MINNESOTA TAXATION OF MINERALS

A Discussion Paper

Prepared For the Minnesota Tax Study Commission

September 12, 1984

This is a draft which is subject to change. Because the Tax Study Commission meeting is open to the public, this paper becomes a public document at 1:30 p.m., the day of the meeting. Persons quoting from this paper are requested to make clear that this is a draft. The final version will be released on December 15, 1984.

MINNESOTA TAXATION OF MINERALS

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EXECUTIVE SUMMARY

Minnesota imposes three special taxes on the mining of iron ore and taconite: the taconite production tax, the occupation tax, and the royalty tax. These taxes respectively replace an ad valorem property tax on taconite and taconite processing facilities, a corporate income tax on mining net income, and a special income tax on royalties received in connection with the exploration and extraction of iron ore and taconite. Taconite companies are not liable for local property taxes on taconite mining property (the ore deposit, mine, and concentrating plant), nor are they subject to Minnesota's corporate income tax.

This report examines Minnesota's separate system of mineral taxation from several perspectives, including the historic rationale for using special taxes on mining, how that rationale has changed over time, and the advantages and disadvantages of the existing tax structure.* It then analyses two important policy issues facing the state:

1. The effect of existing mineral taxes on the economic health of the mining industry; and,
2. The treatment of mineral tax revenues for purposes of determining state aids for property tax relief and public school finance.

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* In addition to taconite, Minnesota also has other ore bodies (copper-nickel, semi-taconite, gold) that, if developed, would be subject to the state's special mineral taxes and/or the local property tax. This report does not address tax policy in relation to the development of these resources.

Revenue

At the outset, it should be noted that although taconite production has long been the major economic activity in Northeastern Minnesota, the tax revenue collected form this activity is relatively small in comparison to total state tax revenues. For example, in 1983, the three major mineral taxes generated $78 million or about two percent of total state tax collections in that year. However, the bulk of this money ($67 million) represents in lieu of property tax dollars and is therefore returned to local governments, residential property owners, and other mandated parties on the Iron Range. Less than 15 percent of the total mineral tax revenue is available for expenditures outside the Iron Range.

Historical Perspective

The conventional rationale for the separate or special treatment of minerals in Minnesota's tax system stems from the special character of the mineral resource, i.e., it is a "gift of nature" whose value is forever diminished by the private mining activity (e.g., wasting asset).

In the late 1800s, the objective of the state's mineral tax policy was to encourage the development and growth of the mining industry. In an effort to keep taxes relatively low, the state unsuccessfully tried to levy a special tonnage tax on the extraction of natural ore in lieu of the ad valorem property tax. By the 1920s, however, a growing public opinion that mining companies were reaping large profits from Minnesota ores led to the adoption of the occupation and royalty taxes (which were levied in addition to the ad valorem property tax).

This same pattern was later repeated with the mining of taconite. In order to encourage the development of the taconite industry, taconite ore and processing facilities were exempted from the property tax in 1941, and taxed instead under a production tax that was imposed at the rate of five cents per ton of production. Later, after substantial private investment in taconite processing facilities had occurred, the tax rate was steadily increased to provide the people of Minnesota (through its public sector) with a greater share of revenues from their "natural heritage".

Current Rationale for Special Taxes

Today, the slackening in demand for steel and the enormous losses of the U.S. steel industry have effectively dulled the potency of the natural heritage principle. Current economic conditions suggest that there is little or no excess value (i.e., value in excess of that earned through the investment of labor and capital) accruing to mining companies from the production of taconite. Minnesota's continuing use of special mineral taxes is now related to reasons of administrative feasibility (simplicity) and efficient resource use (neutrality).

Following are profiles of the production and occupation taxes, including the advantages and disadvantages of their use.

Taconite Production Tax

Replaces:	An ad valorem property tax on taconite ore and taconite processing facilities.
Tax Base:	Three-year average of production tonnage.
Tax Rate:	$2.04 per ton of production, as adjusted by an annual index.
Revenue (1983):	$67.3 million
Distribution of Proceeds:	To various recipients on the Iron Range, as mandated by statutory formula. Includes cities, towns, counties, school districts, homestead property owners (through a special property tax relief credit), Iron Range Resources and Rehabilitation Board (a special state agency), Economic Protection Trust Fund (a fund to be used for economic development purposes), Taconite Environmental Protection Fund (a fund to be used for environmental purposes, including public works), and others.
Advantages:	Simplicity. Determining the assessed value of an unmined ore reserve for purposes of property taxation is a difficult and time-consuming process, even for a trained geologist. A production-based severance tax is much simpler to administer since the only information required is the number of taxable tons of production. Neutrality (Effect on Resource Use). By creating an incentive to "mine out from under the tax", the property tax encourages the rapid depletion of mineral resources. It also encourages "high grading", i.e., extracting the highest grade ore and leaving the nearby lower-grade ore behind. The production tax removes the incentive to accelerate production since the ore is taxed only at the time of extraction. It also decreases the incentive to high-grade.
Disadvantages:	Certainty (Fiscal Stability). Extended shutdowns or cutbacks in production will cause production tax revenues to fluctuate. In a period of declining production, revenues will decrease as spending pressures tend to increase. Using three-year average production (instead of annual production) as the tax base enhances revenue stability.

