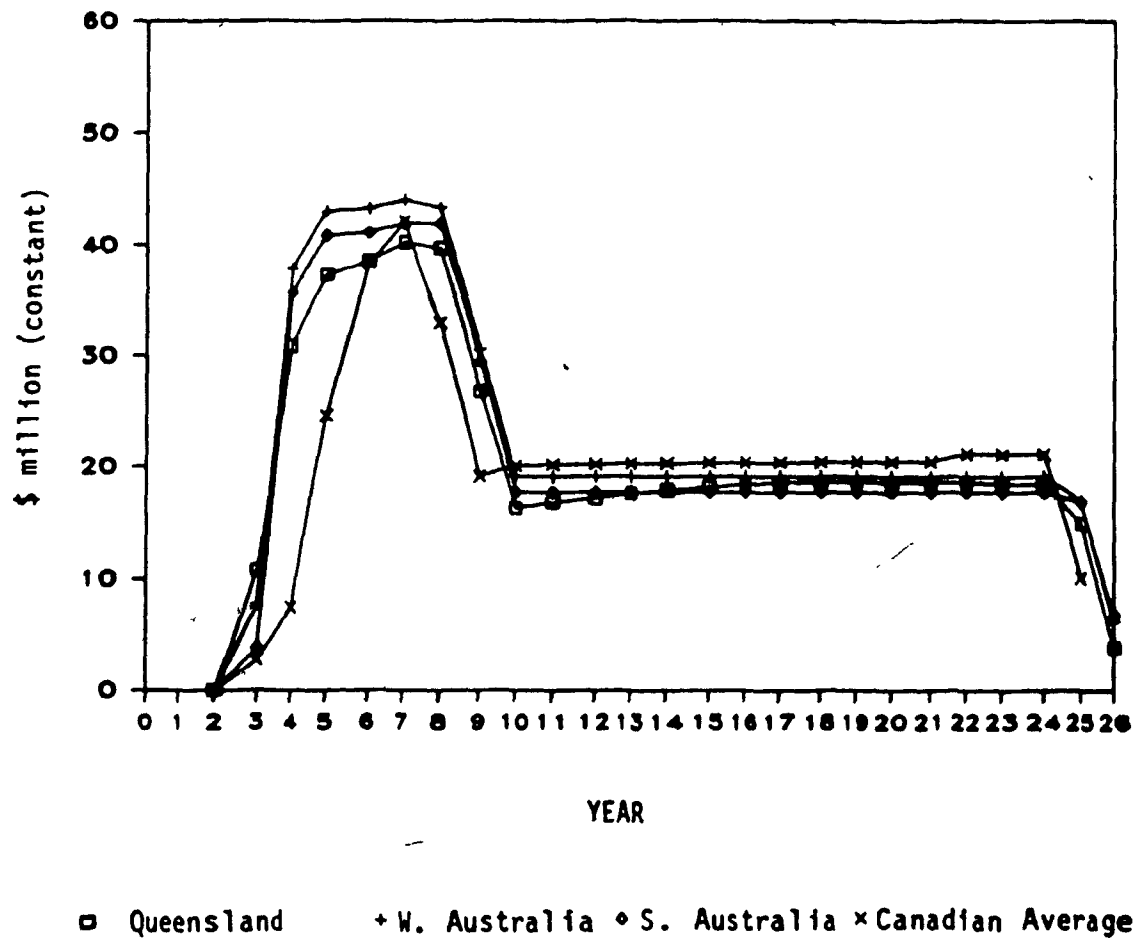
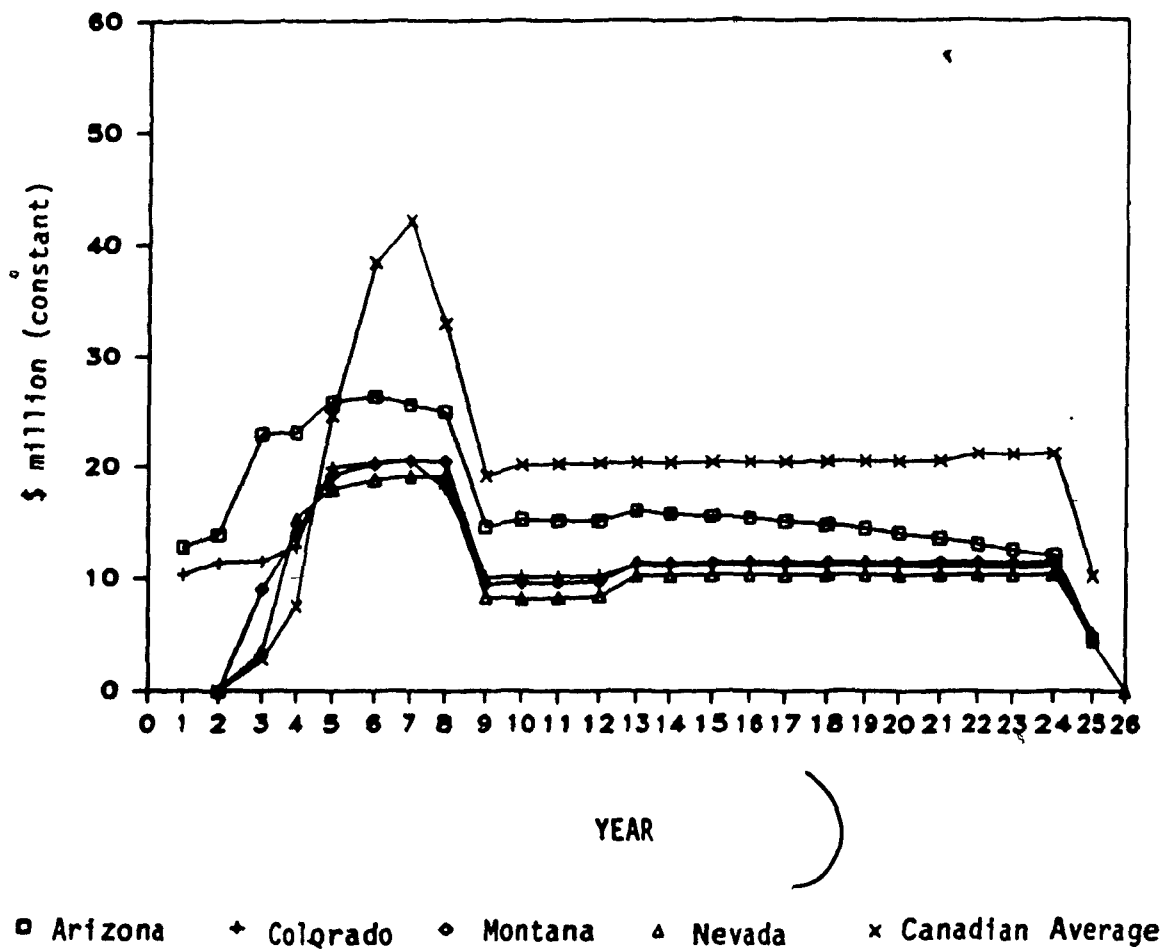


FIGURE 6-19

YEARLY TAX PAYMENTS:

COPPER-MOLYBDENUM PROJECT -- U.S.A.



Tax Payments As a Proportion of Project Value

The level of taxation can be further illustrated by expressing total tax payments as a proportion of before-tax project value. This value represents the overall tax contribution of the mining company to various levels of government in return for the extraction of minerals within its jurisdiction. From the government's point of view, the collection of taxes offsets past and future social costs which are incurred because of the existence of the mining operation within its jurisdiction. These are collected by government on behalf of society. The fact that a mining operation can be viewed as both a cost and a benefit to society, provides government with a wide range of options in designing and implementing mineral policy based on national priorities and public interests.

The remaining portion of the project value is retained by the mining firm. As this part complements the tax portion, a lower tax portion means a greater investment incentive for the company. By raising more revenues from taxes, governments may cause excess burden on the industry, hence weakening the investment environment.

The portion of the project value captured by a tax regime may be defined as an 'effective tax rate'. Thus, the effective tax rate represents here the overall level of taxation imposed by a system on the mining project. Table 6-18 lists the effective tax rates for the mineral projects based on a discount rate of 10 percent.

Although the effective tax rates given in the table 6-18 provide the same ranking among the tax regimes as that based on after-tax net present value, it is easier to compare their relative levels of taxation. It is somewhat surprising to observe so wide a variation in effective tax rates. For example, the rates associated with the gold project range from a low of

zero in Western Australia to a high of 83.4 percent in South Africa. In the case of the lead-zinc project, the range is from 42.6 percent in Nevada to over 100 percent in five of the tax regimes. A similar range is obtained in the case of the copper-molybdenum project, with 40.1 percent in Nevada to 91.8 percent in Western Australia. Although the ranges are very wide for all three projects, the rates associated with the lead-zinc project exceed those associated with the gold project by an average of 34 percent. This difference is reduced to 14 percent in the case of the copper-molybdenum project. This is partly attributable to the preproduction period associated with the lead-zinc project, assumed to be twice as long as that of the other two projects. Because of the longer preproduction period, future positive cash flows are further discounted and have less effect on the net present value. Moreover, since the lead-zinc project has a lower profitability than the other two projects, the effective tax rate becomes very sensitive when profitability approaches the cost of capital.

In fact, effective tax rates vary not only with discount rate, but also with profitability. Because the before-tax project value is used as a denominator when calculating effective tax rates, a marginally economic project, whose project value is accordingly small, may yield wider variations in effective tax rates, as compared to a highly profitable project with a greater project value. Therefore, one should be cautious when comparing different projects based on effective tax rates. The rates thus obtained may have little or no correlation with the impact of taxation on project economics. However, for comparing the incidence of different tax regimes on a particular project, the effective tax rate serves a meaningful purpose.

Effective tax rates of over 100 percent are obtained in five cases, where the tax regimes reduced the profitability of the lead-zinc project to

TABLE 6-18

TAX PAYMENTS AS A PROPORTION OF PROJECT VALUE:

DISCOUNTED

Effective Tax Rates Based on a 10 Percent Discount Rate			
	Gold Project (percent)	Lead-zinc Project (percent)	Copper- Molybdenum Project (percent)
=====			
AUSTRALIA			
Queensland	32.7	102.3	83.4
Western Australia	0.0	113.5	91.8
South Australia	12.1	105.4	85.6
BRAZIL			
Domestic consumption	27.8	53.5	47.4
Export	30.7	65.4	56.6
CANADA			
Quebec	52.1	70.8	64.3
Ontario	67.1	89.2	80.4
Nova Scotia	65.0	76.0	65.5
British Columbia	71.6	84.9	72.8
UNITED STATES			
Arizona	78.8	103.1	75.4
Colorado	56.5	78.7	56.6
Montana	46.0	51.7	44.9
Nevada	39.2	42.6	40.1
SOUTH AFRICA	83.4	101.9	83.9
AVERAGE	47.4	81.4	67.8

TABLE 6-19

TAX PAYMENTS AS A PROPORTION OF PROJECT VALUE:

UNDISCOUNTED

	Effective Tax Rates Based on Undiscounted Project Value and Tax Payments		
	Gold Project (percent)	Lead-zinc Project (percent)	Copper- Molybdenum Project (percent)
=====			
AUSTRALIA			
Queensland	21.9	62.6	59.8
Western Australia	0.0	70.2	65.1
South Australia	8.1	65.6	61.0
BRAZIL			
Domestic consumption	20.3	33.1	36.8
Export	22.2	40.2	43.3
CANADA			
Quebec	41.2	49.2	53.1
Ontario	51.5	59.1	62.3
Nova Scotia	49.7	51.3	51.9
British Columbia	55.6	57.8	58.3
UNITED STATES			
Arizona	50.1	52.2	47.8
Colorado	40.8	41.2	37.1
Montana	33.6	32.0	32.9
Nevada	29.3	26.6	29.6
SOUTH AFRICA	65.0	67.5	65.5
AVERAGE	35.0	50.6	50.3

a level below the cost of capital. Examining the effective tax rates across the three projects, Nevada appears to have the most leanient tax regime with an average effective tax rate of 40.6 percent. South Africa, with an average of 89.7 percent, followed by Arizona with 85.7 percent, provide the heaviest tax burdens. Western Australia's and South Australia's harshness against the base metal projects is tempered by their relative leaniency for gold mining operations. Nevada, Montana and Brazil are among the most favourable taxation systems. Canadian provinces rank from third to tenth, with Ontario and British Columbia providing the relatively tougher tax regimes.

Table 6-19, showing tax payment shares based on undiscounted project values illustrate the effects of time values. Here, all discounting effects are deleted; hence, the effects of different time patterns and preproduction periods are removed. Because undiscounted future cash flows carry more weight in total project value, variations in undiscounted effective tax rates among regimes appear more moderate than discounted effective tax rates. Slight improvements in ranking are observed. for Western Australia, South Australia, Arizona and Colorado, whereas Canadian provinces and South Africa become worse-off with the undiscounted results. Obviously, this reflects the effects of the time distribution of tax payments, which results from the structure of the taxation system. The regimes that show improvement have relatively more production- or property-oriented structures than those that show degradation, which are mainly based on profit or profitability. The relationship between tax structure and distribution of tax payments has been examined in more detail in an earlier part of this section.

Tax payments as a proportion of project value resulting from an integrated company basis of taxation are shown in tables 6-20 and 6-21, which are based on discounted and undiscounted values, respectively. Effective tax rates shown here are generally lower than those observed for

the project basis of taxation. An exception to this rule is of course the U.S. regimes, which, as explained previously, are limited by the minimum tax provision. Canada shows again the greatest improvements from the investor's point of view. Tax payments as a proportion of undiscounted project value shown in figure 6-21 do not necessarily reflect the advantages of flow-through deductions. This is because the provision for flow-through deduction is meaningless without the time-value-of-money consideration. Hence, this provision loses its rationale for being an incentive to encourage mining investment.

TABLE 6-20

TAX PAYMENTS AS A PROPORTION OF PROJECT VALUE
INTEGRATED COMPANY BASE, DISCOUNTED

Effective Tax Rates Based on a 10 Percent Discount Rate			
	Gold Project (percent)	Lead-zinc Project (percent)	Copper- Molybdenum Project (percent)
=====			
AUSTRALIA			
Queensland	32.7	93.8	79.2
Western Australia	0.0	111.3	90.5
South Australia	12.1	103.1	84.3
BRAZIL			
Domestic consumption	20.0	39.4	40.1
Export	22.8	51.3	49.2
CANADA			
Quebec	36.1	49.6	53.8
Ontario	51.1	70.2	72.8
Nova Scotia	45.4	49.8	52.4
British Columbia	52.4	59.3	60.5
UNITED STATES			
Arizona	80.5	103.9	78.5
Colorado	60.8	84.3	61.9
Montana	50.6	57.7	50.1
Nevada	45.1	51.2	46.4
SOUTH AFRICA	n.a.	97.5	79.3
AVERAGE	39.2	73.3	64.2

TABLE 6-21

TAX PAYMENTS AS A PROPORTION OF PROJECT VALUE
INTEGRATED COMPANY BASE, UNDISCOUNTED

	Effective Tax Rates Based on Undiscounted Project Value and Tax Payments		
	Gold Project (percent)	Lead-zinc Project (percent)	Copper- Molybdenum Project (percent)
=====			
AUSTRALIA			
Queensland	21.9	61.1	58.9
Western Australia	0.0	69.6	64.8
South Australia	8.1	65.1	60.6
BRAZIL			
Domestic consumption	17.3	29.1	34.6
Export	19.2	36.2	41.1
CANADA			
Quebec	38.5	47.8	53.6
Ontario	49.0	59.3	65.4
Nova Scotia	46.1	49.0	52.2
British Columbia	52.6	56.2	59.3
UNITED STATES			
Arizona	51.8	53.4	49.6
Colorado	41.0	43.9	39.6
Montana	36.7	34.8	35.4
Nevada	32.9	30.1	32.4
SOUTH AFRICA	n.a.	66.9	64.9
AVERAGE	31.9	50.2	50.9

6.3. SENSITIVITY TO REVENUE AND INFLATION

The sensitivity of after-tax investment incentive to changes in the level of revenue and inflation is examined in this section. This sensitivity analysis completes the study of the effects of taxation on project economics. It is an important part of the study because it analyzes the vulnerability of an investment opportunity under a particular taxation system as it is exposed to changes in the level of key parameters such as metal prices, labour and other input costs, and exchange and inflation rates. In addition, this type of analysis also shows the response of the various taxation systems to a range of project profitability.

Apart from market related variables, there can be other factors, inherent to the mineral deposit, which can affect the level of operating profits. These include for instance an unexpected variation in the quality of some part of the deposit, or a variation in local geological conditions which may cause additional mining costs. All these factors are risk elements which contribute to the uncertainty associated with mining investment decisions. For the purpose of the study, the factors stated above are classified into two groups: those which affect the level of operating profits, and inflation. Metal prices, costs, exchange rates and deposit quality affect the level of operating profits. Hence, all variations in these elements are aggregated and assumed to be represented by a change in the level of revenue. Thus, revenues are varied from 75 to 125 percent of base case conditions for the purpose of sensitivity analysis. In addition to the 5 percent inflation rate assumed for base case conditions, rates of 0, 10, 15 percent are considered as well.

Tables 6-22 to 6-27 show the sensitivity of economic indicators to changes in the level of revenue. Such changes are of prime concern to the

mine operator, since revenue represents the base which ensures the economic healthiness of a mining business. As can be anticipated, definite effects caused by changes in the level of revenue are observed for all three projects. On both a before-tax and after-tax basis, economic indicators are much more sensitive to reductions in revenue. The profitable gold and copper-molybdenum projects become marginally profitable or sub-economic in most tax jurisdictions with a 15 percent reduction in revenue. The lead-zinc project, initially designed to be marginally economic on an after-tax basis, becomes sub-marginal with a 5 percent decrease in revenue, and definitely sub-economic with a 15 percent reduction in revenue.

The tax regimes do not react to the changes in a parallel way. Their original base-case ranking is distorted in certain cases. By examining the results associated with the gold project, it is seen that Canadian provinces and U.S. states maintain their position throughout the range of revenue variations. Brazil maintains its upper position as well. These are the cases of parallel movements in ranking positions. However, contrasting movements are found in Australia, notably in the case of Queensland and South Australia. Queensland moves from third position, at a high level of revenue, to eleventh position at the lowest level. This is a drastic change in relative position among the systems. South Australia moves from second to fourth position under the same conditions. The South African cases exhibit a totally opposite response to the revenue variations relative to the Australian cases. South Africa assumes the lowest position at high levels of revenues, but it improves to better than average at the lowest level.

These findings directly reflect the structure of the individual taxation systems. Taxes in Brazil, Canada, and the U.S. are dominated by corporate income taxes based on profits, whereas taxes for gold mining operations in Australia are solely based on royalties and those in South

TABLE 6-22

SENSITIVITY OF RATE OF RETURN TO REVENUE:

GOLD PROJECT

Before-Tax and After-Tax Rate of Return (%)

	Change in revenue						
	-25%	-15%	-5%	0%	+5%	+15%	+25%
=====							
BEFORE-TAX	6.1	14.5	21.8	25.1	28.3	34.3	39.9
AUSTRALIA							
Queensland	1.9	10.3	17.4	20.6	23.7	29.5	35.0
Western Australia	6.1	14.5	21.8	25.1	28.3	34.3	39.9
South Australia	4.3	12.9	20.1	23.5	26.6	32.6	38.2
BRAZIL							
Domestic consumption	6.1	13.8	19.3	21.7	24.0	28.2	32.2
Export	5.4	13.3	18.9	21.3	23.6	27.8	31.8
CANADA							
Quebec	3.4	10.7	16.3	18.9	21.4	26.0	30.4
Ontario	2.7	9.0	14.1	16.4	18.7	23.0	27.0
Nova Scotia	1.7	8.8	14.2	16.7	19.1	23.7	28.1
British Columbia	2.0	8.4	13.4	15.8	17.9	22.1	26.3
UNITED STATES							
Arizona	-3.4	4.4	10.7	13.3	15.9	20.5	24.3
Colorado	1.9	8.8	14.5	17.0	19.4	23.5	26.9
Montana	2.8	10.3	16.4	19.2	21.7	26.0	29.8
Nevada	4.1	11.6	17.6	20.3	22.8	26.9	30.8
SOUTH AFRICA	3.4	7.7	11.4	13.7	15.1	17.9	21.7

TABLE 6-23

SENSITIVITY OF NET PRESENT VALUE TO REVENUE:

GOLD PROJECT

Before-Tax and After-Tax Net Present Value (\$ million)

	Change in revenue						
	-25%	-15%	-5%	0%	+5%	+15%	+25%
BEFORE-TAX	-1.8	2.3	6.3	8.3	10.3	14.3	18.4
AUSTRALIA							
Queensland	-3.5	0.1	3.8	5.6	7.4	11.1	14.8
Western Australia	-1.8	2.3	6.3	8.3	10.3	14.3	18.4
South Australia	-2.5	1.4	5.3	7.3	9.3	13.2	17.1
BRAZIL							
Domestic consumption	-1.8	1.8	4.6	6.0	7.3	9.9	12.5
Export	-2.1	1.6	4.4	5.8	7.1	9.6	12.2
CANADA							
Quebec	-2.7	0.3	2.8	4.0	5.2	7.4	9.7
Ontario	-2.9	-0.4	1.7	2.7	3.8	5.8	7.8
Nova Scotia	-3.3	-0.5	1.8	2.9	4.0	6.2	8.4
British Columbia	-3.1	-0.7	1.4	2.4	3.3	5.2	7.1
UNITED STATES							
Arizona	-6.2	-2.7	0.3	1.8	3.2	5.8	8.2
Colorado	-3.7	-0.6	2.3	3.6	4.9	7.3	9.5
Montana	-3.1	0.1	3.1	4.5	5.8	8.3	10.5
Nevada	-2.6	0.7	3.7	5.0	6.4	8.8	11.2
SOUTH AFRICA	-2.6	-0.9	0.5	1.4	1.9	3.0	4.5

Africa are based on profitability. Projects operating under taxation systems based on royalties (production) are most sensitive to level of revenues while those under profitability taxation systems are the least sensitive. Those subject to profit-based taxation systems assume an intermediate position in terms of sensitivity to changes in the level of revenue. Property taxation, which constitutes an important part of the U.S. system, has a similar effect to that of production taxation because ad valorem property taxes are closely related to annual revenue. Such a trend is apparent in the cases of Arizona and Colorado, for lower levels of revenue, although the effects of property taxes seem to be largely dampened by corporate income taxation through deduction of state taxes.

These relationships between structure of taxation and after-tax project economics can be further observed in the other two mine development cases. In the case of the lead-zinc and copper-molybdenum projects, sensitivity under the Australian systems are moderate. This is because corporate income taxes are levied from base metal mining operations, hence causing this component to take on a more important role in overall taxation. Nevertheless, the Australian and U.S. taxation systems assume lower positions at the lower revenue levels than at the higher levels, in both base metal mining projects. This reaffirms the statement that production-based taxes make systems more sensitive to revenue levels than profit-based taxes, despite the fact that these taxes may be deductible from the federal income tax base. Here again, the opposite behavior is observed in South Africa for both projects. From a position of ninth or tenth at the lowest level of revenue, it moves down to the last position at the highest level of revenue.

In summary, it has been shown that rate of return and net present value criteria under production- or property-based systems are the most sensitive

to revenue levels, whereas criteria under profitability-based systems are the least sensitive. Taxation systems of Queensland and South Australia on the one hand, and South Africa on the other, have provided examples of both extremes. The systems associated with Canadian provinces assume fairly neutral positions in terms of sensitivity to revenue, while maintaining mid-range positions in terms of competitiveness.

TABLE 6-24

SENSITIVITY OF RATE OF RETURN TO REVENUE:

LEAD-ZINC PROJECT

Before-Tax and After-Tax Rate of Return (%)

	Change in revenue						
	-25%	-15%	-5%	0%	+5%	+15%	+25%
=====							
BEFORE-TAX	5.3	12.1	17.4	19.8	21.9	25.9	29.4
AUSTRALIA							
Queensland	-1.3	3.6	7.8	9.7	11.5	14.8	17.9
Western Australia	-5.1	1.2	6.1	8.3	10.2	13.9	17.1
South Australia	-3.7	2.4	7.2	9.3	11.3	14.5	18.1
BRAZIL							
Domestic consumption	4.5	9.5	13.3	15.0	16.6	19.6	22.3
Export	2.4	8.1	12.1	13.8	15.4	18.4	21.2
CANADA							
Quebec	3.3	8.2	12.0	13.6	15.2	18.0	20.4
Ontario	1.9	6.5	9.9	11.4	12.8	15.4	17.6
Nova Scotia	1.7	7.1	11.1	13.0	14.7	17.8	20.5
British Columbia	1.8	6.6	10.3	12.0	13.6	16.4	18.9
UNITED STATES							
Arizona	-4.0	2.7	7.6	9.7	11.6	15.0	18.0
Colorado	0.0	5.8	10.2	12.1	13.8	17.0	19.7
Montana	2.1	8.4	13.2	15.2	17.1	20.4	23.2
Nevada	3.3	9.4	14.1	16.1	17.9	21.1	23.8
SOUTH AFRICA	0.7	4.8	8.2	9.7	11.2	13.8	16.1

TABLE 6-25

SENSITIVITY OF NET PRESENT VALUE TO REVENUE:

LEAD-ZINC PROJECT

Before-Tax and After-Tax Net Present Value (\$ million)

	Change in revenue						
	-25%	-15%	-5%	0%	+5%	+15%	+25%
BEFORE-TAX	-16.8	8.9	34.7	47.5	60.4	86.1	111.8
AUSTRALIA							
Queensland	-36.2	-22.3	-8.2	-1.1	6.0	20.2	34.5
Western Australia	-43.2	-28.5	-13.8	-6.4	0.9	15.6	30.3
South Australia	-40.3	-25.2	-10.1	-2.6	5.0	20.1	35.2
BRAZIL							
Domestic consumption	-19.6	-2.1	14.0	22.1	30.1	46.2	62.3
Export	-25.7	-7.3	8.7	16.4	24.2	39.7	55.2
CANADA							
Quebec	-21.7	-6.1	7.4	13.9	20.4	32.8	44.5
Ontario	-25.2	-11.9	-0.4	5.1	10.8	21.3	31.4
Nova Scotia	-26.3	-10.2	4.3	11.4	18.7	32.2	45.4
British Columbia	-25.3	-11.4	1.0	7.2	13.7	25.4	36.7
UNITED STATES							
Arizona	-51.9	-30.9	-11.1	-1.5	8.0	26.8	45.4
Colorado	-37.0	-17.7	1.1	10.1	19.1	36.8	54.1
Montana	-26.3	-6.0	13.5	23.0	32.4	50.9	68.3
Nevada	-22.9	-2.2	17.6	27.3	36.7	55.1	72.2
SOUTH AFRICA	-27.3	-16.4	-6.0	-0.9	4.2	14.0	23.8

TABLE 6-26

SENSITIVITY OF RATE OF RETURN TO REVENUE:

COPPER-MOLYBDENUM PROJECT

Before-Tax and After-Tax Rate of Return (%)

	Change in revenue						
	-25%	-15%	-5%	0%	+5%	+15%	+25%
=====							
BEFORE-TAX	9.3	16.5	22.6	25.4	28.1	33.2	38.0
AUSTRALIA							
Queensland	1.0	6.4	11.0	13.1	15.1	19.1	22.8
Western Australia	-2.1	4.3	9.3	11.5	13.7	17.8	21.8
South Australia	-0.7	5.5	10.4	12.7	14.9	19.1	23.0
BRAZIL							
Domestic consumption	7.4	12.7	17.1	19.1	21.1	24.8	28.3
Export	5.6	11.2	15.7	17.7	19.6	23.3	26.8
CANADA							
Quebec	5.8	11.1	15.4	17.3	19.2	22.7	26.0
Ontario	4.3	8.9	12.4	14.0	15.6	18.5	21.4
Nova Scotia	4.6	10.2	14.7	16.8	18.8	22.6	26.4
British Columbia	4.2	9.5	13.8	15.7	17.5	21.0	24.4
UNITED STATES							
Arizona	-1.4	6.0	11.6	13.8	16.0	19.4	22.4
Colorado	3.9	10.0	14.8	16.8	18.5	21.7	24.6
Montana	5.4	12.2	17.3	19.3	21.2	24.5	27.7
Nevada	6.7	13.2	18.1	20.1	21.9	25.4	28.6
SOUTH AFRICA	3.3	7.9	11.8	13.5	15.2	18.4	21.4

TABLE 6-27

SENSITIVITY OF NET PRESENT VALUE TO REVENUE:

COPPER-MOLYBDENUM PROJECT

Before-Tax and After-Tax Net Present Value (\$ million)

	Change in revenue						
	-25%	-15%	-5%	0%	+5%	+15%	+25%
=====							
BEFORE-TAX	-8.1	83.4	174.9	220.6	266.3	357.8	449.3
AUSTRALIA							
Queensland	-88.6	-38.8	11.3	36.6	61.8	112.6	163.7
Western Australia	-112.7	-60.4	-8.2	18.0	44.1	96.4	148.7
South Australia	-102.4	-48.7	4.9	31.7	58.6	112.2	165.9
BRAZIL							
Domestic consumption	-27.5	31.1	87.7	116.0	144.2	200.8	257.3
Export	-45.0	13.5	68.6	95.8	123.1	177.6	232.2
CANADA							
Quebec	-40.4	11.2	56.7	78.8	100.5	143.8	186.0
Ontario	-42.5	-11.2	25.6	43.2	60.9	97.2	134.0
Nova Scotia	-51.8	1.9	51.8	76.2	100.6	149.0	197.9
British Columbia	-53.5	-4.7	39.1	60.1	80.7	122.7	165.1
UNITED STATES							
Arizona	-125.9	-50.2	21.2	54.3	86.8	142.0	193.7
Colorado	-70.4	0.2	66.0	95.7	122.2	173.2	223.6
Montana	-47.7	25.4	92.8	121.5	148.7	200.8	252.7
Nevada	-35.4	38.2	103.6	132.0	159.4	213.8	268.1
SOUTH AFRICA	-58.6	-19.8	17.5	35.5	53.5	89.3	124.4

Effects of inflation on after-tax economic indicators result from the fact that capital expenditure allowances are not indexed. As operating profits inflate, the shielding effect of depreciation allowances diminishes, thereby causing an increase in real tax payments. The effects of different inflation rates are shown in tables 6-28 to 6-33. The reduction in before-tax economic indicators which occurs with higher inflation (as shown in the top line of table 6-28, for example) results from the additional annual working capital needed to keep its current dollar level at a fixed proportion of annual operating costs. In many cases, this effect is significant enough to alter the economic viability of marginal situations such as the lead-zinc project.

The sensitivity of after-tax economic indicators to inflation clearly distinguishes the differences in structure embodied in the tax systems. By examining the the differences between after-tax rates of return at inflation rates of 0 and 15 percent, the tax regimes can be grouped into high sensitivity and low sensitivity regimes. Canada and South Africa fall into the high sensitivity group, with differences ranging from 3.7 to 5.5 percent. Brazil and the United States belong to the low sensitivity group, with differences of 3 percent or less. This observation implies that profit- and profitability-based taxation systems are more sensitive to the level of inflation.¹ Mine development cases subject to the taxation systems existing in Canada and South Africa show an approximate reduction of 1.5 percentage points in the rate of return for every 5 percent increase in the inflation rate. Cases subject to taxation regimes in Brazil and the U.S. show an average reduction of 0.9 percentage points for the similar increases in

1. For cases where profitability structure is not indexed.

inflation rate. These latter regimes have structures consisting of income taxes as well as production taxes. In the case of the gold project in Australia, the results merely reflect the increase in working capital which was discussed previously. Thus, when a general inflation rate is applied to all components of revenues and costs, production-based taxes are not at all sensitive to inflation. As shown, a mixture of profit- and production-based structures has less sensitivity to inflation than a pure profit-based regime.

TABLE 6-28

SENSITIVITY OF RATE OF RETURN TO INFLATION:

) GOLD PROJECT

Before-Tax and After-Tax Rate of Return (%)

	Inflation rate			
	0%	5%	10%	15%
=====				
BEFORE-TAX	25.5	25.1	24.7	24.4
AUSTRALIA				
Queensland	21.1	20.6	20.2	19.8
Western Australia	25.5	25.1	24.7	24.4
South Australia	23.9	23.5	23.1	22.7
BRAZIL				
Domestic consumption	22.7	21.7	20.8	20.1
Export	22.3	21.3	20.4	19.7
CANADA				
Quebec	20.5	18.9	17.5	16.2
Ontario	18.3	16.4	14.9	13.6
Nova Scotia	18.2	16.7	15.5	14.4
British Columbia	17.5	15.8	14.2	12.9
UNITED STATES				
Arizona	14.4	13.3	12.4	11.6
Colorado	18.0	17.0	16.0	15.2
Montana	20.3	19.2	18.2	17.4
Nevada	21.4	20.3	19.3	18.4
SOUTH AFRICA	15.1	13.7	11.8	10.2

TABLE 6-29
SENSITIVITY OF NET PRESENT VALUE TO INFLATION:
GOLD PROJECT

Before-Tax and After-Tax Net Present Value (\$ million)

	Inflation rate			
	0%	5%	10%	15%
=====				
BEFORE-TAX	8.5	8.3	8.1	7.9
AUSTRALIA				
Queensland	5.9	5.5	5.3	5.1
Western Australia	8.5	8.3	8.1	7.9
South Australia	7.5	7.3	7.1	6.9
BRAZIL				
Domestic consumption	6.6	6.0	5.5	5.1
Export	6.3	5.8	5.3	4.9
CANADA				
Quebec	4.8	4.0	3.3	2.7
Ontario	3.6	2.7	2.1	1.5
Nova Scotia	3.6	2.9	2.3	1.9
British Columbia	3.2	2.4	1.7	1.2
UNITED STATES				
Arizona	2.3	1.8	1.3	0.9
Colorado	4.2	3.6	3.1	2.6
Montana	5.1	4.5	4.0	3.5
Nevada	5.7	5.0	4.5	4.1
SOUTH AFRICA	2.0	1.4	0.7	0.1

TABLE 6-30
SENSITIVITY OF RATE OF RETURN TO INFLATION:
LEAD-ZINC PROJECT

Before-Tax and After-Tax Rate of Return (%)

	Inflation rate			
	0%	5%	10%	15%
=====				
BEFORE-TAX	20.1	19.8	19.4	19.2
AUSTRALIA				
Queensland	10.8	9.7	9.0	8.5
Western Australia	8.4	8.3	8.2	8.1
South Australia	9.4	9.3	9.2	9.2
BRAZIL				
Domestic consumption	15.9	15.0	14.2	13.6
Export	14.8	13.8	13.0	12.3
CANADA				
Quebec	15.5	13.6	12.0	10.6
Ontario	13.5	11.4	9.6	8.0
Nova Scotia	14.3	13.0	11.9	10.9
British Columbia	13.6	12.0	10.7	9.5
UNITED STATES				
Arizona	10.5	9.7	9.0	8.3
Colorado	13.0	12.1	11.3	10.7
Montana	16.1	15.2	14.4	13.8
Nevada	16.9	16.1	15.4	14.7
SOUTH AFRICA	11.4	9.7	8.4	7.1

TABLE 6-31
SENSITIVITY OF NET PRESENT VALUE TO INFLATION:
LEAD-ZINC PROJECT

Before-Tax and After-Tax Net Present Value (\$ million)

	Inflation rate			
	0%	5%	10%	15%
=====				
BEFORE-TAX	49.5	47.5	45.7	44.0
AUSTRALIA				
Queensland	3.2	-1.1	-3.8	-5.7
Western Australia	-5.9	-6.4	-6.8	-7.1
South Australia	-2.2	-2.6	-2.8	-3.0
BRAZIL				
Domestic consumption	26.8	22.1	18.4	15.4
Export	21.1	16.4	12.7	9.7
CANADA				
Quebec	22.0	13.9	7.3	2.0
Ontario	13.7	5.1	-1.6	-7.1
Nova Scotia	16.9	11.4	7.1	3.3
British Columbia	13.6	7.2	2.5	-1.8
UNITED STATES				
Arizona	2.7	-1.5	-5.1	-8.1
Colorado	14.5	10.1	6.3	3.2
Montana	27.2	23.0	19.3	16.1
Nevada	31.3	27.3	23.7	20.5
SOUTH AFRICA	4.9	-0.9	-5.6	-9.7

TABLE 6-32

SENSITIVITY OF RATE OF RETURN TO INFLATION:
COPPER-MOLYBDENUM PROJECT

Before-Tax and After-Tax Rate of Return (%)

	Inflation rate			
	0%	5%	10%	15%
=====				
BEFORE-TAX	25.7	25.4	25.2	24.9
AUSTRALIA				
Queensland	13.9	13.1	12.6	12.3
Western Australia	11.5	11.5	11.6	11.8
South Australia	12.6	12.7	12.8	13.0
BRAZIL				
Domestic consumption	20.1	19.1	18.3	17.7
Export	18.7	17.7	16.9	16.2
CANADA				
Quebec	19.1	17.3	15.9	14.6
Ontario	16.2	14.0	12.4	11.1
Nova Scotia	18.0	16.8	15.8	15.0
British Columbia	17.2	15.7	14.4	13.3
UNITED STATES				
Arizona	14.7	13.8	13.1	12.3
Colorado	17.6	16.8	15.9	15.1
Montana	20.6	19.3	18.3	17.4
Nevada	21.3	20.1	19.1	18.2
SOUTH AFRICA	15.0	13.5	12.3	11.3

TABLE 6-33

SENSITIVITY OF NET PRESENT VALUE TO INFLATION:

COPPER-MOLYBDENUM PROJECT

Before-Tax and After-Tax Net Present Value (\$ million)

	Inflation rate			
	0%	5%	10%	15%
=====				
BEFORE-TAX	225.6	220.6	216.1	211.9
AUSTRALIA				
Queensland	47.1	36.6	30.5	26.8
Western Australia	17.1	18.0	19.1	20.4
South Australia	30.4	31.7	33.3	35.0
BRAZIL				
Domestic consumption	130.6	116.0	104.7	95.5
Export	110.4	95.8	84.6	75.4
CANADA				
Quebec	100.4	78.8	62.4	49.0
Ontario	68.3	43.2	25.1	11.2
Nova Scotia	90.6	76.2	64.8	55.0
British Columbia	77.2	60.1	46.4	35.1
UNITED STATES				
Arizona	66.5	54.3	43.3	32.4
Colorado	108.1	95.7	82.3	70.6
Montana	138.6	121.5	107.2	95.0
Nevada	149.0	132.0	117.8	105.9
SOUTH AFRICA	50.9	35.5	23.0	12.6

CHAPTER 7

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1. SUMMARY

Taxes are a critical cost concern to the mining industry, and it is an important determinant in the economic evaluation of mining investment. The issue of appropriate type and level of taxation imposed upon the mining industry continues to be a controversial aspect of mineral policy. As a result of differing taxation philosophies, mineral taxation levels in Canada have fluctuated significantly over recent years. Such a diversity of taxation policies is also the case in individual provinces or states within a country.

This study measures the impacts of taxation on mining investments. In particular, it examines Canada's competitive position in terms of tax incentives in comparison with other important mineral producing countries. A highly competitive position is particularly important to Canada's mineral industry because it is highly export oriented, with over 70 percent of mineral production being exported to international mineral markets, and it has a strong impact on Canada's national economy through both forward and backward linkages with other industrial activities. The comparison is carried out on the basis of the effects of taxation on project economics, the analysis of the time profile of tax payments in relation to tax structure, the assessment of overall tax incidence, and the sensitivity of those factors to the level of profitability and inflation.

Three hypothetical mine development opportunities, considered to be typical projects of interest in Canada, are used to carry out the necessary comparisons: a small-size underground gold project with preproduction and

production periods of 2 and 10 years, respectively; a medium-size underground lead-zinc mine with equivalent periods of 4 and 14.8 years; and a large-scale open pit copper-molybdenum mine with equivalent periods of 2 and 22.5 years. These potential mines are initially evaluated under the tax regimes of four provinces in Canada. Then, these projects are further assessed in a number of other jurisdictions in Australia, Brazil, South Africa, and the U.S.A. All assessments are carried out with reference to economic and technological perspectives currently prevailing in Canada. Monetary values are expressed in constant 1985 Canadian dollars. A 5 percent general inflation rate, a real 10 percent discount rate, and exchange rates of AUS \$1.00/ CAN \$, 0.0968 Brazilian ORTN units/ CAN \$ and US \$0.8/ CAN \$ are used in the study. Market price conditions as well as representative deposit characteristics are held constant for the purpose of the analysis.

The study focuses on the impact of various taxation instrument and does not attempt to assess the relative importance of taxation compared to other factors that an investor would take into account when making an investment decision.

From a mineral economics point of view, the objective of mineral taxation is to capture excessive profits accrued from the extraction of mineral resources, while leaving the investor with a fair return on his capital investment. It is also desirable for governments who are responsible for designing and enforcing a taxation system to ensure that it reflects provisions for those characteristics unique to the mining industry. Some of these special characteristics include: high risk and long time periods associated with mineral exploration, large capital investments required for the development of mines prior to the commencement of production, and depletion associated with non-renewable mineral resources.

In these regards, various desirable elements have been suggested for

the establishment of a fair tax system. Among the goals considered in the formulation of taxation policy are: equity in distribution of tax burden, economic efficiency to facilitate the use of fiscal policy for stabilization and growth objectives, neutrality with respect to minimization of interference with economic decisions, ease of administration and low cost for compliance, stabilization and maximization of revenue for the government, and flexibility to allow the establishment of certain investment incentive programmes with minimum interference with the equity objective.

The various objectives enumerated above and the consideration of the industry's characteristics combine to yield a wide variety of mineral taxation structures. The tax regimes analyzed in this study cover most of the types of fiscal instruments generally applicable to mineral projects. Furthermore, those countries considered are major mineral producers of the world. The regimes are: 1) Provinces of Quebec, Ontario, Nova Scotia and British Columbia in Canada, 2) States of Queensland, Western Australia and South Australia in Australia, 3) States of Arizona, Colorado, Montana and Nevada in the United States, 4) Brazil, and 5) South Africa. The important features of taxation systems as applied to the mining industry in the individual regimes can be summarized as follows:

(1) Canada: The Canadian mining industry is currently subject to three levels of taxation -- federal corporate income taxation, provincial corporate income taxation, and provincial mining taxation. The federal corporate income tax is levied at a rate of 36 percent of the taxable income remaining after subtraction of all production costs and allowable deductions against a company's mining revenues. On approximately the same taxable income, a provincial corporate income tax is levied at a rate varying from 5.5 percent in Quebec to 16 percent in British Columbia. Each

Canadian province imposes a mining tax on profits derived from mining operations before the processing stage. All three taxes are profit based. In addition, none of these taxes are deductible against each other.

(2) Australia: The Australian system consists of Commonwealth income taxation and state royalties. State royalties are deductible for the purpose of computing Commonwealth income taxes, which are levied at a rate of 46 percent of taxable income. They are payable in the year following the year for which they are assessed. Gold mining operations are exempted from corporate income taxation. State royalties in South Australia and Western Australia are based on the value of commodities produced, and are levied at rates of 2.5 and 5 percent, respectively. Gold mining operations in Western Australia are exempted from royalty. Queensland's royalty system is based on the value of production, but a profit-based system may also be used in particular circumstances.

(3) Brazil: Federal corporate income taxation is the only significant tax element here when mineral products are supplied to a domestic smelter. When the minerals are produced for export, a mining tax is levied at a rate of 1 percent for gold and 4 percent for base metals. The mining taxes are collected by the federal government and redistributed to state governments and municipalities, in proportions of 70 and 20 percent, respectively. The remaining 10 percent is retained by the federal government.

(4) South Africa: This taxation system involves corporate income taxes and lease payments. These taxes are based on annual profits. The calculation of lease payments involves a rating structure based on profitability. In the case of new gold mines, corporate income taxation is based on profitability as well. Lease payments are deductible for the purpose of assessing the corporate income tax base. The taxation capital allowance, an interest adjustment associated with carried losses from previous years, is deducted

from operating profits derived from new gold mining operations.

(5) The United States: In the U.S., the federal government levies an income tax on mining operations. Ad valorem property taxes, severance taxes and state corporate taxes are levied by most state governments. However, Nevada does not collect any state corporate income taxes. The federal government levies income taxes at a rate progressively ranging from 15 to 46 percent of taxable income. A minimum tax rule applies in this case as well. Taxes levied by states are deductible in computation of the federal income tax base. Ad valorem property taxes are levied on the present value of future net proceeds (Arizona), the present value of future net income (Colorado, for non-producing mines), the previous year's net income (Colorado, for producing mines), or on the previous year's net proceeds (Nevada). Severance taxes are based on value of mine production. For the purpose of assessing state income taxes, Arizona permits the deduction of severance and property taxes for the current year as well as federal income tax payments from the previous year. Montana and Colorado use the same corporate tax base as that used for federal income tax.

This study examines before- and after-tax economic indicators associated with the representative mine development cases, and investigates the components and time profile of tax payments levied on the projects under the individual tax regimes described above. Taxation on a project basis is assumed in the base case analysis, but an integrated company basis is considered as a variant. Integrated companies may have significant advantages over junior companies, an important factor to consider in a study of this type.

Before-tax economic indicators associated with the representative mine development cases are as follows:

Project	ROR (%)	NPV @10% (\$ mil.)
Gold	25.1	8.3
Lead-Zinc	19.4	45.7
Copper-Molybdenum	25.4	216.1

After-tax economic indicators vary significantly among the tax regimes. The following ranges of results are obtained:

Project	ROR (%)	NPV @10% (\$ mil.)
Gold	13.3 to 25.1	1.4 to 8.3
Lead-Zinc	8.3 to 16.1	-6.4 to 27.3
Copper-Molybdenum	11.5 to 20.1	18.0 to 132.0

Figure 7-1 illustrates project rates of return across all the regimes. Based on before- and after-tax net present values, effective tax rates are obtained and compared in figure 7-2.

Regimes with least and most favourable tax provisions are found to be Arizona and Western Australia for gold and Western Australia and Nevada for base metals.

Integrated company basis provisions allow a more favourable treatment at the federal corporate income tax level, except in the U.S.A. and South Africa, where flow-through provisions do not create an advantageous tax position.

Tax shares between federal and local jurisdictions are found to vary significantly from country to country. Nevertheless, it appears that in most taxation systems, total corporate income taxes account for a significantly higher portion of tax revenues.

FIGURE 7-1

SUMMARY -- RATES OF RETURN

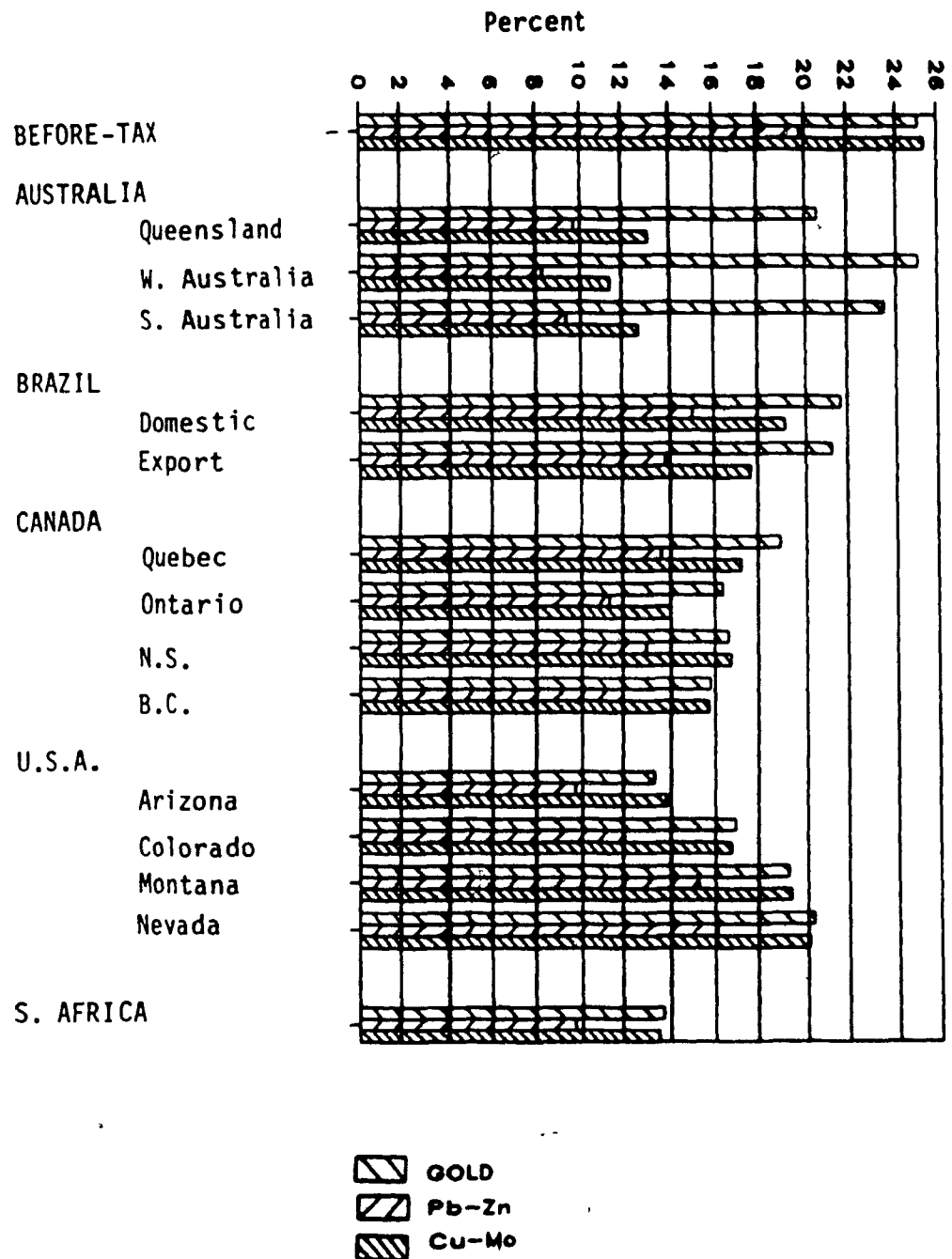
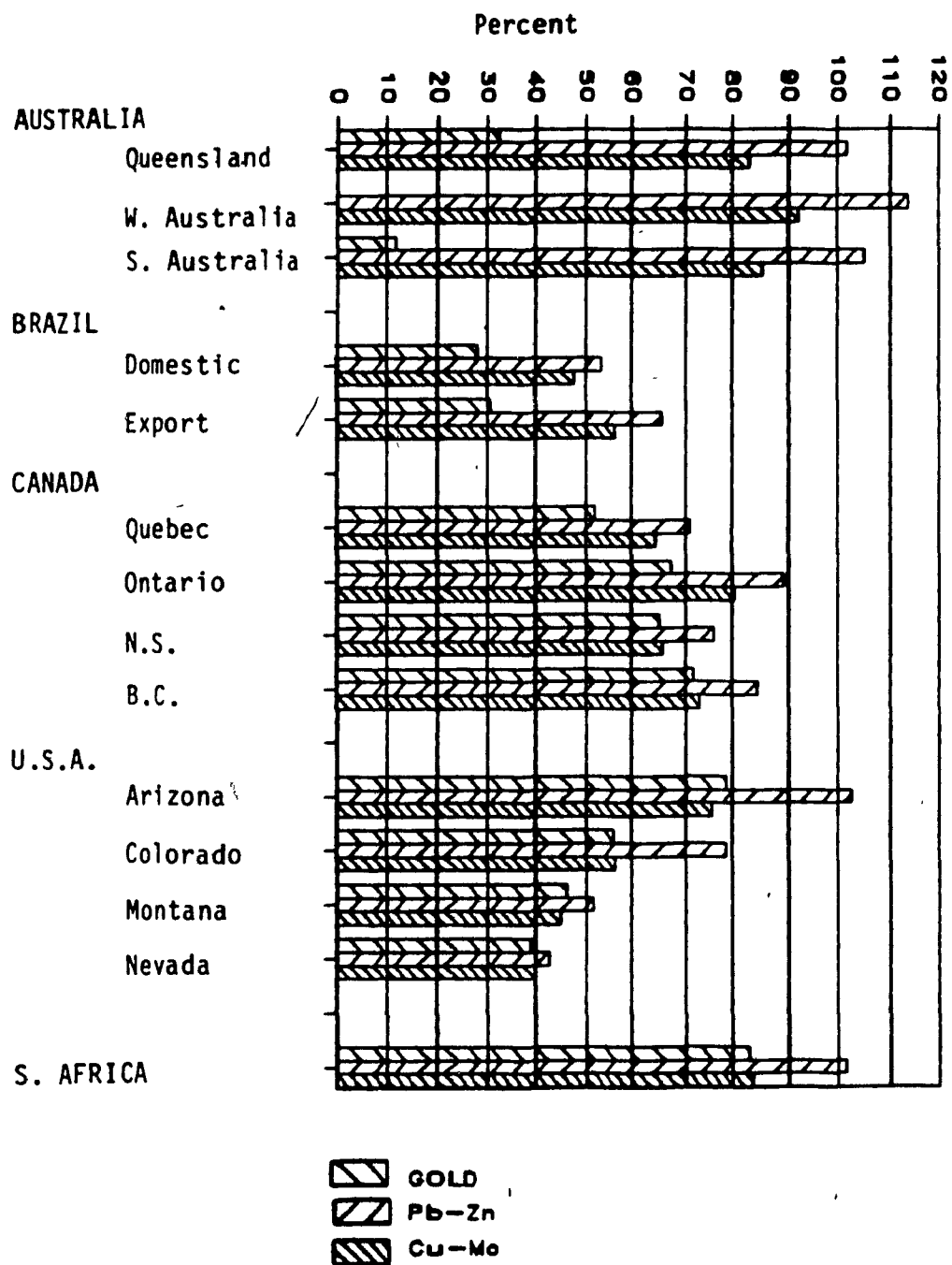


FIGURE 7-2

SUMMARY -- EFFECTIVE TAX RATES



Sensitivity analysis is carried out with particular attention to the effects of variations in revenue and inflation on the economic indicators of the mining projects. A range of revenues varying from -25 percent to +25 percent of base conditions, and inflation rates ranging from 0 to 15 percent are used. This analysis shows that, because of their different structure, the tax regimes do not respond in a parallel way to changes in economic conditions.

Subsequent to the analytical part of the study, the following concluding statements and their implications with respect to the formulation of mineral policy and the competitiveness of the Canadian mining industry can be made.

7.2. CONCLUSIONS

The conclusions presented here are discussed under appropriate headings, relevant to key subjects such as taxation as a decision parameter and policy instrument, level and structure of mineral taxation, and Canada's competitive position in international mineral supply.

Taxation As an Element in Investment Decision-Making

In an investment environment where mineral tax considerations are of significant importance, the ranking of tax regimes represents a relative degree of competitiveness from the decision-maker's point of view. For marginal projects, mineral taxation is an aspect that can become a decisive factor in a go/no-go situation.

For gold projects, Australia and Brazil occupy the most favourable positions, whereas Canada ranks in the lower-middle range, and Arizona and

South Africa assume the least favourable position. For both base metal projects, Australian states occupy the lowest positions in terms of investment incentive. Because of the contrasting behavior of the Australian state systems, Canada's position improves slightly, to the middle-range group.

Under the tax regimes of Australia, Brazil, Canada and South Africa, taxation of the base metal projects on an integrated company basis provides better after-tax incentives than on a project basis of taxation. This is not the case for South African gold mining taxation and U.S. taxation in general.

Taxation As a Tool for Mineral Policy

Corporate income taxation is a part of the overall taxation system of all regimes analyzed in this study, and is considered the primary instrument for collecting government revenues. Other forms of taxations are used as complements of corporate income taxation. Exceptions are found in gold mining taxation of Australia as well as in Arizona, where state taxes are significant and can be deducted for the purpose of assessing the corporate income tax base. In this regard, the tax jurisdictions in Canada do not interfere with each other, i.e. the tax base of one jurisdiction is not affected by the taxes paid to another. In Canada, income taxes represent about 70 percent of total government revenue, while they represent shares of 40 percent in Arizona and 80 percent in South Australia, Nevada and South Africa. Among Canadian provinces, Ontario and British Columbia are more aggressive with respect to taxes than Quebec and Nova Scotia.

Different philosophies reflected in the taxation systems are observed from the legislations. Canada provides the most diversified tax provisions.

For example, major items include inventory allowance, capital cost allowance, resource allowance, earned depletion, and investment tax credit. These features have made the Canadian system one of the most complicated taxation systems in the world. At the same time, it is a typical example of a strictly profit-based taxation system. Although the depletion allowance has been considered as a characteristic feature of mining taxation in many tax regimes, it is not incorporated in the Australian and South African systems. These taxation systems use relatively simple methods of capital expenditure allowances and, thus, less complicated tax calculation formats. Many nations use mineral-type related rules such as tax exemptions or different depletion and/or tax rates. Canada does not use such discriminatory instruments. The mining tax exemption for mineral production relating to domestic supply in the Brazilian system is another type of mineral policy concern which is not found in the Canadian system.

Level of Mineral Taxation

Tax payments expressed in proportion of before-tax value represent the project's contribution to government revenue. This value is defined as the effective tax rate in the study. This measure of tax incidence varies significantly among the tax regimes.

Under the taxation systems of Australia, Arizona and South Africa, the lead-zinc project becomes uneconomic on an after-tax basis. Systems of Nevada, Montana and Brazil are the most favourable tax regimes for all three projects. Western Australia displays a striking contradiction with respect to level of taxation, being the most favourable for gold mining operations but the most severe for base metal projects. Canadian provinces generally rank in the middle ranges, with Ontario and British Columbia having the

relatively tougher regimes.

The relative advantage of an integrated company basis taxation is largest in the case of the Canadian system.

Mineral Taxation Structure

Given a constant level of before-tax cash flows over a particular production period, the time profile of tax payments shows characteristics which are closely related to the tax structure. The following are generally observed:

- Property tax: a downward sloping curve for a present-value based property tax. A property tax profile based on net proceeds is similar to that of a production tax.
- Production tax: a horizontal line.
- Profit tax: an S-shaped growth curve with a slow increase in tax payments in the early stages of production.
- Profitability tax: a step-function curve with a significant increase in tax payments as soon as capital expenditures are recovered through accelerated write-off provisions.

As opposed to profit-based taxes, property taxes and production taxes are weighted towards the earlier years of production, hence escalating the present value of tax payments and resulting in a relatively higher effective tax rate.

A profitability tax, as embodied in the South African taxation system, displays a sharp increase in the level of tax payments after the capital recovery period. When compared to the Canadian tax schedule, this sudden increase occurs before the Canadian profile reaches its plateau. Moreover, effective tax rate estimates based on profitability are relatively high

since there are no more capital cost allowances beyond the capital recovery period.

Brazil, Montana and Nevada have tax profiles similar to those of the Canadian system, but they have relatively lower effective tax rates.

Competitive Position

The above observations concerning level and structure of mineral taxation offer some rational for understanding the differences in tax incentives observed across the tax regimes.

Canada occupies a middle position from the point of view of effective tax rates and present value of tax payments. However, the period of lower tax payments in the earlier years of production is generally longer than in any other taxation regime, effectively shifting the weight of taxation towards the later years. Due to very favourable provisions with respect to capital cost allowances and deductions, the mining projects generate high cash flows in the earlier production years under the Canadian tax regimes, hence producing shorter payback periods than other regimes.

Brazil generally ranks in the most favourable position, while South Africa generally ranks in the least favourable. Although Australia offers very favourable incentives to the gold industry, it is in fact the severest tax regime in the case of base metal mining operations. If the discriminatory treatment of minerals in the Australian system were removed, gold project economics would suffer just as much. The general favourability of the Canadian system, free of such discriminatory provisions, is thus highlighted. Among the U.S. state regimes, Colorado is comparable to the Canadian provinces, Montana and Nevada are more favourable, and Arizona is less favourable.

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Considering the relatively long time periods and high risk associated with mining investment decisions, Canadian taxation regimes provide one of the most favourable tax environments among the regimes studied. As shown in the sensitivity analysis section of the study, the representative mine development projects are more sensitive to revenue variations than to variations of non-income parameters, and profit-based systems are more adaptable to revenue variations than production- or property-based systems. This also enhances the favourability of Canadian tax provisions with respect to the uncertainty involved in the decision making process.

Implications for Mineral Taxation Policy

Although taxation is just one of the numerous factors which must be taken into consideration in the process of investment decisions, it should never contribute to the unfavourability of an investment environment. Considering the significance of the mining industry to the Canadian economy, the sound and continuous growth of this sector must be maintained. The level of taxation is not the only important criterion in determining the favourability of a taxation system, but other general objectives, such as stability and effectiveness, should also be considered when formulating and implementing taxation policies. In addition, such activities should be based on the analysis of economic consequences of any changes in tax structure and level.

The results of the study indicate that the Canadian mineral taxation system possesses a strong potential for a favourable and a competitive instrument of mineral policy. It has fairly extensive provisions regarding the recovery of capital expenditures, as well as many other attractive allowances. It also offers significant benefits to integrated companies by

way of flow-through deductions of capital expenditures, and is non-discriminative between different minerals. However, the study demonstrates that Canadian tax regimes do not rank among the best with respect to taxation levels. For example, Brazil and some of the U.S. regimes rank above Canada.

When designing and formulating tax policies, it is recommended that authorities consider the economic impacts of the policies as well as the competitive position of their mining industry under the proposed taxation regime. Such a consideration should be based on an assessment of the impacts of taxation on the economic viability of potential mining projects.

There have been concerns about Canadian mineral taxation policy, mainly due to the frequent reforms and revisions which have prevailed during periods of economic instability in mineral markets. What is now required for taxing authorities in Canada is not a more refined system which can better respond to economic changes, but the establishment and cultivation of a stronger degree of confidence and trustworthiness between the private sector and government with respect to mineral policy. Such a relationship can be realized through the implementation of predictable and stable long-term mineral policies by means of sound taxation practices.

In short, although Canada is considered to have a relatively favourable taxation environment, it must monitor its mineral taxation policies and their impact on investment decisions, as well as maintain a stable and economically viable tax environment for investors.

7.3. RECOMMENDATIONS FOR FURTHER STUDY

In the course of the study, many limitations were imposed when formulating general economic conditions as well as project-specific

characteristics. These factors were fixed and confined to the Canadian context throughout the study, with a view of identifying and isolating the effects of taxation. The study compared certain categories of national taxes pertaining to the mining industry, and evaluated the effects of particular combinations of tax rates and structures on project economics. It did not cover all taxes that mining investments are subject to, nor did it consider services governments may provide that would offset part of the tax burden. Nevertheless, in the light of examining Canada's competitive position, particularly with respect to mineral taxation, this methodology is quite appropriate. In this way, it is possible to analyze the impacts of mineral taxation clearly and fairly extensively.

However, in order to advance the study of comparative taxation, it is desirable to undertake further studies which can be considered as variations or extensions of this study. The following paragraphs outline some suggestions not embodied in this study due to scope and time limitation.

Firstly, the taxation systems of many other countries could be considered for analysis. Secondly, a more extensive coverage of all the forms of government revenues resulting from mining operations is needed. These include, for example, local real estate and business taxes, taxes on materials and supplies, corporation capital taxes, and workers' insurance payments. This extension will involve a tedious process of collecting and investigating regulations of geographically diversified countries and jurisdictions. Thus, it will be necessary to set specific criteria for selecting types of taxes and levels of jurisdictions.

For a tax study to be more comprehensive, local variations under the same taxation regime should also be considered. Specifically, infrastructure considerations are often an important factor in the evaluation of investment

projects. Differences in infrastructure may be accompanied by varied local tax treatment through special rules and provisions, which reflect considerations for the remoteness aspect of the minesite.

Attention should also be given to specific economic characteristics associated with the mineral industry. Cyclicity in prices and costs is one such element which is worth examining. It should be interesting to observe the response of the various taxation systems to price cycling for example. Other related parameters, such as optimum size of ore reserves and optimum production rate schedules, which must be analyzed in the context of marginal analysis, could eventually be incorporated. These would be useful for studies which examine the effects of taxation on the optimization of mine operating variables.

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APPENDICES

APPENDIX A

CANADIAN MINERAL TAXATION SYSTEM

A.1. DESCRIPTION

(1) FEDERAL CORPORATE INCOME TAXATION

Tax Calculation Format:

- Revenue
- Operating Cost
- Capital Cost Allowance @ 30% db (optional)
- Interest Payments
- If negative: Carried Loss (for year X+1 or X-1)
- Revenue
- Operating Cost
- Net Income before Allowances
- Inventory Allowance
- Capital Cost Allowance
- Resource Profits
- Resource Allowance
- Interest Payments
- Exploration Expenditures
- Development Expenditures
- Income for Earned Depletion
- Earned Depletion Allowance
- Carried Loss (from year X-1 or X+1)
- Income for Federal Corporate Income Tax
- Federal Corporate Income Tax Otherwise Payable
- Investment Tax Credit
- Net Federal Corporate Income Tax Payable

Inventory Allowance:

The allowance is intended to provide some relief from the taxation of inventory profits attributable to inflation.

3 percent of the cost of 'inventory' is allowable each year. Inventory includes operating supplies and the cost of concentrates produced and not sold, but not spare parts. In accounting terms, if working capital (current assets) comprises receivables and inventory, the allowance is determined on the inventory portion.

The allowance is an annual deduction based on the full amount of qualifying opening inventories each year, as determined for tax purposes.

Assume: 50 percent of working capital is applicable to the determination of inventory allowance.

Capital Cost Allowance:

The system of capital cost allowances operates on a pool basis with separate classes provided for various categories of depreciable property and is applied to mine plant and machinery, the mill facility, infrastructure capital, and mine development capital after the start of commercial production. The amount allowable must be reduced by the investment tax credit (see below).

For capital expended during the development stage and for expansions of at least 25 percent in capacity, the deduction permitted is the greater of 15 percent of the allowable capital cost in the year of expenditure and 30 percent per year thereafter on a declining balance basis, or an amount equal to (revenue - operating cost - interest payments) from the new mine, i.e. at 100 percent against new mine income.

The principal capital cost allowance classes generally relevant to the mining industry are:

Class 10 (30 percent rate) -- mining buildings and equipment acquired after the commencement of commercial production.

Class 12 (100 percent rate) -- the cost of mine shafts and other underground workings, and designated overburden removal costs, incurred after the commencement of commercial production. Such costs incurred prior to the commencement of commercial production generally qualify as Canadian exploration expenses.

Class 28 (30 percent to 100 percent rate) -- certain buildings and equipment acquired prior to the commencement of commercial production of a new mine or associated with major expansions of at least 25 percent in capacity.

Assume: Taxation on an individual project basis will use the 100 percent rate. Taxation on an integrated company basis will use the 15 percent and 30 percent rates until new mine income begins and then the balance will be deducted at the 100 percent rate. Note that while capital cost allowance reduces the amount of resource profits and resource allowance, a carried loss does not. Therefore, using the 15 percent and 30 percent rates until new mine income begins may be advantageous even on the individual project basis.

For other capital costs (apart from major expansions) and sustaining capital costs, the capital cost allowance is 15 percent of the capital cost in the year of expenditure and 30 percent per year thereafter on a declining balance basis for all except mine development capital costs, which are allowable at 100 percent.

Capital expenditures incurred to control air and water pollution can be deducted at 50 percent per year on a straight-line basis.

Resource Allowance:

The resource allowance is equal to 25 percent of resource profits.

In effect, the resource allowance reduces the effective federal tax rate on qualifying income by one-quarter, from 36 percent to 27 percent (36 percent less 25 percent of 36 percent), but without reducing the resultant tax saving related to interest expense and exploration and development expenditures. Accordingly, the resource allowance provides an added incentive for exploration and development activities.

The resource allowance reduces the amount of income subject to earned depletion and therefore, may delay a portion of the earned depletion claim until a later year.

Exploration Expenditures:

Canadian exploration expenses (CEE) may be deducted to the extent of available income (100 percent) before deducting the earned depletion allowance.

Development Expenditures:

Mine development capital costs incurred before the start of commercial production (CDE) are allowed to be deducted at 100 percent.

The deduction may be claimed whether or not the corporation has income, that is, the taxpayer may create a loss (eligible for the loss carry-back/carry-forward rules) by claiming CDE.

Included in the CDE and CEE described above may be expenses incurred by a taxpayer via a so-called flow-through share arrangement.

Earned Depletion Allowance:

\$1 for every \$3 of allowable capital costs and expenditures up to a maximum of 25 percent of income for earned depletion in any year.

Allowable capital costs and expenditures include exploration expenditures; mine development, mine plant and machinery, mill facility, and infrastructure capital in the development stage; mine plant and machinery, and mill facility capital associated with a major expansion; and the processing machinery equipment component in other capital costs (other than major expansions) and sustaining capital costs. The amount allowable must be reduced by the investment tax credit (see below).

Carried Loss:

Losses may be carried back three years and ahead seven years.

Federal Corporate Income Tax:

The federal government imposes income taxes on mining income at the same basic rates of tax applicable to other types of income.

The net rate of corporate federal tax applicable to taxable income is 36 percent. Although the net rate of federal tax is 36 percent, the resource allowance which is deducted from taxable income reduces the effective rate of federal tax on each dollar of "resource income" to 27 percent or less. All provincial mining taxes and royalties paid after May 6, 1974 are disallowed in computing income for federal tax purposes.

Investment Tax Credit:

2 An investment tax credit is available against federal taxes otherwise payable. The credit is generally 7 percent of the cost of qualified property. The rate of 10 percent in areas designated under the Regional Development Incentives Act in Saskatchewan, Manitoba, Northern Alberta, Northern British Columbia, Northern Ontario and Quebec (other than the Gaspé region). The rate is 20 percent in the Atlantic provinces and most of the Gaspé region of Quebec. Expenditures with respect to scientific research in the Atlantic provinces and Gaspé qualify for a 20 percent investment tax credit, while the rate for these expenditures in the rest of Canada is 10 percent. If scientific research expenses are incurred anywhere in Canada by a Canadian-controlled private corporation with taxable income eligible for the small business deduction, then the investment tax credit rate is 25 percent. Qualified property must not have been previously used, and includes most buildings, machinery and equipment used in mining and processing operations, and in prospecting, exploration and development activities.

The credit effectively reduces the cost of related assets and expenditures on an after-tax basis. Unused credits may be carried forward for 7 years.

(2) PROVINCIAL CORPORATE INCOME TAXATION

The various provinces each levy a provincial income tax at rates ranging from 5.5 percent to 16 percent. These tax rates are generally levied on federal taxable income applicable to the particular province. However, Ontario, Quebec and British Columbia have in some cases particular rules for determining taxable income which differ in some respects from the federal rules.

QUEBEC

Tax Calculation Format:

- Revenue
- Operating Cost
- Capital Cost Allowance @ 30% db (optional)
- Interest Payments
- If negative: Carried Loss (for year X+1 or X-1)

- Revenue
- Operating Cost
- Net Income before Allowances
- Capital Cost Allowance
- Inventory Allowance
- Resource Profits
- Resource Allowance
- Interest Payments
- Exploration Expenditures
- Development Expenditures
- Income for Earned Depletion
- Earned Depletion Allowance
- Carried Loss (from year X-1 or X+1)
- Income for Quebec Corporate Income Tax
- Quebec Corporate Income Tax

Capital Cost Allowance:

Inventory Allowance:

Resource Allowance:

Development Expenditures:

Carried Loss:

Same rules as for
Federal Corporate
Income Tax

Earned Depletion Allowance:

Same rules as for Federal Corporate Income Tax except maximum annual deduction is 33 1/3 percent of income for earned depletion.

Quebec Corporate Income Tax:

5.5 percent of income for Quebec income tax.

ONTARIO

Tax Calculation Format:

- Revenue
- Operating Cost
- Capital Cost Allowance @ 30% db (optional)
- Interest Payments
- If negative: Carried Loss (for year X+1 or X-1)

- Revenue
- Operating Cost
- Net Income before Allowances
- Capital Cost Allowance
- Inventory Allowance
- Interest Payments
- Exploration Expenditures
- Development Expenditures
- Income for Percentage Depletion
- Percentage Depletion Allowance
- Carried Loss (from year X-1 or X+1)
- Income for Ontario Corporate Income Tax
- Ontario Corporate Income Tax

Capital Cost Allowance:

Same as for Federal Corporate Income Tax except that the deduction permitted is the greater of 30 percent per year of the allowable capital cost on a declining balance basis, or an amount equal to (revenue - operating cost - interest payments) from the new mine, i.e. at 100 percent against new mine income.

Inventory Allowance:

Development Expenditures:

Carried Loss:

Same rules as for

Federal Corporate

Income Tax

Percentage Depletion Allowance:

33 1/3 percent of income for percentage depletion.

Ontario Corporate Income Tax:

14 percent of income for Ontario income tax.

NOVA SCOTIA

In Nova Scotia, income for provincial corporate income tax is derived in exactly the same way as income for federal corporate income tax.

Nova Scotia Corporate Income Tax:

15 percent of income for Nova Scotia income tax.

BRITISH COLUMBIA

In British Columbia, resource allowance is not an allowable deduction in calculating income for B.C. corporate income tax. Otherwise, income for British Columbia corporate income tax is derived in exactly the same way as income for federal corporate income tax.

British Columbia Corporate Income Tax:

16 percent of income for British Columbia income tax.

(3) PROVINCIAL MINING TAXATION

QUEBEC¹

Tax Calculation Format:

	Revenue
-	Operating Cost
-	Depreciation Allowance (Optional)
-	Exploration Expenditures (Optional)
	<u>Carried Loss</u>
	Revenue
-	Operating Cost
-	Depreciation Allowance
-	Exploration Expenditures
	<u>Income for Exploration and Investment Allowance</u>
-	<u>Exploration and Investment Allowance</u>
	<u>Income for Processing Allowance</u>
-	<u>Processing Allowance</u>
	<u>Income for Quebec Mining Tax</u>
	Quebec Mining Tax Otherwise Payable
-	<u>Deduction for Carried Loss</u>
	<u>Net Quebec Mining Tax Payable</u>

1. Significant changes to the Quebec mining taxes have been implemented for 1986. These changes are not considered here.

Depreciation Allowance:

Mine development capital costs are allowed at 100 percent per year; all other capital costs at 30 percent per year on a straight-line basis.

Exploration and Investment Allowance:

\$1 for every \$3 of preproduction exploration expenditures, capital costs of processing facilities, and exploration costs incurred at operating underground mines; up to a maximum of 33 1/3 percent of income for exploration and investment allowance in any year. The eligible capital costs are actually limited to a prescribed list of exploration expenditures which are a function of such factors as depth of exploration and distance from mine workings.

Processing Allowance:

This is calculated by means of an annual rate applied to the original cost of the processing assets, but not to be less than 15 percent nor more than 65 percent of income for processing allowance.

Annual rate: 8 percent if ore is concentrated; 15 percent if concentrate is smelted and/or refined in Quebec.

Quebec Mining Tax Otherwise Payable:

Subject to the 'tax averaging concept' as explained below. (applies until 1985 taxation year)

<u>Income for Mining Tax (\$)</u>	<u>Marginal Rate (%)</u>
up to 250 000	exempt
250 000 - 3 250 000	15
3 250 000 - 10 250 000	20
10 250 000 - 20 250 000	25
20 250 000 and over	30

Deduction for Carried Loss:

15 percent of 'carried loss' in the year following the loss. This deduction can be carried forward for a maximum of four years.

Tax Averaging Concept:

Based on three-year floating average, including the present year.
Procedure:

- i. determine mining tax payable in present year;
- ii. determine average annual income for Quebec mining tax for the last three years (including present year) and calculate what mining tax would be payable on this average annual value (note: loss years

- count as nil tax).
- iii. multiply (ii) by 3 and deduct taxes actually paid during the past two years (excluding present year);
 - iv. pay the lesser of (i) and (iii) in the present year.

ONTARIO

Tax Calculation Format:

	Revenue
-	Operating Cost
	<u>Net Income before Allowances</u>
-	Depreciation Allowance
-	Exploration Expenditures
	<u>Income for Processing Allowance</u>
-	Processing Allowance
	<u>Income for Ontario Mining Tax</u>
	Ontario Mining Tax

Depreciation Allowance:

Mine development capital costs at 100 percent per year; mine plant and equipment at 30 percent per year on a straight-line basis; mill, infrastructure and all other capital costs at 15 percent per year on a straight-line basis, but not to be less than 5 percent per year, irrespective of net income before allowances.

Processing Allowance:

Calculated by means of an annual rate applied to the original cost of the processing assets, but not to be less than 15 percent nor more than 65 percent of income for processing allowance. Annual rates are:

- 8 percent if ore concentrated;
- 15 percent if ore smelted;
- 20 percent if ore refined;
- 30 percent if ore refined in northern Ontario;
- 35 percent if ore fabricated in northern Ontario.

A 16 percent rate applies to gold milling assets if the facility includes a smelter which produces dore or impure bullion.

Ontario Mining Tax:

The tax is levied on a sliding-scale basis, at the following rates:

Income for Mining Tax (\$)Marginal Rate (%)

up to 250 000	exempt
250 000 - 1 000 000	15
1 000 000 - 10 000 000	20
10 000 000 - 20 000 000	25
20 000 000 and over	30

NOVA SCOTIATax Calculation Format:

- Gross Metal Revenue
- Smelting, Refining, and Transportation Charges
- Revenue = Net Smelter Return
- Revenue
- Operating Cost
- Net Income before Allowances
- Depreciation Allowance
- Exploration Expenditures
- Income for Processing Allowance
- Processing Allowance
- Income for Nova Scotia Mining Tax
- Nova Scotia Mining Tax

Depreciation Allowance:

All capital costs except post-production mine access capital costs are allowable at 100 percent against new mine income during the first three years of operation, and at 30 percent per year on a straight-line basis thereafter. Post-production mine development capital costs allowable at 100 percent.

Processing Allowance:

8 percent of the original cost of processing assets per year, but not to be less than 15 percent nor more than 65 percent of income for processing allowance.

Nova Scotia Mining Tax:

The greater of 2 percent of net smelter return or 15 percent of income for Nova Scotia mining tax (subject to change by order-in-council).

BRITISH COLUMBIA

Tax Calculation Format:

- Revenue
- Operating Cost
- Net Income before Allowances
- Depreciation Allowance
- Interest Payments
- Exploration Expenditures
- Income for Earned Depletion Allowance
- Earned Depletion Allowance
- Income for Processing Allowance
- Processing Allowance
- Income for British Columbia Mining Tax
- British Columbia Mining Tax

Depreciation Allowance:

Applies to all capital costs. Calculated in the same manner as explained under 'capital cost allowance' and 'development expenditures' in Federal Corporate Income Tax section.

Earned Depletion Allowance:

8 percent of the original cost of processing assets per year, but not to be less than 15 percent nor more than 50 percent of income for processing allowance.

British Columbia Mining Tax:

17.5 percent of income for British Columbia mining tax.

Note: All allowances must be taken on an individual project basis.

A.2. DETAILED BASE CASE RESULTS

COLD PROJECT QUEBEC

CASH FLOW SUMMARY PROJECT BASIS	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
	1	2	3	4	5	6	7	8	9	10	11	12
Revenues	0	0	9,181,124	9,640,100	10,122,189	10,620,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,701	14,242,937
- Operating costs	0	0	4,850,449	5,092,971	5,347,620	5,615,081	5,895,751	6,190,530	6,500,065	6,825,069	7,164,322	7,524,638
- Operating profits	0	0	4,330,675	4,547,129	4,774,569	5,013,290	5,263,963	5,527,161	5,803,519	6,093,695	6,398,380	6,718,299
- Capital expenditures	5,326,650	5,592,983	254,678	267,411	280,702	294,821	309,562	325,040	341,292	358,357	376,275	395,000
- Working capital	0	1,140,913	58,047	60,949	63,996	67,196	70,556	74,084	77,788	81,672	85,741	(1,091,037)
- New debt	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0
- Def Debt-Pmt Cash Flow	(5,326,650)	(6,753,915)	(6,017,951)	(4,210,849)	(4,029,791)	(4,651,281)	(4,003,845)	(5,128,037)	(5,304,439)	(5,653,661)	(5,936,344)	(6,214,247)
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0
- Def Tax Net Cash Flow	(5,326,650)	(6,753,915)	(6,017,951)	(4,210,849)	(4,029,791)	(4,651,281)	(4,003,845)	(5,128,037)	(5,304,439)	(5,653,661)	(5,936,344)	(6,214,247)
- Federal corp income tax	0	0	0	0	325,452	841,102	920,325	1,001,695	1,040,700	1,529,817	1,618,206	1,715,104
- Provincial corp income tax	0	0	0	61,215	110,145	122,862	140,394	211,070	225,333	239,197	252,975	268,065
- Provincial mining tax	0	0	0	0	50,353	424,082	635,580	647,443	731,016	778,406	827,327	878,693
- A-1 Cash flow (cur \$)	(5,326,650)	(6,753,915)	(6,017,951)	(4,272,891)	(3,943,041)	(3,263,234)	(3,107,537)	(3,227,820)	(2,904,510)	(3,106,240)	(3,237,036)	(3,352,304)
TAX PAYMENTS IN CONST \$												
Federal corp income tax	0	0	0	(191,823)	255,000	627,644	654,058	677,907	920,740	939,175	946,132	955,034
Provincial corp income tax	0	0	0	50,362	86,301	91,842	99,776	142,860	145,252	166,846	167,909	169,269
Provincial mining tax	0	0	0	0	39,453	316,456	451,701	465,209	471,755	477,871	483,721	489,289
Total tax payments	0	0	0	(44,461)	300,754	1,035,902	1,205,534	1,286,136	1,543,726	1,563,895	1,577,761	1,593,593
CASH FLOWS IN CONST \$												
Before debt pmt CF	(5,073,000)	(6,126,000)	(5,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)
Before-tax CF	(5,073,000)	(6,126,000)	(5,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)
After-tax CF	(5,073,000)	(6,126,000)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)	(3,070,857)
FEDERAL CORP INCOME TAX												
PROJECT BASIS	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
	1	2	3	4	5	6	7	8	9	10	11	12
Resource income	0	0	9,181,124	9,640,100	10,122,189	10,620,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,701	14,242,937
- Resource operating costs	0	0	4,850,449	5,092,971	5,347,620	5,615,081	5,895,751	6,190,530	6,500,065	6,825,069	7,164,322	7,524,638
- Operating profit	0	0	4,330,675	4,547,129	4,774,569	5,013,290	5,263,963	5,527,161	5,803,519	6,093,695	6,398,380	6,718,299
- Inventory allowance	0	0	10,265	19,199	20,159	21,167	22,225	23,356	24,563	25,778	27,015	28,280
- Capital cost allowance	0	0	4,330,675	1,195,223	0	0	0	0	0	0	0	0
- ACA (Class 28)	0	0	4,330,675	1,195,223	0	0	0	0	0	0	0	0
- CCA (Class 10)	0	0	0	0	0	0	0	0	0	0	0	0

[illegible]

COLD PROJECT: INITIATION

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	1	2	3	4	5	6	7	8	9	10	11	12	12
Revenues	0	0	9,181,124	9,440,180	10,122,189	10,420,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,781	14,242,937	14,242,937
- operating costs	0	0	4,850,449	5,092,971	5,347,420	5,615,001	5,895,751	6,190,538	6,500,065	6,825,048	7,166,322	7,520,438	7,520,438
= operating profits	0	0	4,330,675	4,347,209	4,774,769	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,459	6,718,299	6,718,299
- Capital expenditures	5,326,450	5,592,983	254,678	267,411	280,782	294,421	309,542	325,040	341,292	358,357	376,275	395,008	395,008
- Working capital	0	1,140,933	58,947	60,949	63,996	67,196	70,556	74,084	77,788	81,677	85,761	89,937	(1,091,837)
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt-Paid Cash Flow	(5,326,450)	(6,753,915)	(4,017,951)	(4,210,049)	(4,429,791)	(4,651,201)	(4,883,845)	(5,128,037)	(5,384,439)	(5,653,661)	(5,936,344)	(6,214,247)	(6,214,247)
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow	(5,326,450)	(6,753,915)	(4,017,951)	(4,210,049)	(4,429,791)	(4,651,201)	(4,883,845)	(5,128,037)	(5,384,439)	(5,653,661)	(5,936,344)	(6,214,247)	(6,214,247)
- Federal corp. income tax	0	0	0	(115,250)	325,452	841,102	928,325	1,001,695	1,440,780	1,529,017	1,618,286	1,715,184	1,715,184
- Provincial corp. income tax	0	0	0	0	374,442	465,932	489,229	513,698	539,375	566,344	594,641	627,041	627,041
- Provincial mining tax	0	0	0	331,291	401,121	551,640	636,572	673,027	758,442	895,181	940,315	995,906	995,906
= After Tax Cash Flow (see 8)	(5,326,450)	(6,753,915)	(4,017,951)	(4,002,815)	(3,328,775)	(2,792,598)	(2,837,719)	(2,939,424)	(2,645,842)	(2,442,319)	(2,779,162)	(4,076,196)	(4,076,196)

TAX PAYMENTS IN CENTS

Federal corp. income tax	0	0	0	(14,823)	255,060	627,444	654,858	677,987	928,740	939,175	946,132	955,034	955,034
Provincial corp. income tax	0	0	0	0	293,385	347,646	347,646	347,646	347,646	347,646	347,646	349,160	349,160
Provincial mining tax	0	0	0	278,554	314,209	411,640	452,400	455,531	488,899	549,563	552,121	554,558	554,558
Total tax payments	0	0	0	177,732	662,675	1,386,978	1,454,144	1,481,284	1,765,324	1,834,424	1,845,939	1,850,752	1,850,752

CASH FLOWS IN CENTS

Before debt payment	(5,073,000)	(6,126,000)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)
Before tax	(5,073,000)	(6,126,000)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)	(3,470,857)
After tax	(5,073,000)	(6,126,000)	(3,470,857)	(3,293,126)	(2,608,183)	(2,003,000)	(2,016,714)	(1,909,653)	(1,705,533)	(1,634,433)	(1,624,918)	(2,715,248)	(2,715,248)

PERMANENT CASH FLOWS IN CENTS

Resource income	0	0	9,181,124	9,440,180	10,122,189	10,420,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,781	14,242,937	14,242,937
- Resource operating costs	0	0	4,850,449	5,092,971	5,347,420	5,615,001	5,895,751	6,190,538	6,500,065	6,825,048	7,166,322	7,520,438	7,520,438
= Operating profit	0	0	4,330,675	4,347,209	4,774,769	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,459	6,718,299	6,718,299
- Inventory allowance	0	0	10,285	19,199	70,159	21,167	22,225	23,336	24,503	25,728	27,015	28,350	28,350
- Capital cost allowance	0	0	4,330,675	1,195,223	0	0	0	0	0	0	0	0	0
- ACCA (Class 28)	0	0	4,330,675	1,195,223	0	0	0	0	0	0	0	0	0
- CCA (Class 10)	0	0	0	0	0	0	0	0	0	0	0	0	0

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GOLD PROJECT: ONTARIO

= Inc for processing alu.	0	0	0	0	2,776,420	2,974,543	3,759,694	4,259,248	4,473,690	4,976,130	5,780,476	6,069,499	6,372,974
- Processing allowance	0	0	0	0	632,643	531,437	543,954	638,887	671,053	746,420	867,071	910,425	955,946
= Income for mining tax	0	0	0	0	2,093,957	2,443,106	3,195,740	3,620,361	3,802,636	4,229,711	4,913,404	5,159,074	5,417,028

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12
Revenues	0	0	9,181,124	9,648,180	10,122,189	10,620,299	11,159,713	11,717,699	12,383,584	12,918,763	13,564,701	14,242,937
- Operating costs	0	0	4,850,449	5,092,971	5,347,620	5,615,081	5,895,751	6,190,538	6,508,065	6,825,868	7,166,322	7,524,638
= Operating profits	0	0	4,330,675	4,547,209	4,774,569	5,013,290	5,263,963	5,527,161	5,883,519	6,093,695	6,398,380	6,718,299
- Capital expenditures	5,326,650	5,592,983	254,678	267,411	288,782	294,821	309,562	325,840	341,292	358,357	376,275	395,088
- Working capital	0	1,168,933	58,847	68,949	63,996	67,196	70,556	74,084	77,708	81,677	85,761	(1,091,837)
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Pmt Cash Flow	(5,326,650)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,201	4,883,845	5,128,837	5,384,439	5,653,661	5,936,344	6,214,247
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	(5,326,650)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,201	4,883,845	5,128,837	5,384,439	5,653,661	5,936,344	6,214,247
- Federal corp. income tax	0	0	0	(115,250)	325,452	841,182	920,325	1,001,695	1,440,780	1,529,817	1,618,206	1,715,184
- Provnc corp. income tax	0	0	0	180,161	337,943	376,964	411,299	446,594	614,545	652,355	689,931	731,089
- Provincial mining tax	0	0	183,622	192,884	282,444	528,078	548,197	569,322	698,862	733,885	770,495	809,828
A-T Cash flow (cur. g)	(5,326,650)	(6,753,915)	3,834,329	3,953,141	3,563,952	2,985,136	3,084,024	3,118,425	2,630,252	2,737,684	2,857,712	4,959,834

Federal corp. income tax	0	0	0	(94,823)	255,000	627,644	654,050	677,907	928,740	939,175	946,132	955,834
Provincial corp. income tax	0	0	0	154,001	264,787	281,296	292,302	302,273	396,141	400,490	403,500	407,090
Provincial mining tax	0	0	150,620	150,620	150,620	394,060	389,594	385,340	450,492	450,492	450,492	450,492
Total tax payments	0	0	150,620	210,590	670,408	1,303,000	1,335,954	1,365,599	1,775,374	1,790,157	1,800,012	1,812,624

Before debt pymnt CF	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	4,574,000
Before-tax CF	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	4,574,000
After-tax CF	(5,073,000)	(6,126,000)	3,312,237	3,252,259	2,792,449	2,167,857	2,134,904	2,185,250	1,695,484	1,600,700	1,670,845	2,761,376	

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CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
PROJECT BASIS	1	2	3	4	5	6	7	8	9	10	11	12
Revenues	0	0	9,181,124	9,640,100	10,172,109	10,620,299	11,159,713	11,717,699	12,303,504	12,918,763	13,564,701	14,242,937
- Operating costs	0	0	4,850,649	5,072,971	5,347,628	5,615,001	5,895,751	6,190,538	6,500,065	6,825,068	7,166,322	7,524,638
= Operating profits	0	0	4,330,475	4,567,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,380	6,718,299
- Capital expenditures	5,326,650	5,592,903	254,678	262,411	280,782	294,021	309,562	325,040	341,292	358,337	376,275	395,000
- Working capital	0	1,168,933	50,047	60,949	63,996	67,196	70,556	74,084	77,790	81,677	85,761	(1,091,037)
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Pmt Cash Flow	(5,326,650)	(6,753,915)	4,017,951	4,210,049	4,429,791	4,651,281	4,883,045	5,128,037	5,384,439	5,653,661	5,936,344	6,216,217
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	(5,326,650)	(6,753,915)	4,017,951	4,210,049	4,429,791	4,651,281	4,883,045	5,128,037	5,384,439	5,653,661	5,936,344	6,216,217
- Federal corp. income tax	0	0	0	0	325,452	841,102	920,325	1,001,695	1,440,700	1,529,017	1,610,206	1,715,104
- Provincial corp. income tax	0	0	0	0	570,529	599,056	640,069	665,010	900,260	953,673	1,001,357	1,055,964
- Provincial mining tax	0	0	0	0	219,509	434,267	554,652	643,623	900,109	940,114	982,120	976,256
= A-F Cash flow (cur. \$)	(5,326,650)	(6,753,915)	4,017,951	4,179,273	3,314,300	2,774,055	2,759,999	2,617,709	2,235,290	2,330,056	2,434,661	4,516,953
TAX PAYMENTS IN CASH, \$												
Federal corp. income tax	0	0	0	0	255,000	627,644	654,050	677,907	920,740	939,175	946,132	955,034
Provincial corp. income tax	0	0	0	0	447,025	447,025	447,025	585,473	585,473	585,473	585,473	589,000
Provincial mining tax	0	0	0	0	171,991	325,549	394,101	435,629	515,757	515,757	515,757	515,757
Total tax payments	0	0	0	0	874,016	1,400,217	1,509,378	1,659,008	2,029,969	2,040,305	2,047,362	2,059,791
CASH FLOWS IN CASH, \$												
Before debt pmt of	(5,073,000)	(6,126,000)	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	4,574,000
Before-tax of	(5,073,000)	(6,126,000)	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	4,574,000
After-tax of	(5,073,000)	(6,126,000)	3,470,057	3,470,057	2,596,041	2,070,440	1,961,400	1,771,769	1,440,000	1,430,452	1,423,496	2,515,209
FEDERAL CORP. INCOME TAX												
PROJECT BASIS	1	2	3	4	5	6	7	8	9	10	11	12
Resource Income	0	0	9,181,124	9,640,100	10,172,109	10,620,299	11,159,713	11,717,699	12,303,504	12,918,763	13,564,701	14,242,937
- Resource operating costs	0	0	4,850,649	5,072,971	5,347,628	5,615,001	5,895,751	6,190,538	6,500,065	6,825,068	7,166,322	7,524,638
= Operating profit	0	0	4,330,475	4,567,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,380	6,718,299
- Inventory allowance	0	0	18,205	19,199	20,159							

GOLD PROJECT: BRITISH COLUMBIA

	CDA (Class 12)											
- Resource profit	0	0	0	0	0	0	0	0	0	0	0	0
- Resource allowance	0	0	(10,285)	3,332,787	4,754,410	4,992,131	5,241,738	5,503,824	5,779,016	6,067,966	6,371,365	6,718,299
- Income before deductions	0	0	0	0	0	0	0	0	0	0	0	0
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0
- Expl. expenditures, CDE	0	0	0	0	0	0	0	0	0	0	0	0
- Dev. expenditures, CDE	0	0	0	0	0	0	0	0	0	0	0	0
- Income before depletion	0	0	0	1,696,923	3,003,911	3,358,791	3,655,988	3,935,148	4,199,357	4,456,342	4,712,420	4,992,452
- Depletion deducted	0	0	0	424,231	750,965	837,698	913,997	957,852	102,388	107,587	112,082	118,527
- Previous loss deducted	0	0	0	18,285	0	0	0	0	0	0	0	0
- Taxable income	0	0	0	1,254,408	2,252,956	2,513,093	2,741,991	2,977,296	4,096,970	4,349,035	4,599,338	4,873,925
Gross federal income tax	0	0	0	451,587	811,064	904,714	987,117	1,071,826	1,424,999	1,565,453	1,655,834	1,754,613
- Investment tax credit	0	0	0	451,587	811,064	904,714	987,117	1,071,826	1,424,999	1,565,453	1,655,834	1,754,613
- Net federal income tax	0	0	0	0	0	0	0	0	0	0	0	0
- Income before carry-back	0	0	0	0	0	0	0	0	0	0	0	0
- Loss carry-back	0	0	0	0	0	0	0	0	0	0	0	0
- Taxable income, adjusted	0	0	0	0	0	0	0	0	0	0	0	0
Tax payable, adjusted	0	0	0	0	0	0	0	0	0	0	0	0
- ITC carry-back	0	0	0	115,258	32,584	34,129	35,836	37,427	0	0	0	0
- Net Tax Payable At Adj.	0	0	0	(115,258)	325,452	841,182	929,325	1,001,695	1,440,780	1,529,817	1,618,286	1,715,184
BRITISH COLUMBIA INC. TX	0	0	0	75,942	579,529	599,856	648,969	665,810	908,740	953,673	1,001,357	1,055,964
- Resource profit	0	0	0	0	0	0	0	0	0	0	0	0
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0
- Expl. expend. CDE	0	0	0	0	0	0	0	0	0	0	0	0
- Dev. expenditures CDE	0	0	0	0	0	0	0	0	0	0	0	0
- Income before depletion	0	0	0	437,238	4,754,410	4,992,131	5,241,738	5,503,824	5,779,016	6,067,966	6,371,365	6,718,299
- Depletion deducted	0	0	0	164,387	1,108,643	1,248,833	1,186,380	97,512	102,388	107,587	112,082	118,527
- Previous loss deducted	0	0	0	18,285	0	0	0	0	0	0	0	0
- Taxable income	0	0	0	274,626	3,645,767	3,743,298	4,055,358	5,406,312	5,676,628	5,960,379	6,259,283	6,599,772
BRITISH COLUMBIA MINING TAX	0	0	0	78,491	219,589	436,267	554,652	643,623	808,189	848,114	882,128	926,226
- Operating profits	0	0	0	4,339,675	4,547,899	5,013,290	5,263,963	5,527,161	5,883,519	6,093,695	6,398,388	6,718,299
- Depreciation allowance	0	0	0	2,549,626	2,629,849	1,102,708	272,291	386,965	322,258	338,343	355,281	373,045
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0
- Expl. & Dev. expenditures	0	0	0	1,781,849	894,588	0	0	0	0	0	0	0
- Inc. for delta allowance	0	0	0	1,822,852	2,648,486	3,910,518	4,971,472	5,279,256	5,481,740	5,755,132	6,043,098	6,345,253
- End depletion allowance	0	0	0	255,713	515,121	977,638	1,242,918	893,381	102,388	107,587	112,082	118,527
- Inc. for pressing allowanc	0	0	0	767,139	1,545,344	2,932,889	3,728,754	4,326,874	5,378,881	5,647,825	5,938,216	6,276,727

COLD PROJECT: BRITISH COLUMBIA

- Processing allowance	0	0	0	0	0	314,331	291,825	439,933	559,313	649,431	806,832	847,174	889,332	934,889
= Income for estate tax	0	0	0	0	0	658,887	1,254,339	2,492,955	3,169,441	3,677,843	4,572,049	4,888,651	5,048,684	5,292,718

LEAD-ZINC PROJECT: QUEBEC

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Revenues	0	0	0	0	76,576,894	86,465,738	84,426,825	86,447,327	65,931,449	69,228,822	72,489,423	76,323,894	80,140,889
- Operating costs	0	0	0	0	31,907,839	33,582,391	33,177,511	36,936,386	38,783,285	40,722,344	42,758,484	44,896,488	47,141,229
= Operating profits	0	0	0	0	44,669,055	52,883,347	51,249,315	49,510,941	27,148,164	28,506,478	29,730,939	31,427,406	32,999,660
- Capital expenditures	21,525,000	22,481,250	23,731,313	24,917,878	2,297,307	2,412,172	2,532,781	2,659,420	2,792,391	2,932,810	3,078,611	3,232,501	3,394,148
- Working capital	0	0	0	10,331,003	516,590	542,420	569,541	598,018	627,919	659,314	692,200	726,894	763,239
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Paid Cash Flow	(21,525,000)	(22,481,250)	(23,731,313)	(35,249,481)	41,855,958	143,948,756	66,146,193	48,453,583	23,727,934	24,916,331	26,160,848	27,468,858	28,941,453
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	(21,525,000)	(22,481,250)	(23,731,313)	(35,249,481)	41,855,958	43,948,756	66,146,193	48,453,583	23,727,934	24,916,331	26,160,848	27,468,858	28,941,453
- Federal corp. income tax	0	0	0	0	0	(996,400)	8,235,301	9,051,216	4,289,163	4,898,727	6,656,874	7,118,259	7,564,748
- Provincial income tax	0	0	0	0	0	1,652,175	1,192,587	1,355,999	958,374	1,038,233	1,118,303	1,194,868	1,267,688
- Provincial mining tax	0	0	0	0	0	1,426,841	2,943,833	8,510,848	4,525,471	4,837,994	5,166,144	5,518,781	5,872,466
= A-1 Cash flow (cur. \$)	(21,525,000)	(22,481,250)	(23,731,313)	(35,249,481)	41,855,958	42,467,820	33,776,472	29,535,440	13,962,927	16,139,378	13,219,448	13,645,822	14,136,619

TAX PAYMENTS IN CONST. \$

Federal corp. income tax	0	0	0	0	0	(703,589)	5,852,674	6,126,219	2,764,832	3,087,393	3,891,648	3,963,713	4,011,743
Provincial income tax	0	0	0	0	0	785,149	847,550	917,793	612,628	637,385	653,895	664,982	682,248
Provincial mining tax	0	0	0	0	0	1,064,133	2,792,127	5,748,477	2,917,159	2,978,109	3,028,537	3,068,564	3,116,385
Total tax payments	0	0	0	0	0	1,185,694	8,792,351	12,884,490	6,294,611	6,614,007	7,566,101	7,697,180	7,790,207

CASH FLOWS IN CONST. \$

Before debt event of	(20,500,000)	(20,500,000)	(20,500,000)	(20,000,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
Before-tax of	(20,500,000)	(20,500,000)	(20,500,000)	(20,000,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
After-tax of	(20,500,000)	(20,500,000)	(20,500,000)	(20,000,000)	31,609,544	24,002,007	19,998,748	19,998,748	9,088,628	8,688,351	7,779,137	7,598,859	7,496,951

FEDERAL CORP. INCOME TAX

PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Resource income	0	0	0	0	76,576,894	86,465,738	84,426,825	86,447,327	65,931,449	69,228,822	72,489,423	76,323,894	80,140,889
- Resource operating costs	0	0	0	0	31,907,839	33,582,391	33,177,511	36,936,386	38,783,285	40,722,344	42,758,484	44,896,488	47,141,229

Operating profit

Operating profit	0	0	0	0	44,669,055	52,883,347	51,249,315	49,510,941	27,148,164	28,506,478	29,730,939	31,427,406	32,999,660
- Inventory allowance	0	0	0	0	142,726	178,862	179,065	188,376	197,794	207,484	218,848	228,972	240,428
- Capital cost allowance	0	0	0	0	44,669,855	0	0	0	0	0	0	0	0
- RMA (Class 28)	0	0	0	0	44,669,855	0	0	0	0	0	0	0	0
- RMA (Class 10)	0	0	0	0	0	0	0	0	0	0	0	0	0

LEAD-ZINC PROJECT: QUEBEC

CCA (Class 12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Resource profit	0	0	0	0	(162,726)	46,732,485	49,069,109	51,522,565	26,950,449	20,297,972	29,712,070	31,190,514	32,750,440	
- Resource allowance	0	0	0	0	0	11,683,121	12,267,277	12,000,641	6,737,612	7,074,493	7,420,210	7,799,629	8,109,610	
- Income before deductions	0	0	0	0	(162,726)	35,049,364	36,801,832	38,641,924	20,212,837	21,223,479	22,291,860	23,390,885	24,640,830	
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Expl. expenditures, CEE	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Dev. expenditures, CDE	0	0	0	0	0	6,109,642	4,276,722	2,993,705	2,095,594	1,466,915	1,026,041	710,709	503,152	
- Income before depletion	0	0	0	0	0	28,939,762	32,525,111	35,648,219	18,117,244	19,756,563	21,267,812	22,680,097	24,065,670	
- Depletion deducted	0	0	0	0	0	7,234,940	8,131,270	8,912,855	4,529,311	4,391,717	923,583	969,762	1,010,251	
- Previous loss deducted	0	0	0	0	0	162,726	0	0	0	0	0	0	0	
- Taxable income	0	0	0	0	0	21,542,095	24,393,833	26,735,364	13,587,933	15,364,846	20,334,229	21,710,335	23,047,427	
Gross federal income tax	0	0	0	0	0	7,755,154	8,701,700	9,625,019	4,891,656	5,531,345	7,320,322	7,815,720	8,297,074	
- Investment tax credit	0	0	0	0	0	7,711,950	253,270	265,942	279,239	293,201	307,061	323,254	338,417	
- Net federal income tax	0	0	0	0	0	43,196	8,528,502	9,359,077	4,612,417	5,238,144	7,012,461	7,492,466	7,957,657	
- Income of loss carry-back	0	0	0	0	0	119,990	23,690,283	25,997,436	12,012,269	14,550,399	19,479,059	20,812,406	22,104,603	
- Loss carry-back	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Taxable income, adjusted	0	0	0	0	0	119,990	23,690,283	25,997,436	12,012,269	14,550,399	19,479,059	20,812,406	22,104,603	
Tax payable, adjusted	0	0	0	0	0	43,196	8,528,502	9,359,077	4,612,417	5,238,144	7,012,461	7,492,466	7,957,657	
- ITC carry-back	0	0	0	0	0	1,039,674	293,201	307,061	323,254	339,417	356,300	374,207	392,917	
- Net Tax Payable Af. Adj.	0	0	0	0	0	(996,400)	8,235,301	9,051,216	4,289,163	4,898,727	6,656,074	7,110,259	7,564,740	
QUEBEC COMP. INCOME TAX	0	0	0	0	0	1,052,175	1,192,507	1,355,999	950,374	1,030,233	1,110,383	1,194,060	1,267,600	
- Income before depletion	0	0	0	0	0	20,939,762	32,525,111	35,648,219	18,117,244	19,756,563	21,267,812	22,680,097	24,065,670	
- Erod depletion allowance	0	0	0	0	0	9,646,506	10,041,702	10,993,692	837,717	879,683	923,583	969,762	1,010,251	
- Carried loss	0	0	0	0	0	162,726	0	0	0	0	0	0	0	
- Taxable income	0	0	0	0	0	19,130,450	21,683,408	24,654,527	17,279,526	18,876,880	20,334,229	21,710,335	23,047,427	
QUEBEC MINING TAX	0	0	0	0	0	1,426,041	2,943,833	8,510,848	4,525,471	4,837,994	5,166,144	5,510,701	5,872,486	
- Operating profits	0	0	0	0	0	44,669,855	46,983,347	49,248,515	51,710,941	27,148,244	20,585,656	29,930,939	31,427,486	
- Depreciation allowance	0	0	0	0	0	22,412,222	23,135,074	23,895,700	9,732,052	2,636,595	2,768,424	2,906,846	3,052,100	
- Expl. & Dev. expondtrs	0	0	0	0	0	20,345,341	0	0	0	0	0	0	0	
- Inc. for investmt. alw.	0	0	0	0	0	1,092,292	23,767,474	25,352,007	41,950,080	24,511,649	25,737,232	27,024,093	28,375,290	
- Investment allowance	0	0	0	0	0	630,764	7,922,491	5,400,774	0	0	0	0	0	
- Processing allowance	0	0	0	0	0	819,993	6,156,314	5,232,067	6,293,833	3,676,747	3,860,505	4,053,614	4,256,295	
- Income for mining tax	0	0	0	0	0	441,535	9,600,660	14,719,165	35,665,055	20,834,902	21,876,647	22,970,479	24,119,003	
- N-Tx otherwise payable	0	0	0	0	0	0	1,426,041	2,943,833	8,510,848	4,525,471	4,837,994	5,166,144	5,510,701	
- Deduct for carried loss	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Mining Tax Payable	0	0	0	0	0	1,426,041	2,943,833	8,510,848	4,525,471	4,837,994	5,166,144	5,510,701	5,872,486	

LEAD-ZINC PROJECT: QUEBEC

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	14	15	16	17	18	19
Revenues	94,147,093	88,354,658	92,772,178	97,410,779	102,201,317	105,098,056
- Operating costs	49,490,290	51,973,204	54,571,065	57,300,450	60,165,401	60,857,600
= Operating profits	34,648,003	36,381,243	38,200,305	40,110,321	42,115,837	44,240,376
- Capital expenditures	3,543,077	3,742,071	3,929,174	4,125,433	4,331,915	3,404,153
- Working capital	801,401	801,471	803,544	927,722	974,100	(21,079,027)
- New debt	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0
= Def. Debt-Post Cash Flow	30,203,525	31,797,701	33,307,507	35,056,966	36,809,814	52,915,300
- Debt's principal payment	0	0	0	0	0	0
= Def. Tax Net Cash Flow	30,203,525	31,797,701	33,307,507	35,056,966	36,809,814	52,915,300
- Federal corp. income tax	0,006,374	0,451,070	9,359,540	9,049,262	10,356,966	0,609,927
- Provincial corp. income tax	1,340,675	1,414,400	1,409,959	1,547,779	1,640,993	1,302,491
- Provincial mining tax	6,252,360	6,651,220	7,070,040	7,509,792	7,971,531	6,107,302
= A-1 Cash flow (cur. \$)	10,604,117	15,200,915	15,468,049	16,130,134	16,832,343	34,655,799

TAX PAYMENTS IN CONST. \$

Federal corp. income tax	4,043,763	4,065,109	4,202,713	4,297,200	4,303,525	3,471,966
Provincial corp. income tax	677,132	690,393	682,547	694,017	694,943	552,439
Provincial mining tax	3,157,067	3,199,355	3,230,067	3,276,497	3,312,336	2,072,101
Total tax payments	7,878,761	7,944,857	8,209,147	8,257,714	8,309,844	6,096,506

CASH FLOWS IN CONST. \$

Before debt payment	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230	21,541,731
Before-tax CF	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230	21,541,731
After-tax CF	7,416,477	7,350,301	7,006,091	7,037,524	6,994,394	10,645,225

FEDERAL CORP. INCOME TAX

PROJECT BASIS	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
	14	15	16	17	18	19
Revenues	94,147,093	88,354,658	92,772,178	97,410,779	102,201,317	105,098,056
- Resource operating costs	49,490,290	51,973,204	54,571,065	57,300,450	60,165,401	60,857,600
= Operating profit	34,648,003	36,381,243	38,200,305	40,110,321	42,115,837	44,240,376
- Inventory allowance	252,041	265,063	270,317	292,232	306,044	0
- Capital cost allowance	0	0	0	0	0	0
- ACCA (Class 20)	0	0	0	0	0	0
- CCA (Class 10)	0	0	0	0	0	0

[illegible]

OREGEC CONSOLIDATED INCOME TAX	1,340,475	1,414,400	1,499,959	1,567,779	1,648,493	1,730,251
Income before depletion	25,445,045	26,040,590	26,254,910	29,742,759	31,272,100	32,721,087
- Erod depletion allowance	1,069,163	1,122,621	1,170,752	1,237,690	1,299,574	1,361,246
- Carried loss	0	0	0	0	0	0
taxable income	24,375,902	25,717,969	27,090,158	28,505,069	29,972,605	31,359,841
OREGEC MINING TAX	6,252,360	6,651,228	7,079,040	7,509,792	7,971,531	8,487,302
Operating profits	34,648,003	36,301,213	38,200,305	40,110,321	42,115,837	44,240,376
- Depreciation allowance	3,365,037	3,533,209	3,709,953	3,895,451	4,090,224	4,311,420
- Expl & Dev expenditures	0	0	0	0	0	0
Inc for investment allowance	31,283,766	32,847,954	34,490,352	36,214,869	38,025,613	40,028,948
- Investment allowance	0	0	0	0	0	0
- Processing allowance	4,692,565	4,927,193	5,173,553	5,432,250	5,703,042	6,054,342
Income for mining tax	26,591,201	27,920,761	29,316,799	30,782,619	32,322,571	34,074,606
- Is otherwise payable	6,252,360	6,651,228	7,079,040	7,509,792	7,971,531	8,487,302
- Deduct for carried loss	0	0	0	0	0	0
Mining Tax Payable	6,252,360	6,651,228	7,079,040	7,509,792	7,971,531	8,487,302

LEAD-ZINC PROJECT ONTARIO

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Revenues	0	0	0	0	76,576,894	80,405,720	84,426,075	88,647,327	65,931,449	69,228,022	72,689,423	76,323,894	80,140,889
- Operating costs	0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,366	42,758,484	44,896,408	47,141,229
= Operating profits	0	0	0	0	44,669,855	46,903,329	49,248,565	51,710,941	27,148,244	28,505,656	29,930,939	31,427,486	32,998,660
- Capital expenditures	21,525,000	22,481,250	23,731,313	24,917,078	2,297,307	2,412,172	2,532,781	2,659,420	2,792,391	2,932,010	3,078,611	3,232,541	3,394,168
- Working capital	0	0	0	10,331,003	516,590	542,420	569,541	598,018	627,919	659,314	692,280	726,894	763,239
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def Debt-Plant Cash Flow	(21,525,000)	(22,481,250)	(23,731,313)	(24,917,078)	41,855,958	43,948,756	46,146,193	48,453,503	23,777,934	24,914,331	26,160,048	27,468,050	28,841,433
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def Tax Net Cash Flow	(21,525,000)	(22,481,250)	(23,731,313)	(24,917,078)	41,855,958	43,948,756	46,146,193	48,453,503	23,777,934	24,914,331	26,160,048	27,468,050	28,841,433
- Federal corp income tax	0	0	0	0	0	(996,488)	8,235,301	9,051,216	4,289,163	4,898,727	6,656,874	7,118,259	7,564,748
- Provincial corp income tax	0	0	0	0	0	1,546,225	4,579,784	4,808,773	2,515,575	2,641,144	2,773,281	2,911,861	3,057,455
- Provincial mining tax	0	0	0	0	819,229	6,765,197	7,448,129	8,609,044	2,745,866	3,060,098	3,928,773	5,786,037	6,878,714
= A-1 Cash flow (cur 8)	(21,525,000)	(22,481,250)	(23,731,313)	(24,917,078)	41,834,729	36,633,813	25,882,980	25,980,470	14,177,530	14,313,962	12,883,999	11,731,893	12,148,545
TAX PAYMENTS IN CASH \$													
Federal corp income tax	0	0	0	0	0	(743,509)	5,852,674	6,126,219	2,764,832	3,007,393	3,891,648	3,963,713	4,011,743
Provincial corp income tax	0	0	0	0	0	1,151,817	3,254,767	3,754,767	1,621,433	1,621,433	1,621,433	1,621,433	1,621,433
Provincial mining tax	0	0	0	0	641,887	5,648,294	5,293,246	5,826,940	1,770,810	1,878,881	2,295,983	3,177,335	3,219,429
Total tax payments	0	0	0	0	641,887	5,458,523	14,400,687	15,707,926	6,156,276	6,507,707	7,809,065	8,762,481	8,852,605
CASH FLOWS IN CASH \$													
Before debt plant CF	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
Before-tax CF	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
After-tax CF	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	32,153,351	27,336,716	18,394,551	17,587,332	9,138,962	8,787,531	7,486,233	6,532,757	6,442,633
FEDERAL CORP INCOME TAX PROJECT BASIS													
Resource income	0	0	0	0	76,576,894	80,405,720	84,426,075	88,647,327	65,931,449	69,228,022	72,689,423	76,323,894	80,140,889
- Resource operating costs	0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,366	42,758,484	44,896,408	47,141,229
= Operating profit	0	0	0	0	44,669,855	46,903,329	49,248,565	51,710,941	27,148,244	28,505,656	29,930,939	31,427,486	32,998,660
- Inventory allowance	0	0	0	0	162,776	170,862	179,405	188,376	197,794	207,484	218,868	229,972	240,420
- Capital cost allowance	0	0	0	0	44,669,855	46,903,329	49,248,565	51,710,941	27,148,244	28,505,656	29,930,939	31,427,486	32,998,660
- NCCA (Class 28)	0	0	0	0	0	0	0	0	0	0	0	0	0
- CCA (Class 10)	0	0	0	0	0	0	0	0	0	0	0	0	0

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LEAD-TIME PROJECT: ONTARIO

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	14	15	16	17	18	19	
Revenues	84,167,093	88,354,448	92,772,170	97,410,779	102,201,317	105,490,654	
- Operating costs	69,490,290	51,973,204	54,571,065	57,300,458	60,165,481	58,657,600	
= Operating profits	34,648,083	36,381,243	38,200,305	40,110,321	42,115,837	35,040,376	
- Capital expenditures	53,563,077	3,742,071	3,929,174	4,125,633	4,331,915	3,404,153	
- Working capital	801,441	841,071	883,544	927,722	974,100	(21,479,077)	
+ New debt	0	0	0	0	0	0	
- Interest payments	0	0	0	0	0	0	
= Net Debt-Paid Cash Flow	30,283,525	31,797,701	33,307,587	35,056,966	36,809,814	52,915,300	
- Debt's principal payments	0	0	0	0	0	0	
= Net Tax Net Cash Flow	30,283,525	31,797,701	33,307,587	35,056,966	36,809,814	52,915,300	
- Federal corp. income tax	8,006,374	6,451,070	9,359,540	9,049,262	10,356,944	8,609,927	
- Provincial corp. income tax	3,210,327	3,370,844	3,539,306	3,716,355	3,902,173	3,270,435	
- Provincial sales tax	6,453,624	6,855,681	7,277,040	7,721,107	8,186,537	6,370,141	
= A-T Cash flow (cur \$)	12,613,200	13,120,107	13,210,022	13,770,242	14,344,158	34,584,796	
TAX PAYMENTS IN CASH \$							
Federal corp. income tax	4,043,743	4,065,109	4,207,713	4,297,200	4,303,525	3,471,966	
Provincial corp. income tax	1,621,433	1,621,433	1,621,433	1,621,433	1,621,433	1,306,467	
Provincial sales tax	3,259,519	3,297,700	3,334,062	3,360,693	3,401,675	2,545,120	
Total tax payments	8,924,715	8,984,242	9,243,209	9,287,327	9,326,634	7,323,753	
CASH FLOWS IN CASH \$							
Before debt paid off	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230	21,141,731	
Before-tax of	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230	21,141,731	
After-tax of	6,370,523	6,310,996	6,652,830	6,807,911	5,968,604	13,017,970	
FEDERAL CORP. INCOME TAX							
PROJECT BASIS	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
	14	15	16	17	18	19	
Resource income	84,167,093	88,354,448	92,772,170	97,410,779	102,201,317	105,490,654	
- Resource operating costs	69,490,290	51,973,204	54,571,065	57,300,458	60,165,481	58,657,600	
= Operating profit	34,648,083	36,381,243	38,200,305	40,110,321	42,115,837	35,040,376	
- Inventory allowance	252,441	265,063	270,317	292,232	306,044	0	
- Capital cost allowance	0	0	0	0	0	0	
- ACRS (Class 20)	0	0	0	0	0	0	
- CCA (Class 10)	0	0	0	0	0	0	

LEAD-ZINC PROJECT: ONTARIO

CCA (Class 12)	0	0	0	0	0	0	0	0	0
Resource profit	34,396,342	34,116,100	37,921,909	37,918,000	41,000,993	35,040,376			
Resource allowance	8,599,090	9,029,045	9,400,497	9,954,522	10,452,240	8,768,094			
Income before deductions	25,797,271	27,087,135	28,441,492	29,863,546	31,356,744	26,290,282			
Interest charges	0	0	0	0	0	0			
Expl. expenditures, CEE	0	0	0	0	0	0			
Dev. expenditures, CEE	352,206	244,544	172,501	120,007	94,565	59,195			
Income before depletion	25,445,065	26,842,590	28,268,910	29,742,759	31,272,180	26,221,087			
Depletion deducted	1,049,163	1,122,621	1,170,752	1,237,690	1,299,574	1,001,246			
Previous loss deducted	0	0	0	0	0	0			
Taxable income	24,395,902	25,717,969	27,098,158	28,505,069	29,972,605	25,139,841			
Gross federal income tax	8,735,325	9,250,469	9,752,457	10,261,025	10,790,130	9,650,343			
Investment tax credit	356,300	374,207	392,917	412,543	431,191	340,415			
Net federal income tax	8,418,937	8,876,262	9,359,540	9,848,262	10,356,946	8,609,927			
Income before carry-back	23,985,936	24,679,505	25,998,721	27,359,860	28,769,296	24,130,687			
Loss carry-back	0	0	0	0	0	0			
Taxable income, adjusted	23,985,936	24,679,505	25,998,721	27,359,860	28,769,296	24,130,687			
Tax payable, adjusted	8,418,937	8,876,262	9,359,540	9,848,262	10,356,946	8,609,927			
ITC carry-back	412,543	431,191	0	0	0	0			
Net Tax Payable Af. Adj.	8,006,374	8,451,070	9,359,540	9,849,262	10,356,946	8,609,927			
ONREC CORP. INCOME TAX	1,340,675	1,414,400	1,409,959	1,567,779	1,648,493	1,302,691			
Income before depletion	25,445,065	26,842,590	28,268,910	29,742,759	31,272,180	26,221,087			
End depletion allowance	1,049,163	1,122,621	1,170,752	1,237,690	1,299,574	1,001,246			
Carried loss	0	0	0	0	0	0			
Taxable income	24,395,902	25,717,969	27,098,158	28,505,069	29,972,605	25,139,841			
ONTARIO MINING TAX	6,453,624	6,055,681	7,277,040	7,721,107	8,106,537	6,370,141			
Operating profits	34,440,003	34,301,243	30,200,305	40,116,321	42,115,837	35,040,376			
Depreciation allowances	3,114,902	3,270,731	3,434,267	3,605,901	3,706,200	3,033,940			
Expl. & Dev. expenditures	0	0	0	0	0	0			
Inc. for processing allow.	31,533,021	33,110,512	34,766,030	36,504,340	38,329,557	31,255,436			
Processing allowance	4,730,073	4,966,577	5,214,906	5,475,651	5,749,434	4,600,945			
Income for mining tax	26,003,740	28,143,935	29,551,132	31,028,689	32,580,123	26,525,470			

LEAD-ZINC PROJECT: NIWA SCOTIA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Revenues	0	0	0	0	76,576,894	88,485,738	84,426,825	88,647,327	65,931,449	69,228,822	72,689,423	76,323,894	80,140,889
- Operating costs	0	0	0	0	31,907,839	33,582,391	35,177,511	36,936,386	38,783,285	40,722,366	42,758,484	44,886,488	47,111,229
= Operating profits	0	0	0	0	44,669,055	54,903,347	49,249,315	51,710,941	27,148,164	28,506,456	29,930,939	31,437,406	32,999,660
- Capital expenditures	21,525,000	22,681,250	23,731,313	24,917,878	2,297,307	2,412,172	2,532,781	2,659,420	2,792,391	2,932,878	3,079,611	3,232,541	3,394,148
- Working capital	0	0	0	10,331,883	516,590	542,420	569,541	598,018	627,919	659,314	692,280	726,894	763,239
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Post Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,481)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,140,848	27,448,850	28,841,453
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,481)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,140,848	27,448,850	28,841,453
- Federal corp. income tax	0	0	0	0	0	(996,488)	8,235,301	9,051,216	4,289,163	4,898,727	6,656,874	7,118,259	7,564,740
- Princ'l corp. income tax	0	0	0	0	0	3,231,314	3,659,075	4,010,425	2,838,190	2,304,727	3,658,134	3,256,558	3,457,114
- Provincial sliding tax	0	0	0	0	1,531,538	1,688,115	2,001,709	6,491,422	3,252,869	3,313,790	3,445,572	3,617,858	3,798,743
= A-1 Cash flow (cur \$)	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,481)	40,324,420	40,185,866	32,258,109	28,900,440	14,147,713	14,397,088	13,888,268	13,475,398	14,828,856
TAX PAYMENTS IN CENTS													
Fed'l corp. income tax	0	0	0	0	0	(713,589)	5,852,674	6,126,219	2,764,832	3,087,393	3,891,648	3,963,713	4,011,743
Princ'l corp. income tax	0	0	0	0	0	2,411,256	2,680,436	2,714,413	1,313,815	1,414,982	1,783,358	1,813,389	1,833,381
Provincial sliding tax	0	0	0	0	1,200,000	1,200,000	1,422,577	4,393,458	2,896,829	2,834,388	2,814,555	2,814,555	2,814,555
Total tax payments	0	0	0	0	1,200,000	2,867,448	9,875,488	13,234,082	6,175,496	6,456,675	7,689,573	7,791,637	7,859,679
CASH FLOWS IN CENTS													
Before debt pay of	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
before-tax of	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
After-tax of	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	31,595,238	29,577,578	22,919,558	19,568,756	9,119,742	8,838,563	7,685,665	7,583,682	7,435,559
FEDERAL CORP. INCOME TAX													
PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Resource income	0	0	0	0	76,576,894	88,485,738	84,426,825	88,647,327	65,931,449	69,228,822	72,689,423	76,323,894	80,140,889
- Resource operating costs	0	0	0	0	31,907,839	33,582,391	35,177,511	36,936,386	38,783,285	40,722,366	42,758,484	44,886,488	47,111,229
= Operating profit	0	0	0	0	44,669,055	54,903,347	49,249,315	51,710,941	27,148,164	28,506,456	29,930,939	31,437,406	32,999,660
- Inventory allowance	0	0	0	0	162,726	178,862	179,485	188,376	197,794	207,404	218,048	228,572	240,428
- Capital cost allowance	0	0	0	0	44,669,855	0	0	0	0	0	0	0	0
- ACR (Class 28)	0	0	0	0	44,669,855	0	0	0	0	0	0	0	0
- CCA (Class 14)	0	0	0	0	0	0	0	0	0	0	0	0	0