Occupation Tax

Replaces:	A corporate income tax on mining net income, but is paid in addition to the taconite production tax.
Tax Base:	Net taxable value of iron ore, as computed by using the "Lake Erie" value of iron ore, less certain non-statutory and statutory deductions and credits. Approximates the net outcome (profits) from mining.
Tax Rate:	15% on net taxable value of taconite ore, with effective rate of 6.75% (due to labor credits) for all taconite firms. Also subject through 1989 to a constitutional and statutory provision that limits a taconite producer's combined occupation, royalty, and excise tax liability to that of its hypothetical corporate income and excise tax liability.
Revenues (1983):	$11.4 million due without the above limitation on taxation. Net $7.4 million due.
Distribution of Proceeds:	To the State of Minnesota, as constitutionally mandated. 50% to General Fund, 40% to elementary and secondary education, and 10% to the University of Minnesota.
Advantages:	Simplicity and Predictability. Difficult to apply the Minnesota corporate income tax since (a) all taconite companies are owned, wholly or jointly, by the major U.S. steel and iron ore companies; (b) only a small share of output is sold to external buyers; and (c) only a few independent producers set the market price. The occupation tax is easier and less costly to administer, and its revenues are probably more predictable.

Neutrality (Effect on Resource Use). Because the tax is on net taxable value, it does not affect a producer's decision as to the timing, quantity, and quality of the ore extracted. It also does not create an incentive to highgrade or to accelerate production in order to mine out from under the tax. To the extent that its rate approximates the tax rate on other sources of business income, the occupation tax is neutral with respect to investment in the mining sector.

Disadvantages: Certainty (Fiscal Stability). Revenues can be unstable due to fluctuations in mineral prices, production costs, and production tonnage. Not a major problem since tax is very small percentage of total state tax revenue.

Mineral Tax Policy Issues

A. Taxes and Economic Health of Mining Industry

Mineral taxes present an unusually clear-cut problem for Minnesota tax policy, i.e., given the substantial cutback in taconite production over the past few years, would a reduction in taconite taxes encourage additional production in the mining industry? This study found that the net result of a tax cut would probably be a loss to the state treasury since both short- and long-run decisions to keep operating or to close a taconite plant depend more on the demand for domestic steel than on tax considerations. For example:

- To the extent that the occupation tax is levied at the same rate as that on net income from other sources, it is unlikely to have any impact on plant closings in either the short- or long-run. Even if its rate is slightly higher (lower), the occupation tax is still unlikely to influence a decision to keep operating or to close since its rate on a per ton basis is less than one percent of the delivered price for iron ore.

- The reduction or elimination of the production tax would not sufficiently lower the price of Minnesota taconite so as to significantly increase its demand; thus, it would not help the Minnesota mining industry to enlarge its market share for taconite.

- The decision to keep operating or to shutdown is complicated by several practical considerations such as: (a) the partnership agreements between the major steelmakers who built, own, and purchase the output of their taconite firms; (b) their obligation to assume the debt of their taconite firms in the event of closure; and (c) the difficulty of selling their interest in a mine when the market is plagued with excess capacity. These factors are likely to outweigh the tax considerations of the shutdown decision.

B. Equal Treatment of Production Tax Revenues

Minnesota's use of the production tax in lieu of the property tax creates a complex interplay between production tax distributions and state aids for property tax relief and public school finance. The goal of equal treatment of equals requires that for purposes of computing state aids, revenues received from the taconite production tax should be treated in the same manner as revenues received from the property tax.

This study analyzed the relationships between: (a) the production tax-supported taconite homestead credit and the state-paid homestead credit; and (b) school districts' production tax revenues and state-paid basic foundation aid. It found that for purposes of determining state aid for property tax relief and public school finance, production tax revenues are not treated in a like manner as property tax revenues elsewhere in Minnesota. Moreover, current practices place an upward pressure on state spending, and therefore on state revenue raising. Specific findings were:

- The 1984 legislative action that reversed the order in which the taconite homestead credit and state homestead credit are subtracted from gross residential property taxes on the Iron Range has the effect of increasing that portion of the total property tax reduction paid by the state homestead credit and decreasing that portion paid by the taconite homestead credit (with no change in the tax relief to the Iron Range homeowner). In short, the effect is to use state general fund revenues to help pay for special property tax relief on the Iron Range.