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LEAD-ZINC PROJECT: NIPIA SCOTIA

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	14	15	16	17	18	19
Revenues	94,147,893	88,354,440	92,772,170	97,410,779	102,281,317	85,899,856
- Operating costs	49,490,290	51,973,204	54,571,865	57,300,450	60,165,481	50,857,680
= Operating profits	34,648,803	36,381,233	38,200,305	40,110,321	42,115,837	35,040,376
- Capital expenditures	3,543,877	3,742,871	3,929,174	4,125,633	4,331,915	3,644,153
- Working capital	801,401	841,471	883,544	927,722	974,100	(21,479,877)
+ New debt	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0
= Net Cash Flow	30,263,525	31,797,701	33,307,507	35,856,966	36,809,814	52,915,300
- Debt's principal payment	0	0	0	0	0	0
= Net Cash Flow	30,263,525	31,797,701	33,307,507	35,856,966	36,809,814	52,915,300
- Federal corp. income tax	8,006,374	8,451,070	9,359,540	9,849,282	10,356,946	8,609,927
- Provincial corp. income tax	3,656,305	3,857,075	4,063,524	4,275,740	4,495,891	3,770,976
- Provincial mining tax	3,900,400	4,100,114	4,397,520	4,617,376	4,848,264	3,956,191
= A-T Cash flow (cur. \$)	10,632,806	15,389,022	15,547,903	16,314,540	17,108,711	36,490,205

TAX PAYMENTS IN CONST. \$	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	14	15	16	17	18	19
Federal corp. income tax	4,043,743	4,045,109	4,207,713	4,297,200	4,383,525	3,471,966
Provincial corp. income tax	1,844,723	1,855,617	1,961,547	1,965,500	1,968,135	1,506,652
Provincial mining tax	2,014,555	2,014,555	2,014,555	2,014,555	2,014,555	1,500,653
Total tax payments	7,903,021	7,915,281	8,183,815	8,277,255	8,366,215	6,559,271

CASH FLOWS IN CONST. \$	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	14	15	16	17	18	19
Before debt paym of	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230	21,141,731
Before-tax of	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230	21,141,731
After-tax of	7,390,190	7,359,957	7,131,424	7,117,983	7,109,823	14,582,440
FEDERAL CORP. INCOME TAX	0	0	0	0	0	0
PROVINCIAL CORP. INCOME TAX	0	0	0	0	0	0
PROVINCIAL MINING TAX	0	0	0	0	0	0
Resource income	94,147,893	88,354,440	92,772,170	97,410,779	102,281,317	85,899,856
- Resource operating costs	49,490,290	51,973,204	54,571,865	57,300,450	60,165,481	50,857,680
= Operating profit	34,648,803	36,381,233	38,200,305	40,110,321	42,115,837	35,040,376
- Inventory allowance	252,441	265,863	278,317	292,232	306,844	0
- Capital cost allowance	0	0	0	0	0	0
- Debt (Class 28)	0	0	0	0	0	0
- CCA (Class 10)	0	0	0	0	0	0

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Revenues	0	0	0	0	76,576,894	88,485,738	84,426,825	88,447,327	65,931,449	69,228,822	72,489,423	76,323,894	80,148,089					
- Operating costs	0	0	0	0	31,987,839	33,582,391	35,177,511	36,936,386	38,783,205	40,722,366	42,758,444	44,896,408	47,141,229					
= Operating profits	0	0	0	0	44,669,055	44,903,347	49,249,315	51,710,941	27,148,244	28,585,456	29,730,939	31,427,486	32,996,860					
- Capital expenditures	21,525,000	22,681,250	23,731,313	24,917,878	2,297,387	2,412,172	2,532,781	2,639,420	2,792,391	2,932,810	3,078,611	3,232,541	3,394,168					
- Working capital	0	0	0	10,331,083	516,598	542,428	569,541	598,018	627,919	659,314	692,786	728,894	763,239					
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0					
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0					
= Def. Debt-Paid Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,481)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,148,048	27,448,858	28,841,453					
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0					
= Def. Tax Net Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,481)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,148,048	27,448,858	28,841,453					
- Federal corp. income tax	0	0	0	0	0	(996,488)	8,235,301	9,051,216	4,289,163	4,898,727	6,654,874	7,119,259	7,564,748					
- Provincial corp. income tax	0	0	0	0	0	3,138,821	5,868,293	6,223,944	4,178,837	4,386,939	4,686,786	4,836,488	5,078,438					
- Provincial mining tax	0	0	0	0	124,182	2,543,346	2,797,512	4,481,038	2,734,581	3,258,928	3,882,451	4,076,573	4,288,482					
= A-T Cash flow (cur \$)	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,481)	41,731,776	39,263,848	29,275,088	28,497,385	12,526,154	12,569,745	11,015,237	11,436,617	11,917,881					

	0	0	0	0	0	(743,589)	5,852,674	6,126,219	2,764,832	3,067,393	3,091,668	3,963,713	4,011,743
Fed'l corp. income tax	0	0	0	0	0	0	0	0	0	0	0	0	0
Princl corp. income tax	0	0	0	0	0	0	2,341,640	4,104,700	2,693,200	2,693,200	2,693,200	2,693,200	2,693,200
Provincial mining tax	0	0	0	0	0	97,300	1,897,804	1,988,140	1,762,735	2,060,694	2,265,989	2,265,989	2,265,989
Total tax payments	0	0	0	0	0	97,300	3,495,935	12,025,314	7,220,748	7,701,200	8,054,857	8,976,902	8,976,902

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VIETNAM MILITARY PROJECT: 001199 000011A

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LEAD-ZINC PROJECT: BATTISH COLUMBIA

- Processing allowance	0	0	0	0	0	769,610	3,292,198	3,020,822	4,720,375	2,757,561	3,206,306	3,915,076	4,110,830	4,316,372
= Income for mining tax	0	0	0	0	0	769,610	10,533,407	15,985,783	26,748,791	15,626,176	10,622,482	22,185,433	23,294,705	24,459,440

LEAD-ZINC PROJECT: BRITISH COLUMBIA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Revenues	84,147,893	88,354,448	92,772,170	97,410,779	102,281,317	85,090,856
- Operating costs	49,498,290	51,973,204	54,571,865	57,388,458	60,165,481	58,857,680
= Operating profits	34,648,803	36,381,243	38,200,305	40,110,321	42,115,837	35,040,376
- Capital expenditures	3,563,877	3,742,871	3,929,174	4,125,633	4,331,915	3,684,153
- Working capital	881,401	841,471	883,544	927,722	974,188	(21,479,877)
- New debt	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0
= Def. Debt-Pmt Cash Flow	30,283,525	31,797,701	33,387,587	35,056,966	36,809,814	52,915,300
- Debt's principal payment	0	0	0	0	0	0
= Def. Tax Net Cash Flow	30,283,525	31,797,701	33,387,587	35,056,966	36,809,814	52,915,300
- Federal corp. income tax	8,086,374	8,451,878	9,359,540	9,849,262	10,356,946	8,689,927
- Provincial corp. income tax	5,332,352	5,598,969	5,878,918	6,172,864	6,481,187	5,433,461
- Provincial mining tax	4,494,422	4,719,143	4,955,180	5,202,855	5,462,990	4,454,721
= A-T Cash flow (cur. \$)	12,450,379	13,828,510	13,194,829	13,831,985	14,500,363	34,337,191

TAX PAYMENTS IN CONST. \$

Federal corp. income tax	4,043,763	4,065,189	4,287,713	4,297,200	4,383,525	3,471,966
Provincial corp. income tax	2,693,288	2,693,288	2,693,288	2,693,288	2,693,288	2,178,888
Provincial mining tax	2,269,989	2,269,989	2,269,989	2,269,989	2,269,989	1,779,835
Total tax payments	9,006,951	9,028,290	9,250,981	9,260,389	9,266,714	7,422,681

CASH FLOWS IN CONST. \$

Before debt pymt CF	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731
Before-tax CF	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731
After-tax CF	6,288,287	6,266,940	6,044,337	6,034,849	6,028,524	13,719,850

FEDERAL CORP. INCOME TAX PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Resource income	84,147,893	88,354,448	92,772,170	97,410,779	102,281,317	85,090,856
- Resource operating costs	49,498,290	51,973,204	54,571,865	57,388,458	60,165,481	58,857,680
= Operating profit	34,648,803	36,381,243	38,200,305	40,110,321	42,115,837	35,040,376
- Inventory allowance	252,441	265,063	278,317	292,232	306,844	0
- Capital cost allowance	0	0	0	0	0	0
ACCA (Class 28)	0	0	0	0	0	0
CCA (Class 10)	0	0	0	0	0	0

LEAD-ZINC PROJECT: BRITISH COLUMBIA

CCA (Class 12)	0	0	0	0	0	0	0	0	0
Resource profit	34,376,342	36,116,100	37,921,909	39,818,000	41,800,993	43,860,376			
Resource allowance	8,599,090	9,029,045	9,480,497	9,954,522	10,452,240	10,968,094			
Income before deductions	25,777,251	27,087,055	28,441,412	29,863,478	31,348,753	32,892,282			
Interest charges	0	0	0	0	0	0			
Exp. expenditures, CEE	0	0	0	0	0	0			
Dev. expenditures, CEE	332,266	246,544	172,581	120,007	84,565	59,195			
Income before depletion	25,445,065	26,840,510	28,268,831	29,743,471	31,264,188	32,833,087			
Depletion deducted	1,069,163	1,122,621	1,178,752	1,237,690	1,299,574	1,361,246			
Previous loss deducted	0	0	0	0	0	0			
taxable income	24,375,902	25,717,889	27,090,079	28,505,781	29,964,614	31,471,841			
Grds. Federal income tax	8,775,325	9,250,469	9,752,457	10,281,025	10,838,130	11,420,343			
Investment tax credit	356,300	374,207	392,917	412,563	433,191	454,415			
Net Federal income tax	8,419,025	8,876,262	9,359,540	9,868,462	10,404,939	10,965,928			
Income before carry-back	23,956,877	24,841,627	25,730,539	26,637,319	27,559,675	28,505,913			
Loss carry-back	0	0	0	0	0	0			
taxable income, adjusted	23,956,877	24,841,627	25,730,539	26,637,319	27,559,675	28,505,913			
Tax payable, adjusted	8,419,025	8,876,262	9,359,540	9,868,462	10,404,939	10,965,928			
IRC carry-back	412,563	433,191	0	0	0	0			
Net tax Payable (A1, A4)	8,006,462	8,443,071	9,359,540	9,835,262	10,361,939	10,965,928			
0 801120 COLUMBIA INC. (1)	5,332,352	5,590,969	5,870,910	6,172,064	6,491,507	6,833,461			
Resource profit	34,376,342	36,116,100	37,921,909	39,818,000	41,800,993	43,860,376			
Interest charges	0	0	0	0	0	0			
Exp. expend. CEE	0	0	0	0	0	0			
Dev. expenditures CEE	0	0	0	0	0	0			
Income before depletion	34,376,342	36,116,100	37,921,909	39,818,000	41,800,993	43,860,376			
Depletion deducted	1,069,163	1,122,621	1,178,752	1,237,690	1,299,574	1,361,246			
Previous loss deducted	0	0	0	0	0	0			
taxable income	33,307,179	34,993,479	36,743,157	38,580,310	40,501,419	42,499,130			
0 8 COLUMBIA RESINS INC.	4,494,422	4,719,143	4,955,100	5,202,055	5,462,990	5,734,721			
Operating profits	34,600,003	36,301,243	38,200,305	40,110,321	42,115,837	44,240,376			
Depletion allowance	3,345,817	3,533,209	3,709,953	3,895,451	4,090,224	4,294,652			
Interest payments	0	0	0	0	0	0			
Exp. & dev. expenditures	0	0	0	0	0	0			
Inc. for debt allowance	31,254,186	32,768,034	34,490,352	36,214,870	38,025,613	39,945,724			
End depletion allowance	1,069,163	1,122,621	1,178,752	1,237,690	1,299,574	1,361,246			
Inc. for pressing allow	30,214,403	31,725,333	33,311,600	34,977,180	36,726,039	38,584,478			

LEAD-TIME PROJECT - BRITISH COLUMBIA

Processing allowance	4,532,190	4,750,000	4,996,740	5,244,527	5,500,906	4,492,155
Income for mining tax	25,682,412	26,964,533	28,314,060	29,730,403	31,217,133	25,455,547

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CASH FLOW SUMMARY	YEAR												
	1	2	3	4	5	6	7	8	9	10	11	12	13
PROJECT BASIS													
Revenues	0	0	179,431,875	188,483,449	197,823,442	207,714,824	218,100,566	188,375,569	155,132,822	162,889,463	171,833,936	179,585,633	188,564,914
- Operating costs	0	0	67,142,250	78,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,888	99,199,683	104,159,667	109,367,650
Operating profits	0	0	112,289,625	117,904,186	123,799,312	129,989,277	136,488,741	102,683,153	65,155,785	68,413,574	71,834,253	75,425,966	79,197,264
- Capital expenditures	130,200,000	136,710,000	6,366,930	6,685,284	7,019,549	7,378,526	7,739,052	8,126,005	8,532,305	8,958,920	9,406,866	9,877,210	10,371,870
- Working capital	0	0	15,906,250	799,313	839,278	881,242	925,304	971,569	1,020,148	1,124,713	1,180,949	1,239,996	1,301,996
- Other debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow	(130,200,000)	(136,696,250)	105,123,375	110,379,544	115,890,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,308,760	67,524,190
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow	(130,200,000)	(136,696,250)	105,123,375	110,379,544	115,890,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,308,760	67,524,190
- Federal corp income tax	0	0	0	0	0	0	0	0	0	0	0	0	0
- Provincial corp income tax	0	0	0	0	0	0	0	0	0	0	0	0	0
- Provincial mining tax	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow (cur 8)	(130,200,000)	(136,696,250)	104,597,036	109,238,284	115,559,422	121,114,512	126,816,351	93,409,339	55,005,775	58,083,781	60,853,356	63,587,979	66,443,871
TAX PAYMENTS IN CASH 8													
Federal corp income tax	0	0	0	0	0	0	0	0	0	0	0	0	0
Provincial corp income tax	0	0	0	0	0	0	0	0	0	0	0	0	0
Provincial mining tax	0	0	0	0	0	0	0	0	0	0	0	0	0
Total tax payments	0	0	0	0	0	0	0	0	0	0	0	0	0
CASH FLOWS IN CASH 8													
Before debt payment CF	(124,000,000)	(130,500,000)	90,009,524	90,009,524	90,009,524	90,009,524	90,009,524	63,309,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524
After-tax CF	(124,000,000)	(130,500,000)	90,009,524	90,009,524	90,009,524	90,009,524	90,009,524	63,309,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524
FEDERAL CORP INCOME TAX													
PROJECT BASIS													
Revenues	0	0	179,431,875	188,483,449	197,823,442	207,714,824	218,100,566	188,375,569	155,132,822	162,889,463	171,833,936	179,585,633	188,564,914
- Operating costs	0	0	67,142,250	78,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,888	99,199,683	104,159,667	109,367,650
Operating profit	0	0	112,289,625	117,904,186	123,799,312	129,989,277	136,488,741	102,683,153	65,155,785	68,413,574	71,834,253	75,425,966	79,197,264
- Inventory allowance	0	0	251,703	264,373	277,591	291,471	306,044	321,347	337,414	354,285	371,999	390,599	410,129
- Capital cost allowance	0	0	112,289,625	28,384,375	0	0	0	0	0	0	0	0	0
Accs (Class 28)	0	0	112,289,625	28,384,375	0	0	0	0	0	0	0	0	0
Accs (Class 10)	0	0	0	0	0	0	0	0	0	0	0	0	0

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CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	14	15	16	17	18	19	20	21	22	23	24	25	26
Revenues	197,993,160	207,092,810	210,207,459	229,201,832	240,641,923	252,695,820	265,329,771	278,596,259	292,526,072	307,152,376	322,509,994	338,206,372	
- Operating costs	114,836,833	120,577,834	126,466,726	132,937,062	139,583,916	146,583,111	153,091,267	161,585,830	169,645,122	178,148,378	187,055,797	195,866,096	
= Operating profits	83,157,127	87,314,904	91,468,733	96,264,769	101,078,008	106,113,908	111,438,504	117,010,429	122,880,950	129,003,998	135,454,196	141,420,276	
- Capital expenditures	10,009,424	11,434,105	12,005,810	12,406,101	13,236,406	13,898,226	14,593,137	15,322,794	16,008,934	16,893,301	17,730,050	18,609,750	
- Working capital	1,367,096	1,435,450	1,507,223	1,582,504	1,661,713	1,744,799	1,832,039	1,923,641	2,019,023	2,120,014	2,226,855	(49,102,147)	
- Debt debt	0	0	0	0	0	0	0	0	0	0	0	0	
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	
= Def. Debt-Paid Cash Flow	70,900,400	74,445,420	78,167,700	82,076,085	86,179,889	90,400,883	95,013,327	99,763,994	104,752,193	109,989,803	115,489,293	121,141,672	
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	
= Def. Tax Net Cash Flow	70,900,400	74,445,420	78,167,700	82,076,085	86,179,889	90,400,883	95,013,327	99,763,994	104,752,193	109,989,803	115,489,293	121,141,672	
- Federal corp. income tax	10,757,967	19,714,253	20,712,836	21,737,407	22,851,640	23,990,664	25,201,690	26,463,930	27,851,144	31,134,761	32,692,241	34,351,560	
- Provincial corp. income tax	3,274,763	3,300,810	3,540,217	3,739,604	3,927,540	4,124,600	4,331,302	4,548,190	4,775,039	5,014,793	5,265,646	5,531,430	
- Provincial mining tax	16,050,143	17,707,300	18,762,915	19,707,311	20,062,926	21,992,322	23,178,189	24,423,348	25,730,765	27,103,554	28,544,981	30,062,156	
= A-T Cash flow (cur \$)	32,059,535	33,555,065	35,131,732	36,791,602	38,537,746	40,373,294	42,302,167	44,320,510	46,459,445	48,736,695	51,166,425	53,744,527	
TAX PATTERNS IN COMST. 8													
Federal corp. income tax	9,474,040	9,402,093	9,408,709	9,492,720	9,495,340	9,497,007	9,490,252	9,499,020	10,136,240	10,136,505	10,136,815	5,007,606	
Provincial corp. income tax	1,420,724	1,430,076	1,430,976	1,431,577	1,431,977	1,432,244	1,432,472	1,432,541	1,432,620	1,432,700	1,432,780	820,027	
Provincial mining tax	0	0	0	0	0	0	0	0	0	0	0	0	
Total tax payments	19,417,260	19,648,964	19,715,273	19,757,435	19,796,294	19,832,440	19,866,290	19,898,143	20,564,910	20,593,397	20,620,405	9,615,779	
CASH FLOWS IN COMST. 9													
before debt pay off	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,103,659	
Before-tax CF	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,103,659	
After-tax CF	16,192,244	16,140,560	16,094,251	16,052,009	16,013,230	15,977,004	15,943,234	15,911,300	15,244,605	15,216,127	15,189,110	23,407,079	
FEDERAL CORP. INCOME TAX													
PROJECT BASIS	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
14	15	16	17	18	19	20	21	22	23	24	25	26	
Resource income	197,993,160	207,092,810	210,207,459	229,201,832	240,641,923	252,695,820	265,329,771	278,596,259	292,526,072	307,152,376	322,509,994	338,206,372	
- Resource operating costs	114,836,833	120,577,834	126,466,726	132,937,062	139,583,916	146,583,111	153,091,267	161,585,830	169,645,122	178,148,378	187,055,797	195,866,096	
= Operating profit	83,157,127	87,314,904	91,468,733	96,264,769	101,078,008	106,113,908	111,438,504	117,010,429	122,880,950	129,003,998	135,454,196	141,420,276	
- Inventory allowance	430,435	652,167	474,775	690,514	523,440	549,612	577,092	645,947	636,244	640,066	701,459	0	
- Capital cost allowance	0	0	0	0	0	0	0	0	0	0	0	0	
CCA (Class 20)	0	0	0	0	0	0	0	0	0	0	0	0	
CCA (Class 10)	0	0	0	0	0	0	0	0	0	0	0	0	

[illegible]

CASH FLOW SUMMARY													
PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Revenues	0	0	179,431,875	188,483,449	197,823,642	207,716,824	218,180,566	188,375,549	155,132,822	162,889,463	171,033,936	179,585,433	188,564,914
- Operating costs	0	0	67,142,250	78,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,888	99,199,483	104,159,647	109,367,650
= Operating profits	0	0	112,289,625	110,984,106	123,799,312	129,991,277	136,568,741	102,683,133	65,155,785	68,413,574	71,834,453	75,425,786	79,197,264
- Capital expenditures	130,200,000	136,710,000	6,366,938	4,685,284	7,019,549	7,378,526	7,739,052	8,126,005	8,532,385	8,958,920	9,406,866	9,877,210	10,371,879
- Working capital	0	0	15,986,250	799,313	881,242	925,304	971,569	1,020,148	1,071,155	1,124,713	1,180,949	1,239,996	1,301,976
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Net Debt-Paid Cash Flow	(130,200,000)	(136,710,000)	105,123,375	110,379,544	115,809,521	121,653,447	127,778,119	91,537,001	55,552,325	58,329,941	61,246,438	64,308,760	67,524,198
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Net Tax Net Cash Flow	(130,200,000)	(136,710,000)	105,123,375	110,379,544	115,809,521	121,653,447	127,778,119	91,537,001	55,552,325	58,329,941	61,246,438	64,308,760	67,524,198
- Federal corp. income tax	0	0	0	(2,881,441)	14,472,945	23,990,061	25,428,776	23,404,852	14,425,950	15,256,647	16,096,859	16,954,467	17,839,716
- Provincial corp. income tax	0	0	0	4,348,874	11,528,694	12,185,129	12,718,386	9,553,749	6,049,715	6,352,281	6,649,811	7,083,381	7,553,463
- Provincial slating tax	0	0	7,571,478	15,896,260	17,368,236	21,433,454	23,882,796	14,871,552	7,612,749	13,841,189	14,633,623	15,444,679	16,296,288
= A-T Cash Flow (cur. \$)	(130,200,000)	(136,710,000)	97,551,955	93,884,643	72,528,646	64,144,883	65,836,162	45,706,828	27,443,911	22,859,905	23,846,945	24,986,312	26,834,729
TAX PAYMENTS IN CASH \$													
Federal corp. income tax	0	0	0	(2,378,569)	11,339,931	17,901,753	18,871,756	15,841,325	9,299,096	9,366,258	9,411,832	9,448,882	9,468,782
Provincial corp. income tax	0	0	0	3,582,844	9,033,834	9,833,834	9,833,834	6,444,367	3,899,780	3,899,780	3,899,780	3,899,780	3,899,780
Provincial slating tax	0	0	6,540,478	12,419,737	13,608,467	16,000,898	16,916,283	10,063,451	4,987,246	8,509,567	8,553,976	8,688,175	8,842,269
Total tax payments	0	0	6,540,478	13,636,212	33,981,432	42,943,484	44,820,993	32,373,343	18,106,042	21,775,525	21,866,789	21,948,757	22,882,751
CASH FLOWS IN CASH \$													
Before debt payment	(124,000,000)	(130,500,000)	90,889,524	90,889,524	90,889,524	90,889,524	90,889,524	63,309,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524
Before-tax CF	(124,000,000)	(130,500,000)	90,889,524	90,889,524	90,889,524	90,889,524	90,889,524	63,309,524	35,889,524	35,889,524	35,889,524	35,889,524	

COPPER-MALYDORUM PROJECT: ONTARIO

CCA (Class 12)	0	0	0	0	0	0	0	0	0	0	0	0	0
= Resource profit	0	0	(251,703)	97,335,359	123,521,720	129,697,006	136,102,697	102,361,007	64,010,371	60,059,290	71,462,254	75,035,367	70,707,135
- Resource allowance	0	0	0	24,333,040	30,000,430	32,424,452	34,045,674	25,590,452	16,204,593	17,014,022	17,065,564	10,750,042	19,696,704
= Income before deductions	0	0	(251,703)	73,001,519	92,641,290	97,273,355	102,137,022	76,771,355	48,613,770	51,044,467	53,596,691	56,276,525	59,090,331
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0
- Expl. expenditures, CEE	0	0	0	0	0	0	0	0	0	0	0	0	0
- Dev. expenditures, CDE	0	0	0	5,166,000	3,616,200	2,531,340	1,771,930	1,240,357	960,250	607,775	425,442	297,010	200,467
= Income before depletion	0	0	0	67,835,519	89,025,090	94,742,015	100,365,004	75,530,990	47,745,529	50,436,693	53,171,240	55,970,716	50,001,005
- Depletion deducted	0	0	0	16,950,000	22,256,273	23,685,504	25,091,271	5,647,279	2,559,692	2,607,670	2,022,060	2,963,163	3,111,321
- Previous loss deducted	0	0	0	251,703	0	0	0	0	0	0	0	0	0
= Taxable income	0	0	0	50,624,856	66,768,818	71,056,511	75,273,813	69,883,719	45,185,837	47,749,016	50,349,100	53,015,553	55,770,564
Gross federal income tax	0	0	0	10,224,940	24,036,774	25,500,344	27,090,573	25,150,139	16,266,901	17,109,646	10,125,700	19,005,599	20,077,403
- Investment tax credit	0	0	0	10,224,940	0,751,229	737,053	773,905	0,812,600	0,553,231	0,095,092	940,607	907,721	1,037,107
= Net federal income tax	0	0	0	0	15,285,545	24,043,291	26,324,668	24,345,539	15,413,671	16,293,754	17,105,021	10,097,070	19,040,296
Income of loss carry-back	0	0	0	0	42,459,040	69,009,143	73,124,077	67,626,496	42,015,752	45,260,427	47,736,170	50,271,003	52,009,711
- Loss carry-back	0	0	0	0	0	0	0	0	0	0	0	0	0
= Taxable income, adjusted	0	0	0	0	42,459,040	69,009,143	73,124,077	67,626,496	42,015,752	45,260,427	47,736,170	50,271,003	52,009,711
Tax payable, adjusted	0	0	0	0	15,285,545	24,043,291	26,324,668	24,345,539	15,413,671	16,293,754	17,105,021	10,097,070	19,040,296
- ITC carry-back	0	0	0	2,001,441	0,12,600	0,53,231	0,095,092	0,940,607	0,907,721	1,037,107	1,000,962	1,143,410	1,200,501
= Net Tax Payable Af. Adj	0	0	0	(2,001,441)	14,472,945	23,990,061	25,420,776	23,404,052	14,425,950	15,256,647	16,096,059	16,954,467	17,839,715
ONTARIO CORP. INCOME TAX:	0	0	0	4,360,074	11,520,694	12,105,129	12,710,306	9,553,769	6,049,715	6,352,201	6,669,011	7,003,301	7,353,466
Operating profit	0	0	112,209,625	117,904,106	123,799,312	129,909,277	136,400,741	102,603,153	65,155,705	60,413,574	71,034,253	75,425,966	79,197,264
- Inventory allowance	0	0	251,703	264,373	277,591	291,471	306,044	321,347	337,414	354,205	371,999	390,599	410,129
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0
- Capital cost allowance	0	0	112,037,042	53,704,650	0	0	0	0	0	0	0	0	0
ACCA (Class 20)	0	0	112,037,042	53,704,650	0	0	0	0	0	0	0	0	0
CCA (Class 10)	0	0	0	0	0	0	0	0	0	0	0	0	0
CCA (Class 12)	0	0	0	0	0	0	0	0	0	0	0	0	0
- Expl. expend. CEE	0	0	0	0	0	0	0	0	0	0	0	0	0
- Devel. expenditures CDE	0	0	0	17,220,000	0	0	0	0	0	0	0	0	0
= Inc. for percentg delta	0	0	0	46,715,075	123,521,720	129,697,006	136,102,697	102,361,007	64,010,371	60,059,290	71,462,254	75,035,367	70,707,135
- Percentage delta allo.	0	0	0	15,571,690	41,173,903	43,232,590	45,394,220	34,120,599	21,606,122	22,686,420	23,020,749	25,011,706	26,262,376
- Previous loss deducted	0	0	0	0	0	0	0	0	0	0	0	0	0
= Taxable income	0	0	0	31,143,385	82,347,818	86,465,209	90,708,469	68,241,200	43,212,250	45,372,862	47,641,505	50,023,500	52,524,759
ONTARIO MINING TAX	0	0	7,571,420	15,096,260	17,360,236	21,453,454	23,002,796	14,071,552	7,612,749	13,061,109	14,633,623	15,444,679	16,296,200
Operating profits	0	0	112,209,625	117,904,106	123,799,312	129,909,277	136,400,741	102,603,153	65,155,705	60,413,574	71,034,253	75,425,966	79,197,264
- Depreciation allowances	0	0	44,220,291	45,223,003	46,276,016	39,632,594	36,910,952	30,137,053	20,552,102	7,830,402	8,222,006	8,633,106	9,064,762
- Expl. & Dev. expendtrs	0	0	17,220,000	0	0	0	0	0	0	0	0	0	0

COPPER-MILLIKEN PROJECT: ONTARIO

= Inc. for processing alu.	0	0	50,049,334	72,601,023	77,523,296	90,356,603	99,569,789	44,545,300	36,403,483	40,503,092	63,612,207	64,792,859	70,132,502
- Processing allowance	0	0	20,319,000	17,060,464	14,337,510	13,533,502	14,935,468	9,601,795	5,936,106	9,007,444	9,541,037	10,010,929	10,519,075
= Income for mining tax	0	0	30,529,734	55,612,559	63,185,786	74,003,100	84,634,320	54,863,505	30,467,497	51,495,620	54,070,410	56,773,930	59,612,627

COPPER-MIL THUNDER PROJECT, GUYANA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25
Revenues	197,993,160	207,092,010	210,207,459	229,201,032	240,661,923	252,695,020	265,329,771	270,596,259	292,526,072	307,152,376	322,509,994	165,206,372
- Operating costs	114,036,033	120,577,034	126,606,726	132,937,062	139,503,916	144,543,111	153,091,267	161,585,030	169,665,122	178,148,378	187,055,797	95,066,096
= Operating profits	83,157,127	87,314,904	91,600,733	96,264,769	101,078,008	106,151,909	111,438,504	117,010,429	122,860,950	129,003,998	135,454,198	69,420,276
- Capital expenditures	10,009,624	11,434,105	12,005,010	12,606,101	13,236,406	13,899,226	14,593,137	15,327,794	16,000,934	16,093,301	17,730,050	9,090,750
- Working capital	1,367,096	1,435,450	1,507,223	1,582,504	1,661,713	1,744,799	1,832,039	1,923,641	2,019,023	2,120,016	2,226,055	(49,102,147)
- Non debt	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt-Paid Cash Flow	70,900,408	74,445,420	78,167,700	82,076,005	86,179,009	90,400,003	95,013,327	99,763,994	104,752,193	109,909,003	115,409,293	109,431,672
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow	70,900,408	74,445,420	78,167,700	82,076,005	86,179,009	90,400,003	95,013,327	99,763,994	104,752,193	109,909,003	115,409,293	109,431,672
- Federal corp. income tax	10,757,967	19,716,253	20,712,036	21,757,407	22,851,660	23,990,666	25,201,690	26,463,230	29,651,144	31,136,761	32,692,241	16,051,560
- Provincial corp. income tax	7,721,140	8,107,197	8,512,556	8,930,104	9,385,093	9,854,340	10,347,066	10,864,419	11,407,640	11,970,022	12,576,923	6,479,226
- Provincial mining tax	17,190,477	10,129,376	19,115,220	20,150,356	21,237,249	22,370,046	23,576,706	24,835,000	26,156,125	27,543,306	20,999,047	12,320,206
= A-T Cash flow (cur. \$)	27,230,823	20,494,603	29,027,007	31,720,057	32,705,078	34,257,302	35,007,706	37,600,637	37,537,205	39,333,714	41,220,203	73,772,600

TAX PAYMENTS IN CONST. \$

Federal corp. income tax	9,474,040	9,402,093	9,400,709	9,472,720	9,495,340	9,497,007	9,498,252	9,499,028	10,136,240	10,136,505	10,136,015	5,097,646
Provincial corp. income tax	3,099,700	3,099,700	3,099,700	3,099,700	3,099,700	3,099,700	3,099,700	3,099,700	3,099,700	3,099,700	3,099,700	1,940,000
Provincial mining tax	6,402,359	0,720,540	0,756,903	0,791,534	0,824,516	0,855,927	8,005,043	8,914,334	8,941,468	8,967,310	8,991,922	3,729,347
Total tax payments	22,056,100	22,103,133	22,145,392	22,103,953	22,219,556	22,252,714	22,203,795	22,313,062	22,977,408	23,003,595	23,020,437	10,707,033

CASH FLOWS IN CONST. \$

Before debt print of	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,103,659
Before-tax of	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,103,659
After-tax of	13,753,416	13,706,391	13,664,132	13,625,570	13,589,960	13,556,009	13,525,729	13,496,462	12,832,116	12,005,929	12,701,007	22,316,625

FEDERAL CORP. INCOME TAX

PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25
Resource income	197,993,160	207,092,010	210,207,459	229,201,032	240,661,923	252,695,020	265,329,771	270,596,259	292,526,072	307,152,376	322,509,994	165,206,372
- Resource operating costs	114,036,033	120,577,034	126,606,726	132,937,062	139,503,916	144,543,111	153,091,267	161,585,030	169,665,122	178,148,378	187,055,797	95,066,096

- Operating profit

- Inventory allowance

- Capital cost allowance

- ACCA (Class 20)

- CCA (Class 10)

- CCA (Class 10)

COPPER-MOLYBDENUM PROJECT - INITIAL

= Inc. for processing adm.	73,439,127	77,321,004	81,187,138	85,244,495	89,508,819	93,984,268	98,683,473	103,617,447	108,790,529	114,238,456	119,958,379	54,521,397
- Processing allowance	11,045,069	11,598,163	12,178,871	12,796,976	13,426,323	14,097,639	14,802,521	15,542,647	16,319,779	17,135,768	17,992,557	8,185,710
= Income for mining tax	62,394,058	65,722,841	69,008,267	72,447,519	76,082,496	79,886,629	83,880,952	88,074,800	92,470,750	97,102,688	101,965,822	46,335,687

[illegible]

[illegible]

COPPER-MILITARIUM PROJECT: MINA SCOTIA

CASH FLOW SUMMARY	YEAR	14	15	16	17	18	19	20	21	22	23	24	25
PROJECT BASIS													
Revenue		197,993,140	207,092,810	218,207,459	229,201,432	240,641,923	252,695,820	265,329,771	278,596,259	292,526,072	307,152,376	322,509,994	165,286,372
- Operating costs		114,836,033	120,577,834	126,606,726	132,937,062	139,583,916	146,563,111	153,091,267	161,585,830	169,665,122	178,148,378	187,055,797	95,066,096
= Operating profits		83,157,127	87,314,904	91,600,733	96,264,370	101,078,008	106,131,900	111,438,504	117,010,429	122,860,950	129,003,998	135,454,198	69,420,276
- Capital expenditures		10,009,624	11,434,105	12,005,810	12,646,301	13,236,406	13,890,226	14,593,137	15,327,794	16,000,934	16,693,381	17,730,650	9,090,750
- Working capital		1,367,096	1,435,450	1,507,223	1,582,564	1,661,713	1,744,799	1,832,039	1,923,641	2,019,823	2,120,814	2,226,855	(49,162,147)
- New debt		0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments		0	0	0	0	0	0	0	0	0	0	0	0
= Net Cash Flow		70,900,406	74,445,428	78,167,700	82,076,065	86,179,889	90,488,003	95,013,327	99,763,994	104,752,193	109,909,003	115,409,293	109,431,672
- Debt's principal payment		0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow		70,900,406	74,445,428	78,167,700	82,076,065	86,179,889	90,488,003	95,013,327	99,763,994	104,752,193	109,909,003	115,409,293	109,431,672
- Federal corp. income tax		10,757,967	19,714,253	20,712,836	21,757,407	22,851,648	23,998,666	25,201,690	26,463,930	27,651,144	31,134,761	32,692,241	16,851,540
- Provincial corp. income tax		8,794,000	9,202,210	9,709,603	10,198,721	10,711,495	11,248,909	11,812,642	12,404,176	13,025,816	13,676,700	14,360,853	7,000,264
- Provincial mining tax		9,291,571	9,756,150	10,243,957	10,756,155	11,293,963	11,850,661	12,451,594	13,074,174	13,727,003	14,410,277	15,134,991	6,973,570
= A-1 Cash flow (cur. \$)		34,056,061	35,732,816	37,501,223	39,343,521	41,322,762	43,382,666	45,547,401	47,821,706	48,340,151	50,744,057	53,301,209	70,206,270
TAX PAYMENTS IN CONST. \$													
Federal corp. income tax		9,474,046	9,482,893	9,480,709	9,492,720	9,495,340	9,497,007	9,498,252	9,499,028	9,499,240	10,136,505	10,136,505	5,007,606
Provincial corp. income tax		4,441,976	4,445,641	4,448,110	4,449,756	4,450,847	4,451,575	4,452,061	4,452,304	4,452,400	4,452,744	4,452,840	2,230,619
Provincial mining tax		4,692,075	4,692,075	4,692,075	4,692,075	4,692,075	4,692,075	4,692,075	4,692,075	4,692,075	4,692,075	4,692,075	2,109,544
Total tax payments		10,608,097	10,620,614	10,620,894	10,624,551	10,639,262	10,640,657	10,641,387	10,641,407	10,641,715	19,202,703	19,202,579	9,445,049
CASH FLOWS IN CONST. \$													
Before debt payment		35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	33,103,659
Before-tax CF		35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	35,007,524	33,103,659
After-tax CF		17,200,625	17,100,095	17,179,742	17,174,174	17,170,461	17,167,906	17,166,336	17,165,236	16,527,009	16,527,320	16,526,994	23,637,010
FEDERAL CORP. INCOME TAX													
PROJECT BASIS													
Revenue income		197,993,140	207,092,810	218,207,459	229,201,432	240,641,923	252,695,820	265,329,771	278,596,259	292,526,072	307,152,376	322,509,994	165,286,372
- Resource operating costs		114,836,033	120,577,834	126,606,726	132,937,062	139,583,916	146,563,111	153,091,267	161,585,830	169,665,122	178,148,378	187,055,797	95,066,096
= Operating profit		83,157,127	87,314,904	91,600,733	96,264,370	101,078,008	106,131,900	111,438,504	117,010,429	122,860,950	129,003,998	135,454,198	69,420,276
- Investment allowance		430,435	432,167	478,775	490,514	521,440	549,612	577,092	605,947	636,244	660,056	701,459	0
- Capital cost allowance		0	0	0	0	0	0	0	0	0	0	0	0
- MCA (Class 28)		0	0	0	0	0	0	0	0	0	0	0	0
- CCA (Class 10)		0	0	0	0	0	0	0	0	0	0	0	0

CHARGE-AND-TRACE PROJECT NOV 2011

[illegible]

COPPER-HILL THERMAL PROJECT, BRITISH COLUMBIA

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Revenues	0	0	179,431,875	188,483,469	197,823,642	207,714,824	218,100,546	188,375,569	153,132,872	162,889,463	171,833,936	179,585,633	188,564,914	197,567,658	206,570,402	215,573,146	224,575,890	233,578,634	242,581,378	251,584,122
- Operating costs	0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,411,825	85,692,416	89,977,037	94,475,888	99,199,683	104,159,667	109,367,650	114,781,633	120,395,616	126,209,599	132,223,582	138,437,565	144,851,548	151,465,531
Operating profits	0	0	112,289,625	117,984,106	123,799,312	129,989,277	136,688,721	102,683,153	63,155,835	68,413,574	71,834,253	75,425,966	79,197,264	83,186,025	86,177,786	89,169,547	92,161,308	95,153,069	98,144,830	101,136,591
- Capital expenditures	130,200,000	136,718,000	6,344,930	6,485,284	7,019,549	7,370,526	7,739,052	8,126,005	8,532,305	8,958,920	9,406,846	9,877,210	10,371,070	10,884,930	11,408,790	11,942,650	12,486,510	13,040,370	13,594,230	14,158,090
- Working capital	0	15,966,250	799,313	839,278	881,242	925,304	971,569	1,020,148	1,071,155	1,124,713	1,180,949	1,239,996	1,301,996	1,366,996	1,435,996	1,507,996	1,582,996	1,660,996	1,742,996	1,828,996
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Before-Front Cash Flow	(130,200,000)	(152,684,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,439	64,308,760	67,524,190	70,895,620	74,322,050	77,803,480	81,340,910	84,935,340	88,586,770	92,295,200
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
After-Tax Net Cash Flow	(130,200,000)	(152,684,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,439	64,308,760	67,524,190	70,895,620	74,322,050	77,803,480	81,340,910	84,935,340	88,586,770	92,295,200
- Federal corp income tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Provincial income tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Provincial mining tax	0	0	1,197,823	3,447,300	4,879,222	10,539,920	14,411,808	12,380,927	8,112,800	8,518,440	8,944,362	9,391,580	9,861,159	10,352,738	10,865,317	11,398,896	11,943,475	12,500,054	13,068,633	13,649,212
- A-T Cash Flow (cur 8)	(130,200,000)	(152,684,250)	103,925,552	106,932,244	111,019,300	111,153,527	113,366,317	85,456,074	47,439,525	49,811,501	52,302,077	54,913,180	57,646,349	60,503,887	63,486,925	66,596,565	69,833,805	73,200,045	76,707,285	80,356,525

TAX PAYMENTS IN CENTS

Federal corp income tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Provincial income tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Provincial mining tax	0	0	1,034,775	2,836,102	3,196,177	8,163,542	10,242,203	8,379,899	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583
Total tax payments	0	0	1,034,775	2,836,102	3,196,177	8,163,542	10,242,203	8,379,899	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583

CASH FLOWS IN CENTS

Before debt paymt of	(124,000,000)	(130,500,000)	90,889,524	90,889,524	90,889,524	90,889,524	90,889,524	63,309,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524
Before-tax of	(124,000,000)	(130,500,000)	90,889,524	90,889,524	90,889,524	90,889,524	90,889,524	63,309,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524	35,889,524
After-tax of	(124,000,000)	(130,500,000)	89,774,799	82,467,081	64,659,516	53,130,329	47,904,991	28,267,108	14,859,645	14,792,483	14,747,780	14,717,859	14,697,959	14,678,059	14,658,159	14,638,259	14,618,359	14,598,459	14,578,559	14,558,659

FEDERAL CORP INCOME TAX

PROJECT BASIS	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
Resource income	0	0	179,431,875	188,483,469	197,823,642	207,714,824	218,100,546	188,375,569	153,132,872	162,889,463	171,833,936	179,585,633	188,564,914	197,567,658	206,570,402	215,573,146	224,575,890	233,578,634	242,581,378	251,584,122
- Resource operating costs	0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,411,825	85,692,416	89,977,037	94,475,888	99,199,683	104,159,667	109,367,650	114,781,633	120,395,616	126,209,599	132,223,582	138,437,565	144,851,548	151,465,531
Operating profit	0	0	112,289,625	117,984,106	123,799,312	129,989,277	136,688,721	102,683,153	63,155,835	68,413,574	71,834,253	75,425,966	79,197,264	83,186,025	86,177,786	89,169,547	92,161,308	95,153,069	98,144,830	101,136,591
- Inventory allowance	0	0	251,783	244,373	217,591	291,471	306,044	321,547	337,414	354,285	371,999	390,599	410,129	430,659	451,189	471,719	492,249	512,779	533,309	553,839
- Capital cost allowance	0	0	112,289,625	117,984,106	123,799,312	129,989,277	136,688,721	102,683,153	63,155,835	68,413,574	71,834,253	75,425,966	79,197,264	83,186,025	86,177,786	89,169,547	92,161,308	95,153,069	98,144,830	101,136,591
- CCA (Class 28)	0	0	112,289,625	117,984,106	123,799,312	129,989,277	136,688,721	102,683,153	63,155,835	68,413,574	71,834,253	75,425,966	79,197,264	83,186,025	86,177,786	89,169,547	92,161,308	95,153,069	98,144,830	101,136,591
- CCA (Class 10)	0	0	112,289,625	117,984,106	123,799,312	129,989,277	136,688,721	102,683,153	63,155,835	68,413,574	71,834,253	75,425,966	79,197,264	83,186,025	86,177,786	89,169,547	92,161,308	95,153,069	98,144,830	101,136,591

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COPPER-MULTIMEDIA PROJECT BRITISH COLUMBIA

- Processing allowance	0	0	6,844,704	9,612,224	8,843,246	11,831,848	14,532,916	12,484,968	8,180,975	8,590,024	9,819,525	9,470,501	9,944,826
= Income for mining tax	0	0	6,844,704	19,698,856	23,309,848	62,513,872	82,353,190	70,748,153	46,358,857	48,676,000	51,110,648	53,666,172	56,349,481

COPPER-MIL THUNDER PROJECT, BRITISH COLUMBIA

CASH FLOW SUMMARY PROJECT BASIS	14	15	16	17	18	19	20	21	22	23	24	25
Revenues	197,993,160	207,892,818	218,287,459	229,201,432	240,641,923	252,695,820	265,329,771	278,596,259	292,558,072	307,152,376	322,509,994	165,206,372
- Operating costs	116,836,833	120,577,834	126,606,726	132,937,862	139,583,916	146,563,111	153,891,267	161,585,830	169,665,122	178,148,378	187,855,797	95,866,896
= Operating profits	81,157,127	87,314,984	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,892,950	129,003,998	135,454,196	69,420,276
- Capital expenditures	10,809,624	11,434,185	12,005,810	12,646,181	13,236,406	13,898,226	14,593,137	15,322,794	16,088,934	16,893,381	17,738,858	9,898,758
- Working capital	1,367,096	1,435,450	1,507,223	1,582,584	1,661,713	1,744,799	1,832,039	1,923,641	2,019,823	2,120,814	2,226,855	(49,182,187)
- Debt debt	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Post-Cash Flow	70,980,406	74,445,429	78,167,700	82,076,085	86,179,889	90,488,883	95,013,327	99,763,994	104,752,193	109,909,603	115,409,293	109,431,672
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Int Cash Flow	70,980,406	74,445,429	78,167,700	82,076,085	86,179,889	90,488,883	95,013,327	99,763,994	104,752,193	109,909,603	115,409,293	109,431,672
- Federal corp. income tax	18,757,967	19,714,253	20,712,836	21,757,487	22,851,668	23,998,666	25,201,690	26,463,938	27,851,144	29,334,761	30,892,241	16,851,568
- Provincial corp. income tax	12,713,537	13,349,214	14,016,674	14,717,580	15,453,383	16,226,853	17,037,355	17,889,223	18,783,684	19,722,868	20,709,012	10,670,888
- Provincial mining tax	10,354,217	10,871,928	11,415,526	11,986,301	12,585,616	13,214,896	13,875,641	14,569,423	15,297,894	16,062,789	16,865,929	7,738,166
= A-I Cash flow (tw 8)	29,074,606	30,510,834	32,022,645	33,614,789	35,289,221	37,049,268	38,898,641	40,841,410	41,019,471	43,069,385	45,222,112	74,179,858
TAX PAYMENTS IN CONST 8												
Federal corp. income tax	9,074,048	9,482,893	9,900,789	9,492,728	9,095,348	9,497,887	9,496,252	9,499,028	10,136,248	10,136,585	10,136,815	5,897,486
Provincial corp. income tax	6,421,208	6,421,208	6,421,208	6,421,208	6,421,208	6,421,208	6,421,208	6,421,208	6,421,208	6,421,208	6,421,208	3,228,888
Provincial mining tax	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	5,229,583	2,338,416
Total tax payments	21,124,839	21,133,676	21,139,572	21,143,583	21,146,123	21,147,870	21,149,035	21,149,812	21,787,023	21,787,368	21,787,596	10,464,182
CASH FLOWS IN CONST 8												
Before debt prmt Cf	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,183,659
Before-tax Cf	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,183,659
After-tax Cf	16,644,692	14,675,840	14,649,952	14,646,823	14,643,400	14,641,653	14,640,489	14,659,712	14,022,581	14,022,156	14,021,926	22,439,557
FEDERAL CORP. INCOME TAX PROJECT BASIS	14	15	16	17	18	19	20	21	22	23	24	25
Resource income	197,993,160	207,892,818	218,287,459	229,201,432	240,641,923	252,695,820	265,329,771	278,596,259	292,558,072	307,152,376	322,509,994	165,206,372
- Resource operating costs	116,836,833	120,577,834	126,606,726	132,937,862	139,583,916	146,563,111	153,891,267	161,585,830	169,665,122	178,148,378	187,855,797	95,866,896
= Operating profit	81,157,127	87,314,984	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,892,950	129,003,998	135,454,196	69,420,276
- Inventory allowance	438,635	452,167	474,775	498,514	523,640	549,612	577,892	605,947	636,244	668,056	701,459	0
- Capital cost allowance	0	0	0	0	0	0	0	0	0	0	0	0
- MCA (Class 28)	0	0	0	0	0	0	0	0	0	0	0	0
- CCA (Class 10)	0	0	0	0	0	0	0	0	0	0	0	0

COPIES - MAIL YUBENEN PROJECT. BRITISH COLUMBIA

[illegible]

COPPER-MULLENBACH PROJECT: BRITISH COLUMBIA

- Processing allowance	10,441,227	10,963,209	11,511,453	12,007,026	12,691,377	13,325,946	13,992,243	14,691,055	15,426,448	16,197,771	17,007,659	7,795,126
= Income for mining tax	59,166,955	62,125,303	65,231,560	68,493,146	71,917,003	75,513,694	79,209,378	83,253,007	87,416,540	91,707,367	96,376,735	44,172,378

APPENDIX B

AUSTRALIAN MINERAL TAXATION SYSTEM

B.1. DESCRIPTION

(1) COMMONWEALTH INCOME TAXATION

Commonwealth Income Taxes are assessed on 'taxable income', defined as gross income less exempt income and allowable expenses and deductions. Revenues and deductions may be "pooled" within a mining company for income tax purposes.

Gold mining income is completely exempt from Australian income tax, provided that:

- i. More than half the mine's income is from gold; or
- ii. More than 40 percent of the income of a gold-copper mine is from gold.

When gold income is exempt, the expenditures associated with gold mining are not allowable deductions for the purpose of determining a company's tax base. This exemption applies to both residents and non-residents.

Tax Calculation Format:

	Revenue
-	State Royalty Payments
-	<u>Operating Cost</u>
	Net Income before Allowances
-	Carried Loss (from year X-1)
-	<u>Capital Deductions</u>
	If negative: carried loss (for year X+1)
	If positive: taxable income
	Income Tax Payable

Carried Loss:

To the extent that net income is not available to absorb new deductions in any given year (and any carried loss from the previous year), the balance constitutes a 'carried loss' which may be brought forward to the next year for deduction. Losses may be carried forward in this manner for up to seven years before they are eliminated.

Capital Deductions:

'New deductions' are based on capital expenditures, and are determined according to the following rules:

i. Exploration expenditures:

- Includes mapping, geological, geophysical and geochemical work, drilling, exploration shafts and development, prior to making a decision to commence mining;
- Feasibility studies, metallurgical testing and similar pre-development work are usually allowable.

Exploration expenditures are deductible in the year incurred, but the deduction is limited to the amount of income available from mining after all other deductions have been taken. Undeducted expenditures may be accumulated and deducted against any subsequent mining income.

ii. Capital expenditures for normal depreciable assets:

Basically, there are two applicable rates:

- General plant, equipment and machinery, at 20 percent straight-line;
- Heavy-duty machinery, at 33 1/3 percent straight-line. For study purposes, it is assumed that 15 percent of underground mine plant and machinery, and 20 percent of open pit mine plant and machinery qualify as heavy-duty machinery.

These rates do not change if the remaining mine life falls below 5 years or 3 years, respectively. Deductions must be taken. The applicable rate is determined by referencing the depreciation rates published by the Commissioner of Taxation. If the published straight-line rate for an asset, combined with the current 'loading' of 18 percent, is 20 percent or less, then the 20 percent rate applies. If the published straight-line rate, combined with the 18-percent loading, exceeds 20 percent, then the 33 1/3-percent rate applies. The published straight-line rate is, theoretically, $(1.0)/(\text{useful life of asset}) \times 100$ percent. The 'loading' represents a provision for accelerated depreciation.

An investment allowance is granted on capital expenditures for normal depreciable assets, irrespective of which rate is applicable. The allowance takes the form of a tax deduction of 18 percent of eligible capital expenditures in the year first used, in addition to the normal tax deduction for which the expenditures would qualify (outlined above). This deduction must be taken. The investment allowance provision terminates in 1986.

Port facilities, such as cranes, conveyors and shiploaders are eligible for depreciation and investment allowance as 'normal depreciable assets' as outlined above. The provision of housing and townsite facilities at port sites is not deductible.

iii. Capital expenditures for special mining assets:

- These capital expenditures are deductible at 10 percent per

year on a straight-line basis when the remaining mine life is ten years or more, or by equal annual amounts when the remaining mine life is less than ten years.

A deduction may or may not be taken. It would not be taken if a 'carried loss' so created was considered to be imperilled by the seven-year loss-carry-forward limitation.

Buildings which are not specifically situated on mining property or at a treatment site may be eligible for depreciation over 40 years (i.e. 2.5 percent straight-line), if the buildings are used for the income-producing activities of the business. This special deduction does not apply to buildings which are primarily used for residential purposes.

iv. Transportation facilities:

- Includes capital expenditure for roads, railways and pipelines used in transporting products from the mine site. Port development costs for dredging, breakwaters, navigational aids and surveys are also included. Road vehicles, railway rolling stock, ships, etc., are not covered by this provision but are eligible for depreciation and investment allowance as 'normal depreciable assets'.

These capital expenditures are deducted at a straight-line depreciation rate of either 10 percent or 5 percent, at the taxpayer's option. This deduction must be taken. The 10-percent rate would normally be selected unless a 'carried loss' created by the deduction was endangered by the seven-year loss-carry-forward limitation.

v. Payments for the purchase of a mining property:

- The value of various types of assets specified in the purchase agreement for a mining property are allowable as 'new deductions'. Deductions may not exceed the vendor's actual expenditure on the property, reduced by any deductions already claimed.

Tax Rates:

Australian income tax is imposed at the normal corporate rate of 46 percent of the taxable income of resident companies (basically, companies incorporated in Australia). Tax is payable in the year following the year for which it is assessed.

Nonresident companies (e.g. a Canadian company operating through a branch) are subject to an additional tax of 5 percent of taxable income.

These taxes are collected by the Commonwealth and are re-distributed in specific proportions to State and local governments.

Withholding taxes on remittances to overseas residents are at the standard rates of 10 percent on interest and 30 percent on dividends (or 15 percent on dividends in the case of Canada and other countries where a tax treaty applies). However, profits of an Australian branch of a nonresident company can be remitted to the foreign head office free of withholding tax. In this case, a branch profit tax of 5 percent must be paid, as mentioned above with respect to nonresidents.

— (2) STATE ROYALTIES

There are seven states, or political divisions in Australia which impose royalties and, as there are a variety of bases and rates, the payments vary substantially. States may also enter into agreements with companies for the determination of royalty payments. State governments also levy a stamp tax on business transactions and a 5 percent payroll tax. Local governments levy real estate taxes.

The simplified state royalty regimes outlined here only apply to the metals of main interest to the states: copper, gold, lead, silver, tin, tungsten, zinc, uranium (South Australia only), nickel, (Western Australia only), and bismuth (Northern Territory only).

QUEENSLAND

Royalty Base (Net Income) Calculation Format:

- Metal Revenue (cif market)
- Smelter Payments and Transportation Costs
- Concentrate Revenue (fob mine)
- Operating Cost
- Depreciation Allowance (assume straight-line over mine life)
- Net Income

'Rail freight' royalty:

5 percent of concentrate revenue as 'rail freight' royalty (for any mineral from which 'adequate' rail freight profits are derived).

Queensland royalty payments:

In addition to the generalized 'rail freight' royalty, one of following royalties is added depending on the minesite.

Mount Isa Mines Agreement:

- Copper ore and lead/zinc/silver ore separately assessed;

- \$2.00/tonne varying with the ratio of current realizable value of contained metals per tonne of ore and the average realizable value in 1973-74.

Other Mines:

Lower of 2 percent of concentrate revenue exceeding \$30 000 or 5 percent of net income exceeding \$30 000.

SOUTH AUSTRALIA

2.5 percent of concentrate revenue for all metals.

WESTERN AUSTRALIA

Gold: nil

Nickel, tin: 2.5 percent of metal revenue.

Cobalt, silver, platinoids: 2.5 percent of concentrate revenue.

Copper, lead, zinc, tungsten and others: 5 percent of concentrate revenue.

B.2. DETAILED BASE CASE RESULTS

OLD PROJECT: GREENLAND

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Revenues	0	0	9,181,124	9,640,180	10,122,189	10,628,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,781	14,242,937	0	0	0	0	0	0	0	0
- Operating costs	0	0	4,858,449	5,072,971	5,347,620	5,615,861	5,935,751	6,309,538	6,748,065	7,251,424	7,829,322	8,484,638	0	0	0	0	0	0	0	0
= Operating profits	0	0	4,322,675	4,567,209	4,774,569	5,012,438	5,223,962	5,408,161	5,555,519	5,667,339	5,735,459	5,758,300	0	0	0	0	0	0	0	0
- Capital expenditures	5,326,658	5,592,983	254,678	267,411	288,782	294,821	309,562	325,048	341,292	358,357	376,275	395,088	0	0	0	0	0	0	0	0
- Working capital	0	0	1,168,933	58,949	63,996	67,196	70,556	74,084	77,788	81,677	85,761	89,937	0	0	0	0	0	0	0	0
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt-Tax Cash Flow	(5,326,658)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,837	5,384,439	5,653,661	5,936,344	6,214,247	0	0	0	0	0	0	0	0
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow	(5,326,658)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,837	5,384,439	5,653,661	5,936,344	6,214,247	0	0	0	0	0	0	0	0
- Commonwealth income taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- State royalty payments	0	0	599,226	633,933	670,375	716,914	765,779	806,135	848,588	893,888	939,717	988,769	0	0	0	0	0	0	0	0
= After Tax Cash Flow	(5,326,658)	(6,753,915)	3,418,725	3,584,916	3,759,416	3,934,367	4,110,065	4,284,982	4,453,938	4,618,773	4,778,627	4,925,478	0	0	0	0	0	0	0	0

TAX PAYMENTS IN CONST. \$	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
COMMONWEALTH INCOME TAX	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Before debt payment	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	0	0	0	0	0	0	0	0
Before tax	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	0	0	0	0	0	0	0	0
After tax	(5,073,000)	(6,126,000)	2,953,226	2,949,319	2,945,681	2,935,865	2,926,632	2,917,233	2,907,901	2,898,633	2,889,424	2,880,271	0	0	0	0	0	0	0	0

CASH FLOWS IN CONST. \$	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
COMMONWEALTH INCOME TAX	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Before debt payment	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	0	0	0	0	0	0	0	0
Before tax	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	0	0	0	0	0	0	0	0
After tax	(5,073,000)	(6,126,000)	2,953,226	2,949,319	2,945,681	2,935,865	2,926,632	2,917,233	2,907,901	2,898,633	2,889,424	2,880,271	0	0	0	0	0	0	0	0

COMMONWEALTH INCOME TAX	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
COMMONWEALTH INCOME TAX	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Gross revenues	0	0	9,181,124	9,640,180	10,122,189	10,628,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,781	14,242,937	0	0	0	0	0	0	0	0
- State royalty payments	0	0	599,226	633,933	670,375	716,914	765,779	806,135	848,588	893,888	939,717	988,769	0	0	0	0	0	0	0	0
- Operating costs	0	0	4,858,449	5,072,971	5,347,620	5,615,861	5,935,751	6,309,538	6,748,065	7,251,424	7,829,322	8,484,638	0	0	0	0	0	0	0	0
= Net inc. before allowances	0	0	3,723,449	3,913,276	4,104,195	4,296,384	4,490,183	4,727,026	4,955,811	5,200,695	5,459,643	5,729,529	0	0	0	0	0	0	0	0
- Carried loss	0	0	316,932	966,643	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Investment allowances	0	0	45,842	48,134	50,541	53,068	55,721	58,507	61,433	64,504	67,729	71,116	0	0	0	0	0	0	0	0
- Depreciation allowances	0	0	649,711	1,478,739	1,459,264	1,273,326	1,078,091	892,164	718,948	561,455	429,745	308,851	0	0	0	0	0	0	0	0

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GOLD PROJECT: WESTERN AUSTRALIA

CASH FLOW SUMMARY PROJECT BASICS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Revenues	0	0	9,181,124	9,640,180	10,122,189	10,629,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,701	14,242,937	0
- Operating costs	0	0	4,850,449	5,072,971	5,347,620	5,615,001	5,895,751	6,190,538	6,500,865	6,825,068	7,166,322	7,524,638	0
= Operating profits	0	0	4,330,675	4,567,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,380	6,718,299	0
- Capital expenditures	5,326,650	5,592,983	254,670	267,411	280,782	294,821	309,562	325,040	341,292	358,357	376,275	395,000	0
- Working capital	0	1,168,933	58,847	68,949	63,996	67,196	70,556	74,084	77,708	81,677	85,761	(1,091,037)	0
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Net Debt-Paid Cash Flow	(5,326,650)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,661	5,936,344	6,214,247	0
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Net Tax Net Cash Flow	(5,326,650)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,661	5,936,344	6,214,247	0
- Commonwealth income taxes	0	0	0	0	0	0	0	0	0	0	0	0	0
- State royalty payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= After Tax Cash Flow	(5,326,650)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,661	5,936,344	6,214,247	0

TAX PAYMENTS IN CONST. \$

Commonwealth income taxes	0	0	0	0	0	0	0	0	0	0	0	0	0
State royalty payments	0	0	0	0	0	0	0	0	0	0	0	0	0
Total tax payments	0	0	0	0	0	0	0	0	0	0	0	0	0

CASH FLOWS IN CONST. \$

Before debt payment CF	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	4,574,000
Before tax CF	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	4,574,000
After tax CF	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	4,574,000
COMMITMENT INCOME TAX COMPUTATION REPORT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Gross revenues	0	0	9,181,124	9,640,180	10,122,189	10,629,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,701	14,242,937	0
- State royalty payments	0	0	0	0	0	0	0	0	0	0	0	0	0
- Operating costs	0	0	4,850,449	5,072,971	5,347,620	5,615,001	5,895,751	6,190,538	6,500,865	6,825,068	7,166,322	7,524,638	0
= Net inc. before allowances	0	0	4,330,675	4,567,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,380	6,718,299	0
- Carried loss	0	316,932	966,643	0	0	0	0	0	0	0	0	0	0
- Investment allowances	0	0	45,842	48,134	50,541	53,068	55,721	58,507	61,433	64,504	67,729	71,116	0
- Depreciation allowances	316,932	649,711	700,646	682,098	662,623	646,685	631,451	616,523	601,999	587,814	573,105	558,210	0

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TAX PAYMENTS IN COST :

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2
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CASH FLOWS IN CONST. \$

	YEAR	1	2	3	4	5	6	7	8	9	10	11	12	13
Before debt print CF	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	4,574,000
Before tax CF	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	4,574,000
After tax CF	(5,073,000)	(6,126,000)	3,272,582	3,272,582	3,272,582	3,272,582	3,272,582	3,272,582	3,272,582	3,272,582	3,272,582	3,272,582	3,272,582	4,375,725
COMMODITY INCOME TAX COMPUTATION REPORT														
Gross revenues	0	0	9,101,124	9,640,100	10,122,109	10,620,299	11,159,713	11,717,699	12,303,504	12,918,763	13,564,701	14,242,937	0	0
State royalty payments	0	0	229,528	241,005	253,055	265,787	278,993	292,912	307,590	322,969	339,118	356,073	0	0
Operating costs	0	0	4,850,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,530	6,500,065	6,825,068	7,166,372	7,524,630	0	0
Net inc. before allowances	0	0	4,101,147	4,306,204	4,521,515	4,747,590	4,984,970	5,234,210	5,495,929	5,770,726	6,059,262	6,362,225	0	0
Carried loss	0	316,232	966,643	0	0	0	0	0	0	0	0	0	0	0
Investment allowances	0	0	45,842	48,134	50,541	53,068	55,721	58,507	61,433	64,504	67,729	71,116	0	0
Depreciation allowances	316,932	649,711	790,666	682,898	662,623	676,695	701,451	795,523	310,299	325,814	342,105	359,210	0	0

LEAD-TIME PROJECT: GREENLAND

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Revenues	0	0	0	0	76,576,894	80,485,730	84,426,025	88,647,327	65,931,449	69,228,822	72,689,423	76,323,894	80,140,089
- Operating costs	0	0	0	0	31,907,839	33,582,391	35,177,511	36,936,386	38,783,285	40,722,366	42,758,484	44,896,400	47,141,229
= Operating profits	0	0	0	0	44,669,055	46,903,347	49,248,515	51,710,941	27,148,244	28,506,456	29,930,939	31,427,486	32,998,860
- Capital expenditures	21,525,000	22,681,250	23,731,313	24,917,070	2,297,307	2,412,172	2,532,781	2,659,420	2,792,391	2,932,810	3,078,611	3,232,541	3,394,160
- Working capital	0	0	0	10,331,083	516,590	542,420	569,541	598,018	627,919	659,314	692,288	726,894	763,239
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Pant Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,681)	41,855,958	43,948,756	46,146,193	48,453,583	23,727,934	24,914,331	26,168,848	27,468,850	28,841,453
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,681)	41,855,958	43,948,756	46,146,193	48,453,583	23,727,934	24,914,331	26,168,848	27,468,850	28,841,453
- Commonwealth income taxes	0	0	0	0	0	9,922,768	14,290,649	15,684,199	17,818,320	6,900,121	7,577,397	8,832,671	8,586,348
- State royalty payments	0	0	0	0	5,359,783	5,627,882	5,909,222	6,204,713	4,278,560	4,538,585	4,765,935	5,012,553	5,278,829
= After Tax Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,681)	36,496,175	28,390,186	25,938,322	26,564,591	2,439,855	13,483,625	13,816,716	14,422,826	15,864,275

TAX PAYMENTS IN CONST. \$

Commonwealth income taxes	0	0	0	0	0	7,404,523	10,161,783	10,615,684	10,965,804	4,236,076	4,438,347	4,472,892	4,511,898
State royalty payments	0	0	0	0	4,199,530	4,199,552	4,199,578	4,199,594	2,757,990	2,781,386	2,786,543	2,791,177	2,795,233
Total tax payments	0	0	0	0	4,199,530	11,604,075	14,361,357	14,815,277	13,723,002	7,017,462	7,216,890	7,264,069	7,386,332

CASH FLOWS IN CONST. \$

Before debt pymt CF	(20,500,000)	(20,500,000)	(20,500,000)	(29,000,000)	32,795,230	32,795,230	32,795,230	32,795,230	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230
Before tax CF	(20,500,000)	(20,500,000)	(20,500,000)	(29,000,000)	32,795,230	32,795,230	32,795,230	32,795,230	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230
After tax CF	(20,500,000)	(20,500,000)	(20,500,000)	(29,000,000)	28,595,708	21,191,163	18,433,681	17,979,961	1,572,236	8,277,776	8,878,348	8,831,169	7,988,987

COMMONWEALTH INCOME TAX
COMPUTATION REPORT

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Gross revenues	0	0	0	0	76,576,894	80,485,730	84,426,025	88,647,327	65,931,449	69,228,822	72,689,423	76,323,894	80,140,089
- State royalty payments	0	0	0	0	5,359,783	5,627,882	5,909,222	6,204,713	4,278,560	4,538,585	4,765,935	5,012,553	5,278,829
- Operating costs	0	0	0	0	31,907,839	33,582,391	35,177,511	36,936,386	38,783,285	40,722,366	42,758,484	44,896,400	47,141,229
= Net inc. before allowcs	0	0	0	0	39,310,872	41,275,546	43,339,293	45,506,228	22,869,683	23,975,871	25,165,084	26,414,932	27,728,831
- Carried loss	0	635,250	1,937,512	3,940,138	4,533,770	0	0	0	0	0	0	0	0
- Investment allowances	0	0	0	0	321,623	337,704	354,589	372,319	390,935	410,481	431,006	452,556	475,184
- Depreciation allowances	635,250	1,302,262	2,082,626	2,593,632	10,883,444	9,853,821	8,888,618	8,154,953	7,478,485	7,091,987	7,271,671	7,470,315	7,692,361

[illegible]

LEAD-TIME PROJECT: ONEENSLAND

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20
Revenues	84,147,893	88,354,440	92,772,170	97,410,779	102,281,317	85,890,856	0
- Operating costs	49,498,290	51,973,204	54,571,865	57,380,450	60,165,401	50,857,680	0
= Operating profits	34,648,803	36,381,243	38,200,305	40,110,321	42,115,837	35,040,376	0
- Capital expenditures	3,563,877	3,742,871	3,929,174	4,125,633	4,331,915	3,684,153	0
- Working capital	881,481	841,471	883,544	927,722	974,100	(21,479,877)	0
+ New debt	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0
= Def. Debt-Pmt Cash Flow	30,283,525	31,797,701	33,387,587	35,054,966	36,809,814	52,915,300	0
- Debt's principal payment	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	30,283,525	31,797,701	33,387,587	35,054,966	36,809,814	52,915,300	0
- Commonwealth income taxes	8,997,824	9,585,633	10,826,719	10,554,781	11,875,859	11,552,878	8,550,243
- State royalty payments	5,541,877	5,823,450	6,117,759	6,422,964	6,735,487	5,482,112	0
= After Tax Cash Flow	15,744,625	16,468,619	17,243,108	18,079,221	18,998,548	35,880,310	(8,550,243)

TAX PAYMENTS IN CONST. 8

Commonwealth income taxes	4,544,512	4,572,372	4,593,355	4,605,016	4,682,248	4,615,826	3,222,497
State royalty payments	2,798,620	2,881,179	2,882,616	2,882,318	2,798,781	2,190,318	0
Total tax payments	7,343,133	7,373,551	7,395,971	7,487,334	7,480,949	6,806,144	3,222,497

CASH FLOWS IN CONST. 8

Before debt pmt CF	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230	21,141,731	0
Before tax CF	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230	21,141,731	0
After tax CF	7,952,185	7,921,687	7,899,267	7,887,904	7,894,289	14,335,586	(3,222,497)

COMMONWEALTH INCOME TAX
COMPUTATION REPORT

	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20
Gross revenues	84,147,893	88,354,440	92,772,170	97,410,779	102,281,317	85,890,856	0
- State royalty payments	5,541,877	5,823,450	6,117,759	6,422,964	6,735,487	5,482,112	0
- Operating costs	49,498,290	51,973,204	54,571,865	57,380,450	60,165,481	50,857,680	0
= Net inc. before allowcs	29,107,726	30,557,793	32,082,546	33,607,356	35,380,429	29,550,264	0
- Carried loss	0	0	0	0	0	0	0
- Investment allowance	498,943	523,898	558,084	577,589	606,468	584,581	0
- Depreciation allowances	7,944,365	8,236,689	8,587,286	9,031,814	9,659,009	10,466,197	0

LEAD-ZINC PROJECT - QUEENSLAND

roads	(YIE)	0	0	0	0	0	0	0	0
normal/acc	(YIE)	2,520,100	2,646,197	2,770,507	2,917,433	3,063,304	3,069,569	0	0
heavy-duty	(YIE)	0	0	0	0	0	0	0	0
mining equip.	(YIE)	5,424,177	5,590,491	5,000,779	6,114,301	6,595,705	7,396,620	0	0
exploration	(YIE)	0	0	0	0	0	0	0	0
<hr/>									
= taxable income		20,644,419	21,797,214	22,945,175	24,077,954	25,114,952	10,507,406	0	0
Commonwealth income taxes		0,997,024	9,545,633	10,026,719	10,554,701	11,075,059	11,552,070	0,550,243	
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* QUEENSLAND, other :									
rail freight royalty		4,207,355	4,417,772	4,630,609	4,870,339	5,114,066	4,254,903	0	0
conc rev royalty 0%		1,002,342	1,766,409	1,054,043	1,947,616	2,045,026	1,701,361	0	0
net income royalty		1,333,722	1,405,790	1,479,151	1,559,425	1,621,341	1,227,209	0	0
STATE ROYALTY PAYMENTS		5,541,077	5,023,450	6,117,759	6,422,964	6,735,407	5,402,112	0	0

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Revenues	0	0	0	0	76,576,894	88,465,738	84,426,825	88,647,327	65,931,449	69,228,822	72,689,423	76,323,894	80,148,089
- Operating costs	0	0	0	0	31,987,839	33,582,391	35,177,511	36,936,386	38,783,285	40,722,366	42,758,484	44,896,488	47,141,229
= Operating profits	0	0	0	0	44,649,855	44,983,347	49,248,515	51,710,941	27,148,214	28,586,456	29,930,939	31,427,406	32,996,860
- Capital expenditures	21,525,000	22,481,250	23,731,313	24,917,878	2,297,387	2,412,172	2,532,781	2,659,428	2,792,391	2,932,818	3,078,611	3,232,541	3,394,148
- Working capital	0	0	0	10,331,083	516,590	542,470	569,541	598,018	627,919	659,316	692,288	726,894	763,239
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Net Debt-Paid Cash Flow	(21,525,000)	(22,481,250)	(23,731,313)	(35,249,681)	41,855,958	43,948,756	46,146,193	48,453,583	23,727,934	24,914,331	26,168,848	27,468,858	28,841,453
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Net Tax Net Cash Flow	(21,525,000)	(22,481,250)	(23,731,313)	(35,249,681)	41,855,958	43,948,756	46,146,193	48,453,583	23,727,934	24,914,331	26,168,848	27,468,858	28,841,453
- Communit Income Taxes	0	0	0	0	0	14,345,641	18,409,559	19,320,841	20,466,963	9,883,688	10,377,788	10,896,677	11,441,511
- State royalty payments	0	0	0	0	3,828,845	4,828,287	4,221,381	4,432,366	3,296,572	3,461,481	3,634,471	3,816,195	4,007,884
= After Tax Cash Flow	(21,525,000)	(22,481,250)	(23,731,313)	(35,249,681)	38,027,113	25,582,887	23,515,333	24,588,295	(175,601)	11,569,322	12,147,789	12,755,178	13,392,937

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404
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	1	2	3	4	5	6	7	8	9	10	11	12	13
Before debt print CF	(20,500,000)	(20,500,000)	(20,500,000)	(20,000,000)	32,795,230	32,795,230	32,795,230	32,795,230	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230
Before tax CF	(20,500,000)	(20,500,000)	(20,500,000)	(20,000,000)	32,795,230	32,795,230	32,795,230	32,795,230	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230
After tax CF	(20,500,000)	(20,500,000)	(20,500,000)	(20,000,000)	29,795,230	19,099,285	16,711,900	16,582,764	(113,194)	7,102,560	7,102,560	7,102,560	7,102,560
COMMODITY INCOME TAX COMPUTATION REPORT													
Gross revenues	0	0	0	0	76,576,894	80,405,730	84,426,025	88,647,327	65,931,449	69,228,022	72,689,423	76,323,894	80,160,009
State royalty payments	0	0	0	0	3,828,845	4,020,287	4,221,301	4,432,366	3,296,572	3,461,401	3,634,471	3,816,195	4,007,004
Operating costs	0	0	0	0	51,907,639	33,582,391	35,177,511	36,936,386	39,783,265	40,772,366	42,758,484	44,896,408	47,161,229
Net inc. before allowances	0	0	0	0	40,841,010	42,803,061	45,027,214	47,278,574	23,851,671	25,044,255	26,296,448	27,611,291	29,991,856
Carried loss	0	635,250	1,937,512	3,940,138	6,533,770	0	0	0	0	0	0	0	0
Investment allowances	0	0	0	0	321,623	337,704	354,589	372,319	390,935	410,481	431,006	452,556	475,104
Depreciation allowances	635,250	1,302,262	2,002,626	2,593,632	2,799,397	2,520,575	2,236,013	2,108,510	1,974,633	2,073,365	2,177,833	2,285,085	2,400,179

[illegible][illegible]

LEAD-ZINC PROJECT: WESTERN AUSTRALIA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20
Revenues	84,147,893	88,354,440	92,772,170	97,418,779	102,281,317	85,898,856	0
- Operating costs	49,490,290	51,973,204	54,571,865	57,388,458	60,165,481	58,857,688	0
= Operating profits	34,648,883	36,381,243	38,200,305	40,110,321	42,115,837	35,040,376	0
- Capital expenditures	3,563,877	3,742,871	3,929,174	4,125,633	4,331,915	3,684,153	0
- Working capital	881,481	841,471	883,544	927,722	974,188	(21,479,877)	0
+ New debt	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0
= Def. Debt-Plant Cash Flow	30,283,525	31,797,701	33,387,587	35,056,966	36,809,814	32,915,300	0
- Debt's principal payment	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	30,283,525	31,797,701	33,387,587	35,056,966	36,809,814	32,915,300	0
- Commonwealth Income taxes	12,813,587	12,614,266	13,244,979	13,987,228	14,682,590	15,332,719	12,517,208
- State royalty payments	4,287,355	4,417,722	4,638,689	4,878,539	5,114,066	4,254,983	0
= After Tax Cash Flow	14,862,584	14,765,713	15,503,999	16,279,199	17,093,158	33,327,678	(12,517,208)

TAX PAYMENTS IN CONST. \$

Commonwealth income taxes	6,867,678	6,867,678	6,867,678	6,867,678	6,867,678	6,126,821	4,717,604
State royalty payments	2,125,000	2,125,000	2,125,000	2,125,000	2,125,000	1,708,000	0
Total tax payments	8,992,678	8,992,678	8,992,678	8,992,678	8,992,678	7,834,821	4,717,604

CASH FLOWS IN CONST. \$

Before debt plant CF	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731	0
Before tax CF	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731	0
After tax CF	7,182,560	7,182,560	7,182,560	7,182,560	7,182,560	13,315,718	(4,717,604)

COMMONWEALTH INCOME TAX
COMPUTATION REPORT

	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20
Gross revenues	84,147,893	88,354,440	92,772,170	97,418,779	102,281,317	85,898,856	0
- State royalty payments	4,287,355	4,417,722	4,638,689	4,878,539	5,114,066	4,254,983	0
- Operating costs	49,490,290	51,973,204	54,571,865	57,388,458	60,165,481	58,857,688	0
= Net Inc. before allowances	30,441,448	31,963,521	33,561,697	35,239,782	37,001,771	30,785,473	0
- Carried loss	0	0	0	0	0	0	0
- Investment allowances	498,943	523,890	558,884	577,589	606,468	504,581	0
- Depreciation allowances	2,528,188	2,646,197	2,778,587	2,917,433	3,063,384	3,869,569	0

LEAD-ZINC PROJECT: WESTERN AUSTRALIA

roads (YVE)	0	2,644,197	2,778,587	2,917,433	3,063,384	3,069,569	0
normal/occ (YVE)	2,520,100	0	0	0	0	0	0
heavy-duty (YVE)	0	0	0	0	0	0	0
mining equip. (YVE)	0	0	0	0	0	0	0
exploration (YVE)	0	0	0	0	0	0	0
total income	27,427,310	20,793,434	30,235,165	31,744,761	33,331,999	27,211,323	0
commitments income taxes	12,013,587	12,614,266	13,244,979	13,907,228	14,602,598	15,332,719	12,517,208

WESTERN AUSTRALIA	0	0	0	0	0	0	0
rev., RI-Su-Co-Je-Pt	0	0	0	0	0	0	0
conc. rev., others	84,167,093	80,354,448	92,772,170	97,410,779	102,281,317	85,098,056	0
royalty from rev(1)	0	0	0	0	0	0	0
royalty from rev(2)	4,207,355	4,417,722	4,638,609	4,870,539	5,114,866	4,254,903	0
STATE ROYALTY PAYMENTS	4,207,355	4,417,722	4,638,609	4,870,539	5,114,866	4,254,903	0

LEAD-ZINC PROJECT: SOUTH AUSTIN, LA

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Revenues	0	0	0	0	76,576,894	80,405,738	84,425,825	88,447,327	65,931,449	69,278,822	72,609,423	76,327,894	80,140,889					
- Operating costs	0	0	0	0	31,407,039	33,502,391	35,177,511	36,936,386	38,783,205	40,772,346	42,758,404	44,896,400	47,101,229					
= Operating profits	0	0	0	0	44,669,855	46,903,347	49,248,315	51,710,941	27,148,244	28,506,476	29,851,019	31,431,494	33,039,660					
- Capital expenditures	21,525,000	22,681,250	23,731,313	24,917,870	2,297,307	2,412,172	2,532,780	2,659,420	2,792,391	2,932,810	3,078,611	3,232,541	3,394,160					
- Working capital	0	0	0	10,331,003	516,590	542,420	569,541	598,018	627,919	659,314	692,200	726,894	763,239					
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0					
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0					
= Net Debt-Paid Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,401)	41,635,950	43,940,756	46,146,193	48,453,503	23,727,934	24,914,331	26,168,040	27,440,850	28,841,453					
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0					
= Net Free Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,401)	41,635,950	43,940,756	46,146,193	48,453,503	23,727,934	24,914,331	26,168,040	27,440,850	28,841,453					
- Commonwealth income taxes	0	0	0	0	0	15,226,296	19,324,225	20,491,741	21,426,407	10,441,819	11,123,910	11,732,686	12,319,236					
- State royalty payments	0	0	0	0	1,914,422	2,010,143	2,110,451	2,216,183	1,640,206	1,730,701	1,817,236	1,900,897	2,003,502					
= After Tax Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(35,249,401)	39,721,528	26,712,317	24,701,317	25,745,579	433,241	12,541,811	13,148,902	13,827,347	14,510,710					

TAX PAYMENTS IN CASH, \$

Commonwealth income taxes	0	0	0	0	0	11,342,096	13,740,473	13,869,617	13,940,375	6,533,154	6,533,154	6,533,154	6,533,154					
State royalty payments	0	0	0	0	1,500,000	1,500,000	1,500,000	1,500,000	1,602,500	1,602,500	1,602,500	1,602,500	1,602,500					
Total tax payments	0	0	0	0	1,500,000	12,842,096	15,240,473	15,369,617	15,003,075	7,595,654	7,595,654	7,595,654	7,595,654					

CASH FLOWS IN CASH, \$

Before debt payment of	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	32,795,230	32,795,230	32,795,230	32,795,230	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230					
Before tax of	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	32,795,230	32,795,230	32,795,230	32,795,230	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230					
After tax of	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	31,295,230	19,933,142	17,554,765	17,425,421	292,143	7,699,504	7,699,504	7,699,504	7,699,504					

COMMONWEALTH INCOME TAX COMPUTATION REPORT

YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Gross revenues	0	0	0	0	76,576,894	80,405,738	84,425,825	88,447,327	65,931,449	69,278,822	72,609,423	76,327,894	80,140,889					
- State royalty payments	0	0	0	0	31,407,039	33,502,391	35,177,511	36,936,386	38,783,205	40,772,346	42,758,404	44,896,400	47,101,229					
- Operating costs	0	0	0	0	0	0	0	0	0	0	0	0	0					
= Net inc. before allowances	0	0	0	0	44,669,855	46,903,347	49,248,315	51,710,941	27,148,244	28,506,476	29,851,019	31,431,494	33,039,660					
- Carried loss	0	635,250	1,437,512	3,940,130	6,533,770	0	0	0	0	0	0	0	0					
- Investment allowances	0	0	0	0	321,423	337,704	354,589	372,319	390,935	410,481	431,006	452,556	475,104					
- Depreciation allowances	635,250	1,302,862	2,002,426	2,593,432	2,799,397	2,524,575	2,236,013	2,108,510	1,974,633	2,073,365	2,177,033	2,285,065	2,400,179					

[illegible]

Variable income	(635,250)	(1,957,512)	(3,940,130)	(6,533,776)	33,100,643	42,030,925	44,547,262	47,013,920	23,134,390	24,291,109	25,565,645	26,780,940	28,119,995
Commuter income taxes	0	0	0	0	0	15,226,296	19,334,225	20,491,741	21,626,407	10,641,819	11,173,910	11,732,606	12,319,236

[illegible]

LEAD-ZINC PROJECT: SOUTH AUSTRIA 1A

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	14	15	16	17	18	19	20	21	22
Revenues	84,147,893	88,354,448	92,772,179	97,418,779	102,281,317	107,099,854	111,867,600	116,585,346	121,253,092
- Operating costs	49,498,290	51,973,204	54,571,865	57,308,458	60,165,481	63,057,600	65,989,719	68,961,838	71,973,957
= Operating profits	34,649,603	36,381,244	38,200,315	40,110,321	42,115,837	44,048,214	45,977,881	47,903,508	49,829,135
- Capital expenditures	3,543,877	3,742,871	3,929,174	4,125,633	4,331,915	4,548,153	4,774,299	5,009,396	5,254,493
- Working capital	801,461	841,471	883,544	927,722	974,108	1,021,699	1,070,500	1,120,511	1,171,731
- New debt	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0
= Def. Debt-Plant Cash Flow	30,283,525	31,797,701	33,387,587	35,054,966	36,809,814	38,649,661	40,574,581	42,584,692	44,679,804
- Debt's principal payment	0	0	0	0	0	0	0	0	0
= Def. Net Cash Flow	30,283,525	31,797,701	33,387,587	35,054,966	36,809,814	38,649,661	40,574,581	42,584,692	44,679,804
- Cumulative income taxes	12,935,190	13,581,958	14,261,856	14,974,100	15,722,814	16,508,954	17,333,600	18,196,854	19,098,718
- State royalty payments	2,183,677	2,268,861	2,319,384	2,435,269	2,557,833	2,687,151	2,823,225	2,966,059	3,116,753
= After Tax Cash Flow	15,244,658	16,006,882	16,807,357	17,644,597	18,529,967	19,469,507	20,460,726	21,504,623	22,603,283

250

TAX PAYMENTS IN CONST. \$

Cumulative income taxes	6,533,154	6,533,154	6,533,154	6,533,154	6,533,154	6,533,154	6,533,154	6,533,154	6,533,154
State royalty payments	1,042,500	1,042,500	1,042,500	1,042,500	1,042,500	1,042,500	1,042,500	1,042,500	1,042,500
Total tax payments	7,575,654	7,575,654	7,575,654	7,575,654	7,575,654	7,575,654	7,575,654	7,575,654	7,575,654

CASH FLOWS IN CONST. \$

Before debt paid off	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
Before tax off	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
After tax off	7,699,584	7,699,584	7,699,584	7,699,584	7,699,584	7,699,584	7,699,584	7,699,584	7,699,584

CUMULATIVE INCOME TAX

Cumulative income tax	14	15	16	17	18	19	20	21	22
Operating costs	84,147,893	88,354,448	92,772,179	97,418,779	102,281,317	107,099,854	111,867,600	116,585,346	121,253,092
- State royalty payments	2,183,677	2,268,861	2,319,384	2,435,269	2,557,833	2,687,151	2,823,225	2,966,059	3,116,753
- Operating costs	49,498,290	51,973,204	54,571,865	57,308,458	60,165,481	63,057,600	65,989,719	68,961,838	71,973,957

CUMULATIVE INCOME TAX

Cumulative income tax	14	15	16	17	18	19	20	21	22
Operating costs	84,147,893	88,354,448	92,772,179	97,418,779	102,281,317	107,099,854	111,867,600	116,585,346	121,253,092
- State royalty payments	2,183,677	2,268,861	2,319,384	2,435,269	2,557,833	2,687,151	2,823,225	2,966,059	3,116,753
- Operating costs	49,498,290	51,973,204	54,571,865	57,308,458	60,165,481	63,057,600	65,989,719	68,961,838	71,973,957

CUMULATIVE INCOME TAX

Cumulative income tax	14	15	16	17	18	19	20	21	22
Operating costs	84,147,893	88,354,448	92,772,179	97,418,779	102,281,317	107,099,854	111,867,600	116,585,346	121,253,092
- State royalty payments	2,183,677	2,268,861	2,319,384	2,435,269	2,557,833	2,687,151	2,823,225	2,966,059	3,116,753
- Operating costs	49,498,290	51,973,204	54,571,865	57,308,458	60,165,481	63,057,600	65,989,719	68,961,838	71,973,957

CUMULATIVE INCOME TAX

Cumulative income tax	14	15	16	17	18	19	20	21	22
Operating costs	84,147,893	88,354,448	92,772,179	97,418,779	102,281,317	107,099,854	111,867,600	116,585,346	121,253,092
- State royalty payments	2,183,677	2,268,861	2,319,384	2,435,269	2,557,833	2,687,151	2,823,225	2,966,059	3,116,753
- Operating costs	49,498,290	51,973,204	54,571,865	57,308,458	60,165,481	63,057,600	65,989,719	68,961,838	71,973,957

roads	(YTE)	0	0	0	0	0
normal+acc	(YME)	2,520,100	2,646,197	2,770,507	2,917,433	0
heavy-duty	(YMB)	0	0	0	0	3,063,304
disposal equip.	(YME)	0	0	0	0	3,069,569
exploration	(YTE)	0	0	0	0	0
exploration	(YTE)	0	0	0	0	0
Tarble income		29,525,995	31,002,295	32,552,409	34,100,030	29,330,774
Commonwealth income taxes		12,935,190	13,581,950	14,261,056	14,974,100	16,500,954
						13,495,836

**= Variable income
Commonwealth income taxes**

• SOUTH AUSTRALIA •

State Royalty Payments

COPPER-MOLYBDENUM PROJECT: GREENLAND

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Revenues	0	0	179,431,875	180,403,449	197,823,642	207,714,824	218,180,544	180,375,549	155,132,822	142,889,443	171,833,936	179,585,433	180,544,914
- Operating costs	0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,000	99,199,683	104,159,667	109,367,650
= Operating profits	0	0	112,289,625	117,904,106	123,799,312	129,989,277	136,488,719	102,483,133	65,155,785	48,414,574	71,834,253	75,425,766	79,197,264
- Capital expenditures	130,200,000	136,710,000	6,346,930	6,445,204	7,019,549	7,378,526	7,739,052	8,126,005	8,532,385	8,958,470	9,406,866	9,877,210	10,371,070
- Working capital	0	0	15,906,250	799,313	839,278	881,242	925,304	971,569	1,020,148	1,124,713	1,180,949	1,239,996	1,301,996
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Paid Cash Flow	(130,200,000)	(132,646,250)	105,123,375	110,379,544	115,808,521	121,693,447	127,778,119	93,537,001	55,552,325	50,329,941	61,244,430	64,380,760	67,524,190
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	(130,200,000)	(132,646,250)	105,123,375	110,379,544	115,808,521	121,693,447	127,778,119	93,537,001	55,552,325	50,329,941	61,244,430	64,380,760	67,524,190
- Cumultht Income taxes	0	0	0	24,395,925	33,767,144	37,144,266	41,385,761	45,552,468	51,443,744	16,020,200	17,595,383	19,164,337	20,742,817
- State royalty payments	0	0	12,559,631	13,107,443	13,847,055	14,539,430	15,264,440	15,185,690	10,060,394	10,651,100	11,242,597	11,896,774	12,555,563
= After Tax Cash Flow	(130,200,000)	(152,646,250)	92,563,744	72,795,976	68,204,322	70,009,743	71,205,918	34,798,843	14,048,187	31,650,625	32,300,450	33,247,649	34,225,819
TAX PAYMENTS IN CASH. \$													
Cumultht Income taxes	0	0	0	20,078,500	26,457,441	27,717,623	29,355,233	30,831,704	28,268,910	9,839,929	10,287,656	10,671,420	11,000,359
- State royalty payments	0	0	10,849,402	10,849,506	10,849,530	10,849,552	10,849,574	8,924,594	6,485,019	6,538,857	6,585,007	6,624,549	6,658,403
Total tax payments	0	0	10,849,402	30,928,094	37,306,971	38,567,176	40,204,807	39,756,297	26,753,927	16,378,786	16,872,663	17,295,969	17,658,861
CASH FLOWS IN CASH. \$													
Before debt pay CF	(124,000,000)	(130,500,000)	90,009,524	90,009,524	90,009,524	90,009,524	90,009,524	63,309,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524
Before tax CF	(124,000,000)	(130,500,000)	90,009,524	90,009,524	90,009,524	90,009,524	90,009,524	63,309,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524
After tax CF	(124,000,000)	(130,500,000)	79,940,842	59,009,429	53,582,553	52,242,348	50,684,717	23,553,226	9,055,587	19,430,738	18,936,861	18,513,535	18,150,682
COMMERCIAL INCOME TAX CONTRIBUTION REPORT													
Gross revenues	0	0	179,431,875	180,403,449	197,823,642	207,714,824	218,180,544	180,375,549	155,132,822	142,889,443	171,833,936	179,585,433	180,544,914
- State royalty payments	0	0	12,559,631	13,107,443	13,847,055	14,539,430	15,264,440	15,185,690	10,060,394	10,651,100	11,242,597	11,896,774	12,555,563
- Operating costs	0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,000	99,199,683	104,159,667	109,367,650
= Net inc. before allmcs	0	0	99,729,994	104,716,643	109,952,257	115,449,839	121,222,301	89,497,464	55,095,391	57,762,466	60,571,656	63,529,192	66,611,701
- Carried loss	0	0	4,204,000	0	0	0	0	0	0	0	0	0	0
- Investment allowances	0	0	0	940,882	947,842	1,037,234	1,089,096	1,143,551	1,200,720	1,260,764	1,323,803	1,389,993	1,459,472
- Depreciation allowances	4,204,000	8,782,200	32,733,172	30,340,827	28,216,010	24,617,472	21,106,101	19,097,948	19,050,733	18,250,849	17,586,252	17,044,119	16,429,725

COPPER-MOLTIDENON PROJECT - QUEENSLAND

roads (YTE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
normal+acc (YME)	3,024,000	6,199,200	7,194,750	8,240,093	9,337,695	7,466,177	5,501,084	5,776,138	6,064,945	6,368,192	6,686,602	7,020,932	7,371,978	7,721,978
heavy-duty (YME)	1,240,000	2,583,000	2,583,000	1,323,000	0	0	0	0	0	0	0	0	0	0
mining equip (YME)	0	0	22,955,415	20,805,734	18,878,315	17,151,295	15,605,017	14,221,810	12,985,789	11,882,677	10,899,650	10,025,188	9,248,947	8,521,947
exploration (YEE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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= Taxable income	(4,284,800)	(13,066,200)	53,034,620	73,406,835	80,748,405	89,795,134	99,027,105	68,355,965	34,843,930	38,250,833	41,641,602	45,093,088	48,561,284	52,041,284
Commonwealth income taxes	0	0	0	24,395,925	33,767,144	37,144,266	41,305,761	45,552,468	31,443,744	16,028,208	17,595,383	19,164,337	20,742,817	22,321,297
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STATE ROYALTY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
COMPUTATION REPORT	1	2	3	4	5	6	7	8	9	10	11	12	13	14
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* QUEENSLAND, other *														
rail freight royalty	0	0	8,971,594	9,420,173	9,891,182	10,385,741	10,905,028	9,418,778	7,756,641	8,144,473	8,551,697	8,979,282	9,420,246	9,871,246
conc. rev. royalty net	0	0	3,588,838	3,767,469	3,955,873	4,153,696	4,361,411	3,766,911	3,102,056	3,257,189	3,420,879	3,591,113	3,770,690	3,951,246
net income royalty	0	0	3,976,323	4,375,264	4,777,665	5,267,890	5,767,632	4,132,760	2,303,753	2,506,635	2,710,900	2,917,492	3,127,317	3,327,317
STATE ROYALTY PAYMENTS	0	0	12,559,631	13,187,643	13,847,055	14,539,438	15,266,440	13,185,690	10,060,394	10,651,108	11,262,597	11,894,774	12,555,563	13,245,869

COPPER-MIL VINCENNE PROJECT: GREENLAND

CASH FLOW SUMMARY	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25	YEAR 26
Revenues	197,993,160	287,892,810	218,287,459	229,281,832	240,641,923	252,695,820	265,329,771	278,596,259	292,526,872	307,152,376	322,509,994	337,206,372	0
- Operating costs	114,836,833	179,577,834	128,686,726	132,937,862	139,583,916	146,563,111	153,891,267	161,585,830	169,665,122	178,148,378	187,855,797	95,866,896	0
= Operating profits	83,157,127	108,314,976	89,600,733	96,344,070	101,058,007	106,132,709	111,438,504	117,010,429	122,861,750	129,003,998	134,654,197	69,429,276	0
- Capital expenditures	18,889,624	11,434,185	12,085,818	12,686,101	13,236,406	13,898,226	14,593,137	15,322,794	16,088,934	16,893,381	17,738,858	9,898,758	0
- Working capital	1,367,896	1,435,458	1,507,223	1,582,584	1,661,713	1,744,799	1,832,039	1,923,641	2,019,823	2,120,814	2,226,855	(49,182,147)	0
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt-Paid Cash Flow	78,989,608	74,445,428	76,167,700	82,076,065	86,179,889	90,488,883	95,013,327	99,763,994	104,752,193	109,989,883	115,489,293	109,431,672	0
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow	78,989,608	74,445,428	76,167,700	82,076,065	86,179,889	90,488,883	95,013,327	99,763,994	104,752,193	109,989,883	115,489,293	109,431,672	0
- Commonwealth income taxes	22,338,191	23,957,586	25,687,544	27,294,864	28,688,182	30,133,638	31,627,703	33,163,343	34,727,867	36,292,277	37,881,521	39,104,354	13,932,674
- State royalty payments	13,240,983	13,954,762	14,699,148	15,437,446	16,210,641	17,019,829	17,865,666	18,748,222	19,666,130	20,614,577	21,578,194	10,359,164	0
= After Tax Cash Flow	35,321,316	36,533,159	37,861,815	39,343,775	41,281,066	43,335,416	45,519,959	47,852,428	50,358,996	53,002,958	56,109,578	59,968,154	(13,932,674)
TAX PAYMENTS IN CONST. \$													
Commonwealth income taxes	11,282,384	11,527,978	11,731,111	11,988,459	12,294,864	12,648,182	13,043,638	13,473,343	13,932,867	14,414,521	14,918,194	15,444,354	3,918,436
State royalty payments	6,407,556	6,712,479	6,933,045	7,235,386	7,537,446	7,839,182	8,141,966	8,445,882	8,750,930	9,057,122	9,364,466	9,672,854	3,133,782
Total tax payments	17,689,940	18,240,457	18,664,156	19,223,845	19,825,628	20,487,820	21,185,604	21,919,225	22,683,810	23,471,643	24,282,660	25,117,208	7,052,218
CASH FLOWS IN CONST. \$													
Before debt payment CF	35,321,316	36,533,159	37,861,815	39,343,775	41,281,066	43,335,416	45,519,959	47,852,428	50,358,996	53,002,958	56,109,578	59,968,154	(13,932,674)
Before tax CF	35,321,316	36,533,159	37,861,815	39,343,775	41,281,066	43,335,416	45,519,959	47,852,428	50,358,996	53,002,958	56,109,578	59,968,154	(13,932,674)
After tax CF	17,689,940	18,240,457	18,664,156	19,223,845	19,825,628	20,487,820	21,185,604	21,919,225	22,683,810	23,471,643	24,282,660	25,117,208	7,052,218
COMMONWEALTH INCOME TAX COMPUTATION REPORT													
Gross revenues	197,993,160	287,892,810	218,287,459	229,281,832	240,641,923	252,695,820	265,329,771	278,596,259	292,526,872	307,152,376	322,509,994	337,206,372	0
- State royalty payments	13,240,983	13,954,762	14,699,148	15,437,446	16,210,641	17,019,829	17,865,666	18,748,222	19,666,130	20,614,577	21,578,194	10,359,164	0
- Operating costs	114,836,833	179,577,834	128,686,726	132,937,862	139,583,916	146,563,111	153,891,267	161,585,830	169,665,122	178,148,378	187,855,797	95,866,896	0
= Net Inc. before allowances	69,916,224	73,360,221	76,981,592	80,827,324	84,867,347	89,112,679	93,572,839	98,262,207	103,194,820	108,389,421	113,876,804	59,861,113	0
- Carried loss	0	0	0	0	0	0	0	0	0	0	0	0	0
- Investment allowances	1,532,467	1,689,898	1,689,545	1,774,822	1,862,723	1,955,859	2,053,652	2,156,335	2,264,152	2,377,359	2,496,227	1,279,317	0
- Depreciation allowances	16,302,221	16,082,557	15,955,387	16,487,489	17,496,716	18,400,343	19,424,961	20,612,248	22,034,414	23,834,842	26,370,310	27,493,374	0

COPPER-MOLYBDENUM PROJECT: QUEENSLAND

roads (YTE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
normal+acc (THE)	7,740,577	8,127,686	8,533,906	8,960,686	9,408,720	9,879,156	10,373,114	10,891,769	11,436,358	12,008,176	12,608,584	13,240,211	13,904,211	0
heavy-duty (THE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
mining equip. (THE)	8,561,644	7,954,951	7,421,401	7,727,003	8,087,996	8,521,188	9,051,847	9,720,478	10,590,856	11,826,666	13,761,726	15,745,162	17,745,162	0
exploration (YTE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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= Taxable income	52,001,536	55,660,574	59,336,660	62,365,613	65,507,908	68,755,876	72,094,225	75,493,624	78,896,254	82,177,220	85,809,466	89,200,422	92,200,422	0
Commonwealth income taxes	22,338,191	23,957,586	25,607,544	27,294,864	28,608,182	30,133,638	31,627,703	33,163,343	34,727,067	36,292,277	37,801,521	39,104,354	40,332,674	13,932,674
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STATE ROYALTY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
COMPUTATION REPORT	14	15	16	17	18	19	20	21	22	23	24	25	26	
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* QUEENSLAND, other *														
rail freight royalty	9,899,650	10,394,641	10,914,373	11,460,892	12,033,096	12,634,751	13,266,489	13,929,813	14,626,304	15,357,619	16,125,500	16,934,319	17,784,319	0
conc. rev. royalty	3,959,263	4,157,256	4,365,149	4,583,437	4,812,638	5,053,300	5,305,995	5,571,325	5,849,921	6,142,448	6,449,600	6,765,127	7,094,845	0
net income royalty	3,341,245	3,560,121	3,784,767	3,977,354	4,177,565	4,385,078	4,599,177	4,818,409	5,039,827	5,256,958	5,452,694	5,639,845	5,819,845	0
STATE ROYALTY PAYMENTS	13,240,903	13,954,762	14,699,140	15,437,446	16,210,661	17,019,829	17,865,666	18,740,222	19,646,130	20,614,577	21,570,194	22,539,164	23,539,164	0

COPPER-MILNEBURN PROJECT: WESTERN AUSTRALIA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Revenues	0	0	179,431,075	100,403,449	197,071,442	207,714,024	210,100,546	100,375,549	155,132,072	162,009,443	171,033,936	179,505,433	100,544,914
- Operating costs	0	0	67,102,250	70,499,363	74,024,331	77,725,547	81,611,025	85,692,416	89,977,037	94,475,000	99,199,603	104,159,647	109,367,650
= Operating profits	0	0	112,299,625	117,904,106	123,999,312	129,989,277	134,489,711	102,683,133	65,155,705	68,413,574	71,834,253	75,425,966	79,197,264
- Capital expenditures	130,200,000	136,710,000	6,366,930	6,405,204	7,019,549	7,370,526	7,739,052	8,126,005	8,532,305	8,950,920	9,406,866	9,877,210	10,371,070
- Working capital	0	15,906,250	799,313	839,278	801,242	925,304	971,569	1,020,148	1,071,155	1,124,713	1,180,949	1,239,596	1,301,596
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt-Paid Cash Flow	(130,200,000)	(152,696,250)	105,123,375	110,379,544	115,090,521	121,693,447	127,770,119	93,537,001	55,552,325	58,329,941	61,246,430	64,300,740	67,524,190
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow	(130,200,000)	(152,696,250)	105,123,375	110,379,544	115,090,521	121,693,447	127,770,119	93,537,001	55,552,325	58,329,941	61,246,430	64,300,740	67,524,190
- Commonwealth Income taxes	0	0	0	36,605,913	45,070,010	42,647,993	51,106,057	54,737,025	39,710,556	23,061,397	24,214,447	25,425,190	26,696,449
- State royalty payments	0	0	8,971,594	9,420,173	9,891,102	10,305,741	10,905,020	9,410,770	7,756,441	8,144,433	8,551,697	8,979,202	9,420,246
= After Tax Cash Flow	(130,200,000)	(152,696,250)	96,151,781	64,353,457	60,936,521	63,659,713	65,767,034	29,381,197	8,077,120	27,124,071	20,480,275	20,904,200	31,399,503

TAX PAYMENTS IN CONST. \$

Commonwealth Income taxes	0	0	0	30,115,776	35,314,165	35,555,666	36,320,121	37,048,173	25,602,935	14,157,697	14,157,697	14,157,697	14,157,697
State royalty payments	0	0	7,750,000	7,750,000	7,750,000	7,750,000	7,750,000	6,375,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Total tax payments	0	0	7,750,000	37,865,776	43,064,165	43,305,666	44,070,121	43,423,173	30,602,935	19,157,697	19,157,697	19,157,697	19,157,697

CASH FLOWS IN CONST. \$

Before debt payment CF	(124,000,000)	(130,500,000)	90,009,524	90,009,524	90,009,524	90,009,524	90,009,524	63,309,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524
Before tax CF	(124,000,000)	(130,500,000)	90,009,524	90,009,524	90,009,524	90,009,524	90,009,524	63,309,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524
After tax CF	(124,000,000)	(130,500,000)	82,059,524	52,943,700	47,745,359	47,503,854	46,739,403	19,006,350	5,206,509	16,451,027	16,451,027	16,451,027	16,451,027

COMMONWEALTH INCOME TAX

COMPUTATION REPORT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Gross revenues	0	0	179,431,075	100,403,449	197,071,442	207,714,024	210,100,546	100,375,549	155,132,072	162,009,443	171,033,936	179,505,433	100,544,914
- State royalty payments	0	0	8,971,594	9,420,173	9,891,102	10,305,741	10,905,020	9,410,770	7,756,441	8,144,433	8,551,697	8,979,202	9,420,246
- Operating costs	0	0	67,102,250	70,499,363	74,024,331	77,725,547	81,611,025	85,692,416	89,977,037	94,475,000	99,199,603	104,159,647	109,367,650

Net Inc. before allowances

- Net Inc. before allowances	0	0	103,310,031	100,403,933	113,900,129	119,603,536	125,503,713	93,264,375	57,399,144	60,269,101	63,202,556	66,046,004	69,709,010
- Carried loss	0	4,204,000	13,646,200	0	0	0	0	0	0	0	0	0	0
- Investment allowances	0	0	0	940,002	907,042	1,037,234	1,009,096	1,143,551	1,200,720	1,260,744	1,323,003	1,389,993	1,459,492
- Depreciation allowances	4,204,000	6,702,200	9,777,757	9,543,093	9,337,695	7,466,177	5,501,004	5,776,130	6,064,945	6,360,192	6,606,602	7,020,352	7,371,570

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COPPER-MOLYBDENUM PROJECT: WESTERN AUSTRALIA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25	YEAR 26
Revenues	197,993,160	207,092,010	210,207,459	229,201,032	240,661,923	252,695,020	265,329,771	270,596,259	292,526,072	307,152,376	322,509,994	165,206,372	0
- Operating costs	114,836,033	120,577,034	126,606,726	132,937,062	139,503,916	146,563,111	153,091,267	161,585,830	169,665,122	170,140,370	107,055,797	95,066,096	0
= Operating profits	83,157,127	87,314,904	91,600,733	96,264,769	101,070,000	106,131,900	111,430,504	117,010,429	122,060,950	129,003,990	135,454,190	69,420,276	0
- Capital expenditures	10,009,624	11,434,105	12,005,010	12,606,101	13,236,706	13,090,226	14,593,137	15,322,794	16,000,934	16,093,301	17,730,050	9,090,750	0
- Working capital	1,367,096	1,435,450	1,507,223	1,502,504	1,661,713	1,744,799	1,832,039	1,923,641	2,019,023	2,120,014	2,226,855	(49,102,147)	0
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Plant Cash Flow	70,900,400	74,445,420	70,167,700	82,076,005	86,179,089	90,400,803	95,013,327	99,763,994	104,752,193	109,909,003	115,409,293	109,431,672	0
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	70,900,400	74,445,420	70,167,700	82,076,005	86,179,089	90,400,803	95,013,327	99,763,994	104,752,193	109,909,003	115,409,293	109,431,672	0
- Commonwealth income taxes	20,031,272	29,432,036	30,904,477	32,449,701	34,072,106	35,775,796	37,564,505	39,442,015	41,414,955	43,485,703	45,659,900	47,942,900	22,139,070
- State royalty payments	9,099,650	10,394,641	10,914,373	11,460,092	12,033,096	12,634,751	13,266,409	13,929,013	14,626,304	15,357,619	16,125,500	0,264,319	0
= After Tax Cash Flow	32,969,470	34,617,952	36,340,049	38,166,292	40,074,606	42,078,337	44,102,254	46,391,366	48,710,935	51,146,401	53,703,005	53,224,366	(22,139,070)

TAX PAYMENTS IN CONST. \$

Commonwealth income taxes	14,157,697	14,157,697	14,157,697	14,157,697	14,157,697	14,157,697	14,157,697	14,157,697	14,157,697	14,157,697	14,157,697	14,503,007	6,226,411
State royalty payments	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	2,500,000	0
Total tax payments	19,157,697	19,157,697	19,157,697	19,157,697	19,157,697	19,157,697	19,157,697	19,157,697	19,157,697	19,157,697	19,157,697	17,003,007	6,226,411

CASH FLOWS IN CONST. \$

Before debt prmt CF	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,103,659	0
Before tax CF	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,103,659	0
After tax CF	16,651,027	16,651,027	16,651,027	16,651,027	16,651,027	16,651,027	16,651,027	16,651,027	16,651,027	16,651,027	16,651,027	16,100,652	(6,226,411)

COMMONWEALTH INCOME TAX
COMPUTATION REPORT

	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25	YEAR 26
Gross revenues	197,993,160	207,092,010	210,207,459	229,201,032	240,661,923	252,695,020	265,329,771	270,596,259	292,526,072	307,152,376	322,509,994	165,206,372	0
- State royalty payments	9,099,650	10,394,641	10,914,373	11,460,092	12,033,096	12,634,751	13,266,409	13,929,013	14,626,304	15,357,619	16,125,500	0,264,319	0
- Operating costs	114,836,033	120,577,034	126,606,726	132,937,062	139,503,916	146,563,111	153,091,267	161,585,830	169,665,122	170,140,370	107,055,797	95,066,096	0
= Net Inc. before allowances	73,257,469	76,920,343	80,766,360	84,804,678	89,044,912	93,497,157	98,172,015	103,000,616	108,234,647	113,646,379	119,320,690	61,155,950	0
- Carried loss	0	0	0	0	0	0	0	0	0	0	0	0	0
- Investment allowances	1,532,447	1,609,090	1,609,545	1,774,022	1,062,723	1,955,059	2,053,652	2,156,335	2,264,152	2,377,359	2,496,227	1,279,317	0
- Depreciation allowances	7,740,577	0,127,606	0,533,906	0,960,606	9,400,720	9,079,156	10,373,114	10,091,769	11,436,350	12,000,176	12,600,504	11,740,211	0

[illegible][illegible]

TAX PATENTS IN CONTEST

CLASH IN THE COURT. :



COPPER-MOLYBDENUM PROJECT: SOUTH AUSTRALIA

roads (YTE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
normal-acc (YME)	3,024,000	6,199,200	7,194,750	8,240,093	9,337,695	7,466,177	5,501,084	5,776,138	6,064,945	6,368,192	6,686,682	7,020,932	7,371,970	0
heavy-duty (YMD)	1,260,000	2,583,000	2,583,000	1,323,000	0	0	0	0	0	0	0	0	0	0
mining equip. (YME)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
exploration (YEE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<hr/>														
= Taxable income	(4,284,000)	(13,066,200)	84,063,870	102,690,125	108,520,184	116,292,995	124,446,047	91,054,076	54,011,792	56,712,301	59,548,000	62,525,400	65,651,670	0
Commonwealth income taxes	0	0	0	38,669,380	47,237,457	49,922,964	53,494,778	57,245,182	41,884,875	24,845,424	26,087,695	27,392,000	28,761,604	0
<hr/>														
* SOUTH AUSTRALIA *														
Conc. revenues	0	0	179,431,875	180,403,469	197,823,642	207,714,824	210,100,566	180,375,569	155,132,822	162,009,463	171,833,936	179,585,633	180,564,914	0
STATE ROYALTY PAYMENTS	0	0	4,485,797	4,710,007	4,945,591	5,192,871	5,452,514	4,709,389	3,878,321	4,072,237	4,275,840	4,489,641	4,714,123	0

COPPER-MILWAUKEE PROJECT: SOUTH AUSTRALIA

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Revenues	197,993,140	207,892,810	218,207,459	229,201,832	240,461,923	252,056,020	263,329,771	278,596,259	292,526,072	307,152,376	322,509,994	337,706,372	0	0	0	0	0	0	0	0
- Operating costs	114,836,833	120,577,834	126,466,726	132,937,862	139,583,916	146,543,111	153,891,267	161,505,830	169,665,122	178,148,378	187,055,797	95,864,896	0	0	0	0	0	0	0	0
Operating profits	83,157,127	87,314,974	91,600,733	96,264,769	101,078,000	106,131,908	111,438,504	117,810,429	122,860,950	129,003,998	135,454,196	69,420,276	0	0	0	0	0	0	0	0
- Capital expenditures	10,809,624	11,434,185	12,005,810	12,606,101	13,234,466	13,898,226	14,593,137	15,322,794	16,088,934	16,893,301	17,738,850	9,899,750	0	0	0	0	0	0	0	0
- Working capital	1,367,896	1,435,459	1,507,223	1,582,584	1,661,713	1,744,799	1,832,039	1,923,641	2,019,823	2,120,814	2,226,855	(69,102,147)	0	0	0	0	0	0	0	0
- Net debt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow	70,900,400	76,445,420	78,167,700	82,076,005	86,179,809	90,480,803	95,013,327	99,763,994	104,752,193	109,909,693	115,489,293	109,431,672	0	0	0	0	0	0	0	0
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow	70,900,400	76,445,420	78,167,700	82,076,005	86,179,809	90,480,803	95,013,327	99,763,994	104,752,193	109,909,693	115,489,293	109,431,672	0	0	0	0	0	0	0	0
- Commonwealth income taxes	30,199,740	31,709,757	33,295,245	34,960,807	36,708,007	38,543,408	40,478,578	42,494,107	44,610,812	46,849,753	49,192,241	51,651,853	20,839,871	0	0	0	0	0	0	0
- State royalty payments	4,949,829	5,197,320	5,457,106	5,730,846	6,016,548	6,317,375	6,633,244	6,964,906	7,313,152	7,678,809	8,062,750	4,132,159	0	0	0	0	0	0	0	0
After Tax Cash Flow	35,750,810	37,538,351	39,415,249	41,306,832	43,455,333	45,628,100	47,889,505	50,304,980	52,820,229	55,441,241	58,234,383	53,647,661	(24,839,871)	0	0	0	0	0	0	0

TAX PAYMENTS IN CASH: \$

Commonwealth income taxes	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935	15,252,935
State royalty payments	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Total tax payments	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935	17,752,935

CASH FLOW IN CASH: \$

Before debt payment of	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524
Before tax of	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524
After tax of	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509	10,054,509

COMMONWEALTH INCOME TAX COMPUTATION REPORT

Revenues	197,993,140	207,892,810	218,207,459	229,201,832	240,461,923	252,056,020	263,329,771	278,596,259	292,526,072	307,152,376	322,509,994	337,706,372	0	0	0	0	0	0	0	0
- State royalty payments	4,949,829	5,197,320	5,457,106	5,730,846	6,016,548	6,317,375	6,633,244	6,964,906	7,313,152	7,678,809	8,062,750	4,132,159	0	0	0	0	0	0	0	0
- Operating costs	114,836,833	120,577,834	126,466,726	132,937,862	139,583,916	146,543,111	153,891,267	161,505,830	169,665,122	178,148,378	187,055,797	95,864,896	0	0	0	0	0	0	0	0
Net Inc. before allowances	70,207,290	82,117,643	86,223,546	90,534,724	95,061,440	99,814,533	104,805,259	110,045,522	115,547,790	121,325,100	127,391,440	65,200,117	0	0	0	0	0	0	0	0
- Carried loss	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Investment allowances	1,532,447	1,609,890	1,689,545	1,774,822	1,862,723	1,953,859	2,053,652	2,156,335	2,264,152	2,377,359	2,496,227	1,279,317	0	0	0	0	0	0	0	0
- Depreciation allowances	7,740,577	8,127,446	8,533,906	8,960,446	9,408,720	9,879,156	10,373,114	10,891,769	11,436,358	12,006,176	12,608,504	11,748,211	0	0	0	0	0	0	0	0

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APPENDIX C
BRAZILIAN MINERAL TAXATION SYSTEM

C.1. DESCRIPTION

(1) FEDERAL CORPORATE INCOME TAXATION (Imposto de Renda): IR

Tax Calculation Format:

	Revenue
-	Operating Cost
-	Interest Payments
-	Carried Loss (from year X-1)
-	Depreciation Allowance
-	Amortization Allowance
-	Depletion Allowance
	<hr/> Taxable Income or Carried Loss (for year X+1)
	Income Tax Payment

Carried Loss:

Tax losses may be carried forward for up to four consecutive years and are set off against taxable profits. All tax deductions may be used to create carried loss.

Depreciation Allowance:

Depreciation may be used for those tangible assets which are subject to wear and tear, use and the effects of obsolescence. This includes machinery, vehicles, buildings and plant installations. Depreciation is allowable on a straight-line basis. The maximum rates are authorized by the government although a company may opt to reduce the depreciation rate if necessary.

Provision is also made for accelerated depreciation rates. If equipment is used on a two-shift or three-shift basis, depreciation rates are increased by a factor 1.5 and 2, respectively. In certain cases where machinery and equipment are made nationally, application may be made to increase depreciation rates to twice the normal rates for the first three years after project start-up (This is the special incentive depreciation). Furthermore, in the case where the mine life is expected to be shorter than the depreciable life, accelerated depreciation is allowed.

The 'normal' depreciation rate depends on the type of asset. For example, buildings are subject to a 4 percent rate, most mine equipment and machinery to a 20-25 percent rate, and railway rolling stock to a 10 percent rate.

This study assumes that the hypothetical mines operate on a three-shift

basis and where appropriate, uses accelerated rates if mine lives are short. The special incentive depreciation is not considered.

Maximum depreciation rates for the projects evaluated in this study are assumed, as:

Mill capital costs	20 percent
Open pit mine capital costs	25 percent
Underground mine capital costs	25 percent
Infrastructure	5 percent

Amortization Allowance:

This is applicable only to the costs of acquiring intangible assets which have a limited life and are related to the soil. These include:

- exploration expenditures;
- mine development expenditures;
- roads and dams.

The amortization rate is 20 percent per year on a straight-line basis.

Depletion Allowance:

Depletion write-offs are allowed for mining operations in either one of two ways, as 'Economic' or as a 'Mineral' depletion allowance.

i. Economic Depletion (Cost Depletion):

This is based on the decrease in the assessed value of mineral rights due to annual production. The value of mineral rights is usually defined as the purchase cost. It may also include exploration expenses but, if claimed here, they cannot be amortized.

The decision depends on the remaining mine life, i.e.,

- if greater than 5 years, amortize;
- if less than 5 years, use economic depletion.

Calculation of economic depletion can be expressed as:

$$\text{Economic Depletion} = \frac{(\text{Annual Production})(\text{Value of Mineral Rights})}{\text{Known Reserves}}$$

The deductions will be linear if mine life and production rate stay constant.

Economic depletion requires authorization by the Ministry of Mines and Energy on a yearly basis.

ii. Mineral Depletion (Incentive Depletion):

This option is used in this study. A mine entering production is entitled to a deduction equivalent to 20 percent of sales revenues for a period of 10 years. The deduction may be greater or less than 20 percent in any year as long as the overall percentage deduction over the ten-year period averages 20 percent.

This form of depletion allowance is most commonly used by mining operations in Brazil today (e.g. Mineracao Morro Velho), although economic depletion is occasionally used (e.g. Companhia Minas da Passa Gem).

In general, the choice between the two types of depletion depends on revenues, mine life, operating costs, and purchase and exploration costs. For example, in the case where the proving-up costs per unit of ore is very high compared to the value of the ore, economic depletion might be chosen.

For stratabound copper deposits, it appears that the mineral depletion allowance would generate the most reductions in taxable income and therefore, be the most favourable allowance to use.

Special Regional Incentives:

Special incentives are provided for mineral development in northern and northeastern regions. This takes the form of a 'tax free period'. This period may be as long as 10 years for some situations in Amazonia. After this tax free period, the mine can use the normal allowances specified above.

Inflation Adjustment:

It should be emphasized that Brazilian accounting systems are 'inflation adjusted'. All costs and revenues are updated by the inflation-related ORTN index. This measure counter-acted the very high inflation which prevailed in the Brazilian economy up until early 1985.

Unwritten-off balances for depreciation, amortization, carried losses, and accumulation of incentive depletion associated with mining taxes (IUM, see below) are adjusted for inflation as they are carried forward. The ORTN index measures the purchase price increase of the National Treasury bonds, and is indirectly linked to past inflation, expected future inflation and current market interest rates. This is the basis of most official inflation adjusting mechanisms.

Integrated Company Tax Basis:

The system allows to write off non-cash deductions and losses against other corporate income if available.

Income Tax Payment (ITP):

Corporate income tax is based on a flat rate of 35 percent of taxable income which does not exceed 60 000 ORTNs, and 45 percent of the portion which exceeds 60 000 ORTNs. Thus, it is assessed as following:

$$ITP = 0.35 (TI) + 0.1 (TI - 60\ 000)$$

where TI = Taxable Income in ORTNs,

60 000 ORTNs = US \$496 000 (Aug. 1983)

(2) BRAZILIAN MINING TAXATION (Imposto Unico Sobre Minerais): IUM

Mining taxation applies to both private and public sector mining operations. The mining taxes are collected by the federal government and re-distributed between government levels as follows:

- 10 percent is retained by the federal government for general purposes;
- 70 percent is paid to state governments for mineral sector development;
- 20 percent is paid to municipalities.

In the case where concentrates are sold to a domestic smelter, the net mining tax paid is usually nil, but if the minerals are produced for export, the rate for precious metals is lower than that for base metals, as explained below.

i. Minerals produced for domestic consumption:

Mineral production revenues are valued on an f.o.b. minesite basis. The rates used are:

- 1 percent of revenue for gemstones and precious metals;
- 15 percent of revenue for other mineral commodities.