- At present, the special property tax relief that is provided to homeowners on the Iron Range is not limited to the available production tax revenue in the property tax relief account. Instead, this account has an open and standing draw on the Economic Protection Fund. In a period of low growth or declining production tonnage, the revenues generated by the production tax are likely to be insufficient to fund the mandated increases in the level of property tax relief. This may necessitate the use of the statutory drawdown at a time when using the Fund for economic development purposes is more important than ever. Although the change in the subtraction sequence for the taconite homestead credit alleviated this fiscal pressure, it did so at a cost to all state taxpayers.

- The current system of shared state and local public school finance allows taconite school districts to make smaller local contributions (and receive greater state-paid basic foundation aid) than non-taconite school districts elsewhere whose ratios of current operating to total expenditures are the same, and whose property tax bases are of similar capacity to the combined production and property tax bases of the taconite districts.

POLICY OPTIONS FOR MINNESOTA'S MINERAL TAXES

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POLICY OPTIONS

OCCUPATION TAX: ELIMINATE LABOR CREDIT

Option A: Status Quo.

Option B: The Commission recommends eliminating the labor credit and lowering the existing statutory rate of the occupation tax (15%) to its existing net effective rate of 6.75%.

- Simplicity: At present, the practical effect of the labor credit for all eight taconite firms is to reduce their tax liability to the net effective rate of 6.75%. Eliminating the credit and recognizing 6.75% as the statutory rate would lower both compliance costs for industry and administrative costs for government.

- Neutrality: This recommendation is also supported on the grounds of neutrality in that the existing arrangement can potentially penalize those firms who operate more efficiently (i.e., tax at a higher effective rate).

- Revenue: Because all taconite firms are already paying at the net effective rate of 6.75%, the elimination of the credit will not lead to a change (plus or minus) in revenues.

OCCUPATION TAX: MAINTAIN 6.75% STATUTORY RATE

If the preceding Option B is adopted, the Commission may then wish to make a recommendation regarding whether the statutory tax rate should or should not be changed.

Option A: Status Quo. The Commission recommends maintaining the existing rate (6.75%).

- Competitiveness: Lowering the occupation tax rate will not improve the competitiveness of the Minnesota mining industry. At present, taxes paid are already quite low and responsive to economic conditions (on a per ton basis, the tax varied from 1.0% of the Lake Erie value in 1979 - a high production year - to 0.3% in 1982 - a low production year). Any further reduction in the tax will not encourage additional production and therefore will not assist the recovery of the taconite industry.

- Revenue: Because a tax cut will not enhance the industry's competitiveness in the market place, the primary result of a rate reduction will be a loss to the State Treasury.

OCCUPATION TAX: M.S. 298.40 AS SECURED BY THE TACONITE AMENDMENT

(Places a limitation on taxation of taconite producers, such that their combined occupation, royalty, and excise tax liability cannot exceed the greater of: (a) the amount of these same taxes computed under the laws of 1963, or (b) the hypothetical amount of corporate income and excise taxes which would be payable if taxed accordingly.)

In 1989, the Taconite Amendment to the Minnesota Constitution is automatically repealed (sunset). Accordingly, several policy issues will arise as to the occupation tax system.

Option A: **The Commission finds that M.S. 298.40 and the Taconite Amendment, which will have been in place for 25 years, be permitted to sunset. It recommends that:**

A-1: **The occupation tax be maintained without the "shadow" net income (profits) tax limitation.**

A-2: **The occupation tax be replaced with the net income tax, i.e., mining shall be taxed the same as other businesses.**

- Neutrality: Uniformity of treatment among business taxpayers argues for adoption of the net income tax approach (A-2).

- Simplicity: Despite the attractiveness of uniformity, Option A-2 poses sizeable operational problems. They are: (a) the difficulty of determining the tax base (gross income) when only a small share of output is sold to external buyers and only a few independent producers set the market price; and (b) if required to file as multistate corporations that are part of unitary groups, the determination of the taxable net income of the Minnesota taconite firms that are jointly owned by two to four of the major U.S. steelmakers will be administratively complex and costly in relation to the revenues obtained. This argues for Option A-1.