However, the IUM paid by producers is credited against industrial taxes paid by consumers, i.e., 10 percent of the IUM is credited against 'industrial production tax' (federal) and 90 percent of the IUM is credited against 'internal trade tax' (state). Therefore, the net IUM paid is usually zero. In the case of 'arms length' transactions, the IUM paid is added onto the selling price established between producer and consumer.

ii. Minerals produced for export

Mineral production revenues are valued on f.o.b. port-of-export basis. The mining taxes are levied as follows:

- Gemstones and precious metals: 1 percent of revenue;
- Iron ore and manganese: 7.5 percent of revenue. However, in applying commodity prices, 60 percent of the previous year's price is used as special incentive for iron ore, and 80 percent of the previous year's price is used for manganese.
- Other mineral commodities: 4 percent of revenue.

EXEMPTIONS: No IUM is paid for production of fertilizer minerals and for production of civil engineering related minerals if used for public works.

If a mining organization does not own the surface rights, an additional payment of 10 percent of the IUM must be made by law to the surface rights owner. This payment can be expensed for income tax purposes.

C.2. DETAILED BASE CASE RESULTS

GOLD PROJECT: BRAZIL -- Production for Domestic Supply

CASH FLOW SUMMARY	YEAR	1	2	3	4	5	6	7	8	9	10	11	12
PROJECT BASIS													
Concentrate revenues		0	0	9,181,124	9,640,180	10,122,189	10,628,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,781	14,242,977
- Operating costs		0	0	4,858,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,538	6,506,065	6,825,068	7,164,322	7,524,438
= Operating profits		0	0	4,322,675	4,547,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,459	6,718,539
- Capital expenditures		5,326,650	5,592,983	254,478	267,411	280,782	294,821	309,562	325,040	341,292	358,357	376,275	395,088
- Working capital		0	1,160,933	58,047	60,949	63,996	67,196	70,556	74,084	77,788	81,677	85,761	(1,091,037)
+ New debt		0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable		0	0	0	0	0	0	0	0	0	0	0	0
= Net Debt-Fin Cash Flow		(5,326,650)	(6,753,915)	4,017,951	4,218,049	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,641	5,936,344	6,214,247
- Debt's principal payments		0	0	0	0	0	0	0	0	0	0	0	0
= Net Total Cash Flow		(5,326,650)	(6,753,915)	4,017,951	4,218,049	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,641	5,936,344	6,214,247
- Corp. Income taxes		0	0	175,957	197,062	344,796	734,523	967,500	1,028,735	1,049,391	1,066,041	1,055,304	955,134
- Mining taxes		0	0	0	0	0	0	0	0	0	0	0	0
= A-T Cash Flow (Cov. \$)		(5,326,650)	(6,753,915)	5,041,994	4,021,786	4,084,995	3,916,757	3,916,345	4,107,302	4,335,048	4,587,619	4,881,048	5,259,113

TAX PAYMENTS IN CONST. \$

Corporate income taxes	0	0	151,998	162,124	285,827	548,113	687,584	690,874	676,447	654,457	617,814	531,854
Mining tax payments	0	0	0	0	0	0	0	0	0	0	0	0
Total tax payments	0	0	151,998	162,124	285,827	548,113	687,584	690,874	676,447	654,457	617,814	531,854

CASH FLOWS IN CONST. \$

Before debt print CF	(5,873,000)	(6,126,000)	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	4,574,000
Before tax CF	(5,873,000)	(6,126,000)	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	4,574,000
After tax CF	(5,873,000)	(6,126,000)	3,318,859	3,308,734	3,185,838	2,922,744	2,783,273	2,779,984	2,794,418	2,816,408	2,853,843	2,882,146	3,482,146

CORPORATE INCOME TAX RETURN

Gross revenues	0	0	9,181,124	9,640,180	10,122,189	10,628,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,781	14,242,977
- Operating costs	0	0	4,858,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,538	6,506,065	6,825,068	7,164,322	7,524,438
- Mining taxes	0	0	0	0	0	0	0	0	0	0	0	0

Net Income before allowances

Net Income before allowances	0	0	4,322,675	4,547,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,459	6,718,539
- Carried losses	0	0	0	0	0	0	0	0	0	0	0	0
- Depreciation allowances	0	0	1,724,146	1,798,542	1,496,875	883,173	429,597	444,285	529,528	648,988	837,117	1,232,286
- Other equities, 25% std	0	0	798,481	845,898	542,381	274,538	235,754	217,542	317,352	415,065	549,816	892,278

- all P&E, 200 sld :
- infrastructure, 53 sld :
- depletion allowances :
- deferred charges amortiza :

all PE.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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OLD PROJECT: BRAZIL -- Production for Export

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	1	2	3	4	5	6	7	8	9	10	11	12
Concentrate revenues	0	0	9,181,124	9,648,100	10,122,189	10,628,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,701	14,242,937
- Operating costs	0	0	4,850,449	5,092,971	5,347,428	5,615,001	5,895,751	6,190,538	6,508,065	6,825,068	7,146,322	7,524,438
= Operating profits	0	0	4,330,675	4,547,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,380	6,718,499
- Capital expenditures	5,326,450	5,592,983	254,678	267,411	280,782	294,821	309,562	325,040	341,292	358,357	376,275	395,088
- Working capital	0	1,160,933	58,847	60,949	63,996	67,196	70,556	74,084	77,788	81,677	85,761	(1,891,837)
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt-Int Cash Flow	(5,326,450)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,641	5,936,344	6,214,217
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow	(5,326,450)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,641	5,936,344	6,214,217
- Corp. Income taxes	0	0	143,823	163,322	319,246	486,496	917,281	969,005	994,825	1,007,997	994,263	891,841
- Mining taxes	0	0	91,811	96,402	181,222	186,283	111,597	117,177	123,036	129,188	135,647	142,479
= After Tax Cash flow (cur. \$)	(5,326,450)	(6,753,915)	3,782,317	3,959,125	4,089,323	3,858,501	3,854,966	4,042,854	4,267,378	4,516,566	4,806,434	5,189,776

TAX PAYMENTS IN CASH, \$

Corporate income taxes	0	0	124,240	134,365	250,130	512,423	651,895	655,184	648,757	619,767	581,325	696,145
Mining tax payments	0	0	79,310	79,310	79,310	79,310	79,310	79,310	79,310	79,310	79,310	79,310
Total tax payments	0	0	203,550	213,675	329,440	591,733	731,205	734,494	728,067	699,077	660,635	775,455

CASH FLOWS IN CASH, \$

Before debt payment of	(5,873,000)	(6,126,000)	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857
Before tax of	(5,873,000)	(6,126,000)	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857
After tax of	(5,873,000)	(6,126,000)	3,267,387	3,267,182	3,141,610	2,879,124	2,739,633	2,736,363	2,758,798	2,772,788	2,810,222	3,998,325

CORPORATE INCOME TAX REPORT

Before revenues	0	0	9,181,124	9,648,100	10,122,189	10,628,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,701	14,242,937
- Operating costs	0	0	4,850,449	5,092,971	5,347,428	5,615,001	5,895,751	6,190,538	6,508,065	6,825,068	7,146,322	7,524,438
- Mining taxes	0	0	91,811	96,402	181,222	186,283	111,597	117,177	123,036	129,188	135,647	142,479

Net Income before allowances

Before revenues	0	0	4,238,864	4,458,887	4,673,317	4,907,815	5,152,366	5,409,984	5,688,803	5,984,587	6,282,733	6,575,869
- Carried losses	0	0	0	0	0	0	0	0	0	0	0	0
- Depreciation allowances	0	0	1,726,160	1,788,582	1,896,875	2,043,373	2,235,754	247,542	317,359	448,988	637,117	1,232,296
- Size reports, 25% old	0	0	799,481	845,898	542,381	224,538	235,754	217,542	317,359	415,085	549,816	892,278

[illegible][illegible]

INSTEAD TAX COMPUTATION											
tax from gov't, gen.	0	91,811	96,402	101,222	186,283	111,597	117,177	123,836	129,108	135,647	142,429
tax from firm, compen.	0	0	0	0	0	0	0	0	0	0	0
tax from others	0	0	0	0	0	0	0	0	0	0	0
tax from others	0	0	0	0	0	0	0	0	0	0	0
total	0	91,811	96,402	101,222	186,283	111,597	117,177	123,836	129,108	135,647	142,429
NOTING TAX PAYMENTS											
tax from gov't, gen.	0	91,811	96,402	101,222	186,283	111,597	117,177	123,836	129,108	135,647	142,429
tax from firm, compen.	0	0	0	0	0	0	0	0	0	0	0
tax from others	0	0	0	0	0	0	0	0	0	0	0
total	0	91,811	96,402	101,222	186,283	111,597	117,177	123,836	129,108	135,647	142,429

LEAD-TIME PROJECT: BRAZIL (Production for Domestic Supply)

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	1	2	3	4	5	6	7	8	9	10	11	12	13
Concentrate revenues	0	0	0	0	76,576,894	80,405,230	84,426,025	88,447,327	65,931,449	69,220,822	72,489,423	76,323,894	80,140,889
- Operating costs	0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,566	42,750,434	44,869,408	47,181,229
= Operating profits	0	0	0	0	44,669,855	46,903,347	49,248,515	51,710,941	27,148,244	28,505,656	29,738,979	31,427,486	32,998,660
- Capital expenditures	21,525,000	22,481,250	23,731,313	24,917,870	2,297,307	2,412,172	2,532,781	2,659,420	2,792,391	2,932,810	3,078,611	3,232,541	3,394,148
- Working capital	0	0	0	0	10,331,863	542,420	549,541	598,018	627,919	659,314	692,280	728,894	763,239
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Paid Cash Flow	(21,525,000)	(22,481,250)	(23,731,313)	(25,249,681)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,048	27,468,058	28,841,453
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	(21,525,000)	(22,481,250)	(23,731,313)	(25,249,681)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,048	27,468,058	28,841,453
- Corp. income taxes	0	0	0	0	6,886,327	8,490,948	10,191,991	11,969,686	3,869,863	4,120,210	4,383,938	4,660,827	4,951,572
- Ruling taxes	0	0	0	0	0	0	0	0	0	0	0	0	0
= A-T Cash flow (cur \$)	(21,525,000)	(22,481,250)	(23,731,313)	(25,249,681)	34,969,631	35,457,807	35,954,202	36,483,817	19,858,072	20,794,113	21,776,117	22,807,221	23,889,881

TAX PAYMENTS IN CONST. \$

Corporate income taxes	0	0	0	0	5,395,774	6,342,846	7,243,258	8,101,555	2,494,832	2,529,456	2,563,193	2,595,324	2,625,924
Ruling tax payments	0	0	0	0	0	0	0	0	0	0	0	0	0
Total tax payments	0	0	0	0	5,395,774	6,342,846	7,243,258	8,101,555	2,494,832	2,529,456	2,563,193	2,595,324	2,625,924

CASH FLOWS IN CONST. \$

Before debt pay of	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
Before tax of	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
After tax of	(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	27,399,464	28,453,192	29,551,960	30,693,483	12,801,286	12,765,782	12,732,805	12,699,914	12,669,534
COMPOSITE INCOME TAX REPORT	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
Gross revenues	0	0	0	0	76,576,894	80,405,230	84,426,025	88,447,327	65,931,449	69,220,822	72,489,423	76,323,894	80,140,889
- Operating costs	0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,566	42,750,434	44,869,408	47,181,229
- Ruling taxes	0	0	0	0	0	0	0	0	0	0	0	0	0
= Net income bef. allmces	0	0	0	0	44,669,855	46,903,347	49,248,515	51,710,941	27,148,244	28,505,656	29,738,979	31,427,486	32,998,660
- Carried losses	0	0	0	0	0	0	0	0	0	0	0	0	0
- Depreciation allowances	0	0	0	0	12,517,558	10,393,323	8,162,884	5,820,923	3,792,689	3,971,897	4,052,651	4,208,191	4,349,859
- Other equities, 25% sid	0	0	0	0	2,836,195	2,547,268	2,743,878	1,975,327	2,021,593	2,122,673	2,228,886	2,340,246	2,457,259

[illegible]

INCOME TAX PAYABLE

LEAD-ZINC PROJECT: BRAZIL (Production for Domestic Supply)

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	14	15	16	17	18	19	19
Concentrate revenues	84,147,093	88,354,448	92,772,178	97,418,779	102,281,317	85,098,856	
- Operating costs	69,498,290	51,973,204	54,571,845	57,388,458	60,165,481	50,857,600	
= Operating profits	14,648,803	36,381,243	38,200,333	40,110,321	42,115,837	35,040,376	
- Capital expenditures	3,563,877	3,742,871	3,929,174	4,125,633	4,331,915	3,604,153	
- Working capital	801,481	841,471	883,544	927,722	974,188	721,479,077	
+ New debt	0	0	0	0	0	0	
- Interest payable	0	0	0	0	0	0	
= Def. Debt-Paid Cash Flow	30,283,525	31,797,701	33,387,587	35,056,964	36,809,814	52,915,300	
- Debt's principal payment	0	0	0	0	0	0	
= Def. Tot Net Cash Flow	30,283,525	31,797,701	33,387,587	35,056,964	36,809,814	52,915,300	
- Corp. Income taxes	5,256,852	13,078,637	13,048,758	14,074,653	13,995,349	9,183,555	
- Mining taxes	0	0	0	0	0	0	
= A-T Cash flow (cor. &)	25,026,673	18,719,064	19,546,829	20,982,311	22,814,465	43,731,745	

TAX PAYMENTS IN CONST. \$

Corporate Income Taxes	2,655,869	6,479,616	6,340,611	6,140,724	5,815,357	3,649,189
Mining tax payments	0	0	0	0	0	0
Total tax payments	2,655,869	6,479,616	6,340,611	6,140,724	5,815,357	3,649,189

CASH FLOWS IN CONST. \$

Before debt paid off	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731
Before tax off	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731
After tax off	12,640,179	8,815,622	8,954,627	9,134,514	9,479,081	17,072,562

COMPANIE INCOME TAX REPORT

Gross revenues	84,147,093	88,354,448	92,772,178	97,418,779	102,281,317	85,098,856
- Operating costs	69,498,290	51,973,204	54,571,845	57,388,458	60,165,481	50,857,600
- Mining taxes	0	0	0	0	0	0

= Def. Income before allowances	34,648,803	36,381,243	38,200,333	40,110,321	42,115,837	35,040,376
- Carried losses	0	0	0	0	0	0
- Depreciation allowances	4,507,010	4,882,331	5,788,458	7,159,835	9,325,793	12,929,946
- Allowances, 25% old	2,589,122	2,789,128	3,473,134	4,542,742	6,227,376	9,838,686

LEAD-ZINC PROJECT: MATH (Production for Domestic Supply)

all P&E, 20% sld	720,854	806,340	1,104,635	1,418,250	1,874,382	2,692,505
Infrastructure, 5% sld	1,206,835	1,206,835	1,206,835	1,206,835	1,206,835	1,206,835
- Population allowances	16,829,419	0	0	0	0	0
- Deferred chgs cartage	1,357,409	1,357,409	1,357,409	1,357,409	1,357,409	1,357,409
= Taxable Income	11,754,485	30,221,223	31,980,972	31,592,796	31,432,335	28,752,741
INCOME TAX PAYABLE	5,254,852	13,479,657	13,648,750	14,074,633	13,995,349	9,183,553

LEAD-ZINC PROJECT: BRAZIL (Production for Export)

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Concentrate revenues	0	0	0	0	76,576,094	80,405,730	84,426,025	88,647,327	65,931,449	69,220,022	72,609,423	76,323,094	80,140,009
- Operating costs	0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,366	42,750,684	44,896,400	47,141,229
= Operating profits	0	0	0	0	44,669,055	46,903,347	49,248,515	51,710,941	27,148,244	28,505,656	29,858,739	31,427,694	32,998,780
- Capital expenditures	21,525,000	22,601,250	23,731,313	24,917,070	2,297,307	2,412,172	2,532,781	2,659,420	2,792,391	2,932,010	3,078,611	3,232,541	3,394,160
- Working capital	0	0	0	10,331,003	516,590	542,420	569,541	598,018	627,919	659,314	692,280	726,894	763,239
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Paid Cash Flow	(21,525,000)	(22,601,250)	(23,731,313)	(35,249,081)	41,855,950	43,940,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,048	27,468,050	28,841,453
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	(21,525,000)	(22,601,250)	(23,731,313)	(35,249,081)	41,855,950	43,940,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,048	27,468,050	28,841,453
- Corp. income taxes	0	0	0	0	5,500,143	7,051,645	8,672,323	10,374,034	2,682,297	2,874,113	3,075,521	3,286,999	3,509,050
- Mining taxes	0	0	0	0	3,063,076	3,216,230	3,377,041	3,545,893	2,637,250	2,769,121	2,907,577	3,052,956	3,205,604
= A-T Cash flow (cur \$)	(21,525,000)	(22,601,250)	(23,731,313)	(35,249,081)	33,284,739	33,668,881	34,096,830	34,533,576	18,400,380	19,271,097	20,176,950	21,120,094	22,126,799

TAX PAYMENTS IN CONST. \$

Corporate income taxes	0	0	0	0	4,315,774	5,262,046	6,163,250	7,021,555	1,729,032	1,764,456	1,790,193	-1,830,324	1,860,924
Mining tax payments	0	0	0	0	2,400,000	2,400,000	2,400,000	2,400,000	1,780,000	1,780,000	1,780,000	1,780,000	1,780,000
Total tax payments	0	0	0	0	6,715,774	7,662,046	8,563,250	9,421,555	3,499,032	3,464,456	3,490,193	3,530,324	3,540,924

CASH FLOWS IN CONST. \$

Before debt paymt CF	(20,500,000)	(20,500,000)	(20,500,000)	(20,000,000)	32,795,230	32,795,230	32,795,230	32,795,230	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230
Before tax CF	(20,500,000)	(20,500,000)	(20,500,000)	(20,000,000)	32,795,230	32,795,230	32,795,230	32,795,230	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230
After tax CF	(20,500,000)	(20,500,000)	(20,500,000)	(20,000,000)	26,079,466	25,133,192	24,231,900	23,373,683	11,866,206	11,830,782	11,797,045	11,764,914	11,734,314

CORPORATE INCOME TAX
REPORT

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Gross revenues	0	0	0	0	76,576,094	80,405,730	84,426,025	88,647,327	65,931,449	69,220,022	72,609,423	76,323,094	80,140,009
- Operating costs	0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,366	42,750,684	44,896,400	47,141,229
- Mining taxes	0	0	0	0	3,063,076	3,216,230	3,377,041	3,545,893	2,637,250	2,769,121	2,907,577	3,052,956	3,205,604
= Net income bef. allowncs	0	0	0	0	41,606,779	43,687,110	45,871,474	48,165,047	24,510,906	25,736,535	27,023,362	28,374,530	29,795,256
- Carried losses	0	0	0	0	0	0	0	0	0	0	0	0	0
- Depreciation allowances	0	0	0	0	12,517,530	10,393,323	8,162,004	5,820,923	3,792,609	3,921,097	4,052,651	4,200,191	4,349,839
- Other expnts, 25% sld	0	0	0	0	2,836,195	2,547,260	2,243,078	1,925,327	2,021,593	2,122,673	2,228,006	2,340,246	2,457,299

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LEAD-ZINC PROJECT: DRAZIL (Production for Export)

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Concentrate revenues	84,147,093	88,354,448	92,772,170	97,410,779	102,281,317	85,898,054
- Operating costs	49,498,290	51,973,204	54,571,865	57,300,450	60,165,481	58,057,680
= Operating profits	34,648,803	36,381,243	38,200,305	40,110,321	42,115,837	35,840,374
- Capital expenditures	3,543,877	3,742,871	3,929,174	4,125,433	4,331,945	3,684,153
- Working capital	801,401	841,471	883,544	927,722	974,108	(21,479,077)
- New debt	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0
= Bef. Debt-Pmt Cash Flow	30,283,525	31,797,701	33,387,587	35,054,966	36,809,814	52,915,300
- Debt's principal payment	0	0	0	0	0	0
= Bef. Tax Net Cash Flow	30,283,525	31,797,701	33,387,587	35,054,966	36,809,814	52,915,300
- Corp. income taxes	3,742,285	11,880,277	12,178,859	12,321,259	12,154,285	7,651,790
- Mining taxes	3,365,884	3,534,178	3,710,887	3,896,431	4,091,253	3,483,922
= A-T Cash Flow (cur \$)	23,175,437	16,383,247	17,505,841	18,839,276	20,564,276	41,859,588

TAX PAYMENTS IN CONST \$

Corporate income taxes	1,890,868	5,714,616	5,575,611	5,375,724	5,058,357	3,057,189
Mining tax payments	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,360,000
Total tax payments	3,590,868	7,414,616	7,275,611	7,075,724	6,758,357	4,417,189

CASH FLOWS IN CONST \$

Before debt pmt CF	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731
Before tax CF	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731
After tax CF	11,785,170	7,888,622	8,819,627	8,219,514	8,544,881	16,724,542

CORPORATE INCOME TAX
REPORT

	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Gross revenues	84,147,093	88,354,448	92,772,170	97,410,779	102,281,317	85,898,054
- Operating costs	49,498,290	51,973,204	54,571,865	57,300,450	60,165,481	58,057,680
- Mining taxes	3,365,884	3,534,178	3,710,887	3,896,431	4,091,253	3,483,922
= Net income bef. allowances	31,282,919	32,847,065	34,489,418	36,213,899	38,024,584	31,636,454
- Carried losses	0	0	0	0	0	0
- Depreciation allowances	4,587,810	4,882,331	5,704,624	7,159,835	9,325,793	12,929,946
- mine equants, 25% sld	2,580,122	2,789,128	3,473,134	4,542,742	6,227,376	9,030,606

LEAD-TIME PROJECT BRAZIL (Production for Export)

all P&E, 20% slid	770,854	886,348	1,104,655	1,410,758	1,891,582	2,692,505
infrastructure, 5% slid	1,206,835	1,206,835	1,206,835	1,206,835	1,206,835	1,206,835
- Depletion allowances	16,829,419	0	0	0	0	0
- Deferred charge amortiza	1,357,689	1,357,689	1,357,689	1,357,689	1,357,689	1,357,689
taxable income	8,500,001	26,487,045	27,347,105	27,696,365	27,341,102	17,340,819
INCOME TAX PAYABLE	3,742,205	11,888,277	12,170,859	12,321,259	12,154,985	7,651,790
RETURNING TAX COMPUTATION						
tax from gold, spec	0	0	0	0	0	0
tax from iron, copper	0	0	0	0	0	0
tax from others	3,345,004	3,534,178	3,710,087	3,896,431	4,091,253	3,403,922
RETURNING TAX PAYMENTS	3,345,004	3,534,178	3,710,087	3,896,431	4,091,253	3,403,922

COPPER-MILITARY PROJECT: BRAZIL (Production for Domestic Supply)

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Concentrate revenues	0	0	179,431,075	180,403,449	197,823,442	207,714,824	218,100,546	188,375,549	155,132,822	162,889,463	171,833,936	179,585,433	188,544,914
- Operating costs	0	0	67,142,250	70,499,343	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,000	99,199,683	104,159,647	109,367,658
= Operating profits	0	0	112,289,825	117,904,106	123,799,312	129,989,277	136,488,721	102,683,133	65,155,785	68,413,574	71,834,253	75,425,786	79,197,264
- Capital expenditures	130,280,000	136,710,000	6,346,930	6,405,204	7,019,549	7,378,526	7,739,052	8,126,005	8,532,395	8,958,270	9,406,864	9,877,218	10,371,870
- Working capital	0	15,986,250	799,313	839,278	881,242	925,304	971,569	1,020,148	1,071,155	1,124,713	1,180,949	1,239,996	1,301,996
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Net Debt-Paid Cash Flow	(130,280,000)	(152,696,250)	105,123,375	110,379,544	115,890,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,388,760	67,524,190
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Net Tax Cash Flow	(130,280,000)	(152,696,250)	105,123,375	110,379,544	115,890,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,388,760	67,524,190
- Corp. Income taxes	0	0	15,618,346	16,606,555	19,778,824	20,605,206	26,252,718	23,519,832	9,480,461	10,065,770	10,680,344	11,325,449	20,974,061
- Mining taxes	0	0	0	0	0	0	0	0	0	0	0	0	0
= A-T Cash flow (cur. 8)	(130,280,000)	(152,696,250)	89,505,029	93,772,989	96,111,697	93,088,241	91,525,401	69,987,169	46,071,864	48,264,171	50,566,092	52,983,310	38,550,137

TAX PAYMENTS IN CONST. 8

Corporate income taxes	0	0	13,484,804	13,642,254	15,497,226	21,405,343	25,764,130	15,939,453	6,111,190	6,179,510	6,244,577	6,306,545	15,365,563
Mining tax payments	0	0	0	0	0	0	0	0	0	0	0	0	0
Total tax payments	0	0	13,484,804	13,642,254	15,497,226	21,405,343	25,764,130	15,939,453	6,111,190	6,179,510	6,244,577	6,306,545	15,365,563

CASH FLOWS IN CONST. 8

Before debt payment	(124,000,000)	(130,500,000)	90,809,524	90,809,524	90,809,524	90,809,524	90,809,524	63,309,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524
After tax CF	(124,000,000)	(130,500,000)	90,809,524	90,809,524	90,809,524	90,809,524	90,809,524	63,309,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524
After tax CF	(124,000,000)	(130,500,000)	77,324,720	77,147,270	75,312,290	65,404,181	65,045,394	47,370,071	29,696,334	29,638,014	29,564,547	29,562,978	28,443,961

CORPORATE INCOME TAX RETURN

Gross revenues	0	0	179,431,075	180,403,449	197,823,442	207,714,824	218,100,546	188,375,549	155,132,822	162,889,463	171,833,936	179,585,433	188,544,914
- Operating costs	0	0	67,142,250	70,499,343	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,000	99,199,683	104,159,647	109,367,658
- Mining taxes	0	0	0	0	0	0	0	0	0	0	0	0	0

= Net income bef. allowances	0	0	112,289,825	117,904,106	123,799,312	129,989,277	136,488,721	102,683,133	65,155,785	68,413,574	71,834,253	75,425,786	79,197,264
- Carried losses	0	0	0	0	0	0	0	0	0	0	0	0	0
- Depreciation allowances	0	0	40,805,482	42,403,793	39,357,103	23,748,079	11,344,449	11,722,823	12,099,094	12,494,182	12,909,022	13,344,405	13,801,966
allow expmts, 25% sld	0	0	10,930,697	12,237,346	8,884,369	5,363,722	5,631,908	5,913,503	6,209,178	6,519,637	6,845,619	7,187,900	7,547,295

COPPER-MALINDUM PROJECT, BRAZIL (Production for Domestic Supply)

bill PGE, 200 sid :	0	0	25,677,330	25,969,852	26,275,359	14,206,982	1,535,186	1,611,945	1,692,543	1,777,170	1,844,028	1,959,330	2,057,296
Infrastructure, 50 sid :	0	0	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375
- Depletion allowances	0	0	35,806,375	37,600,694	39,564,728	41,542,965	43,620,113	37,675,114	31,026,564	32,577,093	34,206,787	35,917,127	0
- Deferred chgs amortiz	0	0	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696
= Taxable income	0	0	34,049,152	37,078,924	44,126,785	63,929,538	80,755,463	52,536,520	21,281,479	22,592,604	23,969,748	25,415,539	26,646,482
INCOME TAX PAYABLE	0	0	15,610,346	16,606,555	19,778,824	28,685,206	36,252,718	23,549,832	9,480,461	10,065,770	10,680,346	11,325,649	20,971,061

COPPER-MOLYBDENUM PROJECT: BMAZIL (Production for Domestic Supply)

CASH FLOW SUMMARY	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25
PROJECT COSTS												
- Concentrate revenues	197,993,160	207,092,010	210,207,459	229,201,032	240,641,923	252,695,020	265,329,771	270,536,259	292,526,072	307,152,376	322,509,994	165,206,372
- Operating costs	114,836,033	120,577,034	126,606,726	132,937,062	139,503,916	146,563,111	153,091,267	161,505,030	169,665,122	178,140,370	187,053,797	95,066,096
= Operating profits	83,157,127	87,314,904	91,600,733	96,264,769	101,078,000	106,131,900	111,438,504	117,010,429	122,860,950	129,003,990	135,454,190	69,420,276
- Capital expenditures	10,009,624	11,434,105	12,005,010	12,604,101	13,236,406	13,890,226	14,593,137	15,327,794	16,000,934	16,093,301	17,730,050	9,090,750
- Working capital	1,367,096	1,435,450	1,507,223	1,582,504	1,661,713	1,744,799	1,832,039	1,923,641	2,019,023	2,120,014	2,226,055	(69,102,107)
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Paid Cash Flow	70,900,400	74,645,420	78,167,700	82,076,005	86,179,009	90,400,003	95,013,327	99,763,994	104,752,193	109,909,003	115,409,293	109,431,672
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tot Net Cash Flow	70,900,400	74,645,420	78,167,700	82,076,005	86,179,009	90,400,003	95,013,327	99,763,994	104,752,193	109,909,003	115,409,293	109,431,672
- Corp. Income taxes	30,534,050	32,172,030	33,091,920	35,607,010	37,593,900	39,504,974	41,675,509	43,634,021	44,448,914	44,670,210	43,572,212	9,764,116
- Mining taxes	0	0	0	0	0	0	0	0	0	0	0	0
= A-T Cash flow (cor. s)	40,366,350	42,473,390	44,275,772	46,378,274	48,585,901	50,903,909	53,337,818	56,129,173	60,303,279	65,319,193	71,917,076	99,670,557

TAX PAYMENTS IN CONST. \$

Corporate Income taxes	15,421,770	15,475,301	15,526,203	15,574,037	15,621,079	15,665,110	15,707,061	15,662,306	15,194,056	14,543,339	13,510,346	2,952,709
Mining tax payments	0	0	0	0	0	0	0	0	0	0	0	0
Total tax payments	15,421,770	15,475,301	15,526,203	15,574,037	15,621,079	15,665,110	15,707,061	15,662,306	15,194,056	14,543,339	13,510,346	2,952,709

CASH FLOWS IN CONST. \$

Before debt payment of	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,103,459
Before tax of	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,103,459
After tax of	20,307,753	20,334,223	20,203,241	20,234,607	20,100,445	20,144,405	20,102,463	20,147,130	20,614,640	21,266,105	22,299,177	30,150,069

CORPORATE INCOME TAX RETURN

Gross revenues	197,993,160	207,092,010	210,207,459	229,201,032	240,641,923	252,695,020	265,329,771	270,536,259	292,526,072	307,152,376	322,509,994	165,206,372
- Operating costs	114,836,033	120,577,034	126,606,726	132,937,062	139,503,916	146,563,111	153,091,267	161,505,030	169,665,122	178,140,370	187,053,797	95,066,096
- Mining taxes	0	0	0	0	0	0	0	0	0	0	0	0

= Net Income bef. allowances

Carried losses	0	0	0	0	0	0	0	0	0	0	0	0
- Depreciation allowances	14,202,196	16,706,437	15,315,090	15,071,016	16,455,530	17,060,446	17,711,999	18,911,620	22,933,004	28,564,901	37,434,006	46,524,756
- Allowances, 25% old	7,924,660	8,320,093	8,736,937	9,173,704	9,632,473	10,114,097	10,619,002	11,150,792	14,295,447	18,697,965	25,631,929	32,739,243

COPPER-MOLYBDENUM PROJECT: BRAZIL (Production for Domestic Supply)

mill P&E, 20% sid	2,160,161	2,268,169	2,381,570	2,500,656	2,625,689	2,756,974	2,894,822	3,563,453	4,441,832	5,669,641	7,684,701	9,580,138
infrastructure, 5% sid	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375
- Depletion allowances	0	0	0	0	0	0	0	0	0	0	0	0
- Deferred chrgs amortizn	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696
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= Taxable income	68,126,236	71,779,851	75,616,147	79,644,258	83,873,775	88,314,767	92,977,809	97,350,113	99,170,481	99,690,321	97,271,496	22,146,825
INCOME TAX PAYABLE	30,534,850	32,172,089	33,891,920	35,697,811	37,593,980	39,584,974	41,675,509	43,634,821	44,448,914	44,670,210	43,572,217	9,761,116

COPPER-METAL PROJECT: SOUTIL (Production for Export)

CASH FLOW SUMMARY	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
PROJECT BASIS													
Concentrate revenues	0	0	179,431,875	180,403,449	197,823,642	207,714,824	218,100,544	186,375,549	155,132,822	162,889,443	171,833,934	179,585,433	188,544,914
- Operating costs	0	0	67,142,258	70,499,343	74,024,331	77,725,547	81,611,875	85,692,416	89,977,037	94,475,000	99,199,483	104,159,647	109,367,459
= Operating profits	0	0	112,289,617	109,904,106	123,799,312	129,989,277	136,488,669	100,683,133	65,155,785	68,414,443	71,834,451	75,425,786	79,177,454
- Capital expenditures	138,200,000	134,710,000	6,344,938	6,485,204	7,819,549	7,378,526	7,239,852	8,126,005	8,532,385	8,958,928	9,406,864	9,877,210	10,371,078
- Working capital	0	15,906,250	799,313	839,278	881,242	925,304	971,569	1,020,148	1,071,155	1,124,713	1,180,949	1,239,996	1,301,996
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Pre-Tax Cash Flow	(138,200,000)	(132,606,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,741	61,246,438	64,308,768	67,524,190
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Pre-Tax Net Cash Flow	(138,200,000)	(132,606,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,741	61,246,438	64,308,768	67,524,190
- Corp. Income taxes	0	0	12,300,572	13,215,292	16,217,998	24,944,339	32,326,908	20,159,072	6,688,070	7,113,760	7,601,735	8,093,188	8,579,892
- Mining taxes	0	0	7,177,275	7,536,139	7,912,946	8,308,593	8,724,023	7,535,823	6,205,313	6,515,579	6,841,357	7,183,425	7,542,597
= A-T Cash Flow (cur. \$)	(138,200,000)	(132,606,250)	85,545,528	89,628,113	91,767,577	88,420,515	86,727,189	65,842,906	42,658,942	44,698,602	46,803,344	49,032,227	51,401,709

TAX PAYMENTS IN CONST. \$

Corporate Income taxes	0	0	10,694,884	10,872,254	12,797,276	10,715,343	22,974,130	13,444,453	4,311,190	4,379,510	4,444,577	4,506,545	4,565,543
Mining tax payments	0	0	6,208,000	6,208,000	6,208,000	6,208,000	6,200,000	5,100,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Total tax payments	0	0	16,894,884	17,072,254	18,997,276	16,923,343	29,174,130	18,544,453	8,311,190	8,379,510	8,444,577	8,506,545	8,565,543

CASH FLOWS IN CONST. \$

Before debt payment	(124,000,000)	(130,500,000)	90,809,524	90,809,524	90,809,524	90,809,524	90,809,524	63,309,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524
Before tax CF	(124,000,000)	(130,500,000)	90,809,524	90,809,524	90,809,524	90,809,524	90,809,524	63,309,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524
After tax CF	(124,000,000)	(130,500,000)	73,914,770	73,732,278	71,902,290	65,994,181	61,635,394	44,565,071	27,498,334	27,438,014	27,364,947	27,302,978	27,243,961

CORPORATE INCOME TAX REPORT

Gross Revenues	0	0	179,431,875	180,403,449	197,823,642	207,714,824	218,100,544	186,375,549	155,132,822	162,889,443	171,833,934	179,585,433	188,544,914
- Operating costs	0	0	67,142,258	70,499,343	74,024,331	77,725,547	81,611,875	85,692,416	89,977,037	94,475,000	99,199,483	104,159,647	109,367,459
- Mining taxes	0	0	7,177,275	7,536,139	7,912,946	8,308,593	8,724,023	7,535,823	6,205,313	6,515,579	6,841,357	7,183,425	7,542,597

Net Income before allowances

Net Income before allowances	0	0	105,112,350	110,367,948	115,886,366	121,686,444	127,764,718	95,148,131	58,950,472	61,897,996	64,992,896	68,242,548	71,654,607
- Carried losses	0	0	0	0	0	0	0	0	0	0	0	0	0
- Depreciation allowances	0	0	40,885,462	42,403,793	39,357,103	23,748,079	11,344,469	11,772,823	12,099,896	12,494,182	12,989,822	13,344,465	13,881,946
- Allowances, 25% std	0	0	10,938,637	12,237,366	8,884,369	5,363,722	5,631,908	5,913,503	6,209,178	6,519,637	6,845,619	7,187,988	7,542,795

COPPER-MOLYBDENUM PROJECT: BRAZIL (Production for Export)

mill P&E, 20% sld	0	0	25,677,330	25,969,852	26,275,359	14,206,982	1,535,186	1,611,945	1,692,543	1,777,170	1,866,828	1,959,338	2,057,296
infrastructure, 5% sld	0	0	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375
- Depletion allowances	0	0	35,886,375	37,680,694	39,564,728	41,542,965	43,620,113	37,675,114	31,026,564	32,577,893	34,206,787	35,917,127	0
- Deferred chrgs amortiza	0	0	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696	748,696
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= Taxable income	0	0	27,671,877	29,534,786	36,215,839	55,620,945	72,031,441	45,001,498	15,076,116	16,077,226	17,128,398	18,232,114	57,184,886
INCOME TAX PAYABLE	0	0	12,388,572	13,215,292	16,217,998	24,946,339	32,326,908	20,159,072	6,688,070	7,133,760	7,601,735	8,093,188	25,579,892
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MINING TAX COMPUTATION													
tax from gold, ores	0	0	0	0	0	0	0	0	0	0	0	0	0
tax from iron, mangan.	0	0	0	0	0	0	0	0	0	0	0	0	0
tax from others	0	0	7,177,275	7,536,139	7,912,946	8,388,593	8,724,023	7,535,023	6,205,313	6,515,579	6,841,357	7,183,425	7,542,597
MINING TAX PAYMENTS	0	0	7,177,275	7,536,139	7,912,946	8,388,593	8,724,023	7,535,023	6,205,313	6,515,579	6,841,357	7,183,425	7,542,597

COPPER-HILL WINDFARM PROJECT: BRAZIL (Production for Export)

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25
Concentrate revenues	197,993,140	207,892,810	218,787,459	229,281,833	240,661,923	252,695,828	265,329,771	278,586,259	292,526,872	307,152,376	322,589,994	165,266,372
- Operating costs	114,836,833	120,577,834	126,406,726	132,937,862	139,583,916	146,563,711	153,891,262	161,585,830	169,665,172	178,148,378	187,855,797	95,866,896
= Operating profits	83,157,127	87,314,984	91,480,733	96,264,769	101,078,008	106,131,900	111,438,504	117,010,429	122,860,950	129,003,998	135,454,198	69,428,276
- Capital expenditures	10,889,624	11,434,165	12,085,010	12,486,101	13,236,406	13,890,226	14,593,137	15,322,794	16,088,934	16,893,381	17,738,858	9,899,758
- Working capital	1,567,096	1,435,458	1,587,223	1,582,584	1,641,713	1,744,799	1,832,039	1,923,641	2,019,823	2,120,814	2,228,853	(49,182,107)
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	1.0	0	0	0	0
= Ref. Debt-Net Cash Flow	70,900,400	74,445,428	78,167,700	82,876,085	86,179,889	89,488,883	95,813,327	99,763,994	104,752,193	109,989,803	115,489,293	109,431,672
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0
= Ref. Net Cash Flow	70,900,400	74,445,428	78,167,700	82,876,085	86,179,889	89,488,883	95,813,327	99,763,994	104,752,193	109,989,803	115,489,293	109,431,672
- Corp. Income taxes	26,978,173	28,429,869	29,862,754	31,372,178	33,062,874	35,034,464	36,899,574	38,620,088	39,183,445	39,141,467	37,767,837	6,785,961
- Mining taxes	7,919,726	8,315,713	8,731,490	9,168,873	9,626,477	10,107,881	10,613,191	11,143,850	11,701,843	12,286,095	12,900,488	6,611,855
= A-1 Cash flow (cur. \$)	36,010,500	37,699,747	39,673,442	41,335,833	43,291,338	45,344,619	47,580,563	50,000,055	53,867,786	58,562,241	64,821,856	96,034,256

TAX PAYMENTS IN CONST. \$

Corporate income taxes	13,621,770	13,675,301	13,726,283	13,774,837	13,821,879	13,865,118	13,907,061	13,942,366	13,974,856	12,743,339	11,718,346	2,882,789
Mining tax payments	4,089,606	4,089,606	4,089,606	4,089,606	4,089,606	4,089,606	4,089,606	4,089,606	4,089,606	4,089,606	4,089,606	2,889,089
Total tax payments	17,621,770	17,675,301	17,726,283	17,774,837	17,821,879	17,865,118	17,907,061	17,862,386	17,394,856	16,743,339	15,718,346	4,052,789

CASH FLOWS IN CONST. \$

Before debt payment of	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,183,659
Before tax of	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,183,659
After tax of	10,187,753	10,134,223	10,083,241	10,034,487	12,988,445	17,944,465	17,902,465	17,947,138	18,414,668	19,066,185	20,899,177	29,658,869

COMPANIE INCOME TAX REPORT

Gross revenues	197,993,140	207,892,810	218,787,459	229,281,832	240,661,923	252,695,828	265,329,771	278,586,259	292,526,872	307,152,376	322,589,994	165,266,372
- Operating costs	114,836,833	120,577,834	126,406,726	132,937,862	139,583,916	146,563,711	153,891,262	161,585,830	169,665,172	178,148,378	187,855,797	95,866,896
- Mining taxes	7,919,726	8,315,713	8,731,490	9,168,873	9,626,477	10,107,881	10,613,191	11,143,850	11,701,843	12,286,095	12,900,488	6,611,855

= Net income bef. allowances	75,236,581	78,999,271	82,949,234	87,896,686	91,451,531	96,024,107	100,825,313	105,866,578	111,159,907	116,717,983	122,553,798	62,008,821
- Carried losses	0	0	0	0	0	0	0	0	0	0	0	0
- Depreciation allowances	14,782,196	14,786,437	15,315,890	15,871,816	16,455,538	17,068,446	17,711,999	18,911,620	22,933,854	28,544,981	37,434,086	44,524,756
- Allow expenss, 25% sld	7,924,640	8,328,893	8,736,937	9,173,784	9,632,473	10,114,097	10,619,882	11,150,792	14,295,447	18,697,965	25,631,979	37,779,741

COPPER-MOLYBDENUM PROJECT: BRAZIL (Production for Export)

mill P&E, 20% sid	2,160,161	2,260,169	2,381,570	2,500,656	2,625,689	2,756,974	2,894,822	3,563,453	4,441,032	5,469,641	7,684,701	9,500,130
infrastructure, 5% sid	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375	4,197,375
- Depletion allowances	0	0	0	0	0	0	0	0	0	0	0	0
- Deferred charge amortiza	740,696	740,696	740,696	740,696	740,696	740,696	740,696	740,696	740,696	740,696	740,696	740,696
= Taxable income	60,206,589	63,464,130	66,004,649	70,476,183	74,247,290	78,206,966	82,364,618	86,206,262	87,477,358	87,404,226	84,374,097	15,535,370
INCOME TAX PAYABLE	26,970,173	28,429,969	29,962,754	31,572,178	33,262,074	35,036,464	36,899,574	38,620,088	39,183,445	39,141,467	37,767,837	6,785,961
=====												
MINING TAX COMPOSITION												
tax from gold, gross	0	0	0	0	0	0	0	0	0	0	0	0
tax from iron, mangan.	0	0	0	0	0	0	0	0	0	0	0	0
tax from others	7,919,726	8,315,713	8,731,490	9,160,873	9,626,477	10,107,001	10,613,191	11,143,850	11,701,043	12,286,095	12,900,400	6,611,455
MINING TAX PAYMENTS	7,919,726	8,315,713	8,731,490	9,160,873	9,626,477	10,107,001	10,613,191	11,143,850	11,701,043	12,286,095	12,900,400	6,611,455

APPENDIX D

SOUTH AFRICAN MINERAL TAXATION SYSTEM

D.1. DESCRIPTION

D.1.1. CATEGORY 1 -- New Gold and Uranium Mines

(1) CORPORATE INCOME TAXATION

Tax Calculation Format:

	Revenue
-	<u>Operating Cost</u>
	Net Income before Allowances
-	Current Capital Costs
-	Lease Payment
-	Carried Loss (from year X-1)
-	<u>Taxation Capital Allowance</u>
	Profit for Taxation Payment or Carried Loss (for year X+1)
	Corporate Income Tax Payment

Current Capital Costs:

Capital costs incurred during a new mine's development period must be carried forward to the start of production for redemption. These include exploration expenditures and interest payments on loans, but exclude working capital and the cost of purchasing mineral rights. During the first production year, the accumulated carried loss, taxation capital allowance, and current capital costs may be written off as rapidly as possible against mining income available within the organization concerned (i.e., not restricted to mining income from the project itself). To the extent that sufficient mining income is not available, losses continue to be carried forward together with the associated taxation capital allowance.

Lease Payment: as defined below.

Carried Loss:

From previous year. Losses may be carried forward indefinitely.

Taxation Capital Allowances:

Ten percent of the loss carried forward from the previous year.

Corporate Income Taxation Payment:

Tax payments are based on the formula:

$$Y_T = a = 8a/R$$

where, Y_T = tax rate in percent

a = a constant which currently consists of:

normal base	60
25% surcharge	15
overall value	75

$$R = (\text{Profit for Taxation Payment})(100)/(\text{Revenue})$$

Thus,

$$Y_T = 25 - 600/R$$

and

$$\text{Taxation Payment} = (Y_T)(\text{Profit for Taxation Payment})/(100)$$

(2) LEASE PAYMENT

1. Private Ground

- Based on agreement with owner;
- Usually a prospecting agreement which includes annual rental over a 2 to 5 year period with option to purchase mineral rights and possibly surface rights at the end of that period. May also include royalty or profit sharing provisions.

2. State Ground (normal situation)

Lease Calculation Format:

	Revenue
-	Operating Cost
	Net Income before Allowances
-	Current Capital Costs
-	Carried Loss (from year X-1)
-	Lease Capital Allowance
	Profit for Lease Payment or Carried Loss (for year X+1)
	State Lease Payment

Current Capital Costs:

The same as for corporate income taxation.

Carried Loss:

From previous year. Losses may be carried forward indefinitely.

Lease Capital Allowance:

Six percent of the loss carried forward from the previous year. As in the case of income taxation, capital costs incurred during a new mine's development period must be carried forward to the start of production for redemption. During the first production year, the accumulated carried loss, lease capital allowances, and current capital costs may be written off as rapidly as possible against mining income available within the organization concerned (i.e. not restricted to mining income from the project itself). To the extent that sufficient mining income is not available, losses continue to be carried forward together with associated lease capital allowances.

State Lease Payment:

Negotiated with government, based on the formula:

$$Y_L = a - 8a/R$$

where, Y_L = percentage of profit for lease payment payable to state

a = Constant negotiated for individual mines which varies from 10 to 30. ASSUME 15 is typical

$$R = (\text{Profit for Lease Payment})(100)/(\text{Revenue})$$

ASSUME: $Y_L = 15 - 120/R$

and

$$\text{Lease Payment} = (Y_L)(\text{Profit for Lease Payment})/(100)$$

D.1.2. CATEGORY II -- New Base Metal, Platinum and Coal Mines

(1) CORPORATE INCOME TAXATION

Tax Calculation Format:

	Revenue
-	<u>Operating Cost</u>
	Net Income before Allowances
-	Current Capital Costs
-	Lease Payment
-	<u>Carried Loss (from year X-1)</u>
	Profit for Taxation Payment or Carried Loss (for year X+1)
	Corporate Income Taxation Payment

Current Capital Costs:

Same as corporate income taxation for new gold and uranium mines. Exploration expenditures include unredeemed expenditures embodied in the cost of purchasing mineral rights.

Lease Payment: as determined below.

Carried Loss:

From previous year. Losses may be carried forward indefinitely.

As shown above, capital costs may be written off for tax purposes in the year incurred if sufficient mining income is available within the organization concerned. To the extent that mining income is not available, the resulting carried loss is brought forward for redemption in a subsequent year where mining income is available.

Corporate Income Taxation Payment:

Levied on profit for taxation payment.

normal rate	50.0%
15% surcharge	7.5%
Overall rate	57.5%

(2) LEASE PAYMENT

1. Private Ground (normal situation)

- Based on agreement with owner;

- Usually a prospecting agreement which includes annual rental over a 2 to 5 year period with option to purchase mineral rights and possibly surface rights at the end of that period. May also include royalty or profit sharing provisions.

2. State Ground

- Negotiated lease payment agreement with government, e.g. 5 percent of profit after allowable deductions in the case of Palabora.
- State lease payment for platinum mines is similar to that of gold, based on the formula:

$$Y_T = a - ba/R$$

Lease payments are deductible for corporate income tax purposes. However, the cost of purchasing mineral rights (e.g., exercising the purchase option in a prospecting agreement) is not deductible except to the extent that the purchase price may embody prior exploration expenditures which have not been previously written off for tax purposes.

D.2. DETAILED BASE CASE RESULTS

GOLD PROJECT: SOUTH AFRICA

CASH FLOW SUMMARY	YEAR	1	2	3	4	5	6	7	8	9	10	11	12
PROJECT BASIS													
Gross revenue	0	0	9,181,124	9,648,100	10,172,189	10,628,299	11,159,713	11,717,699	12,303,504	12,918,763	13,564,701	14,242,937	
- Operating costs	0	0	4,859,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,538	6,508,065	6,825,068	7,146,322	7,524,638	
= Operating profits	0	0	4,321,675	4,555,129	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,380	6,718,299	
- Capital expenditures	5,326,658	5,592,983	254,678	267,411	280,782	294,821	309,562	325,040	341,292	358,357	376,275	395,000	
- Working capital	0	1,148,933	58,047	68,949	63,996	67,196	70,556	74,084	77,788	81,677	85,761	89,937	
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	
= Def. Debt-Paid Cash Flow	(5,326,658)	(6,753,915)	4,017,951	4,218,049	4,429,791	4,651,281	4,883,845	5,128,837	5,384,439	5,653,661	5,936,344	6,214,247	
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	
= Def. Tax Net Cash Flow	(5,326,658)	(6,753,915)	4,017,951	4,218,049	4,429,791	4,651,281	4,883,845	5,128,837	5,384,439	5,653,661	5,936,344	6,214,247	
- Corp. Income tax payment	0	0	0	0	23,496	2,465,906	2,589,285	2,718,749	2,854,607	2,997,421	3,147,292	3,304,657	
- Lease payments	0	0	0	0	79,443	588,232	609,244	639,786	671,691	705,276	740,539	777,566	
= A-T Cash Flow (cur \$)	(5,326,658)	(6,753,915)	4,017,951	4,218,049	4,326,632	1,685,863	1,685,316	1,769,582	1,858,061	1,950,964	2,048,512	2,152,024	

WORLD PROJECT: SOUTH AFRICA

TAX PAYMENTS IN CONST. \$

Corporate income taxes	0	0	0	0	10,410	1,040,157	1,040,156	1,040,157	1,040,157	1,040,157	1,040,157	1,040,157
Lease payments	0	0	0	0	42,410	432,970	432,970	432,970	432,970	432,970	432,970	432,970
Total tax payments	0	0	0	0	50,820	2,273,135	2,273,135	2,273,135	2,273,135	2,273,135	2,273,135	2,273,135

CASH FLOWS IN CONST. \$

Before debt paymt CF	(5,073,000)	(6,126,000)	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	4,574,000
Before-tax CF	(5,073,000)	(6,126,000)	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	3,470,057	4,574,000
After-tax CF	(5,073,000)	(6,126,000)	3,470,057	3,470,057	3,390,829	1,197,723	1,197,723	1,197,723	1,197,723	1,197,723	1,197,723	2,300,064

CORPORATE INCOME TAX REPORT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12
Gross revenues	0	0	9,101,124	9,640,100	10,122,109	10,620,299	11,159,713	11,717,699	12,303,504	12,910,763	13,564,701	14,242,937
- Operating costs	0	0	4,050,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,530	6,500,065	6,825,060	7,166,322	7,524,630
= Net income bef. allmcs	0	0	4,330,675	4,547,209	4,774,569	5,013,290	5,263,963	5,527,161	5,803,519	6,093,695	6,390,300	6,710,299
- Current capital costs	0	0	11,174,310	267,411	200,702	294,021	309,562	325,040	341,292	358,357	376,275	395,000
- Lease payments	0	0	0	0	79,663	500,232	609,244	639,706	671,691	705,276	740,539	777,566
- Carried losses	0	0	0	6,043,635	3,240,201	0	0	0	0	0	0	0

[illegible]

LEAD-ZINC PROJECT: SOUTH AFRICA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Gross revenues	0	0	0	0	16,576,894	88,485,738	84,426,875	88,447,327	65,931,449	65,276,827	72,689,423	76,323,894	88,148,889
- Operating costs	0	0	0	0	31,907,839	33,582,391	35,177,511	36,936,386	38,783,285	40,722,346	42,758,484	44,896,488	47,141,229
= Operating profits	0	0	0	0	44,669,055	44,903,347	49,249,364	51,510,941	27,148,164	24,554,481	29,930,939	31,427,406	40,998,660
- Capital expenditures	21,525,000	22,681,250	23,731,313	24,917,878	2,297,387	2,412,172	2,532,781	2,659,428	2,792,391	2,932,810	3,078,611	3,232,541	3,394,168
- Working capital	0	0	0	18,331,083	516,590	542,428	569,541	598,018	627,919	659,314	692,288	726,894	763,239
- Debt debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(33,249,481)	41,855,958	43,948,756	46,146,193	48,453,583	23,727,934	24,914,331	26,168,808	27,468,858	28,841,453
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow	(21,525,000)	(22,681,250)	(23,731,313)	(33,249,481)	41,855,958	43,948,756	46,146,193	48,453,583	23,727,934	24,914,331	26,168,808	27,468,858	28,841,453
- Corp. Income tax payments	0	0	0	0	0	0	29,832,581	24,585,597	12,358,858	12,976,793	13,425,432	14,386,914	15,022,248
- Lease payments	0	0	0	0	0	0	4,373,441	6,293,960	2,862,201	3,085,311	3,155,576	3,313,355	3,479,823
= A-1 Cash flow (cur \$)	(21,525,000)	(22,681,250)	(23,731,313)	(33,249,481)	41,855,958	43,948,756	20,740,170	17,573,966	8,506,884	8,932,228	9,378,839	9,847,781	10,348,178
TAX PAYMENTS IN CONST. \$													
Corporate income taxes	0	0	0	0	0	0	14,805,326	16,648,580	7,966,425	7,966,425	7,966,425	7,966,425	7,966,425
Lease payments	0	0	0	0	0	0	3,250,259	4,760,000	1,845,000	1,845,000	1,845,000	1,845,000	1,845,000
Total tax payments	0	0	0	0	0	0	18,055,586	20,908,580	9,811,425	9,811,425	9,811,425	9,811,425	9,811,425
CASH FLOWS IN CONST. \$													
Before debt paym'ts	(20,500,000)	(20,500,000)	(20,500,000)	(29,000,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
Before-tax CF	(20,500,000)	(20,500,000)	(20,500,000)	(29,000,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
After-tax CF	(20,500,000)	(20,500,000)	(20,500,000)	(29,000,000)	32,795,238	32,795,238	14,739,653	11,894,738	5,483,613	5,483,613	5,483,613	5,483,613	5,483,613
CORPORATE INCOME TAX REPORT													
Gross revenues	0	0	0	0	76,576,894	88,485,738	84,426,875	88,447,327	65,931,449	65,276,827	72,689,423	76,323,894	88,148,889
- Operating costs	0	0	0	0	31,907,839	33,582,391	35,177,511	36,936,386	38,783,285	40,722,346	42,758,484	44,896,488	47,141,229
= Net Income before all items	0	0	0	0	44,669,055	44,903,347	49,249,364	51,510,941	27,148,164	24,554,481	29,930,939	31,427,406	40,998,660
- Current capital costs	0	0	0	0	95,072,747	2,412,172	2,532,781	2,659,428	2,792,391	2,932,810	3,078,611	3,232,541	3,394,168
- Lease payments	0	0	0	0	0	0	4,573,441	6,293,960	2,862,201	3,085,311	3,155,576	3,313,355	3,479,823
- Carried losses	0	0	0	0	0	50,402,893	5,911,717	0	0	0	0	0	0

[illegible]

LEAD-ZINC PROJECT: SOUTH AFRICA

CASH FLOW SUMMARY PROJECT LASTS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Gross revenues	84,147,093	88,354,448	92,772,178	97,410,779	102,281,317	85,098,054
- Operating costs	49,498,290	51,973,204	54,571,865	57,300,458	60,165,481	50,057,680
= Operating profits	34,648,803	36,381,243	38,200,313	40,110,321	42,115,837	35,040,374
- Capital expenditures	3,543,877	3,742,871	3,929,174	4,125,633	4,331,915	3,604,153
- Working capital	881,401	841,471	883,544	927,722	974,108	(21,479,077)
- New debt	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0
= Def. Debt-Paid Cash Flow	38,283,525	31,797,701	33,387,587	35,054,966	36,809,814	52,915,300
- Debt's principal payment	0	0	0	0	0	0
= Def. Tax Net Cash Flow	38,283,525	31,797,701	33,387,587	35,054,966	36,809,814	52,915,300
- Corp. Income tax payment	15,773,373	16,542,041	17,398,143	18,259,658	19,172,633	15,951,631
- Lease payments	3,632,974	3,835,622	4,027,484	4,228,774	4,440,212	3,694,257
= A-T Cash flow (cur \$)	18,877,178	11,400,038	11,979,960	12,566,542	13,196,969	33,268,412

TAX PAYMENTS IN CONST \$

Corporate income taxes	7,966,625	7,966,625	7,966,625	7,966,625	7,966,625	6,373,300
Lease payments	1,845,000	1,845,000	1,845,000	1,845,000	1,845,000	1,476,000
Total tax payments	9,811,625	9,811,625	9,811,625	9,811,625	9,811,625	7,849,300

CASH FLOWS IN CONST \$

Before debt payment	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731
Before-tax CF	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731
After-tax CF	5,483,613	5,483,613	5,483,613	5,483,613	5,483,613	13,292,431

CORPORATE INCOME TAX REPORT

CORPORATE INCOME TAX REPORT	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Gross revenues	84,147,093	88,354,448	92,772,178	97,410,779	102,281,317	85,098,054
- Operating costs	49,498,290	51,973,204	54,571,865	57,300,458	60,165,481	50,057,680
= Net income before allowances	34,648,803	36,381,243	38,200,313	40,110,321	42,115,837	35,040,374
- Current capital costs	3,543,877	3,742,871	3,929,174	4,125,633	4,331,915	3,604,153
- Lease payments	3,632,974	3,835,622	4,027,484	4,228,774	4,440,212	3,694,257
- Carried losses	0	0	0	0	0	0

- Taxation capt allmcs	0	0	0	0	0	0
= Profit for Taxation	27,431,952	28,883,558	30,243,727	31,755,914	33,343,769	27,741,966
Tax rates/(Previous net):						
Tax payment(BH,Coal,Pt)	15,773,373	16,562,041	17,390,143	18,259,650	19,172,633	15,951,631
INCOME TAX PAYMENTS	15,773,373	16,562,041	17,390,143	18,259,650	19,172,633	15,951,631
LEASE PAYMENTS						
REPAIR	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Gross revenues	84,147,093	88,354,448	92,772,170	97,410,779	102,281,317	85,098,056
- operating costs	49,498,290	51,973,284	54,571,065	57,380,458	60,165,481	50,057,680
= Net income bef allowances	34,648,803	36,381,243	38,200,305	40,110,321	42,115,837	35,040,376
- Current capital costs	3,563,877	3,742,071	3,929,174	4,125,633	4,331,915	3,604,153
- Carried less	0	0	0	0	0	0
- Lease capital allowances	0	0	0	0	0	0
= Profit for lease payment	31,084,926	32,639,172	34,271,131	35,984,688	37,783,922	31,436,223
Lease rates	12%	12%	12%	12%	12%	12%
LEASE PAYMENTS	3,652,974	3,835,622	4,027,404	4,228,774	4,440,212	3,694,257

COPPER-MULTIMETAL PROJECT: SOUTH AFRICA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Gross revenues	0	0	179,431,875	188,483,469	197,823,642	207,714,824	218,100,566	188,375,569	155,132,822	162,809,463	171,833,936	179,585,633	188,564,914
- Operating costs	0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,837	94,475,888	99,199,683	104,159,667	109,367,650
= Operating profits	0	0	112,289,625	117,984,106	123,799,312	129,989,277	136,488,741	102,683,153	65,155,785	68,413,574	71,834,253	75,425,966	79,197,264
- Capital expenditures	138,200,000	136,710,000	6,366,930	6,685,284	7,019,549	7,370,526	7,739,052	8,126,005	8,532,385	8,958,920	9,406,866	9,877,210	10,371,870
- Working capital	0	15,986,250	799,313	839,270	881,242	925,384	971,569	1,020,148	1,071,155	1,124,713	1,180,949	1,239,996	1,301,876
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Paid Cash Flow	(138,200,000)	(152,696,250)	185,123,375	110,379,544	115,890,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,388,760	67,524,198
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	(138,200,000)	(152,696,250)	185,123,375	110,379,544	115,890,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,388,760	67,524,198
- Corp. income tax payment	0	0	0	0	35,257,390	61,363,147	64,431,304	47,514,598	28,745,142	30,182,399	31,691,519	33,276,895	34,939,980
- Lease payments	0	0	0	0	5,694,072	15,900,235	16,695,247	11,923,065	6,631,928	6,963,525	7,311,701	7,677,286	8,061,150
= A-T Cash Flow (cur \$)	(138,200,000)	(152,696,250)	185,123,375	110,379,544	74,947,059	44,430,065	46,651,569	34,099,337	20,175,254	21,184,017	22,243,218	23,355,579	24,523,100

TAX PAYMENTS IN CONST. \$

Corporate income taxes	0	0	0	0	27,625,080	45,790,125	45,790,125	32,159,750	18,529,375	18,529,375	18,529,375	18,529,375	18,529,375
Lease payments	0	0	0	0	4,461,454	11,865,000	11,865,000	8,070,000	4,275,000	4,275,000	4,275,000	4,275,000	4,275,000
Total tax payments	0	0	0	0	32,086,542	57,655,125	57,655,125	40,229,750	22,804,375	22,804,375	22,804,375	22,804,375	22,804,375

CASH FLOWS IN CONST. \$

Before debt pymt CF	(124,000,000)	(130,500,000)	90,809,524	90,809,524	90,809,524	90,809,524	90,809,524	63,309,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524
Before-tax CF	(124,000,000)	(130,500,000)	90,809,524	90,809,524	90,809,524	90,809,524	90,809,524	63,309,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524
After-tax CF	(124,000,000)	(130,500,000)	90,809,524	90,809,524	58,722,982	33,154,399	33,154,399	23,079,774	13,085,149	13,085,149	13,085,149	13,085,149	13,085,149

CORPORATE INCOME TAX REPORT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Gross revenues	0	0	179,431,875	188,483,469	197,823,642	207,714,824	218,100,566	188,375,569	155,132,822	162,809,463	171,833,936	179,585,633	188,564,914
- Operating costs	0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,837	94,475,888	99,199,683	104,159,667	109,367,650
= Net income bef. allmcs	0	0	112,289,625	117,984,106	123,799,312	129,989,277	136,488,741	102,683,153	65,155,785	68,413,574	71,834,253	75,425,966	79,197,264
- Current capital costs	0	0	273,276,938	6,685,284	7,019,549	7,370,526	7,739,052	8,126,005	8,532,385	8,958,920	9,406,866	9,877,210	10,371,870
- Lease payments	0	0	0	0	5,694,072	15,900,235	16,695,247	11,923,065	6,631,928	6,963,525	7,311,701	7,677,286	8,061,150
- Carried losses	0	0	0	160,987,313	49,768,491	0	0	0	0	0	0	0	0

COPPER-MOLYBDENUM PROJECT: SOUTH AFRICA

- Taxation captl allmcs	0	0	0	0	0	0	0	0	0	0	0	0	0
= Profit for Taxation	0	0	(160,987,313)	(49,768,491)	61,317,201	106,718,516	112,054,442	82,634,003	49,991,552	52,491,129	55,115,686	57,871,470	60,765,044
Tax rates(Procons net)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Tax payment(BM,Coal,Pt)	0	0	0	0	35,257,390	61,363,147	64,431,304	47,514,598	28,745,142	30,182,399	31,691,519	33,276,095	34,939,900
INCOME TAX PAYMENTS	0	0	0	0	35,257,390	61,363,147	64,431,304	47,514,598	28,745,142	30,182,399	31,691,519	33,276,095	34,939,900
LEASE PAYMENTS REPORT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Gross revenues	0	0	179,431,875	180,403,469	197,823,642	207,714,824	218,100,566	188,375,569	155,132,822	162,889,463	171,033,936	179,585,633	188,564,914
- Operating costs	0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,880	99,199,683	104,159,647	109,367,650
= Net income bef. allmcs	0	0	112,289,625	117,904,106	123,799,312	129,989,277	136,488,741	102,683,153	65,155,785	68,413,574	71,834,253	75,425,966	79,197,264
- Current capital costs	0	0	273,276,930	6,685,284	7,019,549	7,370,526	7,739,052	8,126,005	8,532,305	8,958,920	9,406,066	9,877,210	10,371,070
- Carried loss	0	0	0	160,987,313	59,427,729	0	0	0	0	0	0	0	0
- Lease capital allowances	0	0	0	9,659,239	3,565,664	0	0	0	0	0	0	0	0
= Profit for lease payment	0	0	(160,987,313)	(59,427,729)	53,786,370	122,618,751	120,749,689	94,557,148	56,623,480	59,454,654	62,427,387	65,548,756	68,826,194
Lease rates	0%	0%	0%	0%	11%	13%	13%	13%	12%	12%	12%	12%	12%
LEASE PAYMENTS	0	0	0	0	5,694,072	15,900,235	16,695,247	11,923,065	6,631,920	6,963,525	7,311,701	7,677,206	8,061,150

COPPER-MOLYBDENUM PROJECT: SOUTH AFRICA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25
Gross revenues	197,993,160	207,092,010	210,207,459	229,201,032	240,661,923	252,695,020	265,329,771	270,596,259	292,526,072	307,152,376	322,509,994	165,206,372
- Operating costs	114,836,833	120,577,834	126,606,726	132,937,062	139,583,916	146,563,111	153,091,267	161,585,830	169,665,122	178,148,370	187,055,797	95,066,096
= Operating profits	83,157,127	87,314,904	91,600,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,860,950	129,003,990	135,454,190	69,420,276
- Capital expenditures	10,009,624	11,434,105	12,005,010	12,606,101	13,236,406	13,890,226	14,593,137	15,322,794	16,080,934	16,893,381	17,730,050	9,090,750
- Working capital	1,367,096	1,435,450	1,507,223	1,582,504	1,661,713	1,744,799	1,832,039	1,923,641	2,019,823	2,120,814	2,226,855	(49,102,147)
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payable	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Paid Cash Flow	70,900,400	74,445,420	70,167,700	82,076,005	86,179,889	90,400,083	95,013,327	99,763,994	104,752,193	109,909,003	115,489,293	109,431,672
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	70,900,400	74,445,420	70,167,700	82,076,005	86,179,889	90,400,083	95,013,327	99,763,994	104,752,193	109,909,003	115,489,293	109,431,672
- Corp. income tax payment	36,606,095	30,521,240	40,447,382	42,469,667	44,593,150	46,822,000	49,163,940	51,622,146	54,203,253	56,913,415	59,759,006	30,626,532
- Lease payments	8,464,200	8,007,410	9,331,709	9,790,370	10,200,297	10,002,712	11,342,848	11,909,990	12,505,490	13,130,764	13,707,382	7,065,992
= A-I Cash flow (cur. \$)	25,749,385	27,036,770	20,300,609	29,000,039	31,290,441	32,663,363	34,506,531	36,231,050	38,043,451	39,945,621	41,942,905	71,739,140

TAX PAYMENTS IN CONST. \$

Corporate income taxes	10,529,375	10,529,375	10,529,375	10,529,375	10,529,375	10,529,375	10,529,375	10,529,375	10,529,375	10,529,375	10,529,375	9,264,600
Lease payments	4,275,000	4,275,000	4,275,000	4,275,000	4,275,000	4,275,000	4,275,000	4,275,000	4,275,000	4,275,000	4,275,000	2,137,500
Total tax payments	22,804,375	22,804,375	22,804,375	22,804,375	22,804,375	22,804,375	22,804,375	22,804,375	22,804,375	22,804,375	22,804,375	11,402,100

CASH FLOWS IN CONST. \$

Before debt pymt CF	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,103,659
Before-tax CF	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,103,659
After-tax CF	13,005,149	13,005,149	13,005,149	13,005,149	13,005,149	13,005,149	13,005,149	13,005,149	13,005,149	13,005,149	13,005,149	21,701,471

CORPORATE INCOME TAX REPORT	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25
Gross revenues	197,993,160	207,092,010	210,207,459	229,201,032	240,661,923	252,695,020	265,329,771	270,596,259	292,526,072	307,152,376	322,509,994	165,206,372
- Operating costs	114,836,833	120,577,834	126,606,726	132,937,062	139,583,916	146,563,111	153,091,267	161,585,830	169,665,122	178,148,370	187,055,797	95,066,096
= Net income bef. allmcs	83,157,127	87,314,904	91,600,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,860,950	129,003,990	135,454,190	69,420,276
- Current capital costs	10,009,624	11,434,105	12,005,010	12,606,101	13,236,406	13,890,226	14,593,137	15,322,794	16,080,934	16,893,381	17,730,050	9,090,750
- Lease payments	8,464,200	8,007,410	9,331,709	9,790,370	10,200,297	10,002,712	11,342,848	11,909,990	12,505,490	13,130,764	13,707,382	7,065,992
- Carried losses	0	0	0	0	0	0	0	0	0	0	0	0

COPPER-MOLYBDENUM PROJECT: SOUTH AFRICA

- Taxation captl allowncs	0	0	0	0	0	0	0	0	0	0	0	0	0
= Profit for Taxation	63,803,296	66,993,461	70,343,134	73,868,290	77,553,305	81,438,970	85,502,519	89,777,644	94,266,527	98,979,853	103,920,846	108,263,533	112,920,846
Tax rates(Precious met)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Tax payment(BN,Coal,Pt)	36,686,895	38,521,240	40,447,302	42,469,667	44,593,150	46,822,808	49,163,948	51,622,146	54,203,253	56,913,415	59,759,086	62,726,532	65,813,086
INCOME TAX PAYMENTS	36,686,895	38,521,240	40,447,302	42,469,667	44,593,150	46,822,808	49,163,948	51,622,146	54,203,253	56,913,415	59,759,086	62,726,532	65,813,086
LEASE PAYMENTS REPORT	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25	YEAR 26
Gross revenues	197,993,160	207,892,818	218,207,459	229,201,832	240,661,923	252,695,020	265,329,771	278,596,259	292,526,072	307,152,376	322,509,994	338,606,372	355,486,372
- Operating costs	114,836,833	120,577,834	126,606,726	132,937,062	139,583,916	146,563,111	153,891,267	161,585,830	169,665,122	178,148,378	187,055,797	196,406,896	206,146,896
= Net income bef. allowncs	83,157,127	87,314,984	91,600,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,860,950	129,003,998	135,454,198	142,199,476	149,339,476
- Current capital costs	10,809,624	11,434,185	12,005,810	12,606,101	13,236,406	13,898,226	14,593,137	15,322,794	16,088,934	16,893,381	17,738,050	18,622,750	19,547,500
- Carried loss	0	0	0	0	0	0	0	0	0	0	0	0	0
- Lease capital allowncs	0	0	0	0	0	0	0	0	0	0	0	0	0
= Profit for lease percent	72,267,503	75,880,799	79,674,922	83,658,669	87,841,602	92,233,682	96,845,366	101,687,635	106,772,016	112,110,617	117,716,148	123,576,726	129,791,976
Lease rates	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
LEASE PAYMENTS	8,444,208	8,887,418	9,331,789	9,790,378	10,268,297	10,762,712	11,272,848	11,800,990	12,347,490	12,913,764	13,500,382	14,108,892	14,739,892

APPENDIX E

MINERAL TAXATION SYSTEM OF THE UNITED STATES

E.1. DESCRIPTION

(1) FEDERAL CORPORATE INCOME TAXATION

Tax Calculation Format:

	Revenue
-	Operating Costs
-	Interest Payments
-	Exploration Expenditures
-	Mine Development Expenditures
-	Royalty Payments
-	<u>State Taxation Payments</u>
	Net Income before Allowances
-	Depreciation Allowances
-	<u>Amortization</u>
	Income before Depletion
-	<u>Depletion Allowance</u>
	Income before Federal Tax
	Federal Tax Otherwise Payable
-	<u>Investment Tax Credit</u>
	Net Federal Tax Payable

Exploration Expenditures:

Exploration expenditures may be expensed for tax purposes. In that case, exploration write-offs related to a property which is subsequently brought into production are subject to 'recapture' from the depletion allowance. The taxpayer may elect to do this in either of two ways:

- include in revenues the amount of exploration expenditures previously deducted when the mine starts production;
- forego the amount of depletion otherwise deductible with respect to the mine until the cumulative amount equals previously deducted exploration expenditures.

Only 85 percent of such expenditure can be expensed; the remaining 15 percent must be written off over a five-year period. The depreciation rates over the five-year period are 15, 22, 21, 21 and 21 percent, starting from the year the cost is incurred. The 15 percent of exploration expenditures so capitalized is eligible for investment tax credit.

If exploration expenditures are not expensed, they must be capitalized and either written-off when the property is abandoned or included in the basis of the cost depletion account if the property comes into

production. This method is assumed in the study.

Mine Development Expenditures:

Mine development expenditures may either be expensed against current income or amortized as the mineral deposit is mined. Development expenditures are not subject to recapture from the depletion allowance.

If the taxpayer elects to expense development expenditures, only 85 percent of these can be treated as such. The remaining 15 percent must be written off over a five-year period in accordance with the schedule specified above for exploration expenditures. Similarly, the capitalized amount is eligible for investment tax credit.

Rather than expense development expenditures, the taxpayer may elect to defer such deductions for each specific mine or deposit. The amortization of these costs is allowed as an ordinary deduction based on units of production during production. This provision is applicable to development expenses incurred both in the development and production stages.

Royalty Payments:

Royalty payments made to the private or public owner of the mineral property to secure the right to mine. These payments are not considered in the study.

State Taxation Payments:

This includes ad valorem property tax, severance tax, and state income tax as discussed below, all of which are allowable deductions for federal income tax purposes.

Depreciation Allowance:

Assets with a useful life greater than one year are depreciable. Depreciation of an asset is based on the estimated useful life of the asset to the taxpayer. Under the Accelerated Cost recovery System (ACRS), recovery of capital costs for most tangible depreciable property placed in service after 1980 is made using accelerated methods of cost recovery over statutory recovery periods. The cost of eligible property is recovered over a 3-, 5-, 10-, or 15-year period, depending upon the type of asset. Each item of property is assigned to one of the following classes:

- 3-Year Property; automobiles, light-duty trucks, property used in connection with research and experimentation, etc.
- 5-Year Property; this includes most mining equipment.
- 10-Year Property, and 15-Year Property; infrastructure

The following table gives the ACRS depreciation schedules:

<u>Annual-Depreciation Rates (in percent)</u>															
Recovery Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Class of Property															
3-Year	25	38	37												
5-Year	15	22	21	21	21										
10-Year	8	14	12	10	10	10	9	9	9	9					
15-Year	5	10	9	8	7	7	6	6	6	6	6	6	6	6	6

In this study, the 5-Year Class is applied for mining and processing equipment, and the 10-Year Class is used for infrastructure. The depreciation basis must be reduced by 50 percent of the investment tax credit (ITC), for which a 10 percent rate is used in this study.

Amortization:

When it is impossible to expense mine development expenditures against current income as provided for above, these costs may be capitalized and amortized on a unit-of-production basis as the deposit is mined.

Depletion Allowance:

The greater of cost (unit) depletion or statutory (percentage) depletion.

Cost depletion involves pro-rating the amount of exploration and property acquisition costs capitalized into the depletion account (the cost depletion base) against the number of units of production in the deposit. In practice, cost depletion seldom results in a greater deduction than the statutory depletion allowance.

The statutory or percentage depletion allowance is determined by selecting the lesser of:

- the product of the depletion rate for the mineral(s) in question and the difference between revenue and royalty payments;
- 50 percent of income for depletion.

Depletion rates for selected minerals are as follows:

22 percent: uranium, asbestos, chromite, bismuth, cadmium, cobalt, lead, manganese, mercury, molybdenum,

nickel, platinum, tin, tungsten, zinc;

15 percent: copper, gold, silver, iron ore;

14 percent: phosphate rock, potash;

10 percent: coal.

Revenue usually refers to the income derived from the sale of the 'first marketable product', a concentrate in the case of base metals. When there are different saleable products, appropriate depletion rates must be applied in proportion to the product's respective contribution to revenue.

Federal Tax Otherwise Payable:

The following marginal tax rates currently apply:

<u>Income for Federal Tax (\$)</u>	<u>Marginal Rate (%)</u>
0 - 25 000	15
25 000 - 50 000	18
50 000 - 75 000	30
75 000 - 100 000	40
over 100 000	46

Investment Tax Credit (ITC):

Incentive which reduces federal income taxes in the year the asset is acquired. To qualify for the credit, the asset must be depreciable, have a useful life of at least three years, and must be placed in service during the year the credit is taken.

The allowable credit is a function of the life of the asset. On average, 90 percent of depreciable assets qualify for the credit. The investment tax credit is currently 10 percent of the qualifying investment. In any one year, the credit is limited to the lesser of the federal tax otherwise payable, or a total of \$25 000 plus 90 percent of the tax liability exceeding \$25 000. Investment tax credits may be carried back up to 3 years and forward up to 15 years.

Minimum Tax:

A minimum tax is levied at a rate of 15 percent on tax preference items. The minimum tax base is the total of the taxpayer's preferences reduced by the greater of \$10 000 or the full amount of the taxpayer's income tax liability (reduced by the ITC, if any). The major tax preference items considered in this study are:

- accelerated depreciation: Excess of the depreciation taken

during the year over the amount that would have been allowed with the straight-line method (depreciation of equipment and amortized development expenditures).

- excess depletion: Excess of the depletion deduction in a tax year over the unadjusted base of the property.
- exploration and development: Difference between the deductions claimed for exploration and development (when the current deduction method is used) and the deductions associated with a ten-year straight-line amortization of these costs.

(2) STATE MINERAL TAXATION

ARIZONA

Ad Valorem Property Tax:

Arizona property tax is based on the present value of the annual net proceeds of a mining operation and investment property (Hoskold Property Tax). Mineral reserves in the ground must be predicted and assessed.

The value of the mine is determined by estimating annual gross revenue and deducting the probable annual costs of extraction, reduction, and sale of the product. These annual net proceeds are then converted to the present worth of the remaining mineral reserves. The Hoskold formula used in the study is:

$$V_p = A / (r / ((1+r)^n - 1) + r')$$

where, V_p = value of mineral property

A = annual net proceeds

r = interest rate = 8%

r' = redemption rate = 19%

The taxable base is the product of V_p and the assessment rate. The assessment rate is 44 percent for the period 1983 - 1985 and is scheduled to decrease to 36 percent for 1986 - 1988, 28 percent for 1989 - 1991, and 25 percent for 1992 and beyond. The property tax is determined by multiplying the tax base by the "mill levy" rate of 11 percent.

Severance Tax:

Arizona severance tax is based on the value after milling. The metalliferous mineral severance tax is levied at a rate of 2.5 percent of the net severance base, which is defined as the commodity revenues less the sum of smelter operating costs, refinery operating costs and smelter to refinery transportation costs.

Income Tax:

Arizona income tax is based on the net taxable profits obtained by deducting various allowances from gross revenues. Deductions include operating costs, transportation costs, amortization and depreciation, federal taxes from the previous year, current severance and property taxes, royalty payments, interest payments, and depletion. A sliding scale rate is applied as follows:

<u>Net Taxable Profit (\$)</u>	<u>Marginal Rate (%)</u>
0 - 2 000	exempt
2 000 - 3 000	5.0
3 000 - 4 000	6.5
4 000 - 5 000	8.0
5 000 - 6 000	9.0
over 6 000	10.5

COLORADO

Ad Valorem Property Tax:

For producing mines, Colorado property tax base is the greater of 25 percent of gross proceeds of the previous year or 100 percent of net proceeds of the current year. For non-producing mines, the tax is based on 30 percent of the present value of the net income it will generate. A mill levy rate of 7 percent is used.

Severance Tax:

The severance tax is 2.25 percent of gross income (value after mining) in excess of \$11 million. Tax on molybdenum ore is 15 cents per ton* and tax on iron ore is 2 cents per ton*. Ad valorem taxes are allowed as a credit against this tax in an amount not exceeding 50 percent of the severance tax levied.

* Imperial tons.

Income Tax:

Colorado income tax is levied at a rate of 5 percent of income for federal tax.

MONTANA

Ad Valorem Property Tax:

The Montana property tax base is determined by multiplying annual gross revenue by an assessment rate of 3 percent. The mill levy rate is 22 percent.

Severance Tax:

The severance tax is 0.5 percent of gross income (value after mining); this is the Resource Indemnity Tax. In addition, the Licence Tax is assessed as follows:

<u>Gross Revenues (\$)</u>	<u>Marginal Rate (%)</u>
0 - 100 000	0.150
100 000 - 250 000	0.575
250 000 - 400 000	0.860
400 000 - 500 000	1.150
over 500 000	1.438

Income Tax:

Montana income tax is levied at a rate of 6.75 percent of income for federal tax.

NEVADA

Ad-Valorem Property Tax:

This is termed "net proceeds of mines tax" and is based on the net proceeds from the previous year. The assessment rate is 35 percent, and the mill levy rate is 5 percent.

Severance Tax:

The severance tax is based on net proceeds, obtained by deducting various allowances from gross revenues. The deductions include: operating costs, transportation costs, property taxes, royalty payments, amortization and depreciation, and interest payments. The rate is 1.3 percent.

Income Tax:

No state income tax.

Note: Royalty Payments and Investment Property Taxes are not considered in this study.

E.2. DETAILED BASE CASE RESULTS

GOLD PROJECT: ARIZONA

CASH FLOW SUMMARY												
PROJECT BASIS	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
	1	2	3	4	5	6	7	8	9	10	11	12
Before operating revenues	0	0	9,181,124	9,640,180	10,122,189	10,629,299	11,159,713	11,717,699	12,303,594	12,918,763	13,564,701	14,242,937
- Operating costs	0	0	4,858,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,538	6,508,065	6,825,068	7,146,322	7,524,638
= Operating profits	0	0	4,322,675	4,547,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,380	6,718,299
- Capital expenditures	5,326,650	5,592,983	254,678	267,411	280,782	294,821	309,562	325,040	341,292	358,357	376,275	395,088
- Working capital	0	1,168,933	58,847	68,949	81,996	97,196	114,684	134,779	157,584	183,199	210,721	240,250
- New debt	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt-Net Cash Flow	(5,326,650)	(6,753,913)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,661	5,936,344	6,214,247
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow	(5,326,650)	(6,753,913)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,661	5,936,344	6,214,247
- Federal corp. income tax	0	0	38,744	120,431	260,515	410,545	654,385	880,500	1,092,707	1,295,858	1,478,567	1,794,564
- State property tax	597,993	694,717	809,192	814,809	813,652	803,263	780,765	742,153	681,904	592,199	461,481	273,200
- State severance tax	0	0	100,267	113,680	119,364	125,332	131,599	138,179	145,088	152,342	159,959	167,957
- State income tax	0	0	110,486	85,448	91,889	87,934	83,485	78,479	74,055	69,157	63,807	57,981
= After-Tax Cash Flow (C.F.)	(5,924,643)	(7,448,632)	2,951,862	3,084,381	3,145,171	3,224,286	3,433,610	3,182,724	3,407,765	3,631,185	3,888,749	4,149,877
TAX PAYMENTS IN CASH, \$												
Federal corp. income tax	0	0	33,440	99,879	204,121	386,353	622,923	859,957	1,033,487	1,212,762	1,398,857	1,719,545
State property tax	549,510	630,129	699,011	678,411	637,510	599,487	554,875	502,320	439,561	363,559	269,935	152,155
State severance tax	0	0	93,525	93,525	93,525	93,525	93,525	93,525	93,525	93,525	93,525	93,525
State income tax	0	0	95,615	70,314	71,370	65,618	59,331	52,862	46,357	40,820	35,216	29,739
Total tax payments	549,510	630,129	921,619	933,339	1,006,534	1,064,905	1,030,655	1,316,664	1,272,931	1,241,674	1,201,864	1,149,964
CASH FLOWS IN CASH, \$												
Before-tax CF	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	4,574,000
After-tax CF	(5,642,510)	(6,756,129)	2,549,238	2,537,528	2,444,323	2,405,952	2,440,202	2,154,193	2,197,926	2,229,183	2,268,994	3,424,836
FEDERAL CORP. INCOME TAX												
PROJECT BASIS	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
	1	2	3	4	5	6	7	8	9	10	11	12
Before operating revenues	0	0	9,181,124	9,640,180	10,122,189	10,629,299	11,159,713	11,717,699	12,303,594	12,918,763	13,564,701	14,242,937
- Operating cost	0	0	4,858,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,538	6,508,065	6,825,068	7,146,322	7,524,638
Operating profit	0	0	4,322,675	4,547,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,380	6,718,299
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0
- State tax payments	597,993	694,717	1,010,497	1,083,898	1,020,233	1,025,487	1,010,720	1,063,813	1,024,772	958,700	854,832	696,648

GOLD PROJECT: ARIZONA

= H.T. before allowances	(597,993)	(694,717)	3,329,178	3,543,311	3,754,336	3,987,811	4,245,243	4,464,148	4,778,747	5,134,915	5,543,547	6,021,638
- Depreciation allowances	0	0	1,122,182	1,712,756	1,677,113	1,789,860	1,770,910	406,185	407,446	422,104	437,495	453,655
- Amortization	0	0	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556
= Income for depletion	(597,993)	(694,717)	1,939,441	1,562,999	1,809,667	2,010,396	2,206,776	3,790,407	4,103,745	4,445,255	4,838,497	5,300,428
- Depletion allowance	0	0	945,221	781,500	904,834	1,085,198	1,103,388	1,757,655	1,845,538	1,937,814	2,034,765	2,136,448
= Taxable income	(597,993)	(694,717)	945,221	781,500	904,834	1,085,198	1,103,388	2,032,753	2,258,208	2,507,440	2,803,732	3,163,980
Tax otherwise payable	0	0	418,689	334,177	398,911	437,879	482,246	909,754	1,013,463	1,128,118	1,264,432	1,438,122
- Investment tax credit	0	0	379,945	303,085	130,395	26,534	27,861	29,254	30,716	32,252	33,865	35,558
= Tax payable net of ITC	0	0	38,744	38,293	268,515	410,345	454,385	880,500	982,747	1,095,858	1,230,567	1,394,564

MINIMUM TAX SCHEDULE

Tot. depr. al. for the yr	0	0	1,309,737	1,908,312	1,944,649	1,977,415	2,038,466	673,741	675,002	689,660	705,658	721,211
Hypothetical 50 base	0	0	11,174,310	10,324,290	9,457,929	8,570,509	7,655,713	6,704,801	5,765,133	4,837,286	3,947,746	3,128,961
Hypothetical 50A for the yr	0	0	1,117,431	1,147,143	1,182,241	1,224,358	1,275,952	1,340,960	1,426,283	1,545,735	1,733,873	2,128,961
Accelerated depr. amount	0	0	272,306	833,168	762,428	753,057	762,514	0	0	0	0	0
Minimum tax base	0	0	233,562	882,876	581,913	342,512	308,129	0	0	0	0	0
Minimum tax payable	0	0	35,034	120,431	75,287	51,377	44,219	0	0	0	0	0

Federal corp. income tax

	0	0	38,744	120,431	268,515	410,345	454,385	880,500	982,747	1,095,858	1,230,567	1,394,564
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ARIZONA STATE TAXES

Net proceeds, less 8	0	0	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000
Residual net of property	11,766,891	13,019,189	14,442,371	13,851,446	13,171,851	12,384,440	11,444,349	10,378,587	9,081,843	7,511,543	5,577,179	3,143,697
Assessed tax base, 44%	5,436,384	6,315,488	7,356,294	7,408,879	7,396,836	7,382,372	7,097,868	6,746,864	6,199,126	5,383,625	4,197,182	2,404,877
Ad valorem property tax	597,993	694,717	889,192	814,089	813,652	803,263	788,765	742,155	681,904	592,199	461,681	273,240

Net severance base

	0	0	4,330,675	4,547,289	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,388	6,718,299
Severance tax	0	0	108,267	113,680	119,364	125,332	131,599	138,179	145,888	152,342	159,959	167,957

Operating profits

	0	0	4,330,675	4,547,289	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,388	6,718,299
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- Interest payment

	0	0	0	0	0	0	0	0	0	0	0	0
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- Depletion

	0	0	1,122,182	1,712,756	1,677,113	1,789,860	1,770,910	406,185	407,446	422,104	437,495	453,655
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- Amortization

	0	0	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556
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- Federal tax, provisions

	0	0	0	0	0	0	0	0	0	0	0	0
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- Property tax

	597,993	694,717	889,192	814,089	813,652	803,263	788,765	742,155	681,904	592,199	461,681	273,240
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- Severance tax

	0	0	108,267	113,680	119,364	125,332	131,599	138,179	145,888	152,342	159,959	167,957
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- Depletion

	0	0	945,221	781,500	904,834	1,085,198	1,103,388	1,757,655	1,845,538	1,937,814	2,034,765	2,136,448
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= Net taxable profits

	0	0	1,858,258	818,085	871,619	841,573	799,199	1,761,846	1,575,688	1,738,933	1,941,125	2,188,874
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Arizona income tax

	0	0	110,686	85,448	91,089	87,934	83,485	184,479	164,995	182,157	203,387	229,481
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GOLD PROJECT: COLORADO

CASH FLOW SUMMARY	YEAR	1	2	3	4	5	6	7	8	9	10	11	12
PROJECT BASIS													
Line operating revenues		0	0	9,101,124	9,640,100	10,122,109	10,620,299	11,159,713	11,717,699	12,303,504	12,910,763	13,564,701	14,242,937
- Operating costs		0	0	4,850,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,530	6,500,065	6,825,060	7,166,322	7,524,630
= Operating profits		0	0	4,250,675	4,547,129	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,085,695	6,398,380	6,718,299
- Capital expenditures		5,326,650	5,592,903	254,670	267,411	200,702	294,021	309,562	325,040	341,292	358,357	376,275	395,000
- Working capital		0	1,160,933	50,047	60,949	63,996	67,196	70,556	74,004	77,700	81,677	85,761	89,937
- New debt		0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments		0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Post Cash Flow		(5,326,650)	(6,753,915)	4,017,951	4,210,049	4,429,791	4,651,201	4,883,045	5,120,037	5,364,439	5,613,641	5,876,344	6,144,247
- Debt's principal payments		0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow		(5,326,650)	(6,753,915)	4,017,951	4,210,049	4,429,791	4,651,201	4,883,045	5,120,037	5,364,439	5,613,641	5,876,344	6,144,247
- Federal corp. income tax		0	0	52,540	105,932	500,023	540,517	577,152	1,107,751	1,170,712	1,247,337	1,319,394	1,392,607
- State property tax		418,092	403,020	303,147	310,305	334,220	350,931	368,477	386,901	406,246	426,559	447,807	470,201
- State severance tax		0	0	0	0	0	0	0	0	0	0	0	5,546
- State income tax		0	0	65,345	55,721	61,043	66,534	70,797	120,994	136,907	144,746	152,092	161,102
= A-T Cash Flow (Cur. \$)		(5,745,542)	(7,237,735)	3,596,899	3,450,892	3,533,705	3,693,299	3,867,417	3,500,391	3,642,493	3,835,019	4,016,171	4,100,432
TAX PAYMENTS IN CONST. \$													
Fed'l corp. income tax		0	0	45,306	152,946	391,701	403,342	410,171	749,749	759,000	765,757	771,422	775,456
State property tax		390,945	430,039	261,070	261,070	261,070	261,070	261,070	261,070	261,070	261,070	261,070	261,070
State severance tax		0	0	0	0	0	0	0	0	0	0	0	3,000
State income tax		0	0	56,465	45,441	40,456	49,440	50,314	87,300	100,303	100,061	99,393	89,752
Total tax payments		390,945	430,039	363,770	460,457	702,107	714,860	722,556	1,090,947	1,109,701	1,116,400	1,122,405	1,130,166
CASH FLOWS IN CONST. \$													
Before-tax CF		(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	4,574,000
After-tax CF		(5,471,945)	(6,564,039)	3,107,137	3,010,179	2,768,750	2,755,997	2,740,501	2,371,910	2,340,076	2,354,569	2,340,172	3,443,834
FEDERAL CORP. INCOME TAX													
PROJECT BASIS													
Line operating revenue		0	0	9,101,124	9,640,100	10,122,109	10,620,299	11,159,713	11,717,699	12,303,504	12,910,763	13,564,701	14,242,937
- Operating cost		0	0	4,850,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,530	6,500,065	6,825,060	7,166,322	7,524,630
Operating profit		0	0	4,250,675	4,547,129	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,085,695	6,398,380	6,718,299
- Interest charges		0	0	0	0	0	0	0	0	0	0	0	0
- State tax payments		418,092	403,020	410,643	409,974	435,962	460,309	484,951	560,990	590,761	629,477	661,730	700,916

GOLD PROJECT- COLOMBO

: N.I. before allowances	(410,092)	(403,020)	3,919,992	4,137,235	4,350,607	4,552,900	4,779,012	4,950,171	5,204,750	5,464,217	5,736,650	6,017,385
- Depreciation allowances	0	0	1,122,102	1,712,756	1,677,113	1,709,060	1,770,910	406,185	407,446	422,104	437,495	453,655
- Amortization	0	0	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556
: Income for depletion	(410,092)	(403,020)	2,530,255	2,156,923	2,393,938	2,575,493	2,740,546	4,204,431	4,529,756	4,774,558	5,031,600	5,296,174
- Depletion allowance	0	0	1,265,127	1,070,462	1,196,969	1,207,747	1,370,273	1,757,655	1,045,530	1,937,014	2,034,705	2,136,440
: Taxable income	(410,092)	(403,020)	1,265,127	1,070,462	1,196,969	1,207,747	1,370,273	2,526,776	2,684,219	2,836,743	2,996,894	3,159,733
Tax otherwise payable	0	0	556,646	470,700	525,293	567,051	605,013	1,137,004	1,209,420	1,279,509	1,353,259	1,420,165
- Investment tax credit	0	0	504,106	204,040	25,270	26,534	27,061	29,254	30,716	32,252	33,065	35,550
: Tax payable net of ITC	0	0	52,540	105,932	500,023	540,517	577,152	1,107,751	1,178,712	1,247,337	1,319,394	1,392,607

MINIMUM TAX SCHEDULE

Tot. depr. al. for the Yr	0	0	1,309,737	1,900,312	1,944,669	1,977,415	2,030,466	673,741	675,002	689,660	705,050	721,211
Hypothetical SLD base	0	0	11,174,310	10,324,290	9,457,929	8,570,509	7,655,713	6,704,001	5,705,133	4,637,206	3,467,746	2,120,961
Hypothetical SLA for the Yr	0	0	1,117,431	1,147,143	1,102,241	1,224,350	1,275,952	1,340,960	1,426,203	1,545,735	1,733,073	2,120,961
Accelerated depr amount	0	0	272,306	833,160	762,420	753,057	762,514	0	0	0	0	0
Minimum tax base	0	0	219,767	647,237	262,405	212,540	185,362	0	0	0	0	0
Minimum tax payable	0	0	32,965	97,006	39,361	31,001	27,004	0	0	0	0	0

Federal corp. income tax	0	0	52,540	105,932	500,023	540,517	577,152	1,107,751	1,178,712	1,247,337	1,319,394	1,392,607
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COLOMBO STATE TAXES

Gross proceeds, prev. yr	0	0	9,101,124	9,640,100	10,122,109	10,620,299	11,159,713	11,717,699	12,303,504	12,910,763	13,564,701	14,242,937
Net proceeds, const. & PVI(not proceeds), prepaid	19,947,245	23,039,040	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000	3,741,000
Property tax base	5,904,174	6,911,720	4,330,675	4,547,209	4,774,569	5,013,290	5,263,963	5,527,161	5,003,519	6,093,695	6,390,300	6,710,299
Ad valorem property tax	410,092	403,020	303,147	310,305	334,220	350,931	360,477	306,901	406,246	426,559	447,007	470,201
Gross severance base	0	0	0	0	0	0	0	0	0	0	0	492,937
Annual ore production	0	0	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000
severance tax, usually	0	0	0	0	0	0	0	0	0	0	0	5,546
severance tax, only-ore	0	0	6,094	6,094	6,094	6,094	6,094	6,094	6,094	6,094	6,094	6,094
severance tax, iron-ore	0	0	013	013	013	013	013	013	013	013	013	013
Severance tax payable	0	0	0	0	0	0	0	0	0	0	0	5,546
Operating profits	0	0	4,330,675	4,547,209	4,774,569	5,013,290	5,263,963	5,527,161	5,003,519	6,093,695	6,390,300	6,710,299
- Interest payment	0	0	0	0	0	0	0	0	0	0	0	0
- Property tax	410,092	403,020	303,147	310,305	334,220	350,931	360,477	306,901	406,246	426,559	447,007	470,201
- Severance tax	0	0	0	0	0	0	0	0	0	0	0	5,546
- Depreciation	0	0	1,122,102	1,712,756	1,677,113	1,709,060	1,770,910	406,185	407,446	422,104	437,495	453,655
- Amortization	0	0	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556
- Depletion	0	0	1,265,127	1,070,462	1,196,969	1,207,747	1,370,273	1,757,655	1,045,530	1,937,014	2,034,705	2,136,440
: N.I. of SLDs deduct. A	0	0	1,372,663	1,170,131	1,290,711	1,397,205	1,406,746	2,700,064	2,076,733	3,039,662	3,210,737	3,304,021

OLD PROJECT: COLORADO

Colorado Income Tax	0	0	65,345	55,721	61,043	66,534	70,797	120,494	134,907	144,746	152,092	161,102
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GOLD PROJECT: MONTANA

CASH FLOW SUMMARY	YEAR	1	2	3	4	5	6	7	8	9	10	11	12
PROJECT BASIS													
Line operating revenues	0	0	9,181,124	9,640,180	10,122,189	10,628,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,781	14,242,937	
- Operating costs	0	0	4,858,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,538	6,508,865	6,825,068	7,164,322	7,529,638	
= Operating profits	0	0	4,322,675	4,547,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,300	6,718,299	
- Capital expenditures	5,326,650	5,592,983	254,678	267,411	280,782	294,821	309,562	325,040	341,292	358,357	376,275	395,088	
- Working capital	0	1,168,933	58,847	60,949	63,996	67,154	70,556	74,084	77,788	81,677	85,761	89,937	
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	
= Net Debt-Paid Cash Flow	(5,326,650)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,641	5,936,344	6,214,247	
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	
= Net Tax Net Cash Flow	(5,326,650)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,641	5,936,344	6,214,247	
- Federal corp. income tax	0	0	53,228	288,925	508,797	549,478	586,387	617,938	649,105	680,830	713,102	745,922	
- State property tax	0	0	66,595	63,425	64,806	70,147	73,654	77,337	81,204	85,264	89,527	94,003	
- State severance tax	0	0	173,258	182,155	191,496	201,305	211,603	222,417	233,772	245,694	258,212	271,356	
- State income tax	0	0	90,231	77,366	85,715	92,143	98,002	104,797	112,672	120,740	129,333	138,511	
= A-1 Cash Flow (cur. 0)	(5,326,650)	(6,753,915)	3,448,638	3,694,777	3,576,983	3,730,215	3,914,190	4,133,548	4,392,686	4,691,424	5,030,849	5,411,002	
TAX PAYMENTS TO GOVT. 8													
Federal corp. income tax	0	0	43,981	165,382	398,451	418,825	416,734	416,664	416,500	416,322	416,138	415,948	
State property tax	0	0	52,345	52,345	52,345	52,345	52,345	52,345	52,345	52,345	52,345	52,345	
State severance tax	0	0	149,647	149,647	150,842	150,217	150,383	150,541	150,691	150,835	150,971	151,101	
State income tax	0	0	77,945	63,649	67,160	68,758	69,649	70,643	71,735	72,927	74,219	75,611	
Total tax payments	0	0	325,937	431,155	648,196	681,344	699,110	709,213	720,519	732,200	744,279	756,646	
CASH FLOW TO GOVT. 8													
Before-tax CF	(5,073,000)	(6,126,000)	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	3,478,857	
After-tax CF	(5,073,000)	(6,126,000)	3,144,790	3,039,782	2,882,668	2,789,513	2,701,747	2,591,644	2,468,338	2,323,649	2,167,278	2,004,354	
FEDERAL CORP. INCOME TAX													
PROJECT BASIS													
Line operating revenue	0	0	9,181,124	9,640,180	10,122,189	10,628,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,781	14,242,937	
- Operating cost	0	0	4,858,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,538	6,508,865	6,825,068	7,164,322	7,529,638	
= Operating profit	0	0	4,322,675	4,547,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,300	6,718,299	
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0	
- State tax payments	0	0	388,745	371,778	397,842	421,454	444,888	464,844	476,166	486,232	496,000	505,947	

GOLD PROJECT MONTANA

= N.I. before allowances	0	0	3,949,330	4,175,401	4,376,727	4,591,044	4,819,163	4,990,317	5,227,352	5,487,463	5,768,579	6,067,332
- Depreciation allowances	0	0	1,122,182	1,712,756	1,677,113	1,799,868	1,770,910	466,185	407,446	427,104	437,495	633,635
- Amortization	0	0	267,536	267,536	267,536	267,536	267,536	267,536	267,536	267,536	267,536	267,536
= Income for depletion	0	0	2,560,193	2,195,109	2,432,058	2,614,428	2,780,657	4,306,576	4,552,351	4,797,804	5,053,529	5,326,141
- Depletion allowance	0	0	1,280,897	1,097,585	1,216,029	1,387,214	1,390,348	1,737,655	1,845,538	1,937,814	2,034,785	2,134,440
= Taxable income	0	0	1,280,897	1,097,585	1,216,029	1,387,214	1,390,348	2,568,922	2,706,813	2,859,989	3,028,824	3,191,700
Tax otherwise payable	0	0	543,532	479,526	534,061	576,006	614,248	1,147,191	1,219,822	1,290,282	1,344,266	1,441,958
- Investment tax credit	0	0	510,384	270,651	25,270	26,534	27,861	29,254	30,716	32,252	33,865	35,558
= Tax payable net of ITC	0	0	53,228	208,925	508,791	549,472	586,387	1,117,938	1,189,105	1,258,030	1,330,402	1,406,372

REVENUE TAX SCHEDULE

Tot. depr. al. for the Tr	0	0	1,309,737	1,900,312	1,944,649	1,977,415	2,038,466	673,741	675,002	689,640	705,050	721,211
Hypothetical S.B. base	0	0	11,174,310	10,324,290	9,457,929	8,570,509	7,655,713	6,704,801	5,705,133	4,637,206	3,467,744	2,178,761
Hypothetical S.B. for the Tr	0	0	1,117,431	1,147,143	1,182,241	1,224,358	1,275,952	1,340,960	1,426,283	1,545,235	1,733,873	2,128,761
Accelerated depr. amount	0	0	272,386	833,168	762,428	753,057	762,514	0	0	0	0	0
Minimum tax base	0	0	219,878	632,243	753,438	783,585	176,127	0	0	0	0	0
Minimum tax payable	0	0	32,062	91,836	38,046	30,538	26,419	0	0	0	0	0

Federal corp. income tax

0	0	0	53,228	208,925	508,791	549,472	586,387	1,117,938	1,189,105	1,258,030	1,330,402	1,406,372
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MONTANA STATE TAXES

0	0	0	324,085	323,146	344,018	363,594	383,260	476,551	502,648	529,286	557,892	586,373
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Gross revenues

0	0	0	9,181,124	9,640,180	10,122,189	10,628,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,781	14,242,937
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Accrued tax base, 3%

0	0	0	275,433	292,205	303,665	310,848	319,791	330,734	343,107	357,542	374,048	392,780
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Property tax

0	0	0	60,375	63,625	66,806	70,147	73,654	77,337	81,204	85,264	89,527	94,003
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Gross revenues

0	0	0	9,181,124	9,640,180	10,122,189	10,628,299	11,159,713	11,717,699	12,303,584	12,918,763	13,564,781	14,242,937
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Less indemnity trust tax

0	0	0	45,966	48,201	50,611	53,141	55,799	58,588	61,518	64,594	67,824	71,215
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Licence tax

0	0	0	127,353	133,954	140,985	148,163	155,805	163,829	172,254	181,180	190,589	199,142
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Severance tax payable

0	0	0	173,258	182,155	191,496	201,305	211,603	222,417	233,772	245,694	258,212	271,356
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Operating profits

0	0	0	4,338,475	4,547,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,093,695	6,398,380	6,718,299
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- Interest payment

0	0	0	0	0	0	0	0	0	0	0	0	0
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- Property tax

0	0	0	60,375	63,625	66,806	70,147	73,654	77,337	81,204	85,264	89,527	94,003
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- Severance tax

0	0	0	173,258	182,155	191,496	201,305	211,603	222,417	233,772	245,694	258,212	271,356
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- Depreciation

0	0	0	1,122,182	1,712,756	1,677,113	1,799,868	1,770,910	466,185	407,446	427,104	437,495	633,635
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- Amortization

0	0	0	267,536	267,536	267,536	267,536	267,536	267,536	267,536	267,536	267,536	267,536
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- Depletion

0	0	0	1,280,897	1,097,585	1,216,029	1,387,214	1,390,348	1,737,655	1,845,538	1,937,814	2,034,785	2,134,440
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= N.I. b/f S.I.T. deduct. A

0	0	0	1,426,988	1,223,532	1,355,568	1,457,217	1,549,891	2,796,011	2,948,004	3,135,263	3,310,885	3,495,208
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Montana income tax

0	0	0	90,231	77,366	85,715	92,143	98,002	176,797	187,672	198,248	209,353	221,014
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GOLD PROJECT REVENUE

CASH FLOW SUMMARY	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
PROJECT BASIS	1	2	3	4	5	6	7	8	9	10	11	12	13
Blow operating revenues	0	0	9,101,124	9,440,100	10,122,189	10,420,299	11,159,713	11,717,699	12,303,584	12,910,763	13,544,701	14,242,937	0
- Operating costs	0	0	4,050,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,538	6,500,065	6,825,048	7,164,327	7,524,630	0
Operating profit	0	0	4,330,675	4,347,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,085,715	6,380,374	6,718,307	0
- Capital expenditures	5,326,650	5,592,903	254,678	262,411	280,782	294,821	309,562	325,040	341,292	358,357	376,275	395,088	0
- Working capital	0	1,160,933	58,047	60,949	63,996	67,196	70,556	74,084	77,788	81,677	85,761	89,937	0
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0
- Ref Debt-Pmt Cash Flow	(5,326,650)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,641	5,936,344	6,234,247	0
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
- Ref Tax Net Cash Flow	(5,326,650)	(6,753,915)	4,017,951	4,218,849	4,429,791	4,651,281	4,883,845	5,128,037	5,384,439	5,653,641	5,936,344	6,234,247	0
- Federal corp income tax	0	0	63,687	349,329	567,716	612,199	652,773	694,059	734,943	774,738	813,473	851,345	0
- State property tax	0	0	0	75,787	79,536	83,555	87,733	92,119	96,725	101,562	106,640	111,972	117,570
- State severance tax	0	0	56,299	59,114	62,569	65,173	68,432	71,853	75,446	79,210	83,179	87,330	0
- State income tax	0	0	0	0	0	0	0	0	0	0	0	0	0
- A-T Cash flow (cur 8)	(5,326,650)	(6,753,915)	3,897,965	3,734,420	3,770,430	3,899,354	4,074,907	4,294,006	4,557,324	4,865,143	5,218,852	5,621,592	(117,570)

TAX PAYMENTS IN CASH \$

Federal corp income tax	0	0	55,016	287,550	444,820	456,832	463,916	475,870	486,381	497,449	508,344	519,079	0
State property tax	0	0	0	62,350	62,350	62,350	62,350	62,350	62,350	62,350	62,350	62,350	0
State severance tax	0	0	60,633	60,633	60,633	60,633	60,633	60,633	60,633	60,633	60,633	60,633	0
State income tax	0	0	0	0	0	0	0	0	0	0	0	0	0
Total tax payments	0	0	103,649	390,541	555,803	567,815	574,897	594,853	607,284	620,452	634,327	648,972	0

CASH FLOW IN CASH \$

Before-tax CF	(5,073,000)	(6,126,000)	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	3,470,857	0
After-tax CF	(5,073,000)	(6,126,000)	3,367,289	3,077,316	2,915,054	2,903,042	2,895,960	2,484,084	2,473,574	2,467,405	2,461,530	2,455,870	0
FEDERAL CORP. INCOME TAX	0	0	0	0	0	0	0	0	0	0	0	0	0
PROJECT BASIS	1	2	3	4	5	6	7	8	9	10	11	12	13
Blow operating revenues	0	0	9,101,124	9,440,100	10,122,189	10,420,299	11,159,713	11,717,699	12,303,584	12,910,763	13,544,701	14,242,937	0
- Operating cost	0	0	4,050,449	5,092,971	5,347,620	5,615,001	5,895,751	6,190,538	6,500,065	6,825,048	7,164,327	7,524,630	0
Operating profit	0	0	4,330,675	4,347,209	4,774,569	5,013,298	5,263,963	5,527,161	5,803,519	6,085,715	6,380,374	6,718,307	0
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0
- State tax payments	0	0	56,299	134,901	141,444	140,770	156,164	163,972	172,171	180,700	189,019	199,310	117,570

GOLD PROJECT- NEVADA

= N.I. before allowances	0	0	4,274,376	4,412,300	4,632,924	4,864,570	5,107,790	5,363,100	5,631,340	5,912,915	6,200,561	6,510,909	(117,570)
- Depreciation allowances	0	0	1,122,102	1,712,756	1,677,113	1,709,860	1,770,910	406,185	407,446	422,104	437,495	453,655	0
- Amortization	0	0	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556	267,556	0
= Income for depletion	0	0	2,884,639	2,431,997	2,688,255	2,887,155	3,069,332	4,689,448	4,956,344	5,223,256	5,503,510	5,797,778	(117,570)
- Depletion allowance	0	0	1,377,169	1,215,990	1,344,127	1,443,577	1,534,666	1,757,655	1,845,530	1,937,814	2,034,705	2,136,440	0
= Taxable income	0	0	1,507,471	1,215,990	1,344,127	1,443,577	1,534,666	2,931,793	3,110,800	3,285,441	3,468,805	3,661,338	(117,570)
Tax otherwise payable	0	0	640,124	534,047	592,906	630,733	680,634	1,323,312	1,405,659	1,485,990	1,570,330	1,650,903	0
- Investment tax credit	0	0	604,437	104,510	25,270	26,534	27,061	29,254	30,716	32,252	33,065	35,550	0
= Tax payable net of ITC	0	0	63,687	349,529	567,716	612,199	652,773	1,294,059	1,374,943	1,453,738	1,536,473	1,623,345	0
WINNIEH TAX SCHEDULE													
Tot. depr. al. for the Yr	0	0	1,309,737	1,900,312	1,944,669	1,977,415	2,030,466	673,741	675,002	689,660	705,050	721,211	0
Hypothetical SLD base	0	0	11,174,310	10,324,290	9,457,929	8,570,509	7,655,713	6,704,801	5,705,133	4,637,206	3,467,746	2,120,961	0
Hypothetical SLA for the Yr	0	0	1,117,431	1,147,143	1,102,241	1,224,350	1,275,952	1,340,960	1,426,203	1,545,735	1,733,073	2,120,961	0
Accelerated depr amount	0	0	272,306	833,168	762,420	753,057	762,514	0	0	0	0	0	0
Minimum tax base	0	0	200,619	483,640	194,712	140,850	109,741	0	0	0	0	0	0
Minimum tax payable	0	0	31,293	72,546	29,207	21,129	16,461	0	0	0	0	0	0
Federal corp income tax	0	0	63,687	349,529	567,716	612,199	652,773	1,294,059	1,374,943	1,453,738	1,536,473	1,623,345	0
NEVADA STATE TAXES													
Net proceeds previous yr	0	0	0	4,330,675	4,547,209	4,774,569	5,013,290	5,263,963	5,527,161	5,803,519	6,093,695	6,390,300	6,710,299
Assessed tax base	0	0	0	1,515,736	1,591,523	1,671,099	1,754,654	1,842,387	1,934,506	2,031,232	2,132,793	2,239,433	2,351,004
Property tax	0	0	0	75,787	79,576	83,555	87,733	92,119	96,725	101,562	106,640	111,972	117,570
Net proceeds tax base	0	0	4,330,675	4,547,209	4,774,569	5,013,290	5,263,963	5,527,161	5,803,519	6,093,695	6,390,300	6,710,299	0
Severance tax	0	0	56,299	59,114	62,069	65,173	68,432	71,853	75,446	79,210	83,179	87,330	0

LEAD-ZINC PROJECT ARIZONA

CASH FLOW SUMMARY	YEAR	1	2	3	4	5	6	7	8	9	10	11	12	13
PROJECT BASIS														
Line operating revenues		0	0	0	0	76,576,894	80,405,738	84,476,075	88,647,377	65,931,449	69,228,027	72,609,423	76,323,894	80,848,089
- Operating costs		0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,366	42,758,484	44,896,408	47,141,229
= Operating profits		0	0	0	0	44,669,855	46,903,347	49,298,564	51,710,991	27,148,244	28,505,661	29,850,939	31,427,486	33,706,860
- Capital expenditures		21,525,000	22,601,250	23,731,313	24,917,078	2,297,307	2,412,172	2,532,781	2,659,420	2,792,391	2,932,010	3,078,611	3,232,341	3,394,148
- Working capital		0	0	0	10,331,803	516,590	542,420	569,541	598,018	627,919	659,314	692,290	726,894	763,239
+ New debt		0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments		0	0	0	0	0	0	0	0	0	0	0	0	0
= Def Debt-Post Cash Flow		(21,525,000)	(22,601,250)	(23,731,313)	(35,249,681)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,048	27,468,858	28,841,453
- Debt's principal payments		0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow		(21,525,000)	(22,601,250)	(23,731,313)	(35,249,681)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,048	27,468,858	28,841,453
- Federal corp. income tax		0	0	0	0	586,394	3,348,014	5,537,543	6,101,854	1,250,151	3,438,899	3,734,397	4,019,859	4,331,175
- State property tax		3,753,771	4,318,200	4,954,927	5,703,526	6,574,759	6,408,861	6,128,925	5,735,874	5,191,164	5,252,765	5,277,908	5,254,971	5,168,780
- State severance tax		0	0	0	0	1,116,746	1,172,584	1,231,213	1,292,774	678,706	712,641	748,273	785,487	824,971
- State income tax		0	0	0	0	1,431,154	1,217,000	1,086,759	999,894	0	794,551	641,924	484,556	735,753
= A-T Cash flow (cur \$)		(25,278,771)	(26,911,450)	(28,686,239)	(40,953,207)	52,146,965	51,010,297	52,161,754	54,323,508	16,487,914	14,715,455	15,755,545	16,722,977	17,700,776
TAX PAYMENTS IN CONST \$														
Federal corp. income tax		0	0	0	0	459,455	2,498,339	3,935,429	4,129,975	885,858	2,111,186	2,184,594	2,238,488	2,296,916
State property tax		3,575,020	3,909,478	4,290,252	4,692,385	5,151,495	4,776,421	4,355,712	3,881,995	3,344,270	3,224,754	3,085,883	2,956,164	2,741,116
State severance tax		0	0	0	0	875,000	875,000	875,000	875,000	437,500	437,500	437,508	437,500	437,500
State income tax		0	0	0	0	1,121,347	908,144	772,339	676,767	0	487,785	375,320	301,186	398,185
Total tax payments		3,575,020	3,909,478	4,290,252	4,692,385	7,407,297	9,057,905	9,938,480	9,563,737	4,589,629	6,261,225	6,083,297	5,983,259	5,865,716
CASH FLOWS IN CONST \$														
Before-tax CF		(20,508,000)	(20,508,000)	(20,508,000)	(20,508,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
After-tax CF		(24,075,020)	(24,409,478)	(24,700,252)	(33,692,385)	25,187,941	23,737,333	22,856,758	23,231,501	10,705,609	9,834,813	9,211,941	9,311,979	9,429,524
FEDERAL CORP. INCOME TAX														
PROJECT BASIS														
Line operating revenue		0	0	0	0	76,576,894	80,405,738	84,476,075	88,647,377	65,931,449	69,228,027	72,609,423	76,323,894	80,848,089
- Operating cost		0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,366	42,758,484	44,896,408	47,141,229
Operating profit		0	0	0	0	44,669,855	46,903,347	49,298,564	51,710,991	27,148,244	28,505,661	29,850,939	31,427,486	33,706,860
- Interest charges		0	0	0	0	0	0	0	0	0	0	0	0	0
- State tax payments		3,753,771	4,318,200	4,954,927	5,703,526	6,574,759	6,408,861	6,128,925	5,735,874	5,191,164	5,252,765	5,277,908	5,254,971	5,168,780

LEAD-ZINC PROJECT - ARIZONA

= R.I. before allowances	(3,753,771)	(4,310,200)	(4,954,927)	(5,703,526)	35,870,304	38,340,827	40,774,001	43,458,495	21,048,741	21,823,344	23,120,152	24,553,852	26,100,674
- Depreciation allowances	0	0	0	0	9,441,908	14,581,791	14,221,427	14,401,941	14,952,444	4,230,233	4,192,104	4,324,405	4,463,237
- Amortization	0	0	0	0	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037
= Income for depletion	(3,753,771)	(4,310,200)	(4,954,927)	(5,703,526)	25,052,360	22,302,200	25,177,417	27,480,498	4,740,838	16,209,097	17,559,931	18,852,411	20,269,401
- Depletion allowance	0	0	0	0	12,526,180	11,191,100	12,580,709	13,840,249	2,370,019	8,104,548	8,779,946	9,426,305	10,134,700
= Taxable income	(3,753,771)	(4,310,200)	(4,954,927)	(5,703,526)	12,526,180	11,191,100	12,580,709	13,840,249	2,370,019	8,104,548	8,779,946	9,426,305	10,134,700
Tax otherwise payable	0	0	0	0	5,734,730	5,122,593	5,745,493	6,341,202	1,044,896	3,702,700	4,013,472	4,310,700	4,634,650
- Investment tax credit	0	0	0	0	5,164,182	1,774,500	227,950	239,348	251,315	263,001	277,075	290,929	305,475
= Tax payable net of ITC	0	0	0	0	570,548	3,348,014	5,537,543	6,101,854	813,581	3,438,899	3,736,397	4,019,859	4,331,175
MINIMUM TAX SCHEDULE													
Tot. depr. al. for the yr.	0	0	0	0	10,810,024	15,957,827	15,597,464	15,777,997	16,320,703	5,614,270	5,548,221	5,700,442	5,839,273
Hypothetical 30% base	0	0	0	0	95,072,747	91,146,736	87,169,036	83,123,145	79,989,607	74,739,835	70,344,463	65,768,953	60,935,002
Hypothetical 54% for the yr.	0	0	0	0	6,338,183	6,510,481	6,705,310	6,926,979	7,180,702	7,473,904	7,816,051	8,220,119	8,705,000
Accelerated depr. amount	0	0	0	0	4,479,841	9,447,346	8,892,153	8,851,868	9,147,920	0	0	0	0
Minimum tax base	0	0	0	0	3,909,293	6,099,332	3,354,610	2,749,214	8,334,339	0	0	0	0
Minimum tax payable	0	0	0	0	586,394	914,900	503,191	412,302	1,250,151	0	0	0	0
Federal corp. income tax	0	0	0	0	586,394	3,348,014	5,537,543	6,101,854	1,250,151	3,438,899	3,736,397	4,019,859	4,331,175

ARIZONA STATE TAXES

Net proceeds, const. &	3,753,771	4,310,200	4,954,927	5,703,526	9,122,659	8,790,445	8,446,896	8,028,141	5,869,870	6,759,977	6,648,106	6,775,216	6,779,504
Held 10% of property	73,864,853	80,774,347	88,434,943	96,948,447	104,435,854	98,486,391	89,594,056	80,206,501	69,137,819	66,627,151	63,752,922	60,457,943	56,634,590
Assessed tax base, 40%	34,125,192	39,183,636	45,044,791	51,850,235	57,770,532	50,189,649	55,717,096	52,140,674	47,197,390	47,752,587	47,900,901	47,772,443	46,900,905
Ad valorem property tax	3,753,771	4,310,200	4,954,927	5,703,526	6,574,759	6,400,861	6,120,925	5,735,474	5,191,164	5,252,785	5,277,900	5,254,971	5,168,700
Net severance base	0	0	0	0	44,649,855	46,903,347	49,248,515	51,710,941	27,148,244	28,505,454	29,830,439	31,427,406	32,998,840
Severance tax	0	0	0	0	1,116,746	1,172,584	1,231,213	1,292,774	678,706	712,641	748,273	785,407	824,971
Operating profits	0	0	0	0	44,649,855	46,903,347	49,248,515	51,710,941	27,148,244	28,505,454	29,830,439	31,427,406	32,998,840
- Interest payment	0	0	0	0	0	0	0	0	0	0	0	0	0
- Depreciation	0	0	0	0	9,441,908	14,581,791	14,221,427	14,401,941	14,952,444	4,230,233	4,192,104	4,324,405	4,463,237
- Amortization	0	0	0	0	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037
- Federal tax, previous yr.	0	0	0	0	0	586,394	3,348,014	5,537,543	6,101,854	1,250,151	3,438,899	3,736,397	4,019,859
- Property tax	3,753,771	4,310,200	4,954,927	5,703,526	6,574,759	6,400,861	6,120,925	5,735,474	5,191,164	5,252,785	5,277,900	5,254,971	5,168,700
- Severance tax	0	0	0	0	1,116,746	1,172,584	1,231,213	1,292,774	678,706	712,641	748,273	785,407	824,971
- Depletion	0	0	0	0	12,526,180	11,191,100	12,580,709	13,840,249	2,370,019	8,104,548	8,779,946	9,426,305	10,134,700
= Net taxable profits	0	0	0	0	13,434,146	11,594,581	10,354,191	9,526,903	0	7,571,261	6,117,672	6,523,604	7,011,276
Arizona income tax	0	0	0	0	1,431,154	1,217,800	1,086,759	999,894	0	794,551	641,924	604,554	735,753