- Revenue Certainty: Due to the likely difficulties of apportionment, revenue yield may be uncertain, at least in the first few years. This also argues for Option A-1.

Option B: Status Quo. **The Commission recommends the continuation of the occupation tax with a level limitation based on a hypothetical income tax computation.**

If this option is adopted in concept, two operational changes are appropriate for the Commission to recommend: (1) base the corporate income tax limitation solely on current Minnesota law; and (2) make the limitation statutory rather than constitutional.

- Simplicity and Neutrality: Simplicity in tax administration argues that a taconite firm's combined tax liability be compared only to its hypothetical income and excise tax liability if taxed as a corporation, and not compared to its tax liability under the laws of 1963. This recommendation is also justified on the grounds of neutrality since nearly all other businesses are taxed according to current tax law.

- Political Accountability: The goal argues for the statutory approach. Constitutions should define broad, long-term goals and objectives, rather than be a repository for specific tax law.

Option C: Combination of Options A and B. **The Commission prefers A-1 or A-2, but recognizes that there is merit to the present arrangement. If the legislature decides to continue the income tax limitation approach, this should be done only with the two operational changes described in Option B.**

ROYALTY TAX: STATUTORY RATE

Option A: Status Quo.

Option B: **The Commission recommends that the statutory rate be lowered from 15% to 6.75%, consistent with the occupation tax rate.**

- Simplicity and Uniformity (Neutrality): At present, the royalty tax on mined land is reduced by an amount that makes its net effective rate equal to the net effective rate of the occupation tax. This is desirable since it insures that mining firms who lease ore reserves and can deduct royalties paid are not at a financial advantage to firms that own reserves and cannot take such deductions. This recommendation maintains the desired consistency in the occupation and royalty tax rates, and simplifies the computation of the latter tax.

- Revenue: The effect on revenues should be minor because most taconite firms already pay an effective 6.75% rate.

PRODUCTION TAX: STATUTORY RATE

Option A: Status Quo. The Commission recommends maintaining the existing statutory rate and base of the production tax ($2.04 per taxable ton with index and phaseout of the iron content escalator; three-year average of production).

- Competitiveness: This recommendation is justified under the criterion of competitiveness because even a significant reduction in the tax rate would not sufficiently lower the price of Minnesota taconite pellets so as to stimulate domestic demand for steel and thus taconite, or to make the Minnesota pellet price competitive with lower cost foreign ores.

- Certainty: Applying the production tax to the three-year average of production tonnage makes it a more stable source of revenue for local governments, thus satisfying the certainty criterion.

- Neutrality: Although the taconite industry may pay more in production taxes than if taxed under the property tax (given the caveats in the analysis), the neutrality criterion suggests that this is intended in that it allows monies to be set aside to protect against unforeseen or long-term inpacts to the environment and economies of the Iron Range communities.

Option B: The Commission recommends lowering the existing statutory rate and/or changing the base of the production tax to the annual production tonnage.

- Neutrality (Uniformity): The Commission may determine that there is no overriding public purpose served by taxing mining

at a higher effective rate under the production tax than under its alternative, the ad valorem property tax (given the caveats in the analysis). If so, neutrality/uniformity requires the use of a lower statutory rate. Likewise, since the ad valorem property tax is applied to an annual (not averaged) assessed value, the production tax should be based on annual production tonnage.

PRODUCTION TAX: DISTRIBUTION TO TACONITE HOMESTEAD CREDIT

Option A: Status Quo. The Commission recommends that no changes be made in the taconite homestead credit.

- Certainty/Predictability: With respect to the certainty criterion, maintaining the present structure preserves a credit that has been available to Iron Range homestead property owners for fifteen years. The amount of credit is predictable since the automatic $15 per year increase in the credit maximum eliminates the need for frequent legislative action. In addition, the credit's statutory draw on the Economic Protection Trust Fund guarantees the payment of existing levels of property tax relief despite a potential decline in production revenues and without the need for legislative action.

- Revenue: This recommendation increases the cost of the state homestead credit program by approximately $26.8 million through F.Y. 1987.

Option B: Uniformity with Other Tax Relief Programs. The Commission recommends that: (1) as is true for other property tax credits, the taconite homestead credit should be subtracted before the statewide homestead credit (thus eliminating the draw on state general funds); (2) a cap be placed on the maximum taconite credit amount (thus controlling the cost of the program in a period of declining production and revenue); and (3) the statutory draw on the Economic Protection Trust Fund for property tax relief purposes be eliminated and that the program be funded on a prorata basis (thus making expenditures equal revenues, and enhancing the economic diversification purpose of the fund).