LEAD-ZINC PROJECT ARIZONA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Net operating revenues	84,147,093	88,354,448	92,772,170	97,410,779	102,281,317	85,098,056
- Operating costs	49,498,290	51,973,204	54,571,865	57,300,458	60,165,481	50,057,680
= Operating profits	34,648,803	36,381,243	38,200,305	40,110,321	42,115,837	35,040,376
- Capital expenditures	3,563,877	3,742,071	3,929,174	4,125,633	4,331,915	3,604,153
- Working capital	801,401	841,471	883,544	927,722	974,108	(21,479,077)
+ New debt	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0
= Debt-Paid Cash Flow	30,283,525	31,797,701	33,387,587	35,056,966	36,809,814	52,915,300
- Debt's principal payment	0	0	0	0	0	0
= Debt Net Cash Flow	30,283,525	31,797,701	33,387,587	35,056,966	36,809,814	52,915,300
- Federal corp. income tax	4,675,496	5,400,499	5,833,459	6,327,858	6,901,445	5,708,030
- State property tax	4,999,096	4,718,524	4,289,254	3,657,866	2,746,706	1,425,172
- State severance tax	844,270	999,531	955,080	1,002,758	1,052,894	876,009
- State income tax	792,406	948,365	975,993	1,057,759	1,153,817	799,818
= A-T Cash flow (cur 8)	18,958,347	19,820,783	21,333,873	23,018,725	24,955,549	44,026,271
TAX PAYMENTS IN CONST 8						
Federal corp. income tax	2,341,443	2,597,732	2,672,375	2,748,823	2,867,776	2,312,544
State property tax	2,529,083	2,269,691	1,944,957	1,595,915	1,141,313	549,412
State severance tax	437,500	437,500	437,500	437,500	437,500	350,000
State income tax	480,219	452,332	447,113	461,497	479,103	319,558
Total tax payments	5,728,044	5,757,255	5,527,945	5,255,735	4,925,692	3,551,515
CASH FLOWS IN CONST 8						
Before-tax CF	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731
After-tax CF	9,571,193	9,537,984	9,773,293	10,039,503	10,369,546	17,590,216
FEDERAL CORP INCOME TAX						
PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Net operating revenue	84,147,093	88,354,448	92,772,170	97,410,779	102,281,317	85,098,056
- Operating cost	49,498,290	51,973,204	54,571,865	57,300,458	60,165,481	50,057,680
= Operating profit	34,648,803	36,381,243	38,200,305	40,110,321	42,115,837	35,040,376
- Interest charges	0	0	0	0	0	0
- State tax payments	4,838,096	4,756,127	4,438,875	5,953,654	5,706,533	3,481,304

LEAD-ZINC PROJECT: ARIZONA

= N.I. before allowances	27,017,907	29,645,116	31,761,000	34,156,667	36,909,304	31,550,992
- Depreciation allowances	4,609,010	3,214,307	3,375,022	3,543,773	3,720,962	3,772,439
- Amortization	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,100,029
= Income for depletion	21,032,860	25,054,772	27,010,422	29,236,857	31,812,305	26,685,724
- Depletion allowance	10,916,430	12,527,306	13,505,211	14,610,429	15,906,153	13,342,862
= Taxable income	10,916,430	12,527,306	13,505,211	14,610,429	15,906,153	13,342,862
Tax otherwise payable	4,996,245	5,737,205	6,107,004	6,699,165	7,291,510	6,112,404
- Investment tax credit	320,749	336,704	353,626	371,307	389,072	324,374
= Tax payable net of ITC	4,675,496	5,400,499	5,833,459	6,327,858	6,901,645	5,788,030

MINIMUM TAX SCHEDULE

Tot. depr. al. for the yr	5,905,047	4,590,343	4,751,059	4,919,010	5,086,990	4,073,260
Hypothetical SLD base	55,793,079	50,236,969	44,110,750	37,214,695	29,141,712	10,175,009
Hypothetical SLA for the yr	9,290,900	10,047,394	11,029,607	12,404,090	14,570,056	10,175,009
Accelerated depr. amount	0	0	0	0	0	0
Minimum tax base	0	0	0	0	0	0
Minimum tax payable	0	0	0	0	0	0

Federal corp. income tax	4,675,496	5,400,499	5,833,459	6,327,858	6,901,645	5,788,030
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ARIZONA STATE TAXES	6,657,722	6,560,420	6,220,255	5,710,303	4,952,619	3,100,999
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Net proceeds, const. &	17,500,000	17,500,000	17,500,000	17,500,000	17,500,000	14,000,000
Household PV of property	52,167,004	46,094,437	40,590,202	32,973,449	23,500,049	11,764,706
Assessed tax base, 40%	45,446,324	42,095,673	38,993,222	33,253,330	24,970,054	12,954,105
Ad valorem property tax	4,999,096	4,710,524	4,209,254	3,657,066	2,746,706	1,425,172

Net severance base	34,640,003	36,301,243	30,200,305	40,110,321	42,115,037	35,040,376
Severance tax	866,220	909,531	955,000	1,002,750	1,052,096	876,009

Operating profits	34,640,003	36,301,243	30,200,305	40,110,321	42,115,037	35,040,376
- Interest payment	0	0	0	0	0	0
- Depreciation	4,609,010	3,214,307	3,375,022	3,543,773	3,720,962	3,772,439
- Amortization	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,100,029
- Federal tax, previous yr	4,331,175	4,675,496	5,400,499	5,833,459	6,327,858	6,901,645
- Property tax	4,999,096	4,710,524	4,209,254	3,657,066	2,746,706	1,425,172
- Severance tax	866,220	909,531	955,000	1,002,750	1,052,096	876,009
- Depletion	10,916,430	12,527,306	13,505,211	14,610,429	15,906,153	13,342,862
= Not taxable profits	7,550,836	8,959,962	9,299,275	10,077,999	10,905,226	7,621,419
Arizona income tax	792,406	940,365	975,993	1,057,759	1,153,017	799,018

CASH FLOW SUMMARY PROJECT BASIS	YEAR												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Line operating revenues	0	0	0	0	76,576,894	80,405,730	84,426,075	88,647,377	65,931,449	69,278,072	72,609,423	76,323,894	80,140,899
- Operating costs	0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,344	42,758,684	44,896,408	47,141,229
= Operating profits	0	0	0	0	44,669,855	46,903,337	49,248,515	51,710,941	27,148,244	28,505,656	29,930,939	31,427,486	32,999,669
- Capital expenditures	21,525,000	22,601,250	23,731,313	24,917,878	2,297,307	2,412,172	2,532,781	2,659,420	2,792,391	2,932,010	3,078,411	3,232,541	3,394,148
- Working capital	0	0	0	10,331,003	516,590	542,420	569,541	598,018	627,919	659,314	692,280	726,894	763,239
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt-Paid Cash Flow	(21,525,000)	(22,601,250)	(23,731,313)	(35,249,681)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,048	27,468,050	28,841,453
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow	(21,525,000)	(22,601,250)	(23,731,313)	(35,249,681)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,048	27,468,050	28,841,453
- Federal corp. income tax	0	0	0	0	658,845	1,952,295	6,256,811	6,701,879	1,567,827	4,198,322	4,408,126	4,736,847	5,084,745
- State property tax	2,827,446	3,265,723	3,771,910	4,356,556	3,126,890	3,283,234	3,447,396	3,619,746	1,908,377	1,995,396	2,095,146	2,199,924	2,309,920
- State severance tax	0	0	0	0	706,803	749,877	795,105	842,595	587,041	642,128	643,869	703,956	746,888
- State income tax	0	0	0	0	741,545	660,824	726,486	777,425	205,830	508,781	533,781	563,886	595,617
= After Tax Cash Flow (cur \$)	(24,352,446)	(25,866,973)	(27,503,223)	(39,606,237)	36,621,875	34,298,526	34,920,395	36,511,838	19,466,859	17,595,785	18,387,987	19,264,316	20,184,642
TAX PAYMENTS IN CASH \$													
Federal corp. income tax	0	0	0	0	516,223	1,695,079	4,446,599	4,536,095	1,018,635	2,577,485	2,619,437	2,637,288	2,654,134
State property tax	2,692,825	2,962,107	3,258,310	3,584,150	2,458,000	2,450,000	2,450,000	2,450,000	1,225,000	1,225,000	1,225,000	1,225,000	1,225,000
State severance tax	0	0	0	0	553,790	559,578	565,066	570,301	378,417	383,149	387,682	391,969	396,091
State income tax	0	0	0	0	581,020	496,182	516,300	526,192	132,600	307,436	312,844	315,948	319,742
Total tax payments	2,692,825	2,962,107	3,258,310	3,584,150	4,101,841	7,201,150	7,977,966	8,082,582	2,746,727	4,082,062	4,544,163	4,568,146	4,596,967

[illegible]

LEAD-TIME PROJECT: COLUMBIAN

• B.L. before allowances	(2,827,446)	(3,265,723)	(3,771,910)	(4,356,556)	39,789,399	41,868,049	43,902,131	44,067,297	24,348,878	25,125,286	26,361,757	27,666,913	29,837,327
- Depreciation allowances	0	0	0	0	9,441,980	14,581,791	14,221,427	14,401,961	14,952,666	6,238,233	4,192,184	4,324,085	4,463,237
- Amortization	0	0	0	0	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837
• Income for depletion	(2,827,446)	(3,265,723)	(3,771,910)	(4,356,556)	28,891,375	25,902,222	28,304,668	30,289,300	8,019,367	19,518,956	28,793,536	21,966,472	23,198,854
- Depletion allowance	0	0	0	0	14,445,487	12,951,111	14,152,334	15,144,650	4,009,684	9,755,648	18,396,768	18,983,236	11,599,887
• Taxable income	(2,827,446)	(3,265,723)	(3,771,910)	(4,356,556)	14,445,487	12,951,111	14,152,334	15,144,650	4,009,684	9,755,648	18,396,768	18,983,236	11,599,887
Tax otherwise payable	0	0	0	0	6,619,704	5,932,199	6,484,761	6,941,226	1,819,142	4,462,283	4,757,281	5,826,976	5,310,240
- Investment tax credit	0	0	0	0	5,960,858	979,904	227,950	239,348	251,315	263,881	277,075	298,979	385,475
• Tax payable net of ITC	0	0	0	0	658,845	4,952,295	6,256,811	6,701,879	1,567,827	4,198,402	4,480,206	4,736,847	5,004,765
RETURN TAX SCHEDULE													
Tot. depr. al. for the yr	0	0	0	0	10,818,824	15,957,827	15,597,464	15,777,997	16,328,703	5,614,278	5,568,221	5,780,442	5,839,273
Hypothetical S.D. base	0	0	0	0	95,072,747	91,146,736	87,169,036	83,123,145	78,988,607	74,739,835	70,344,463	65,748,953	60,935,882
Hypothetical S.L.A. for the yr	0	0	0	0	6,338,183	6,518,481	6,705,310	6,976,929	7,180,782	7,473,984	7,816,851	8,228,119	8,785,888
Accelerated depr. amount	0	0	0	0	4,479,841	9,447,346	8,892,153	8,851,868	9,147,920	0	0	0	0
Minimum tax base	0	0	0	0	5,820,996	14,495,851	2,635,342	2,149,190	7,580,894	0	0	0	0
Minimum tax payable	0	0	0	0	573,149	674,258	395,301	322,378	1,137,014	0	0	0	0
Federal corp. income tax	0	0	0	0	658,845	4,952,295	6,256,811	6,701,879	1,567,827	4,198,402	4,480,206	4,736,847	5,004,765
COLUMBIAN STATE TAXES	2,827,446	3,265,723	3,771,910	4,356,556	4,575,238	4,697,935	4,968,988	5,239,786	2,693,249	5,120,384	3,291,935	3,467,486	3,652,225
Gross proceeds, prev. yr	0	0	0	0	76,576,894	80,405,738	84,426,025	88,647,327	65,931,449	69,228,822	72,689,423	76,323,894	80,148,889
Net proceeds, const. & preprod. (net proceeds), prev. yr	134,641,229	135,518,619	179,614,765	287,453,853	35,000,000	35,000,000	35,000,000	35,000,000	17,500,000	17,500,000	17,500,000	17,500,000	17,500,000
Property tax base	46,372,369	46,653,186	53,884,429	62,236,516	44,649,855	44,983,347	49,248,515	51,710,941	27,148,244	28,585,656	29,938,939	31,427,486	32,998,849
Ad valorem property tax	2,827,446	3,265,723	3,771,910	4,356,556	3,126,890	3,283,234	3,447,396	3,619,766	1,900,377	1,995,396	2,095,166	2,199,924	2,309,728
Gross severance base	0	0	0	0	62,826,894	66,653,738	70,676,025	74,897,327	52,181,449	55,478,822	58,938,423	62,573,894	66,398,889
Annual ore production	0	0	0	0	508,880	500,000	500,000	500,000	500,000	508,880	500,000	500,000	508,880
Severance tax, usually	0	0	0	0	786,803	749,877	795,105	842,595	587,041	624,128	663,869	703,956	746,888
Severance tax, only-ore	0	0	0	0	44,875	46,875	46,875	46,875	44,875	46,875	46,875	46,875	46,875
Severance tax, iron-ore	0	0	0	0	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250
Severance tax payable	0	0	0	0	786,803	749,877	795,105	842,595	587,041	624,128	663,869	703,956	746,888
Operating profits	0	0	0	0	44,649,855	44,983,347	49,248,515	51,710,941	27,148,244	28,585,656	29,938,939	31,427,486	32,998,849
- Interest payment	0	0	0	0	0	0	0	0	0	0	0	0	0
- Property tax	2,827,446	3,265,723	3,771,910	4,356,556	3,126,890	3,283,234	3,447,396	3,619,766	1,900,377	1,995,396	2,095,166	2,199,924	2,309,728
- Severance tax	0	0	0	0	786,803	749,877	795,105	842,595	587,041	624,128	663,869	703,956	746,888
- Depreciation	0	0	0	0	9,441,980	14,581,791	14,221,427	14,401,961	14,952,666	6,238,233	4,192,184	4,324,085	4,463,237
- Amortization	0	0	0	0	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837
- Depletion	0	0	0	0	14,445,487	12,951,111	14,152,334	15,144,650	4,009,684	9,755,648	18,396,768	18,983,236	11,599,887
• B.L. of S.L.A. deductible, A	0	0	0	0	15,572,451	13,961,298	15,256,216	16,325,933	4,322,439	10,516,394	11,207,716	11,839,978	12,583,751

LEAD-ZINC PROJECT COLORADO

Colorado Income Tax	0	0	0	0	0	0	0	0	0	741,545	644,824	776,486	777,425	205,830	500,781	533,701	543,886	595,417

LEAD-ZINC PROJECT COLORADO

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Mine operating revenues	84,147,893	88,354,448	92,772,170	97,418,779	102,281,317	85,898,056
- Operating costs	49,498,290	51,973,204	54,571,865	57,388,458	60,165,481	50,857,680
= Operating profits	34,648,883	36,381,243	38,200,305	40,110,321	42,115,837	35,040,376
- Capital expenditures	3,563,877	3,742,871	3,929,174	4,125,633	4,331,915	3,684,153
- Working capital	881,481	841,471	883,544	927,722	974,188	(21,479,077)
+ New debt	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0
= Def. Debt-Paid Cash Flow	38,283,525	31,797,701	33,387,587	35,856,966	36,809,814	52,915,300
- Debt's principal payment	0	0	0	0	0	0
= Def. Tax Net Cash Flow	38,283,525	31,797,701	33,387,587	35,856,966	36,809,814	52,915,300
- Federal corp. income tax	5,286,918	5,925,883	6,236,877	6,563,585	6,986,464	5,687,649
- State property tax	2,425,416	2,546,687	2,674,821	2,887,722	2,948,189	2,452,826
- State severance tax	791,967	839,388	888,999	941,184	995,977	882,666
- State income tax	628,688	781,493	738,287	776,718	817,854	664,884
= A-T Cash flow (cur. \$)	21,158,616	21,784,218	22,849,482	23,967,845	25,142,211	43,387,354
TAX PAYMENTS IN CONST. \$						
Federal corp. income tax	2,678,253	2,858,413	2,857,185	2,863,635	2,869,778	2,248,475
State property tax	1,225,000	1,225,000	1,225,000	1,225,000	1,225,000	988,000
State severance tax	399,997	483,718	487,261	418,635	413,849	320,696
State income tax	317,498	337,527	338,218	338,876	339,503	265,615
Total tax payments	4,612,748	4,816,657	4,827,664	4,838,147	4,848,130	3,806,787
CASH FLOWS IN CONST. \$						
Before-tax CF	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731
After-tax CF	10,682,490	10,478,581	10,467,574	10,457,092	10,447,100	17,334,944
FEDERAL CORP. INCOME TAX						
PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Mine operating revenue	84,147,893	88,354,448	92,772,170	97,418,779	102,281,317	85,898,056
Operating cost	49,498,290	51,973,204	54,571,865	57,388,458	60,165,481	50,857,680
Operating profit	34,648,883	36,381,243	38,200,305	40,110,321	42,115,837	35,040,376
- Interest charges	0	0	0	0	0	0
- State tax payments	4,172,541	4,452,196	4,684,833	4,929,101	5,185,583	4,265,649

LEAD-ZINC PROJECT COLORADO

= N.I. before allowances	30,476,262	31,929,047	33,515,472	35,101,219	36,930,254	30,774,727
- Depreciation allowances	4,609,010	3,214,307	3,375,022	3,543,773	3,720,962	3,772,439
- Amortization	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,100,829
= Income for depletion	24,491,215	27,338,703	28,764,414	30,261,410	31,833,255	25,901,459
- Depletion allowance	12,245,600	13,669,352	14,382,207	15,130,705	15,916,620	12,950,729
= Taxable income	12,245,600	13,669,352	14,382,207	15,130,705	15,916,620	12,950,729
Tax otherwise payable	5,607,647	6,262,509	6,590,503	6,934,812	7,296,336	5,932,023
- Investment tax credit	320,749	336,706	353,626	371,307	389,072	324,374
= Tax payable net of ITC	5,286,910	5,925,803	6,236,877	6,563,505	6,906,464	5,607,649

MINIMUM TAX SCHEDULE

Tot. depr. al for the yr	5,905,047	4,590,343	4,751,059	4,919,810	5,096,990	4,873,268
Hypothetical SLB base	55,793,079	50,236,969	44,110,750	37,214,695	29,141,712	10,125,009
Hypothetical SLA for the yr	9,290,900	10,047,394	11,029,607	12,404,090	14,570,056	18,175,009
Accelerated depr amount	0	0	0	0	0	0
Minimum tax base	0	0	0	0	0	0
Minimum tax payable	0	0	0	0	0	0

Federal corp. income tax	5,286,910	5,925,803	6,236,877	6,563,505	6,906,464	5,607,649
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COLORADO STATE TAXES

Gross proceeds, prev yr	84,147,093	80,354,440	92,772,170	97,410,779	102,201,317	85,090,056
Net proceeds, const 0	17,500,000	17,500,000	17,500,000	17,500,000	17,500,000	14,000,000
PP(net procds), prepaid	0	0	0	0	0	0
Property tax base	34,640,003	36,301,243	30,200,305	40,110,321	42,115,837	35,040,376
Ad valorem property tax	2,425,416	2,546,607	2,674,021	2,007,722	2,940,109	2,452,026

Gross severance base	70,397,093	74,604,440	79,022,170	83,660,779	80,531,317	71,340,056
Annual ore production	500,000	500,000	500,000	500,000	500,000	400,000
severance tax, usually	791,967	839,300	800,999	941,104	995,977	802,666
severance tax, only-ore	46,075	46,075	46,075	46,075	46,075	37,500
severance tax, iron-ore	6,250	6,250	6,250	6,250	6,250	5,000
Severance tax payable	791,967	839,300	800,999	941,104	995,977	802,666

Operating profits	34,640,003	36,301,243	30,200,305	40,110,321	42,115,837	35,040,376
- Interest payment	0	0	0	0	0	0
- Property tax	2,425,416	2,546,607	2,674,021	2,007,722	2,940,109	2,452,026
- Severance tax	791,967	839,300	800,999	941,104	995,977	802,666
- Depreciation	4,609,010	3,214,307	3,375,022	3,543,773	3,720,962	3,772,439
- Amortization	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,100,829
- Depletion	12,245,600	13,669,352	14,382,207	15,130,705	15,916,620	12,950,729
= N.I. bf SITx dedcns, A	13,200,765	14,735,561	15,504,019	16,310,900	17,150,125	13,960,006

LEAD-ZINC PROJECT: COLORADO

Colorado income tax : 629,488 781,693 738,287 776,718 817,854 644,884

LEAD-ZINC PROJECT: MONTANA

CASH FLOW SUMMARY	YEAR	1	2	3	4	5	6	7	8	9	10	11	12	13
PROJECT BASIS														
Line operating revenues		0	0	0	0	76,576,894	80,405,238	84,426,025	88,647,327	65,931,449	69,228,022	72,689,423	76,323,894	80,140,089
- Operating costs		0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,366	42,758,484	44,896,400	47,141,229
= Operating profits		0	0	0	0	44,669,855	46,903,347	49,248,515	51,710,941	27,148,244	28,505,656	29,930,939	31,427,494	32,998,860
- Capital expenditures		21,525,000	22,601,250	23,731,313	24,917,878	2,297,307	2,412,172	2,532,781	2,659,420	2,792,391	2,932,010	3,078,611	3,232,541	3,394,168
- Working capital		0	0	0	10,331,003	516,590	542,420	569,541	598,018	627,919	659,316	692,280	726,894	763,239
+ New debt		0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments		0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Post-Paid Cash Flow		(21,525,000)	(22,601,250)	(23,731,313)	(35,249,681)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,048	27,468,650	28,841,453
- Debt's principal payments		0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Net Cash Flow		(21,525,000)	(22,601,250)	(23,731,313)	(35,249,681)	41,855,958	43,948,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,048	27,468,650	28,841,453
- Federal corp. income tax		0	0	0	0	690,426	5,586,885	6,421,137	7,084,362	1,714,160	4,328,533	4,689,178	4,872,785	5,149,581
- State property tax		0	0	0	0	505,407	530,678	557,212	585,072	435,148	456,905	479,750	503,738	529,975
- State severance tax		0	0	0	0	1,479,308	1,553,591	1,631,504	1,713,313	1,273,000	1,336,967	1,404,849	1,474,065	1,548,443
- State income tax		0	0	0	0	1,057,890	958,114	1,044,463	1,116,575	382,471	700,379	746,238	788,395	832,641
= A-T Cash Flow (cur. \$)		(21,525,000)	(22,601,250)	(23,731,313)	(35,249,681)	30,127,438	35,319,487	36,291,877	37,954,181	28,083,877	18,899,547	18,928,840	19,828,646	20,781,843
TAX PAYMENTS IN CONST. \$														
Federal corp. income tax		0	0	0	0	541,124	4,169,028	4,705,519	4,794,975	1,104,963	2,652,432	2,694,886	2,713,549	2,738,933
State property tax		0	0	0	0	396,000	396,000	396,000	396,000	280,500	280,500	280,500	280,500	280,500
State severance tax		0	0	0	0	1,159,139	1,159,314	1,159,080	1,159,638	820,638	820,782	820,918	821,049	821,172
State income tax		0	0	0	0	828,891	714,959	742,780	755,742	194,975	429,972	436,310	439,808	441,578
Total tax payments		0	0	0	0	2,925,154	6,439,293	7,003,279	7,106,355	2,401,076	4,183,606	4,232,615	4,253,966	4,274,183
CASH FLOWS IN CONST. \$														
Before-tax CF		(20,500,000)	(20,500,000)	(20,500,000)	(29,000,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
After-tax CF		(20,500,000)	(20,500,000)	(20,500,000)	(29,000,000)	29,870,084	26,353,945	25,791,959	25,688,083	12,894,162	11,111,552	11,062,623	11,041,332	11,021,655
FEDERAL CORP. INCOME TAX														
PROJECT BASIS														
Line operating revenues		0	0	0	0	76,576,894	80,405,238	84,426,025	88,647,327	65,931,449	69,228,022	72,689,423	76,323,894	80,140,089
Operating cost		0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,366	42,758,484	44,896,400	47,141,229
Operating profit		0	0	0	0	44,669,855	46,903,347	49,248,515	51,710,941	27,148,244	28,505,656	29,930,939	31,427,494	32,998,860
- Interest charges		0	0	0	0	0	0	0	0	0	0	0	0	0
- State tax payments		0	0	0	0	3,578,677	3,527,812	3,742,356	3,908,673	2,163,944	2,047,899	3,088,119	3,166,059	3,331,896

LEAD-ZINC PROJECT, MONTANA

= R.I. before allowances	0	0	0	0	0	61,091,177	43,375,536	45,446,159	47,730,768	24,904,799	25,656,557	26,772,020	28,261,427	29,666,964
- Depreciation allowances	0	0	0	0	0	9,441,908	14,581,791	14,221,427	14,401,961	14,952,646	4,238,233	4,192,184	4,324,405	4,463,237
- Amortization	0	0	0	0	0	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037
= Income for depletion	0	0	0	0	0	30,273,133	27,417,709	29,888,695	31,952,271	8,655,597	20,042,287	21,354,599	22,568,985	23,827,691
- Depletion allowance	0	0	0	0	0	15,136,577	13,708,854	14,944,348	15,976,135	4,327,798	10,021,144	10,677,380	11,208,493	11,913,845
= Taxable income	0	0	0	0	0	15,136,577	13,708,854	14,944,348	15,976,135	4,327,798	10,021,144	10,677,380	11,208,493	11,913,845
Tax otherwise payable	0	0	0	0	0	6,937,513	6,200,768	6,849,087	7,323,710	1,965,475	4,584,414	4,886,245	5,163,714	5,455,856
- Investment tax credit	0	0	0	0	0	6,244,006	693,076	227,950	239,348	251,315	263,081	277,075	298,929	303,475
= Tax payable net of ITC	0	0	0	0	0	690,626	5,506,885	6,621,137	7,084,362	1,714,160	4,320,533	4,609,170	4,872,785	5,149,581
RETURN TAX SCHEDULE														
Tot. Amount for the tr	0	0	0	0	0	10,818,024	15,957,827	15,597,464	15,777,997	16,328,783	5,614,270	5,548,221	5,700,442	5,839,273
Hypothetical 30 base	0	0	0	0	0	95,072,747	91,166,736	87,169,036	83,123,145	78,988,407	74,739,035	70,344,443	65,760,953	60,935,002
Hypothetical 30A for the tr	0	0	0	0	0	6,338,183	6,510,481	6,705,310	6,926,929	7,180,782	7,473,984	7,816,851	8,228,119	8,705,000
Accelerated depr amount	0	0	0	0	0	4,479,841	9,447,346	8,897,153	8,851,068	9,147,970	0	0	0	0
Minimum tax base	0	0	0	0	0	3,789,215	3,840,461	2,271,816	1,766,706	7,433,761	0	0	0	0
Minimum tax payable	0	0	0	0	0	568,382	579,069	340,652	265,006	1,115,064	0	0	0	0
Federal corp income tax	0	0	0	0	0	690,626	5,506,885	6,621,137	7,084,362	1,714,160	4,320,533	4,609,170	4,872,785	5,149,581
MONTANA STATE TAXES														
Gross revenues	0	0	0	0	0	76,576,894	80,405,738	84,426,025	88,647,327	65,931,449	69,228,022	72,689,423	76,323,894	80,140,889
Assessed tax base, 35	0	0	0	0	0	279,106,8125	241,217,1531	253,780,7608	265,9419,7988	197,943,4754	207,6840,6491	218,0642,6816	228,9713,8157	240,4202,6545
Property tax	0	0	0	0	0	505,407	530,678	557,212	585,072	435,148	456,905	479,758	503,738	529,975
Gross revenues	0	0	0	0	0	76,576,894	80,405,738	84,426,025	88,647,327	65,931,449	69,228,022	72,689,423	76,323,894	80,140,889
Inc. Indemnity trust tax	0	0	0	0	0	382,884	402,079	427,130	443,237	329,657	346,110	363,447	381,619	400,700
Licence tax	0	0	0	0	0	1,096,504	1,151,563	1,209,374	1,270,077	943,422	990,827	1,040,682	1,092,864	1,147,743
Severance tax payable	0	0	0	0	0	1,479,388	1,553,591	1,631,504	1,713,313	1,273,080	1,336,987	1,404,049	1,474,085	1,548,443
Operating profits	0	0	0	0	0	44,669,855	46,903,347	49,248,515	51,710,941	27,148,244	28,505,656	29,930,939	31,427,466	32,998,868
- Interest payment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Property tax	0	0	0	0	0	505,407	530,678	557,212	585,072	435,148	456,905	479,758	503,738	529,975
- Severance tax	0	0	0	0	0	1,479,388	1,553,591	1,631,504	1,713,313	1,273,080	1,336,987	1,404,049	1,474,085	1,548,443
- Depreciation	0	0	0	0	0	9,441,908	14,581,791	14,221,427	14,401,961	14,952,646	4,238,233	4,192,184	4,324,405	4,463,237
- Amortization	0	0	0	0	0	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037
- Depletion	0	0	0	0	0	15,136,577	13,708,854	14,944,348	15,976,135	4,327,798	10,021,144	10,677,380	11,208,493	11,913,845
= R.I. of SITS debt, A	0	0	0	0	0	16,730,458	15,152,397	16,517,987	17,658,422	4,783,515	11,076,370	11,801,619	12,468,329	13,168,373
Montana income tax	0	0	0	0	0	1,057,898	958,114	1,044,463	1,116,575	302,471	700,379	746,238	788,395	832,441

LEAD-ZINC PROJECT MONTANA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Mine operating revenues	84,147,093	88,354,448	92,772,170	97,410,779	102,281,317	85,898,054
- Operating costs	49,498,290	51,973,204	54,571,865	57,380,458	60,165,481	50,057,680
Operating profits	34,648,803	36,381,243	38,200,305	40,110,321	42,115,837	35,840,376
- Capital expenditures	3,563,877	3,742,071	3,929,174	4,125,633	4,331,915	3,604,153
- Working capital	801,401	841,471	883,544	927,722	974,108	(21,479,077)
+ New debt	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0
Def. Debt-Pmt Cash Flow	30,283,525	31,797,701	33,387,587	35,056,966	36,809,814	52,915,300
- Debt's principal payment	0	0	0	0	0	0
Def. Tax Net Cash Flow	30,283,525	31,797,701	33,387,587	35,056,966	36,809,814	52,915,300
- Federal corp. income tax	5,440,217	6,083,565	6,483,991	6,740,438	7,093,700	5,759,670
- State property tax	555,371	583,139	612,296	642,911	675,057	561,647
- State severance tax	1,626,099	1,787,637	1,793,253	1,883,149	1,977,540	1,644,528
- State income tax	879,139	979,323	1,030,565	1,084,370	1,140,865	928,226
A-T Cash flow (cur \$)	21,782,788	22,444,837	23,547,481	24,786,898	25,922,645	44,821,228

TAX PAYMENTS IN CONST \$

Federal corp. income tax	2,747,679	2,926,299	2,933,742	2,940,831	2,947,582	2,381,214
State property tax	280,500	280,500	280,500	280,500	280,500	224,400
State severance tax	821,298	821,483	821,518	821,612	821,789	657,053
State income tax	444,825	471,071	472,114	473,187	474,853	378,863
Total tax payments	4,293,495	4,499,273	4,587,864	4,516,849	4,523,844	3,553,529

CASH FLOWS IN CONST \$

Before-tax CF	15,295,230	15,295,230	15,295,230	15,295,230	15,295,230	21,141,731
After-tax CF	11,081,744	10,795,965	10,787,372	10,779,189	10,771,395	17,588,201

FEDERAL CORP. INCOME TAX PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19
Mine operating revenue	84,147,093	88,354,448	92,772,170	97,410,779	102,281,317	85,898,054
Operating cost	49,498,290	51,973,204	54,571,865	57,380,458	60,165,481	50,057,680
Operating profit	34,648,803	36,381,243	38,200,305	40,110,321	42,115,837	35,840,376
- Interest charges	0	0	0	0	0	0
- State tax payments	3,586,824	3,766,273	3,958,258	4,159,826	4,371,488	3,604,687

LEAD-ZINC PROJECT: MONTANA

= N.I. before allowances	31,142,779	32,614,970	34,242,855	35,950,495	37,744,356	31,435,689
- Depreciation allowances	4,609,810	3,214,387	3,375,822	3,543,773	3,720,962	3,772,439
- Amortization	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837	1,100,829
= Income for depletion	25,157,732	28,024,627	29,490,997	31,030,685	32,647,358	26,562,421
- Depletion allowance	12,578,866	14,812,313	14,745,498	15,515,343	16,323,679	13,281,210
= Taxable income	12,578,866	14,812,313	14,745,498	15,515,343	16,323,679	13,281,210
Tax otherwise payable	5,768,966	6,420,352	6,757,617	7,111,745	7,483,580	6,884,844
- Investment tax credit	320,749	336,786	353,626	371,387	389,872	324,374
= Tax payable net of ITC	5,448,217	6,083,565	6,403,991	6,740,430	7,093,708	5,759,670

MONTANA TAX SCHEDULE

Tot. depr. al. for the Yr	5,985,847	4,598,343	4,751,859	4,919,810	5,096,998	4,873,268
Hypothetical SLD base	55,793,879	50,236,969	44,118,758	37,214,695	29,141,712	18,175,009
Hypothetical SLD for the Yr	9,298,988	10,847,394	11,829,687	12,404,898	14,570,856	18,175,009
Accelerated depr amount	0	0	0	0	0	0
Minimum tax base	0	0	0	0	0	0
Minimum tax payable	0	0	0	0	0	0

Federal corp. income tax	5,448,217	6,083,565	6,403,991	6,740,430	7,093,708	5,759,670
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MONTANA STATE TAXES

Gross revenues	84,147,893	88,354,448	92,772,178	97,418,779	102,281,317	85,898,856
Assessed tax base, 3%	2524412 7893	2650633 4287	2783165 1882	2922323 3552	3068439 525	2552941 6831
Property tax	555,371	583,139	612,296	642,911	675,857	561,647

Gross revenues	84,147,893	88,354,448	92,772,178	97,418,779	102,281,317	85,898,856
Des. indemnity trust tax	420,735	441,772	463,861	487,054	511,487	425,490
Licence tax	1,205,363	1,265,865	1,329,392	1,396,895	1,466,133	1,219,038
Severance tax payable	1,626,099	1,707,637	1,793,253	1,883,149	1,977,540	1,644,528

Operating profits	34,648,883	36,381,243	38,200,305	40,118,321	42,115,837	35,048,376
- Interest payment	0	0	0	0	0	0
- Property tax	555,371	583,139	612,296	642,911	675,857	561,647
- Severance tax	1,626,099	1,707,637	1,793,253	1,883,149	1,977,540	1,644,528
- Depreciation	4,609,810	3,214,387	3,375,822	3,543,773	3,720,962	3,772,439
- Amortization	1,376,837	1,376,837	1,376,837	1,376,837	1,376,837	1,100,829
- Depletion	12,578,866	14,812,313	14,745,498	15,515,343	16,323,679	13,281,210
= N.I. b/ SITx deductn, A	13,903,420	15,487,810	16,298,199	17,149,100	18,042,562	14,679,722
Montana income tax	879,139	979,323	1,030,565	1,084,370	1,140,865	928,226

LEAD-ZINC PROJECT NEVADA

CASH FLOW SUMMARY	YEAR	1	2	3	4	5	6	7	8	9	10	11	12	13
PROJECT BASIS														
Before operating revenues		0	0	0	0	76,576,894	80,405,730	84,426,075	88,647,377	65,931,449	69,278,022	72,489,423	76,323,894	80,140,809
- Operating costs		0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,366	42,758,484	44,896,408	47,141,229
= Operating profits		0	0	0	0	44,669,855	46,903,347	49,248,515	51,710,941	27,148,244	28,505,656	29,730,939	31,427,486	32,999,860
- Capital expenditures		21,525,000	22,601,250	23,731,313	24,917,078	2,297,307	2,412,172	2,532,781	2,659,420	2,792,391	2,932,010	3,078,611	3,232,541	3,394,148
- Working capital		0	0	0	10,331,003	516,590	542,420	569,541	598,018	627,919	659,314	692,780	726,894	763,239
+ New debt		0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments		0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt-Paid Cash Flow		(21,525,000)	(22,601,250)	(23,731,313)	(25,249,481)	41,855,958	43,940,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,848	27,468,050	28,841,453
- Debt's principal payments		0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow		(21,525,000)	(22,601,250)	(23,731,313)	(25,249,481)	41,855,958	43,940,756	46,146,193	48,453,503	23,727,934	24,914,331	26,160,848	27,468,050	28,841,453
- Federal corp. income tax		0	0	0	0	903,379	6,555,024	7,150,440	7,647,076	1,922,557	4,701,322	5,096,809	5,386,539	5,690,755
- State property tax		0	0	0	0	0	781,772	820,809	861,849	904,941	473,894	498,849	523,791	549,981
- State severance tax		0	0	0	0	580,708	609,744	640,231	672,242	352,927	370,574	389,182	408,557	428,905
- State income tax		0	0	0	0	0	0	0	0	0	0	0	0	0
= A-T Cash Flow (cur \$)		(21,525,000)	(22,601,250)	(23,731,313)	(25,249,481)	40,371,871	36,002,765	37,534,714	39,272,356	20,547,509	19,787,342	20,175,200	21,149,163	22,171,731
TAX PAYMENTS IN CASH \$														
Federal corp. income tax		0	0	0	0	787,821	14,891,448	5,881,684	5,175,842	1,239,297	2,935,317	2,979,999	2,999,426	3,017,999
State property tax		0	0	0	0	0	583,333	583,333	583,333	583,333	291,667	291,667	291,667	291,667
State severance tax		0	0	0	0	455,000	455,000	455,000	455,000	277,500	277,500	277,500	277,500	277,500
State income tax		0	0	0	0	0	0	0	0	0	0	0	0	0
Total tax payments		0	0	0	0	1,142,821	5,929,784	6,120,018	6,214,175	2,056,131	3,454,483	3,499,165	3,518,593	3,537,896
CASH FLOWS IN CASH \$														
Before-tax CF		(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	32,795,238	32,795,238	32,795,238	32,795,238	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238
After-tax CF		(20,500,000)	(20,500,000)	(20,500,000)	(20,500,000)	31,432,417	26,865,445	26,675,721	26,581,063	13,245,107	11,840,755	11,796,073	11,776,645	11,756,143
FEDERAL CORP. INCOME TAX														
PROJECT BASIS														
Before operating revenue		0	0	0	0	76,576,894	80,405,730	84,426,075	88,647,377	65,931,449	69,278,022	72,489,423	76,323,894	80,140,809
- Operating cost		0	0	0	0	31,907,039	33,502,391	35,177,511	36,936,386	38,783,205	40,722,366	42,758,484	44,896,408	47,141,229
= Operating profit		0	0	0	0	44,669,855	46,903,347	49,248,515	51,710,941	27,148,244	28,505,656	29,730,939	31,427,486	32,999,860
- Interest charges		0	0	0	0	0	0	0	0	0	0	0	0	0
- State tax payments		0	0	0	0	0	1,391,666	1,461,839	1,534,891	1,257,869	845,648	887,951	932,349	978,966

LEAD-ZINC PROJECT - NEVADA

= N.I. before allowances	0	0	0	0	44,009,147	45,511,001	47,707,476	50,176,049	25,090,375	27,659,900	29,042,900	30,495,137	32,019,094
- Depreciation allowances	0	0	0	0	9,441,900	14,501,791	14,221,427	14,401,941	14,952,444	4,238,233	4,192,104	4,324,405	4,463,237
- Amortization	0	0	0	0	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037
= Income for depletion	0	0	0	0	33,271,122	29,554,854	32,190,012	34,398,052	9,541,672	22,045,710	23,474,767	24,794,695	26,100,629
- Depletion allowance	0	0	0	0	16,635,541	14,777,027	16,095,006	17,199,426	4,700,836	11,022,059	11,737,303	12,397,340	13,090,310
= Taxable income	0	0	0	0	16,635,541	14,777,027	16,095,006	17,199,426	4,700,836	11,022,059	11,737,303	12,397,340	13,090,310
Tax otherwise payable	0	0	0	0	7,627,046	6,772,120	7,370,390	7,806,423	2,173,072	5,045,203	5,373,004	5,673,447	5,996,230
- Investment tax credit	0	0	0	0	6,723,447	217,095	227,950	239,348	251,315	263,001	277,075	290,979	305,475
= Tax payable net of ITC	0	0	0	0	903,379	6,555,024	7,150,440	7,647,076	1,922,557	4,781,372	5,096,009	5,386,539	5,690,755
RETIREMENT TAX SCHEDULE													
Tot. depr. al. for the Tr	0	0	0	0	10,018,024	15,952,027	15,597,444	15,777,997	16,320,703	5,614,270	5,540,221	5,700,442	5,839,273
Hypothetical SLB base	0	0	0	0	95,072,747	91,146,736	87,169,036	83,123,145	78,900,607	74,739,835	70,344,463	65,740,953	60,935,002
Hypothetical SLA for the Tr	0	0	0	0	6,130,183	6,510,481	6,705,310	6,926,979	7,100,702	7,473,904	7,816,051	8,220,119	8,705,000
Accelerated depr. amount	0	0	0	0	4,479,041	9,447,346	8,092,153	8,051,068	9,147,920	0	0	0	0
Minimum tax base	0	0	0	0	3,576,442	2,092,322	1,741,713	1,203,993	7,225,363	0	0	0	0
Minimum tax payable	0	0	0	0	536,469	433,048	261,257	100,599	1,003,005	0	0	0	0
Federal corp. income tax	0	0	0	0	903,379	6,555,024	7,150,440	7,647,076	1,922,557	4,781,372	5,096,009	5,386,539	5,690,755

NEVADA STATE TAXES	0	0	0	0	500,708	1,391,446	1,461,039	1,534,091	1,257,069	845,640	807,951	932,349	970,746
Net proceeds previous yr	0	0	0	0	0	44,649,055	46,903,347	49,240,515	51,710,941	27,148,244	28,505,656	29,930,939	31,427,406
Assessed tax base	0	0	0	0	0	15,634,449	16,416,172	17,236,900	18,090,029	9,501,005	9,976,900	10,475,029	10,999,620
Property tax	0	0	0	0	0	781,722	820,809	861,849	904,941	475,094	490,049	523,791	549,901
Net proceeds tax base	0	0	0	0	44,649,055	46,903,347	49,240,515	51,710,941	27,148,244	28,505,656	29,930,939	31,427,406	32,990,060
Sovereignty tax	0	0	0	0	500,708	609,744	640,231	672,242	352,927	370,574	309,102	400,557	420,905

LEAD-ZINC PROJECT: NEVADA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20
Line operating revenues	84,147,093	88,354,448	92,772,178	97,418,779	102,281,317	85,098,056	0
- Operating costs	49,498,290	51,973,204	54,571,865	57,388,458	60,165,481	50,857,680	0
= Operating profits	34,648,803	36,381,243	38,200,313	40,110,321	42,115,837	35,040,376	0
- Capital expenditures	3,563,877	3,742,071	3,929,174	4,125,633	4,331,915	3,604,153	0
- Working capital	801,401	841,471	883,544	927,722	974,108	(21,479,077)	0
+ New debt	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0
= Def Debt-Pant Cash Flow	38,283,525	31,797,701	33,387,587	35,054,966	36,809,814	52,915,300	0
- Debt's principal payment	0	0	0	0	0	0	0
= Def Tax Net Cash Flow	38,283,525	31,797,701	33,387,587	35,054,966	36,809,814	52,915,300	0
- Federal corp. income tax	6,010,182	6,701,567	7,053,735	7,423,512	7,811,778	6,314,462	0
- State property tax	577,480	686,354	636,672	648,505	701,931	737,027	613,207
- State severance tax	450,434	472,956	496,604	521,434	547,506	455,525	0
- State income tax	0	0	0	0	0	0	0
= A-T Cash flow (cur \$)	23,245,429	24,016,825	25,200,576	26,443,514	27,748,600	45,400,286	(613,207)
TAX PAYMENTS IN CONST. \$							
Federal corp. income tax	3,035,558	3,223,568	3,231,397	3,238,854	3,245,955	2,522,874	0
State property tax	291,667	291,667	291,667	291,667	291,667	294,471	0
State severance tax	227,580	227,580	227,580	227,580	227,580	182,008	0
State income tax	0	0	0	0	0	0	0
Total tax payments	3,554,717	3,742,735	3,758,564	3,758,820	3,765,122	2,999,345	0
CASH FLOWS IN CONST. \$							
Before-tax CF	15,295,238	15,295,238	15,295,238	15,295,238	15,295,238	21,141,731	0
After-tax CF	11,740,521	11,552,583	11,544,674	11,537,218	11,538,117	18,142,385	0
FEDERAL CORP. INCOME TAX : PROJECT BASIS							
Line operating revenue	84,147,093	88,354,448	92,772,178	97,418,779	102,281,317	85,098,056	0
Operating cost	49,498,290	51,973,204	54,571,865	57,388,458	60,165,481	50,857,680	0
Operating profit	34,648,803	36,381,243	38,200,313	40,110,321	42,115,837	35,040,376	0
- Interest charges	0	0	0	0	0	0	0
- State tax payments	1,827,914	1,879,310	1,133,276	1,189,940	1,249,436	1,192,552	613,207

LEAD-ZINC PROJECT: NEVADA

= U.I. before allowances	33,620,009	35,301,933	37,067,030	38,920,301	40,866,400	33,047,824	(613,207)
- Depreciation allowances	4,609,010	3,214,307	3,375,022	3,543,773	3,720,962	3,772,439	0
- Amortization	1,376,037	1,376,037	1,376,037	1,376,037	1,376,037	1,100,029	0
= Income for depletion	27,635,041	30,711,590	32,315,971	34,000,571	35,769,402	29,974,556	(613,207)
- Depletion allowance	13,017,921	15,355,795	16,157,905	17,000,206	17,004,701	14,407,270	0
= Taxable income	13,017,921	15,355,795	16,157,905	17,000,206	17,004,701	14,407,270	(613,207)
Tax otherwise payable	6,330,931	7,030,353	7,407,361	7,794,019	8,201,650	6,630,035	0
- Investment tax credit	320,749	336,706	353,626	371,307	389,072	324,374	0
= Tax payable net of ITC	6,010,182	6,701,567	7,053,735	7,423,512	7,811,770	6,314,462	0

MINIMUM TAX SCHEDULE

Tot. depr. al. for the Yr	5,905,047	4,590,343	4,751,059	4,919,010	5,096,990	4,073,260	0
Hypothetical SLB base	55,793,079	50,236,969	44,110,750	37,214,695	29,141,712	10,175,009	0
Hypothetical SLA for the Yr	9,290,900	10,047,394	11,029,607	12,404,090	14,570,054	10,175,009	0
Accelerated depr. amount	0	0	0	0	0	0	0
Minimum tax base	0	0	0	0	0	0	0
Minimum tax payable	0	0	0	0	0	0	0

Federal corp. income tax	6,010,182	6,701,567	7,053,735	7,423,512	7,811,770	6,314,462	0
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NEVADA STATE TAXES	1,027,914	1,079,310	1,133,276	1,189,940	1,249,436	1,192,552	613,207
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Net proceeds previous yr	32,990,060	34,640,003	36,301,243	38,200,305	40,110,321	42,115,037	35,040,376
Assessed tax base	11,549,601	12,127,001	12,733,435	13,370,107	14,030,612	14,740,543	12,264,132
Property tax	577,400	606,354	636,672	668,505	701,931	737,027	613,207

Net proceeds tax base	34,640,003	36,301,243	38,200,305	40,110,321	42,115,037	35,040,376	0
Severance tax	450,434	472,956	496,604	521,434	547,506	455,525	0

[illegible]

Net operating revenues	0	0	179,431,875	180,403,449	197,823,642	207,714,824	218,100,566	188,375,569	155,132,822	162,889,463	171,033,936	179,585,433	186,564,916
- Operating costs	0	0	67,142,250	70,499,363	74,074,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,888	99,199,683	104,159,667	109,367,659
Operating profits	0	0	112,289,625	117,904,106	123,799,312	129,989,277	136,488,741	102,683,153	65,155,785	68,413,574	71,834,253	75,425,766	76,197,254
- Capital expenditures	130,200,000	136,710,000	6,366,438	6,685,294	7,019,549	7,370,526	7,739,052	8,126,005	8,532,305	8,958,970	9,406,864	9,877,210	10,371,878
- Working capital	0	15,966,250	799,313	839,278	881,242	925,384	971,569	1,020,148	1,071,155	1,124,713	1,180,949	1,239,996	1,301,996
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0
Def. Debt-Past Cash Flow	(130,200,000)	(152,676,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,308,760	67,524,190
Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0	0
Def. Tax Net Cash Flow	(130,200,000)	(152,676,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,308,760	67,524,190
- Federal corp. income tax	0	0	2,757,993	5,340,610	10,308,945	13,212,976	14,491,639	16,888,075	6,691,219	7,148,370	7,679,039	8,226,087	10,308,686
- State property tax	13,405,822	15,314,429	17,507,943	17,339,400	17,001,395	16,457,374	15,644,401	14,570,940	14,145,742	14,405,193	15,045,454	15,457,354	15,829,346
- State severance tax	0	0	2,807,241	2,947,603	3,094,983	3,249,732	3,412,219	2,567,079	1,628,076	1,710,339	1,795,856	1,885,454	1,979,932
- State income tax	0	0	3,565,454	2,387,758	2,548,812	2,387,794	2,417,773	2,842,632	99,404	1,299,161	1,386,860	1,480,760	1,975,452
Net Cash flow (cur 0)	(143,685,822)	(168,810,679)	70,545,404	82,364,173	87,864,387	94,385,571	91,792,048	56,668,296	32,987,065	33,546,698	35,339,227	37,258,911	37,358,576

TAX PAYMENTS IN CENTS											
Fed'l corp	0	2,302,450	4,393,733	8,140,810	9,859,726	18,298,966	-11,430,480	4,313,219	4,600,000	4,689,775	5,509,362
State property tax	12,766,600	15,123,450	14,263,140	13,321,030	12,200,746	11,132,390	9,862,705	9,118,471	8,966,121	8,796,766	8,394,639
State severance tax	0	2,425,000	2,425,000	2,425,000	2,425,000	2,425,000	1,737,500	1,050,000	1,050,000	1,050,000	1,050,000
State income tax	0	3,670,143	1,944,415	1,997,061	1,701,000	1,718,766	1,474,005	64,077	797,560	810,048	1,047,736
Total tax payments	12,766,600	33,090,639	23,046,315	25,063,109	26,347,280	25,574,629	24,954,190	14,545,767	15,214,761	15,147,410	16,001,717
CASH FLOWS IN CENTS											

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
BELLEVUE CO.	\$1,274,000,000	\$1,326,500,000	\$90,000,524	\$90,000,524	\$90,000,524	\$90,000,524	\$90,000,524	\$13,309,524	\$35,009,524	\$35,009,524	\$35,009,524	\$35,009,524	\$35,009,524
AFTER-TAX C ^a	(136,746,688)	(152,390,439)	67,850,473	67,761,209	64,926,415	66,462,243	65,734,895	30,355,354	21,283,757	20,594,743	20,662,114	20,747,156	19,007,007
FEDERAL CORP. INCOME TAX PROJECT BASIS													
Raise operating revenue	0	0	179,431,075	180,402,449	197,073,642	202,716,024	218,100,566	100,375,549	155,132,022	162,009,443	171,033,936	179,505,433	180,544,916
Operating cost	0	0	67,142,250	70,079,363	74,024,331	77,725,547	81,611,025	85,457,416	89,977,037	94,475,000	99,199,683	104,159,667	109,367,650
Operating profit	0	0	112,289,825	110,323,086	123,049,312	124,990,477	136,489,541	102,683,153	65,155,705	68,413,574	71,834,253	75,475,766	79,197,264
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0
- State tax payments	13,405,022	15,314,479	23,002,251	22,529,009	22,700,365	22,629,103	22,247,269	20,348,325	17,342,952	17,091,919	18,433,112	19,258,303	20,102,049

COPPER-MILWAUKEE PROJECT ARIZONA

= R.I. before allowances	(13,465,022)	(15,314,429)	89,282,374	95,375,017	101,098,946	107,349,174	114,241,477	82,334,629	47,012,835	50,421,656	53,201,141	56,167,663	59,010,215
- Depreciation allowances	0	0	30,905,665	48,000,543	46,383,350	46,161,945	47,488,214	14,954,964	14,506,461	14,072,908	15,257,678	15,661,686	0,900,304
- Amortization	0	0	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333
= Income for depletion	(13,465,022)	(15,314,429)	57,531,435	46,521,141	54,030,255	60,441,896	65,707,924	64,614,331	37,541,039	34,703,414	37,170,130	39,740,643	69,336,490
- Depletion allowance	0	0	26,914,701	23,260,570	27,015,127	30,220,948	32,715,085	28,756,335	16,270,520	17,391,707	18,509,065	19,070,322	24,668,249
= Taxable income	(13,465,022)	(15,314,429)	30,616,654	23,260,570	27,015,127	30,220,948	33,072,839	30,357,996	16,270,520	17,391,707	18,509,065	19,070,322	24,668,249
Tax otherwise payable	0	0	14,050,348	10,674,550	12,401,446	13,876,324	15,188,194	17,619,366	7,459,127	7,974,073	8,525,657	9,115,035	11,322,002
- Investment tax credit	0	0	12,655,639	9,610,220	2,012,701	663,347	696,515	731,540	767,907	806,303	846,618	880,949	933,396
= Tax payable net of ITC	0	0	1,402,710	1,064,330	10,388,945	13,212,976	14,491,679	16,888,025	6,691,219	7,168,570	7,679,039	8,226,087	10,388,606
MINIMUM TAX SCHEDULE													
Tot. depr. al. for the tr	0	0	31,670,930	48,053,076	47,060,691	46,927,278	48,453,548	15,770,298	15,271,794	15,638,241	16,023,011	16,427,029	9,673,717
Hypothetical SLB base	0	0	273,276,930	268,000,616	262,914,682	257,765,461	252,616,240	247,446,654	242,231,923	236,941,906	231,539,904	225,901,120	220,210,602
Hypothetical SLB for the tr	0	0	11,001,606	12,185,403	12,519,747	12,008,273	12,295,592	13,747,036	14,240,437	14,800,869	15,435,994	16,141,509	16,939,283
Accelerated depr. amount	0	0	19,799,332	36,648,394	34,540,944	34,039,005	35,157,956	1,973,261	1,072,857	829,372	507,018	285,511	0
Minimum tax base	0	0	10,306,622	35,604,064	24,159,999	20,826,079	20,666,277	0	0	0	0	0	0
Minimum tax payable	0	0	2,757,993	5,340,610	3,624,000	3,123,904	3,099,942	0	0	0	0	0	0
Federal corp. income tax	0	0	2,757,993	5,340,610	10,388,945	13,212,976	14,491,679	16,888,025	6,691,219	7,168,570	7,679,039	8,226,087	10,388,606

ARIZONA STATE TAXES													
Net proceeds, cost &	0	0	97,000,000	97,000,000	97,000,000	97,000,000	97,000,000	97,000,000	97,000,000	97,000,000	97,000,000	97,000,000	97,000,000
Residual P.V. of property	263,774,536	206,996,671	312,467,946	294,734,067	275,270,048	253,734,417	230,008,217	203,764,561	180,390,165	165,254,575	151,751,344	137,035,390	123,442,940
Assessed tax base, 44%	121,863,036	139,222,005	159,157,121	157,630,912	154,558,132	149,612,490	142,403,650	132,463,347	120,597,651	112,776,400	106,521,397	100,521,397	94,903,131
Ad valorem property tax	13,405,022	15,314,429	17,507,283	17,339,400	17,001,395	16,457,374	15,664,401	14,570,968	14,145,742	14,405,193	15,045,455	15,457,354	15,829,344
Net severance base	0	0	112,209,625	117,904,106	123,799,312	129,909,277	136,488,741	102,683,153	65,155,785	68,413,574	71,034,253	75,425,946	79,197,264
Severance tax	0	0	2,807,241	2,947,603	3,094,983	3,249,732	3,412,219	2,567,079	1,628,895	1,710,339	1,795,856	1,885,649	1,979,932
Operating profits	0	0	112,209,625	117,904,106	123,799,312	129,909,277	136,488,741	102,683,153	65,155,785	68,413,574	71,034,253	75,425,946	79,197,264
- Depreciation	0	0	30,905,665	48,000,543	46,383,350	46,161,945	47,488,214	14,954,964	14,506,461	14,072,908	15,257,678	15,661,686	0,900,304
- Amortization	0	0	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333
- Federal tax, previous yr	0	0	2,757,993	5,340,610	10,388,945	13,212,976	14,491,679	16,888,025	6,691,219	7,168,570	7,679,039	8,226,087	10,388,606
- Property tax	13,405,022	15,314,429	17,507,283	17,339,400	17,001,395	16,457,374	15,664,401	14,570,968	14,145,742	14,405,193	15,045,455	15,457,354	15,829,344
- Severance tax	0	0	2,807,241	2,947,603	3,094,983	3,249,732	3,412,219	2,567,079	1,628,895	1,710,339	1,795,856	1,885,649	1,979,932
- Depletion	0	0	26,914,701	23,260,570	27,015,127	30,220,948	32,715,085	28,756,335	16,270,520	17,391,707	18,509,065	19,070,322	24,668,249
= Net taxable profits	0	0	33,309,302	22,744,643	24,270,506	22,745,000	23,030,512	27,076,794	950,810	12,376,075	13,212,295	14,106,502	18,819,935
Arizona income tax	0	0	3,505,454	2,307,758	2,548,812	2,307,794	2,417,773	2,842,632	99,404	1,299,161	1,386,860	1,480,740	1,975,642

COOPER-HOLYBURN PROJECT ARIZONA

CASH FLOW SUMMARY PROJECT BASIS	YEAR												
	14	15	16	17	18	19	20	21	22	23	24	25	
Line operating revenues	197,993,160	207,092,818	218,287,459	229,201,832	240,661,923	252,695,020	265,329,771	278,596,259	292,526,072	307,152,376	322,509,994	165,706,372	
- Operating costs	114,836,033	120,577,834	126,606,726	132,937,062	139,583,916	146,563,111	153,891,267	161,585,830	169,665,122	178,148,378	187,055,797	95,866,096	
= Operating profits	83,157,127	87,314,984	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,860,950	129,003,998	135,454,196	69,820,276	
- Capital expenditures	10,889,624	11,434,105	12,005,810	12,606,101	13,236,406	13,898,226	14,593,137	15,322,794	16,088,934	16,893,381	17,738,050	9,090,750	
- Working capital	1,367,096	1,435,450	1,507,223	1,582,584	1,661,713	1,744,799	1,832,039	1,923,641	2,019,873	2,120,814	2,226,855	(69,102,147)	
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	
= Before Debt-Paid Cash Flow	70,900,408	74,445,428	78,167,700	82,076,085	86,179,889	90,488,883	95,013,327	99,763,994	104,752,193	109,989,603	115,489,293	109,431,672	
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	
= Before Tax Net Cash Flow	70,900,408	74,445,428	78,167,700	82,076,085	86,179,889	90,488,883	95,013,327	99,763,994	104,752,193	109,989,603	115,489,293	109,431,672	
- Federal corp. income tax	11,021,780	11,706,822	12,448,345	13,257,249	14,143,313	15,119,917	16,204,302	17,419,142	18,878,983	21,100,419	23,882,488	18,092,449	
- State property tax	16,145,856	16,591,405	17,176,892	17,825,380	18,415,369	19,052,239	19,737,419	20,467,919	21,242,979	22,068,002	22,937,358	12,823,408	
- State severance tax	2,078,978	2,182,075	2,292,018	2,406,619	2,526,950	2,653,298	2,785,963	2,925,261	3,071,524	3,225,100	3,386,355	1,735,587	
- State income tax	1,918,789	2,035,238	2,162,545	2,300,561	2,451,572	2,617,850	2,800,339	3,008,943	3,242,137	3,504,784	4,111,081	237,165	
= A-T Cash flow (cor. & state payments in cash)	39,734,135	42,129,389	44,725,386	47,551,135	50,642,685	54,045,579	57,818,426	62,038,228	66,705,414	71,389,498	76,744,218	94,543,872	
TAX PAYMENTS IN CASH													
Federal corp. income tax	5,566,748	5,630,797	5,702,738	5,784,094	5,876,839	5,983,465	6,107,231	6,252,468	6,433,778	6,649,691	7,000,388	3,853,819	
State property tax	8,155,259	7,884,546	7,576,892	7,225,380	6,870,925	6,532,416	6,204,964	5,894,870	5,598,347	5,312,653	5,038,053	854,118	
State severance tax	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	525,000	
State income tax	99,078	97,225	99,687	1,003,727	1,018,679	1,035,972	1,056,172	1,080,037	1,115,161	1,194,451	1,274,962	71,744	
Total tax payments	15,741,085	15,544,548	15,328,309	15,663,121	14,766,442	14,421,853	14,018,367	13,541,375	13,006,287	12,567,152	12,007,483	4,503,880	
CASH FLOW IN CASH													
Before-tax CF	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	33,183,659	
After-tax CF	20,069,438	20,264,956	20,409,215	20,746,403	21,043,081	21,387,671	21,791,157	22,268,148	22,803,237	23,242,372	23,802,121	20,599,778	
FEDERAL CORP. INCOME TAX													
PROJECT BASIS													
YEAR													
25													
Line operating revenue	197,993,160	207,092,818	218,287,459	229,201,832	240,661,923	252,695,020	265,329,771	278,596,259	292,526,072	307,152,376	322,509,994	165,706,372	
Operating cost	114,836,033	120,577,834	126,606,726	132,937,062	139,583,916	146,563,111	153,891,267	161,585,830	169,665,122	178,148,378	187,055,797	95,866,096	
Operating profit	83,157,127	87,314,984	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,860,950	129,003,998	135,454,196	69,820,276	
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0	
- State tax payments	20,765,996	21,340,139	21,671,613	21,900,151	22,160,007	22,441,227	21,864,281	21,242,823	20,152,749	18,424,259	15,885,751	6,850,540	

COPPER-MOLYBDENUM PROJECT: ARIZONA

= U.I. before allowances	62,411,131	66,066,045	70,009,120	74,276,610	78,917,121	83,990,682	89,574,223	95,768,406	102,700,201	110,579,739	119,648,247	62,569,737
- Depreciation allowances	9,353,003	9,821,493	10,312,568	10,820,196	11,369,606	11,930,006	12,534,991	13,161,740	13,819,827	14,510,810	15,236,359	14,639,554
- Amortization	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	302,667
= Income for depletion	52,291,995	55,480,010	58,931,219	62,683,089	66,782,182	71,287,262	76,273,899	81,841,332	88,123,041	95,303,587	103,646,554	47,547,516
- Depletion allowance	26,145,997	27,740,009	29,465,609	31,341,544	33,391,091	35,643,631	38,136,950	40,920,666	43,870,911	46,072,856	48,376,499	23,773,750
= Taxable income	26,145,997	27,740,009	29,465,609	31,341,544	33,391,091	35,643,631	38,136,950	40,920,666	44,244,130	49,230,731	55,270,055	23,773,750
Tax otherwise payable	12,001,046	12,735,092	13,520,068	14,391,790	15,334,509	16,370,750	17,517,684	18,790,194	20,326,907	22,620,824	25,390,913	10,910,616
- Investment tax credit	900,066	1,029,069	1,000,523	1,134,549	1,191,277	1,250,840	1,313,382	1,379,051	1,448,804	1,520,404	1,596,424	810,160
= Tax payable net of ITC	11,021,700	11,706,022	12,440,345	13,257,249	14,143,313	15,119,917	16,204,302	17,419,142	18,878,903	21,100,419	23,802,480	10,092,449
MINIMUM TAX SCHEDULE												
Tot. depr. al. for the yr	10,119,136	10,586,026	11,077,901	11,593,529	12,134,939	12,703,420	13,300,324	13,927,073	14,585,160	15,276,152	16,001,693	15,822,220
Hypothetical SLB base	214,161,822	207,740,375	200,067,970	193,307,274	185,136,204	175,892,405	165,358,056	153,121,174	138,585,873	120,832,706	98,293,240	58,237,371
Hypothetical SLB for the yr	17,846,752	10,006,216	20,006,797	21,487,475	23,142,026	25,127,406	27,559,676	30,624,235	34,646,468	40,277,595	49,146,620	58,237,371
Accelerated depr. amount	0	0	0	0	0	0	0	0	0	0	0	0
Minimum tax base	0	0	0	0	0	0	0	0	0	0	0	0
Minimum tax payable	0	0	0	0	0	0	0	0	0	0	0	0
Federal corp. income tax	11,021,700	11,706,022	12,440,345	13,257,249	14,143,313	15,119,917	16,204,302	17,419,142	18,878,903	21,100,419	23,802,480	10,092,449
ARIZONA STATE TAXES												
Net proceeds, const. &	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	21,000,000
Reshold PV of property	160,497,092	162,903,042	156,547,353	149,203,063	140,920,204	131,240,260	119,937,271	106,580,227	90,647,675	71,343,183	47,563,073	17,647,859
Assessed tax base, 44%	146,789,596	149,012,770	150,358,225	150,550,106	149,230,631	145,929,448	140,020,806	130,658,358	116,673,956	96,418,204	67,494,093	25,668,001
Ad valorem property tax	16,146,856	16,391,405	16,539,405	16,560,520	16,415,369	16,052,239	15,402,297	14,372,419	12,834,135	10,606,002	7,424,350	2,823,400
Net severance base	83,157,127	87,314,984	91,680,733	96,264,769	101,078,000	106,131,900	111,438,504	117,010,429	122,860,950	129,003,990	135,454,190	69,420,276
Severance tax	2,078,920	2,182,075	2,292,010	2,406,619	2,526,950	2,653,290	2,785,963	2,925,261	3,071,524	3,225,100	3,386,355	1,735,507
Operating profits	83,157,127	87,314,984	91,680,733	96,264,769	101,078,000	106,131,900	111,438,504	117,010,429	122,860,950	129,003,990	135,454,190	69,420,276
- Interest payment	0	0	0	0	0	0	0	0	0	0	0	0
- Depreciation	9,353,003	9,821,493	10,312,568	10,820,196	11,369,606	11,930,006	12,534,991	13,161,740	13,819,827	14,510,810	15,236,359	14,639,554
- Amortization	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	302,667
- Federal tax, previous yr	10,300,606	11,021,700	11,706,022	12,440,345	13,257,249	14,143,313	15,119,917	16,204,302	17,419,142	18,878,903	21,100,419	23,802,480
- Property tax	16,146,856	16,391,405	16,539,405	16,560,520	16,415,369	16,052,239	15,402,297	14,372,419	12,834,135	10,606,002	7,424,350	2,823,400
- Severance tax	2,078,920	2,182,075	2,292,010	2,406,619	2,526,950	2,653,290	2,785,963	2,925,261	3,071,524	3,225,100	3,386,355	1,735,507
- Depletion	26,145,997	27,740,009	29,465,609	31,341,544	33,391,091	35,643,631	38,136,950	40,920,666	43,870,911	46,072,856	48,376,499	23,773,750
= Net taxable profits	10,277,524	19,392,009	20,599,777	21,914,211	23,352,409	24,936,000	26,693,053	28,660,707	31,072,078	34,944,904	39,164,001	2,262,822
Arizona income tax	1,910,709	2,035,730	2,162,545	2,300,561	2,451,572	2,617,850	2,802,339	3,008,943	3,262,137	3,668,784	4,111,881	237,165

COPPER-MILYBURN PROJECT, COLORADO

CASH FLOW SUMMARY PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Line operating revenues	0	0	179,431,875	188,483,469	197,823,642	207,714,824	218,100,566	188,375,569	155,132,872	162,889,463	171,033,936	179,585,633	188,564,914
- Operating costs	0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,888	99,199,683	104,159,667	109,367,650
= Operating profits	0	0	112,289,625	117,984,106	123,799,312	129,989,277	136,488,741	102,683,153	65,155,785	68,413,574	71,834,253	75,425,966	79,197,264
- Capital expenditures	130,200,000	136,710,000	6,364,938	6,685,284	7,019,549	7,370,526	7,739,052	8,126,005	8,532,305	8,958,920	9,406,866	9,877,210	10,371,870
- Working capital	0	15,986,250	799,313	839,278	881,242	925,304	971,569	1,020,148	1,071,155	1,124,713	1,180,949	1,239,996	1,301,996
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Debt-Pmt Cash Flow	(130,200,000)	(152,696,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,308,740	67,524,190
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
= Def. Tax Net Cash Flow	(130,200,000)	(152,696,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,308,740	67,524,190
- Federal corp. income tax	0	0	2,738,767	4,920,659	14,202,648	15,476,699	16,443,717	16,695,352	9,032,271	9,583,441	10,162,169	10,769,833	12,996,743
- State property tax	10,838,509	12,518,478	7,868,274	8,253,287	8,665,952	9,099,249	9,554,212	7,187,821	4,560,905	4,788,958	5,028,398	5,279,018	5,543,888
- State severance tax	0	0	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500
- State income tax	0	0	1,774,289	1,478,722	1,658,259	1,803,960	1,915,575	1,947,543	1,096,468	1,162,248	1,231,342	1,303,877	1,357,348
= A-T Cash flow (cur. 8)	(141,038,509)	(165,214,728)	91,820,625	94,789,975	90,434,163	94,376,039	99,927,115	66,768,785	39,925,181	41,857,790	43,887,838	46,017,737	48,488,798
TAX PAYMENTS IN CONST. 8													
Federal corp. income tax	0	0	2,738,767	4,920,659	14,202,648	15,476,699	16,443,717	16,695,352	9,032,271	9,583,441	10,162,169	10,769,833	12,996,743
State property tax	10,322,389	11,354,628	6,790,800	6,790,800	6,790,800	6,790,800	6,790,800	4,863,000	2,940,000	2,940,000	2,940,000	2,940,000	2,940,000
State severance tax	0	0	887,848	771,284	734,356	699,577	646,764	631,537	404,371	575,544	548,137	527,835	497,176
State income tax	0	0	1,532,629	1,216,548	1,299,289	1,346,143	1,361,364	1,318,173	706,793	713,527	719,940	726,048	825,895
Total tax payments	10,322,389	11,354,628	11,491,416	12,825,577	19,951,991	28,384,671	29,503,870	18,117,782	10,073,396	10,112,477	10,149,686	10,185,129	11,155,321
CASH FLOW IN CONST. 8													
Before-tax CF	(124,000,000)	(138,580,000)	90,809,524	90,809,524	90,809,524	90,809,524	90,809,524	63,309,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524
After-tax CF	(134,327,389)	(149,934,628)	79,318,106	77,983,947	70,857,533	78,424,853	70,305,654	45,191,742	25,736,178	25,697,852	25,459,837	25,624,395	24,454,882
FEDERAL CORP. INCOME TAX													
PROJECT BASIS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13
Line operating revenue	0	0	179,431,875	188,483,469	197,823,642	207,714,824	218,100,566	188,375,569	155,132,872	162,889,463	171,033,936	179,585,633	188,564,914
Operating cost	0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,888	99,199,683	104,159,667	109,367,650
Operating profit	0	0	112,289,625	117,984,106	123,799,312	129,989,277	136,488,741	102,683,153	65,155,785	68,413,574	71,834,253	75,425,966	79,197,264
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0
- State tax payments	10,838,509	12,518,478	11,491,416	11,437,677	12,123,143	12,777,832	13,482,391	11,084,574	7,164,446	7,497,481	7,836,897	8,198,534	8,847,668

COPPER-BILVERMIN PROJECT: COLORADO

= N.I. before allowances	(10,830,509)	(12,510,470)	100,795,975	106,466,429	111,676,160	117,211,445	123,006,350	91,590,500	57,991,319	60,921,093	63,997,356	67,227,432	70,349,596
- Depreciation allowances	0	0	30,905,605	40,000,543	46,303,350	46,161,945	47,600,214	14,954,964	14,506,461	14,872,900	15,257,670	15,661,606	0,900,304
- Amortization	0	0	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333
= Income for depletion	(10,830,509)	(12,510,470)	69,125,037	57,612,553	64,607,477	70,204,167	74,632,002	75,070,702	42,719,525	45,702,052	47,974,345	50,000,412	60,675,079
- Depletion allowance	0	0	34,562,510	20,006,276	32,303,730	35,142,003	37,316,401	37,939,141	21,359,762	22,641,426	23,907,172	25,400,206	30,337,940
= Taxable income	(10,830,509)	(12,510,470)	34,562,510	20,006,276	32,303,730	35,142,003	37,316,401	37,939,141	21,359,762	22,641,426	23,907,172	25,400,206	30,337,940
Tax otherwise payable	0	0	15,073,446	13,225,575	14,834,407	16,140,046	17,140,232	17,426,692	9,000,170	10,309,743	11,000,707	11,650,702	13,930,140
- Investment tax credit	0	0	14,209,226	9,357,574	631,759	663,347	696,515	731,340	767,907	806,303	846,610	880,949	933,396
= Tax payable net of ITC	0	0	1,504,220	3,068,001	14,202,648	15,476,699	16,443,717	16,695,352	9,032,271	9,503,441	10,162,169	10,769,833	12,996,743
MINIMUM TAX SCHEDULE													
Tot. depr. al. for the Yr	0	0	31,670,930	40,053,076	47,060,691	46,927,271	48,453,540	15,720,290	15,271,794	15,630,241	16,023,011	16,427,020	9,673,717
Hypothetical SLB base	0	0	273,276,930	260,000,616	262,914,682	257,765,461	252,616,240	247,446,654	242,231,923	236,941,906	231,539,904	225,901,120	220,210,682
Hypothetical SLA for the Yr	0	0	11,001,606	12,105,403	12,519,747	12,000,273	13,295,592	13,747,036	14,240,937	14,000,869	15,435,994	16,141,509	16,939,203
Accelerated depr. amount	0	0	19,709,332	36,660,394	34,540,944	34,039,005	35,157,956	1,973,261	1,022,057	829,372	507,010	205,511	0
Minimum tax base	0	0	10,205,113	32,000,393	20,346,297	10,562,307	10,714,239	0	0	0	0	0	0
Minimum tax payable	0	0	2,730,767	4,920,059	3,051,944	2,704,346	2,007,136	0	0	0	0	0	0
Federal corp. income tax	0	0	2,730,767	4,920,059	14,202,648	15,476,699	16,443,717	16,695,352	9,032,271	9,503,441	10,162,169	10,769,833	12,996,743
COLORADO STATE TAXES													
Gross proceeds, prev. yr	0	0	179,431,075	100,403,469	197,023,642	207,714,024	210,100,566	100,375,569	155,132,022	162,009,463	171,033,936	179,505,633	100,564,914
Net proceeds, const. &	0	0	97,000,000	97,000,000	97,000,000	97,000,000	97,000,000	69,500,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000
PI(net procds), preprod.	516,119,463	596,117,979	0	0	0	0	0	0	0	0	0	0	0
Property tax base	154,035,039	170,035,394	112,209,625	117,904,106	123,799,312	129,909,277	136,400,741	102,603,153	65,155,705	60,413,574	71,004,253	75,425,966	79,197,264
Ad valorem property tax	10,830,509	12,510,470	7,060,274	0,253,207	0,665,952	9,092,249	9,554,212	7,107,821	4,560,905	4,700,950	5,020,390	5,279,010	5,543,000
Gross severance base	0	0	165,681,075	174,653,469	184,073,642	193,964,024	204,350,566	174,625,569	141,302,022	149,139,463	157,203,936	165,035,633	174,014,914
Annual ore production	0	0	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
severance tax, usually	0	0	1,063,921	1,964,052	2,070,020	2,102,104	2,290,944	1,964,530	1,590,557	1,677,019	1,769,444	1,865,651	1,966,660
severance tax, sully-ore	0	0	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500
severance tax, iron-ore	0	0	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000
Severance tax payable	0	0	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500
Operating profits	0	0	112,209,625	117,904,106	123,799,312	129,909,277	136,400,741	102,603,153	65,155,705	60,413,574	71,004,253	75,425,966	79,197,264
- Interest payment	0	0	0	0	0	0	0	0	0	0	0	0	0
- Property tax	10,830,509	12,510,470	7,060,274	0,253,207	0,665,952	9,092,249	9,554,212	7,107,821	4,560,905	4,700,950	5,020,390	5,279,010	5,543,000
- Severance tax	0	0	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500
- Depreciation	0	0	30,905,605	40,000,543	46,303,350	46,161,945	47,600,214	14,954,964	14,506,461	14,872,900	15,257,670	15,661,606	0,900,304
- Amortization	0	0	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333
- Depletion	0	0	34,562,510	20,006,276	32,303,730	35,142,003	37,316,401	37,939,141	21,359,762	22,641,426	23,907,172	25,400,206	30,337,940
= N.I. bf SITx dedctn, A	0	0	37,250,395	31,053,166	34,823,430	37,003,166	40,227,000	40,890,394	23,025,824	24,407,457	25,850,172	27,301,422	32,704,299

COPPER-MOLYBDENUM PROJECT: COLORADO

Colorado income tax	0	0	1,774,209	1,479,722	1,658,259	1,803,940	2,915,575	1,947,543	1,096,448	1,142,260	1,231,342	1,303,877	1,557,348
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COPPER-HILL MINE PROJECT: COLUMBIA

CASH FLOW SUMMARY PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25
Mine operating revenues	197,993,160	207,892,810	210,707,459	229,281,832	240,641,923	255,695,020	265,329,771	278,536,259	292,526,072	307,152,376	322,509,994	165,286,372
- Operating costs	114,836,833	120,577,834	126,486,726	132,937,862	139,583,916	146,563,111	153,891,267	161,585,830	169,645,122	178,148,378	187,855,797	95,866,896
= Operating profits	83,157,127	87,314,984	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,860,950	129,003,998	135,454,198	69,420,276
- Capital expenditures	10,889,424	11,434,185	12,085,810	12,686,101	13,236,406	13,899,226	14,583,137	15,327,794	16,088,934	16,893,301	17,738,858	9,898,750
- Working capital	1,342,096	1,435,450	1,507,223	1,582,584	1,661,713	1,744,799	1,832,039	1,923,641	2,019,823	2,120,814	2,226,855	149,182,107
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt-Paid Cash Flow	70,900,408	74,445,428	78,167,700	82,076,065	86,179,889	90,408,083	95,013,327	99,763,994	104,752,193	109,989,803	115,489,293	109,431,672
- Debt's principal payments	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow	70,900,408	74,445,428	78,167,700	82,076,065	86,179,889	90,408,083	95,013,327	99,763,994	104,752,193	109,989,803	115,489,293	109,431,672
- Federal corp. income tax	13,666,694	14,378,142	15,100,762	15,804,313	16,698,642	17,553,687	18,451,485	19,394,172	20,383,994	21,423,307	22,514,585	10,810,959
- State property tax	5,820,999	6,112,049	6,417,651	6,738,534	7,075,461	7,429,234	7,800,695	8,190,730	8,600,267	9,030,280	9,481,794	4,859,419
- State severance tax	937,580	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	648,750
- State income tax	1,637,318	1,721,287	1,809,453	1,902,031	1,999,236	2,101,301	2,208,469	2,320,996	2,439,149	2,563,210	2,693,474	1,212,185
= A-T Cash Flow (cur. \$)	40,837,897	51,304,450	53,894,331	56,613,707	59,469,050	62,467,162	65,615,178	68,920,596	72,391,284	76,035,507	79,861,961	92,872,359
TAX PAYMENTS IN CONST. \$												
Federal corp. income tax	6,702,609	6,912,284	6,921,498	6,938,273	6,938,631	6,946,590	6,954,170	6,961,390	6,968,266	6,974,814	6,981,050	3,838,788
State property tax	2,940,000	2,940,000	2,940,000	2,940,000	2,940,000	2,940,000	2,940,000	2,940,000	2,940,000	2,940,000	2,940,000	1,478,000
State severance tax	473,501	450,954	429,488	409,028	389,551	371,001	353,334	336,508	320,484	305,223	290,689	141,799
State income tax	826,957	827,969	828,932	829,850	830,724	831,556	832,349	833,104	833,823	834,508	835,160	366,672
Total tax payments	11,143,067	11,131,206	11,119,910	11,109,151	11,098,905	11,089,147	11,079,853	11,071,002	11,062,573	11,054,545	11,046,899	5,809,288
CASH FLOWS IN CONST. \$												
Before-tax CF	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524	33,103,659
After-tax CF	24,666,457	24,678,318	24,689,614	24,700,373	24,710,619	24,720,377	24,729,671	24,738,522	24,746,951	24,754,979	24,762,625	28,094,379
FEDERAL CORP. INCOME TAX PROJECT BASIS	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	YEAR 21	YEAR 22	YEAR 23	YEAR 24	YEAR 25
Mine operating revenues	197,993,160	207,892,810	210,707,459	229,281,832	240,641,923	255,695,020	265,329,771	278,536,259	292,526,072	307,152,376	322,509,994	165,286,372
Operating cost	114,836,833	120,577,834	126,486,726	132,937,862	139,583,916	146,563,111	153,891,267	161,585,830	169,645,122	178,148,378	187,855,797	95,866,896
Operating profit	83,157,127	87,314,984	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,860,950	129,003,998	135,454,198	69,420,276
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0
- State tax payments	9,246,372	9,665,012	10,104,583	10,566,133	11,050,761	11,559,619	12,093,921	12,654,938	13,244,006	13,862,527	14,511,975	7,170,861

COPPER-HILL MINE PROJECT COLOMBO

= R. I. before allowances	73,910,755	77,649,972	81,576,150	85,698,636	90,077,247	94,572,289	99,344,582	104,355,491	109,616,944	115,141,470	120,942,223	62,250,215
- Depreciation allowances	9,353,803	9,821,493	10,312,540	10,820,196	11,369,606	11,938,086	12,534,991	13,161,740	13,819,827	14,510,818	15,236,359	14,639,554
- Amortization	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	387,667
= Income for depletion	63,791,619	67,063,146	70,498,249	74,105,107	77,892,308	81,668,869	86,044,258	90,428,417	95,031,784	99,865,319	104,940,530	47,227,995
- Depreciation allowance	31,895,809	33,531,573	35,249,124	37,052,553	38,946,154	40,934,435	43,022,129	45,214,209	47,515,892	49,932,659	52,470,265	23,613,997
= Taxable income	31,895,809	33,531,573	35,249,124	37,052,553	38,946,154	40,934,435	43,022,129	45,214,209	47,515,892	49,932,659	52,470,265	23,613,997
Tax otherwise payable	14,646,740	15,399,211	16,189,285	17,018,842	17,889,918	18,804,527	19,764,867	20,773,223	21,831,998	22,943,711	24,111,010	10,837,126
- Investment tax credit	980,066	1,029,069	1,080,523	1,134,549	1,191,277	1,250,840	1,313,382	1,379,051	1,448,004	1,520,404	1,596,424	818,168
= Tax payable net of ITC	13,666,674	14,370,142	15,108,762	15,884,313	16,698,642	17,553,687	18,451,485	19,394,172	20,383,994	21,423,307	22,514,585	10,018,959

MINIMUM TAX SCHEDULE

Tot. depr. al. for the yr	10,119,136	10,586,826	11,077,901	11,593,529	12,134,939	12,703,420	13,300,374	13,927,073	14,585,160	15,276,152	16,001,693	15,022,270
Hypothetical SLB base	214,161,072	207,748,375	200,847,970	193,387,274	185,136,204	175,892,405	165,358,056	153,121,174	138,585,873	120,832,786	98,293,240	58,237,371
Hypothetical SLB for the yr	17,846,752	18,086,216	20,086,797	21,487,475	23,142,026	25,127,486	27,559,676	30,627,235	34,646,468	40,277,595	49,146,620	58,237,371
Accelerating depr. amount	0	0	0	0	0	0	0	0	0	0	0	0
Minimum tax base	0	0	0	0	0	0	0	0	0	0	0	0
Minimum tax payable	0	0	0	0	0	0	0	0	0	0	0	0
Federal corp. income tax	13,666,674	14,370,142	15,108,762	15,884,313	16,698,642	17,553,687	18,451,485	19,394,172	20,383,994	21,423,307	22,514,585	10,018,959

COLOMBO STATE TAXES

Gross proceeds, prev. yr	197,993,160	207,892,018	218,207,459	229,281,832	240,641,973	252,495,020	265,379,771	278,596,259	292,526,072	307,152,376	322,509,994	165,286,372
Net proceeds, const. g	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	42,000,000	21,000,000
PI (net proceeds), prepaid	0	0	0	0	0	0	0	0	0	0	0	0
Property tax base	83,157,127	87,314,904	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,479	122,868,950	129,003,998	135,454,198	69,478,276
Ad valorem property tax	5,828,999	6,112,849	6,417,451	6,738,534	7,075,441	7,429,234	7,800,695	8,190,730	8,600,267	9,030,280	9,481,794	4,859,419
Gross severance base	184,243,160	194,142,018	204,537,459	215,451,832	226,911,973	238,945,020	251,579,771	264,846,259	278,776,072	293,402,376	308,759,994	151,536,372
Annual ore production	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	5,000,000
Severance tax, usually	2,072,736	2,184,107	2,301,044	2,423,033	2,552,759	2,698,131	2,850,272	2,979,520	3,136,231	3,300,777	3,473,558	1,704,784
Severance tax, multi-yr	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	468,750
Severance tax, firm-yr	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	62,500
Severance tax payable	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	468,750
Operating profits	83,157,127	87,314,904	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,479	122,868,950	129,003,998	135,454,198	69,478,276
- Interest payment	0	0	0	0	0	0	0	0	0	0	0	0
- Property tax	5,828,999	6,112,849	6,417,451	6,738,534	7,075,441	7,429,234	7,800,695	8,190,730	8,600,267	9,030,280	9,481,794	4,859,419
- Severance tax	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	937,500	468,750
- Depreciation	9,353,803	9,821,493	10,312,540	10,820,196	11,369,606	11,938,086	12,534,991	13,161,740	13,819,827	14,510,818	15,236,359	14,639,554
- Amortization	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	387,667
- Depletion	31,895,809	33,531,573	35,249,124	37,052,553	38,946,154	40,934,435	43,022,129	45,214,209	47,515,892	49,932,659	52,470,265	23,613,997
= R. I. af. SLB depleta. A	34,383,483	36,147,835	37,998,556	39,942,653	41,983,954	44,127,328	46,377,855	48,740,917	51,222,131	53,827,407	56,562,946	25,455,889

COPPER-MULTIBUS PROJECT CHALLENGE

Colorado income tax	:	1,637,318	1,721,287	1,809,455	1,902,831	1,999,236	2,101,301	2,208,469	2,320,996	2,439,149	2,563,210	2,693,474	1,212,185
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COPPER-HOLYBROM PROJECT MONTANA

CASH FLOW SUMMARY		YEAR												YEAR	
PROJECT BASIS		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Line operating revenues		0	0	179,431,875	180,403,449	197,823,642	207,714,874	218,100,566	180,375,569	155,132,822	167,809,463	171,033,936	179,585,633	188,564,916	198,564,916
- Operating costs		0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,888	99,199,683	104,159,667	109,367,650	114,367,650
= Operating profits		0	0	112,289,625	117,904,106	123,799,312	129,989,277	136,488,741	102,683,153	65,155,785	68,413,574	71,834,253	75,425,966	79,197,264	84,197,264
- Capital expenditures		130,200,000	136,710,000	6,366,938	6,485,284	7,019,549	7,370,526	7,739,052	8,126,005	8,532,305	8,958,920	9,406,866	9,877,210	10,371,870	10,894,870
- Working capital		0	15,966,250	799,313	839,278	881,242	925,304	971,549	1,020,148	1,071,155	1,124,713	1,180,949	1,239,996	1,301,996	1,369,996
+ New debt		0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments		0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Bef Debt-Paid Cash Flow		(130,200,000)	(152,676,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,746,438	64,308,760	67,524,190	70,524,190
- Debt's principal payment		0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Bef. Tax Net Cash Flow		(130,200,000)	(152,676,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,746,438	64,308,760	67,524,190	70,524,190
- Federal corp. income tax		0	0	2,639,263	9,819,612	16,840,120	18,760,447	20,065,017	21,950,669	9,181,871	9,728,566	10,302,595	10,905,326	11,546,610	12,224,610
- State property tax		0	0	1,184,250	1,243,443	1,305,436	1,370,918	1,439,464	1,513,279	1,023,877	1,075,070	1,128,824	1,185,263	1,244,528	1,304,528
- State severance tax		0	0	3,472,718	3,646,587	3,829,150	4,020,841	4,222,117	3,646,047	3,001,802	3,152,126	3,309,946	3,475,698	3,649,716	3,829,716
- State income tax		0	0	3,191,329	2,278,002	2,650,824	2,941,104	3,140,001	3,402,961	1,528,524	1,618,180	1,712,319	1,811,164	1,916,164	2,021,164
= A-T Cash flow (cor. &)		(130,200,000)	(152,676,250)	94,785,813	93,379,880	91,272,791	94,591,936	98,911,521	63,794,046	40,816,750	42,753,999	44,792,734	46,931,307	49,185,281	51,546,281
TAX PAYMENTS IN CASH															
Federal corp. income tax		0	0	2,297,173	8,878,619	13,194,675	14,805,454	16,259,833	14,857,877	5,918,716	5,972,495	6,023,714	6,072,494	6,121,274	6,170,054
State property tax		0	0	1,023,000	1,023,000	1,023,000	1,023,000	1,023,000	841,500	640,000	640,000	640,000	640,000	640,000	640,000
State severance tax		0	0	2,999,864	3,000,856	3,000,239	3,000,414	3,000,580	2,467,788	1,934,908	1,935,132	1,935,264	1,935,399	1,935,522	1,935,645
State income tax		0	0	2,679,044	1,867,506	2,076,990	2,194,697	2,231,540	2,303,258	985,301	993,422	1,001,157	1,008,524	1,016,750	1,024,976
Total tax payments		0	0	8,999,082	13,969,212	19,294,904	20,223,565	20,514,953	20,469,422	9,499,005	9,561,850	9,628,148	9,696,416	9,764,644	9,832,872
CASH FLOW IN CASH															
Before-tax CF		(124,000,000)	(130,500,000)	90,809,524	90,809,524	90,809,524	90,809,524	90,809,524	63,309,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524
After-tax CF		(124,000,000)	(130,500,000)	81,810,442	76,840,312	71,518,629	70,585,959	70,794,571	42,839,901	26,318,519	26,248,474	26,189,304	26,133,108	26,077,900	26,022,692
FEDERAL CORP INCOME TAX															
PROJECT BASIS		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Line operating revenue		0	0	179,431,875	180,403,449	197,823,642	207,714,874	218,100,566	180,375,569	155,132,822	167,809,463	171,033,936	179,585,633	188,564,916	198,564,916
Operating cost		0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,888	99,199,683	104,159,667	109,367,650	114,367,650
Operating profit		0	0	112,289,625	117,904,106	123,799,312	129,989,277	136,488,741	102,683,153	65,155,785	68,413,574	71,834,253	75,425,966	79,197,264	84,197,264
- Interest charges		0	0	0	0	0	0	0	0	0	0	0	0	0	0
- State tax payments		0	0	8,778,783	8,371,673	9,819,780	9,646,281	10,131,316	9,342,777	6,514,838	6,861,582	7,226,348	7,609,436	8,001,143	8,401,143

COPPER-MOLYBDENUM PROJECT MONTANA

= N.I. before allowances	0	0	103,510,042	109,532,613	114,779,611	120,302,996	126,357,425	93,340,376	50,641,755	61,552,072	64,607,905	67,016,530	70,796,121
- Depreciation allowances	0	0	30,905,685	40,000,543	46,303,350	46,161,945	47,600,214	14,954,964	14,506,461	14,072,900	15,257,670	15,661,686	0,900,304
- Amortization	0	0	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333
= Income for depletion	0	0	71,639,904	69,670,737	67,710,970	73,455,710	77,903,878	77,620,070	43,369,861	45,913,831	48,504,094	51,309,510	61,122,004
- Depletion allowance	0	0	26,914,701	20,260,520	29,673,546	51,157,224	32,715,085	20,256,335	21,684,900	22,956,915	24,292,447	25,694,755	20,204,737
= Taxable income	0	0	44,925,123	32,410,217	38,037,374	42,298,486	45,188,793	49,363,743	21,684,900	22,956,915	24,292,447	25,694,755	32,637,467
Tax otherwise payable	0	0	20,640,244	14,007,067	17,471,079	19,431,995	20,761,532	22,682,009	9,949,778	10,534,069	11,149,213	11,794,275	15,000,014
- Investment tax credit	0	0	10,579,345	5,067,455	631,759	663,347	696,515	731,340	767,907	806,303	846,610	888,949	933,396
= Tax payable net of ITC	0	0	2,060,899	9,019,612	16,040,120	18,768,647	20,065,017	21,950,669	9,181,871	9,728,566	10,302,595	10,905,326	14,144,610
RETURN TAX SCHEDULE													
Tot. depr. al. for the tr	0	0	31,670,930	40,053,076	47,060,691	46,927,270	48,453,540	15,770,298	15,271,794	15,630,741	16,023,011	16,427,020	9,673,717
Hypothetical SLD base	0	0	273,276,930	268,000,616	262,914,682	257,765,461	252,616,240	247,446,654	242,231,923	236,941,906	231,539,904	225,901,120	220,210,602
Hypothetical SLA for the tr	0	0	11,001,686	12,105,403	12,519,747	12,000,273	13,295,592	13,717,036	14,240,937	14,800,069	15,435,994	16,141,509	16,939,203
Accelerated depr. amount	0	0	19,709,332	36,668,394	34,548,944	34,039,005	35,157,956	1,913,261	1,022,857	829,372	587,018	205,511	0
Minimum tax base	0	0	17,720,433	26,040,702	17,700,824	15,270,350	15,092,939	0	0	0	0	0	0
Minimum tax payable	0	0	2,659,265	4,027,317	2,656,324	2,290,554	2,263,941	0	0	0	0	0	0
Federal corp income tax	0	0	2,659,265	9,019,612	16,040,120	18,768,647	20,065,017	21,950,669	9,181,871	9,728,566	10,302,595	10,905,326	14,144,610
MONTANA STATE TAXES													
Gross revenues	0	0	179,431,075	180,403,449	197,023,642	207,714,024	210,100,566	180,375,569	155,132,022	162,009,463	171,033,936	179,505,633	180,564,914
Assessed tax base, II	0	0	530,956,25	563,104,063	593,709,265	623,444,709	654,301,965	565,126,075	465,390,479	480,663,003	513,010,073	530,764,970	545,947,427
Property tax	0	0	1,104,250	1,243,463	1,305,636	1,370,910	1,439,464	1,243,279	1,023,877	1,075,070	1,120,024	1,165,265	1,244,520
Gross revenues	0	0	179,431,075	180,403,449	197,023,642	207,714,024	210,100,566	180,375,569	155,132,022	162,009,463	171,033,936	179,505,633	180,564,914
Res. indemnity trust tax	0	0	0	942,017	989,118	1,038,574	1,090,503	941,078	775,464	814,447	855,170	897,920	942,025
Licence tax	0	0	2,575,550	2,704,570	2,840,032	2,982,267	3,131,614	2,704,169	2,226,138	2,337,679	2,454,796	2,577,270	2,706,092
Severance tax payable	0	0	3,472,710	3,646,507	3,829,150	4,020,041	4,222,117	3,646,047	3,001,002	3,152,126	3,309,966	3,475,690	3,649,716
Operating profits	0	0	112,209,625	117,904,106	123,799,312	129,909,277	136,400,741	102,603,133	65,155,785	68,413,574	71,034,253	73,425,964	79,197,264
- Interest payment	0	0	0	0	0	0	0	0	0	0	0	0	0
- Property tax	0	0	1,104,250	1,243,463	1,305,636	1,370,910	1,439,464	1,243,279	1,023,877	1,075,070	1,120,024	1,165,265	1,244,520
- Severance tax	0	0	3,472,710	3,646,507	3,829,150	4,020,041	4,222,117	3,646,047	3,001,002	3,152,126	3,309,966	3,475,690	3,649,716
- Depreciation	0	0	30,905,685	40,000,543	46,303,350	46,161,945	47,600,214	14,954,964	14,506,461	14,072,900	15,257,670	15,661,686	0,900,304
- Amortization	0	0	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333
- Depletion	0	0	26,914,701	20,260,520	29,673,546	51,157,224	32,715,085	20,256,335	21,684,900	22,956,915	24,292,447	25,694,755	20,204,737
= N.I. by SLDs deducible, A	0	0	49,046,837	35,099,659	41,922,280	46,513,016	49,658,528	53,817,195	24,173,332	25,591,221	27,000,005	28,443,220	36,344,565
Montana income tax	0	0	3,101,379	2,270,002	2,650,824	2,941,104	3,140,001	3,402,961	1,520,524	1,610,100	1,712,319	1,811,164	2,290,134

COPPER R-HOLYBENUM PROJECT MONTANA

CASH FLOW SUMMARY PROJECT BASIS	YEAR												
	14	15	16	17	18	19	20	21	22	23	24	25	
Line operating revenues	197,993,160	207,892,818	218,287,459	229,201,832	240,661,923	252,695,020	265,329,271	278,596,259	292,526,072	307,152,376	322,509,994	165,286,372	
- Operating costs	114,936,033	120,577,834	126,606,726	132,937,062	139,583,916	146,563,111	153,894,267	161,585,830	169,665,122	178,148,378	187,055,797	95,866,096	
= Operating profits	83,157,127	87,314,984	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,860,950	129,003,998	135,454,196	69,420,276	
- Capital expenditures	10,889,624	11,434,105	12,005,819	12,606,101	13,236,406	13,898,226	14,593,137	15,322,794	16,088,934	16,893,381	17,738,050	9,090,750	
- Working capital	1,367,096	1,435,450	1,507,223	1,582,584	1,661,713	1,744,799	1,832,039	1,923,641	2,019,823	2,120,814	2,226,855	(49,102,147)	
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	
= Def Debt-Paid Cash Flow	70,900,408	74,445,428	78,167,700	82,076,085	86,179,889	90,488,883	95,013,327	99,763,994	104,752,193	109,989,803	115,489,293	109,431,672	
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	
= Def Tax Net Cash Flow	70,900,408	74,445,428	78,167,700	82,076,085	86,179,889	90,488,883	95,013,327	99,763,994	104,752,193	109,989,803	115,489,293	109,431,672	
- Federal corp income tax	14,871,761	15,635,160	16,432,630	17,272,073	18,153,488	19,078,974	20,050,734	21,071,082	22,142,448	23,267,382	24,448,562	10,856,138	
- State property tax	1,306,755	1,372,093	1,440,697	1,512,732	1,588,369	1,667,787	1,751,176	1,838,735	1,930,672	2,027,286	2,128,546	1,090,890	
- State severance tax	3,812,436	4,024,291	4,225,739	4,437,260	4,659,356	4,892,558	5,137,419	5,394,524	5,664,483	5,947,941	6,245,572	3,190,578	
- State income tax	2,415,446	2,538,623	2,667,959	2,803,762	2,946,355	3,096,077	3,253,286	3,418,355	3,591,678	3,773,667	3,964,755	1,678,192	
= A-1 Cash flow (cor &)	48,474,011	50,877,262	53,400,675	56,058,258	58,832,321	61,753,487	64,820,712	68,041,297	71,422,912	74,973,608	78,781,838	93,415,882	
TAX PAYMENTS IN CONST &													
Federal corp income tax	2,511,250	2,519,817	2,527,977	2,535,748	2,543,149	2,550,198	2,556,911	2,563,304	2,569,393	2,575,192	2,580,715	3,042,832	
State property tax	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	640,000	330,000	
State severance tax	1,935,440	1,935,753	1,935,860	1,935,962	1,936,059	1,936,151	1,936,239	1,936,323	1,936,403	1,936,479	1,936,551	967,587	
State income tax	1,219,964	1,221,121	1,222,223	1,223,272	1,224,271	1,225,223	1,226,129	1,226,993	1,227,815	1,228,598	1,229,343	585,242	
Total tax payments	11,326,654	11,336,691	11,346,059	11,354,982	11,363,479	11,371,572	11,379,279	11,386,620	11,393,610	11,400,268	11,406,609	4,844,861	
CASH FLOWS IN CONST &													
Before-tax CF	35,089,524	35,089,524	35,089,524	35,089,524	35,089,524	35,089,524	35,089,524	35,089,524	35,089,524	35,089,524	35,089,524	33,183,659	
After-tax CF	24,482,678	24,472,833	24,463,664	24,454,542	24,446,045	24,437,952	24,430,285	24,422,904	24,415,913	24,409,255	24,402,916	28,258,797	
FEDERAL CORP INCOME TAX													
PROJECT BASIS	YEAR	14	15	16	17	18	19	20	21	22	23	24	25
Line operating revenue	197,993,160	207,892,818	218,287,459	229,201,832	240,661,923	252,695,020	265,329,271	278,596,259	292,526,072	307,152,376	322,509,994	165,286,372	
Operating cost	114,936,033	120,577,834	126,606,726	132,937,062	139,583,916	146,563,111	153,894,267	161,585,830	169,665,122	178,148,378	187,055,797	95,866,096	
Operating profit	83,157,127	87,314,984	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,860,950	129,003,998	135,454,196	69,420,276	
Interest charges	0	0	0	0	0	0	0	0	0	0	0	0	
- State tax payments	8,823,497	9,266,969	9,739,615	10,271,543	10,734,918	11,273,961	11,804,752	12,434,251	13,058,261	13,713,472	14,401,447	7,088,647	

COPPER-MULTIBENEFIT PROJECT MONTANA

= N.I. before allowances	74,333,630	70,000,014	81,940,110	86,043,226	90,343,090	94,057,947	99,590,547	104,576,170	109,002,689	115,790,526	121,052,755	62,411,029
- Depreciation allowances	9,333,003	9,821,493	10,312,560	10,820,196	11,369,606	11,930,006	12,534,991	13,161,740	13,819,027	14,510,010	15,236,359	14,639,554
- Amortization	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	302,667
= Income for depletion	64,214,494	67,461,100	70,870,217	74,449,697	78,208,151	82,154,528	86,290,224	90,649,104	95,217,529	100,014,374	105,051,062	47,309,609
- Depletion allowance	29,690,974	31,183,923	32,743,119	34,300,275	36,099,209	37,904,253	39,799,466	41,789,439	43,870,911	46,072,856	48,376,499	23,694,005
= Taxable income	34,515,520	36,277,265	38,127,098	40,069,422	42,108,963	44,250,275	46,490,758	48,859,665	51,338,618	53,941,518	56,674,563	23,694,005
Tax otherwise payable	15,051,027	16,662,230	17,513,153	18,406,622	19,344,764	20,329,014	21,364,116	22,450,134	23,590,452	24,787,706	26,044,907	10,074,290
- Investment tax credit	900,066	1,029,069	1,000,523	1,134,549	1,191,277	1,250,840	1,313,382	1,379,051	1,448,004	1,520,404	1,596,424	810,160
= Tax payable net of ITC	14,071,761	15,633,160	16,432,630	17,272,073	18,153,488	19,078,974	20,050,734	21,071,082	22,142,448	23,267,302	24,448,562	10,056,130

MONTANA TAX SCHEDULE

Tot. depr. al. for the Yr	10,119,136	10,506,026	11,077,901	11,593,529	12,134,939	12,703,420	13,300,324	13,927,073	14,585,160	15,276,152	16,001,693	15,022,220
Hypothetical SLB base	214,161,022	207,740,375	200,867,970	193,307,274	185,136,204	175,892,405	165,350,056	153,121,174	138,505,073	120,832,706	90,293,240	58,237,371
Hypothetical SLA for the Yr	17,046,752	10,006,216	20,006,797	21,407,475	23,142,026	25,127,406	27,559,676	30,674,235	34,646,460	40,277,595	49,146,620	50,237,371
Accelerated depr. amount	0	0	0	0	0	0	0	0	0	0	0	0
Minimum tax base	0	0	0	0	0	0	0	0	0	0	0	0
Minimum tax payable	0	0	0	0	0	0	0	0	0	0	0	0

Federal corp income tax	14,071,761	15,633,160	16,432,630	17,272,073	18,153,488	19,078,974	20,050,734	21,071,082	22,142,448	23,267,302	24,448,562	10,056,130
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MONTANA STATE TAXES	7,554,636	7,935,006	8,334,395	8,753,754	9,194,080	9,656,422	10,141,002	10,651,614	11,186,834	11,740,014	12,330,093	5,959,660
Gross revenues	197,993,160	207,092,010	210,207,459	229,201,032	240,661,923	252,695,020	265,329,771	278,596,259	292,526,072	307,152,376	322,509,994	165,206,372
Assessed tax base, 3%	5939794 7903	6236704 5302	6540623 7651	6876054 9534	7219057 7011	7580050 5861	7959093 1154	8357887 7712	8775782 1590	9214571 2670	9675299 8311	4950591 1635
Property tax	1,306,755	1,372,093	1,440,697	1,512,732	1,580,369	1,647,707	1,751,176	1,830,735	1,930,672	2,027,206	2,120,566	1,090,090
Gross revenues	197,993,160	207,092,010	210,207,459	229,201,032	240,661,923	252,695,020	265,329,771	278,596,259	292,526,072	307,152,376	322,509,994	165,206,372
Res indemnity trust tax	989,966	1,039,464	1,091,437	1,146,009	1,203,310	1,263,475	1,326,649	1,392,981	1,462,630	1,535,762	1,612,550	826,432
Licence tax	2,842,470	2,904,027	3,134,302	3,291,250	3,456,047	3,629,003	3,810,770	4,001,542	4,201,853	4,412,179	4,633,022	2,372,146
Severance tax payable	3,032,436	4,024,291	4,225,739	4,437,260	4,659,356	4,892,550	5,137,419	5,394,524	5,664,403	5,947,941	6,245,572	3,190,570
Operating profits	83,157,127	87,314,904	91,680,733	96,264,769	101,070,000	106,131,900	111,430,504	117,010,429	122,860,950	129,003,990	135,454,190	69,420,276
- Interest payment	0	0	0	0	0	0	0	0	0	0	0	0
- Property tax	1,306,755	1,372,093	1,440,697	1,512,732	1,580,369	1,647,707	1,751,176	1,830,735	1,930,672	2,027,206	2,120,566	1,090,090
- Severance tax	3,032,436	4,024,291	4,225,739	4,437,260	4,659,356	4,892,550	5,137,419	5,394,524	5,664,403	5,947,941	6,245,572	3,190,570
- Depreciation	9,333,003	9,821,493	10,312,560	10,820,196	11,369,606	11,930,006	12,534,991	13,161,740	13,819,027	14,510,010	15,236,359	14,639,554
- Amortization	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	302,667
- Depletion	29,690,974	31,183,923	32,743,119	34,300,275	36,099,209	37,904,253	39,799,466	41,789,439	43,870,911	46,072,856	48,376,499	23,694,005
= N I bf STx deduct, A	30,199,827	40,147,851	42,193,277	44,340,973	46,596,055	48,963,091	51,450,119	54,060,650	56,801,724	59,679,043	62,701,060	26,413,703
Montana income tax	2,415,446	2,538,623	2,667,959	2,803,762	2,946,355	3,096,077	3,253,286	3,418,355	3,591,670	3,773,667	3,964,755	1,670,192

CASH FLOW SUMMARY PROJECT BASIS	YEAR												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Line operating revenues	0	0	179,431,875	180,403,449	197,823,642	207,714,824	218,100,566	188,375,569	155,132,822	162,889,463	171,033,936	179,585,633	188,564,916
- Operating costs	0	0	67,142,250	70,499,363	74,024,331	77,725,547	81,611,825	85,692,416	89,977,037	94,475,888	99,199,683	104,159,667	109,367,650
- Operating profits	0	0	112,289,625	111,904,106	123,799,312	129,989,277	136,488,741	102,683,153	65,155,785	68,413,574	71,834,253	75,425,966	79,197,264
- Capital expenditures	130,200,000	136,710,000	6,366,930	6,685,284	7,019,549	7,370,526	7,739,052	8,126,005	8,532,305	8,958,970	9,406,866	9,877,210	10,371,870
- Working capital	0	15,986,250	799,313	839,278	881,242	925,304	971,569	1,020,148	1,071,155	1,124,713	1,180,949	1,239,996	1,301,996
- New debt	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0
- Ref Debt-Prnt Cash Flow	(130,200,000)	(132,696,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,308,760	67,524,198
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0
- Ref Tar Net Cash Flow	(130,200,000)	(132,696,250)	105,123,375	110,379,544	115,898,521	121,693,447	127,778,119	93,537,001	55,552,325	58,329,941	61,246,438	64,308,760	67,524,198
- Federal corp. income tax	0	0	2,608,764	15,091,576	19,299,738	21,613,616	22,862,806	24,535,567	10,233,020	11,272,048	12,019,601	12,884,532	16,938,565
- State property tax	0	0	0	1,965,048	2,063,322	2,166,488	2,274,812	2,388,553	1,796,955	1,140,226	1,197,238	1,257,899	1,319,954
- State severance tax	0	0	1,459,765	1,537,753	1,609,391	1,689,861	1,774,354	1,834,881	847,025	889,376	933,845	988,538	1,029,564
- State income tax	0	0	0	0	0	0	0	0	0	0	0	0	0
- Total tax payments	0	0	4,068,529	17,594,377	22,972,429	25,469,965	26,911,972	28,758,304	12,877,000	13,291,650	14,146,684	15,131,975	19,288,083
- Total Cash Flow (Cur. \$)	(130,200,000)	(132,696,250)	101,054,846	91,790,168	92,926,074	96,223,482	100,866,147	65,778,697	42,675,324	45,038,291	47,095,754	49,246,591	48,244,314
TAX PAYMENTS IN CONST \$													
- Fed'l corp. income tax	0	0	2,253,548	12,415,875	15,121,847	15,979,170	16,248,170	16,606,637	6,594,296	6,729,859	7,027,612	7,138,043	8,978,534
- State property tax	0	0	0	1,616,667	1,616,667	1,616,667	1,616,667	1,616,667	1,158,333	700,000	700,000	700,000	700,000
- State severance tax	0	0	1,261,000	1,261,000	1,261,000	1,261,000	1,261,000	903,500	546,000	546,000	546,000	546,000	546,000
- State income tax	0	0	0	0	0	0	0	0	0	0	0	0	0
- Total tax payments	0	0	3,514,548	15,293,542	17,999,513	18,856,837	19,125,836	19,126,804	8,300,629	8,146,859	8,273,612	8,376,043	10,224,534
CASH FLOWS IN CONST \$													
- Before-tax CF	(124,000,000)	(130,500,000)	90,809,524	90,809,524	90,809,524	90,809,524	90,809,524	63,309,524	35,809,524	35,809,524	35,809,524	35,809,524	35,809,524
- After-tax CF	(124,000,000)	(130,500,000)	87,294,976	75,515,902	72,810,810	71,							

COPPER-HOLYBROM PROJECT NEVADA

U.S.I. before allowances	0	0	110,829,860	114,466,794	128,126,599	126,112,979	132,439,575	98,459,719	62,511,805	64,383,972	69,783,178	73,188,329	76,847,745
- Depreciation allowances	0	0	38,905,605	48,080,543	46,383,358	46,161,945	47,688,214	14,954,964	14,506,461	14,872,988	15,257,678	15,641,686	8,988,384
- Amortization	0	0	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333
Income for depletion	0	0	79,158,922	65,552,408	73,057,907	79,285,650	83,986,027	83,239,472	47,248,011	50,745,730	53,688,159	56,761,389	67,174,028
- Depletion allowance	0	0	26,914,781	28,250,528	29,673,546	31,157,274	32,715,085	28,256,335	23,269,923	24,433,419	25,655,898	26,937,845	28,284,737
taxable income	0	0	52,244,148	37,291,880	41,384,361	48,048,426	51,270,943	54,983,086	23,970,088	26,312,311	28,032,261	29,853,444	38,889,291
tax otherwise payable	0	0	24,086,992	17,128,956	19,931,494	22,876,964	23,559,321	25,264,907	11,000,928	12,078,358	12,864,219	13,693,481	17,863,761
- Investment tax credit	0	0	21,609,418	2,837,382	631,759	643,347	696,515	731,340	767,907	806,303	846,618	888,949	933,396
Tax payable net of TIC	0	0	2,397,574	15,091,574	19,299,734	21,413,616	22,862,806	24,533,567	10,233,020	11,272,048	12,019,481	12,804,532	16,938,365

MINIMUM TAX SCHEDULE

Tot. depr. al. for the yr	0	0	31,670,938	48,853,876	47,068,691	46,927,278	48,453,548	15,770,298	15,271,794	15,638,241	16,023,811	16,427,878	9,623,717
Applicable SLB base	0	0	273,276,938	248,080,616	262,914,682	257,765,461	252,616,240	247,446,654	242,231,923	236,941,906	231,539,904	225,981,178	220,218,082
Applicable SLB for the yr	0	0	11,081,686	12,185,483	12,519,747	12,888,273	13,295,592	13,747,036	14,248,937	14,808,849	15,435,994	16,141,589	16,939,283
Accelerated depr. amount	0	0	19,789,332	36,648,394	34,548,944	34,839,005	35,157,956	1,973,261	1,022,857	829,372	587,018	285,511	0
Minimum tax base	0	0	17,391,758	21,576,828	15,249,210	12,625,389	12,295,150	0	0	0	0	0	0
Minimum tax payable	0	0	2,688,764	3,256,523	2,287,382	1,893,888	1,844,272	0	0	0	0	0	0

Federal corp income tax 0 0 2,688,764 15,091,574 19,299,734 21,413,616 22,862,806 24,533,567 10,233,020 11,272,048 12,019,481 12,804,532 16,938,365

NEVADA STATE TAXES

Net proceeds previous yr	0	0	0	112,289,425	117,904,106	123,799,312	129,989,277	136,488,741	102,483,153	65,155,785	68,413,574	71,834,253	75,425,966
Assessed tax base	0	0	0	39,381,369	41,264,437	43,329,759	45,486,247	47,771,859	35,939,104	22,804,525	23,944,751	25,141,989	26,399,088
Property tax	0	0	0	1,965,060	2,063,322	2,166,488	2,274,812	2,388,553	1,796,955	1,140,226	1,197,238	1,257,899	1,319,954
Net proceeds tax base	0	0	112,289,425	117,904,106	123,799,312	129,989,277	136,488,741	102,483,153	65,155,785	68,413,574	71,834,253	75,425,966	79,197,264
Severance tax	0	0	1,459,765	1,532,753	1,609,391	1,689,861	1,774,354	1,334,881	847,025	889,376	933,845	980,538	1,029,564

COPPER-HOLYBENUM PROJECT NEVADA

CASH FLOW SUMMARY PROJECT BASIS	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Line operating revenues	197,993,160	207,892,818	218,287,459	229,201,832	240,661,923	252,695,020	265,329,771	278,556,259	292,526,072	307,152,376	322,509,994	338,786,372	355,984,000	374,092,818	393,107,459	413,026,818	433,747,459	455,264,000	477,574,000	500,574,000
- Operating costs	114,836,033	120,577,834	126,606,776	132,937,062	139,583,916	146,563,111	153,891,267	161,585,830	169,665,122	178,148,378	187,055,797	196,384,000	206,126,000	216,271,000	226,816,000	237,751,000	249,066,000	260,751,000	272,806,000	285,221,000
= Operating profits	83,157,127	87,314,984	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,860,950	129,003,998	135,454,196	142,402,372	149,858,000	157,821,818	165,521,459	173,975,818	182,181,459	191,013,000	199,768,000	208,353,000
- Capital expenditures	10,889,624	11,434,105	12,005,810	12,606,101	13,236,406	13,899,226	14,593,137	15,327,794	16,098,934	16,903,381	17,738,050	18,602,000	19,494,000	20,413,000	21,358,000	22,328,000	23,322,000	24,340,000	25,381,000	26,445,000
- Working capital	1,367,094	1,435,450	1,507,223	1,582,584	1,661,713	1,744,799	1,832,039	1,923,641	2,019,823	2,120,814	2,226,855	2,338,000	2,454,250	2,575,625	2,702,125	2,838,750	2,985,500	3,142,375	3,309,375	3,486,500
+ New debt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Debt-Paid Cash Flow	70,900,408	74,445,428	78,167,700	82,076,085	86,179,889	90,488,883	95,013,327	99,763,994	104,752,193	109,989,603	115,489,293	121,240,372	127,251,000	133,521,818	140,052,459	146,854,818	153,926,459	161,268,000	168,889,000	176,780,000
- Debt's principal payment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= Before Tax Net Cash Flow	70,900,408	74,445,428	78,167,700	82,076,085	86,179,889	90,488,883	95,013,327	99,763,994	104,752,193	109,989,603	115,489,293	121,240,372	127,251,000	133,521,818	140,052,459	146,854,818	153,926,459	161,268,000	168,889,000	176,780,000
- Federal corp. income tax	17,295,252	18,704,407	19,658,494	20,660,289	21,712,172	22,816,649	23,976,350	25,194,035	26,472,605	27,815,184	29,224,727	30,700,000	32,240,000	33,852,000	35,535,000	37,288,000	39,110,000	41,000,000	42,950,000	44,970,000
- State property tax	1,385,952	1,453,258	1,520,812	1,604,413	1,694,633	1,791,865	1,897,308	1,950,174	2,047,683	2,150,667	2,257,576	2,368,000	2,481,750	2,608,500	2,748,000	2,890,000	3,044,000	3,200,000	3,368,000	3,540,000
- State severance tax	1,061,043	1,135,095	1,191,850	1,251,442	1,314,014	1,379,715	1,448,701	1,521,136	1,597,192	1,677,052	1,760,905	1,848,750	1,940,500	2,036,250	2,136,000	2,239,750	2,347,500	2,459,250	2,575,000	2,694,750
- State income tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
= A-T Cash Flow (cur \$)	50,437,641	53,150,676	55,789,342	58,559,941	61,469,069	64,523,654	67,730,969	71,098,649	74,634,713	78,347,581	82,246,091	86,340,620	90,630,370	95,116,570	99,800,459	104,683,959	109,768,959	115,056,459	120,548,459	126,245,959
TAX PAYMENTS IN CUMUL \$																				
Federal corp. income tax	8,980,664	9,997,140	9,805,784	9,814,016	9,871,856	9,879,323	9,836,434	9,843,207	9,849,657	9,855,888	9,861,658	9,867,031	9,872,000	9,876,667	9,881,031	9,885,088	9,888,848	9,892,311	9,895,578	9,898,651
State property tax	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000
State severance tax	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000	546,000
State income tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total tax payments	10,234,064	10,243,146	10,251,784	10,260,016	10,267,856	10,275,323	10,282,434	10,289,207	10,295,657	10,301,888	10,307,658	10,312,981	10,317,861	10,322,296	10,327,286	10,331,831	10,335,941	10,339,616	10,342,856	10,345,661
CASH FLOWS IN CUMUL \$																				
Before-tax CF	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524	35,009,524
After-tax CF	25,575,440	25,566,384	25,557,740	25,549,580	25,541,440	25,534,281	25,527,090	25,520,317	25,513,867	25,507,724	25,501,874	25,496,315	25,490,048	25,484,064	25,478,363	25,472,946	25,467,813	25,462,964	25,458,400	25,454,120
FEDERAL CORP INCOME TAX																				
PROJECT BASIS																				
Line operating revenue	197,993,160	207,892,818	218,287,459	229,201,832	240,661,923	252,695,020	265,329,771	278,556,259	292,526,072	307,152,376	322,509,994	338,786,372	355,984,000	374,092,818	393,107,459	413,026,818	433,747,459	455,264,000	477,574,000	500,574,000
Operating cost	114,836,033	120,577,834	126,606,776	132,937,062	139,583,916	146,563,111	153,891,267	161,585,830	169,665,122	178,148,378	187,055,797	196,384,000	206,126,000	216,271,000	226,816,000	237,751,000	249,066,000	260,751,000	272,806,000	285,221,000
Operating profit	83,157,127	87,314,984	91,680,733	96,264,769	101,078,008	106,131,908	111,438,504	117,010,429	122,860,950	129,003,998	135,454,196	142,402,372	149,858,000	157,821,818	165,521,459	173,975,818	182,181,459	191,013,000	199,768,000	208,353,000
- Interest charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- State tax payments	2,666,995	2,598,345	2,719,862	2,853,855	2,998,648	3,148,588	3,306,089	3,471,389	3,644,875	3,827,119	4,018,675	4,219,912	4,431,355	4,653,500	4,885,950	5,129,300	5,383,150	5,647,100	5,921,850	6,208,000

COPPER-MOLYBDENUM PROJECT REVENUE

= N.I. before allowances	88,690,132	84,724,639	88,940,871	93,408,915	98,879,348	102,983,328	108,132,495	113,539,119	119,216,875	125,176,879	131,435,723	66,167,364	(1,214,855)
- Depreciation allowances	9,353,883	9,821,493	10,312,548	10,828,196	11,369,686	11,938,886	12,534,991	13,161,748	13,819,827	14,510,818	15,234,359	14,439,554	0
- Amortization	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	765,333	382,447	0
= Income for depletion	78,570,996	74,137,813	77,862,978	81,815,385	85,944,421	90,279,909	94,832,171	99,612,846	104,638,915	109,908,727	115,434,838	51,125,164	(1,214,855)
- Depletion allowance	29,698,974	31,183,923	32,743,119	34,388,275	36,099,289	37,864,253	39,799,466	41,789,439	43,878,911	46,072,856	48,376,499	24,792,956	0
= Taxable income	48,872,022	42,953,890	45,119,851	47,427,110	49,845,132	52,375,656	55,032,705	57,823,407	60,752,004	63,827,871	67,057,531	26,332,188	(1,214,855)
Tax otherwise payable	18,775,818	19,733,477	20,739,819	21,794,838	22,903,448	24,067,489	25,289,732	26,573,087	27,970,609	29,335,588	30,821,152	12,087,494	0
- Investment tax credit	980,866	1,029,869	1,080,523	1,134,549	1,191,277	1,250,846	1,313,382	1,379,851	1,448,004	1,520,484	1,596,424	818,168	0
= Tax payable net of ITC	17,795,752	18,704,407	19,659,496	20,660,289	21,712,172	22,816,649	23,976,350	25,194,035	26,472,605	27,815,104	29,224,727	11,269,327	0

WITHIN TAX SCHEDULE

Tot. depr. al. for the yr	10,119,136	10,586,826	11,077,981	11,593,529	12,134,939	12,703,428	13,300,324	13,927,873	14,585,148	15,276,152	16,001,693	15,822,228	0
Hypothetical SLB base	214,161,822	207,748,375	200,867,978	193,387,274	185,136,204	175,892,485	165,358,056	153,121,174	138,585,873	126,832,786	98,293,248	58,237,371	0
Hypothetical SLA for the yr	17,846,752	18,886,216	20,086,797	21,487,475	23,142,026	25,127,486	27,559,676	30,424,235	34,646,448	40,277,595	49,146,628	58,237,371	0
Accelerated depr. amount	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum tax base	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum tax payable	0	0	0	0	0	0	0	0	0	0	0	0	0

Federal corp income tax 17,795,752 18,704,407 19,659,496 20,660,289 21,712,172 22,816,649 23,976,350 25,194,035 26,472,605 27,815,104 29,224,727 11,269,327 0

REVENUE STATE TAXES

Net proceeds previous yr	79,197,264	83,157,127	87,314,984	91,680,733	96,264,769	101,078,088	106,131,908	111,438,584	117,018,429	122,868,950	129,083,998	135,454,198	69,428,276
Assessed tax base	27,719,042	29,184,995	30,560,244	32,088,256	33,692,469	35,377,303	37,144,148	39,003,476	40,953,658	43,001,333	45,151,399	47,408,969	24,297,897
Property tax	1,385,952	1,455,250	1,528,812	1,604,413	1,684,633	1,768,865	1,857,308	1,950,174	2,047,683	2,150,867	2,257,578	2,378,468	1,214,855
Net proceeds tax base	83,157,127	87,314,984	91,680,733	96,264,769	101,078,088	106,131,908	111,438,584	117,018,429	122,868,950	129,083,998	135,454,198	69,428,276	0
Sovereignty tax	1,081,043	1,135,095	1,191,850	1,251,442	1,314,016	1,379,715	1,448,701	1,521,136	1,597,192	1,677,052	1,760,905	902,464	0