- Political Accountability and Fiscal Stability (Certainty): This recommendation generally supports the rationale presented

for the certainty criterion in the preceding recommendation. However, it also recognizes that taconite production has been in a state of decline and is not likely to return to full capacity in the years ahead; therefore, production tax collections are not likely to increase and may decline in the years ahead. Given these economic realities, both political accountability and fiscal stability (certainty) would argue against automatically increasing the maximum credit amount by $15 per year (irresponsive of changes int he property tax base and rate), and would not support funding this increasing level of property tax relief by tapping the state general fund or having the ability to tap the Economic Protection Trust Fund, particularly during a period of long-term decline when it is more important than ever to use Fund monies for economic development purposes.

- Revenue: This recommendation eliminates the $26.8 million increase in the cost of the state homestead credit program through F.Y. 1987. If production tax revenues continue to decline then property tax relief to Iron Range homeowners will also decline.

Option C: **Abolish Taconite Homestead Credit. The Commission recommends abolishing the taconite homestead credit and redistributing its monies to taxing jurisdictions on the Iron Range.**

- Political Accountability: As currently structured, the cost of maintaining existing levels of taconite homestead tax relief on the Iron Range is being partially financed by taxpayers statewide. This statewide distribution of the local tax burden is not the result of an explicit legislative action; rather, it is the implicit result of the change in the subtraction sequence of the taconite and statewide homestead credits from the property tax bill. In addition, the current law allows monies to be withdrawn from

the Economic Protection Trust Fund in order to maintain the legislatively mandated level of property tax relief. Political accountability requires full disclosure of this financing arrangement. It also suggests that revenues reserved from the taxation of a wasting asset for the purpose of economic diversification should be expended for that purpose and not for property tax relief. Even though the 1984 reversal in the credit order is expected to preserve current levels of Iron Range property tax relief and the integrity of the Economic Protection Fund, this objective should not be achieved at a cost to state taxpayers.

- Equity: If the revenue formerly earmarked for this credit were returned to the various Iron Range taxing jurisdictions, all property could be taxed at a somewhat lower rate, thus satisfying the equity criterion. Iron Range homeowners would then receive the same amount of property tax relilef as similarly-situated homeowners elsewhere in the state, also satisfying the equity criterion.

- Revenue: This recommendation eliminates the $26.8 million increase in the cost of the state homestead credit program through F.Y. 1987. It also redistributes production tax revenue on the Iron Range, resulting in somewhat higher residential property taxes and somewhat lower property taxes for all other classes (assuming the redistributed monies are used to lower the mill rate and not to increase public spending).

PRODUCTION TAX: STATE BASIC FOUNDATION AID PROGRAM

Option A: The Commission recommends that for purposes of determining state basic foundation aid distributions to taconite school districts, production tax revenues should be treated in a like manner as property tax revenue, and such treatment may require a change in how state foundation aid is distributed to the taconite school districts.

- Neutrality: Under the goal of tax neutrality, taconite and non-taconite school districts of equal revenue raising capacities and with similar ratios of current operating to total expenditures should be treated in a like manner for purposes of determining state basic foundation aid.

- Simplicity: The current method of computing foundation aid for taconite school districts is extremenly complex, and may overcompensate such districts for the tax-exempt status of their taconite property.

- Equity: The goal of equal treatment of equals suggests that the formula for determining foundation aid distributions to the 22 taconite school districts is in need of revision.

I. INTRODUCTION

Minnesota enacted its first special tax on iron mining in 1881. In an attempt to encourage the development of the State's mineral resources, the Legislature approved a tax of one cent per ton on the production of iron ore. This tax, modeled after a similar tax already in effect in Michigan, was in lieu of an ad valorem property tax on mines and ore reserves. It remained in effect until 1897 when it was declared unconstitutional under the equal and uniform tax provision of the State Constitution.[1] The tax was repealed and an ad valorem tax was imposed.

Ever since those early days, state policies toward the mining industry have fluctuated significantly. Initially, the objective was to encourage the development and growth of the industry, and taxes were therefore kept relatively low. By 1913, however, Iron Range residents began to recognize the enormous value of the ore deposits on which their communities were located. Increasingly heavy taxes were imposed on mining,[2] funding substantially higher levels of local government services than were available elsewhere.[3] Stories of extravagant spending by Iron Range cities, towns, and school districts grew more and more plentiful during the next twenty-five years. In 1941, the Legislature finally placed limits on expenditures by local governments on the Iron Range.

As natural ore became more expensive to mine, a similar cycle began with taconite.[4] In order to encourage the development of the taconite industry, taconite ore and processing facilities were generally exempted from the local property tax in 1941, and taxed

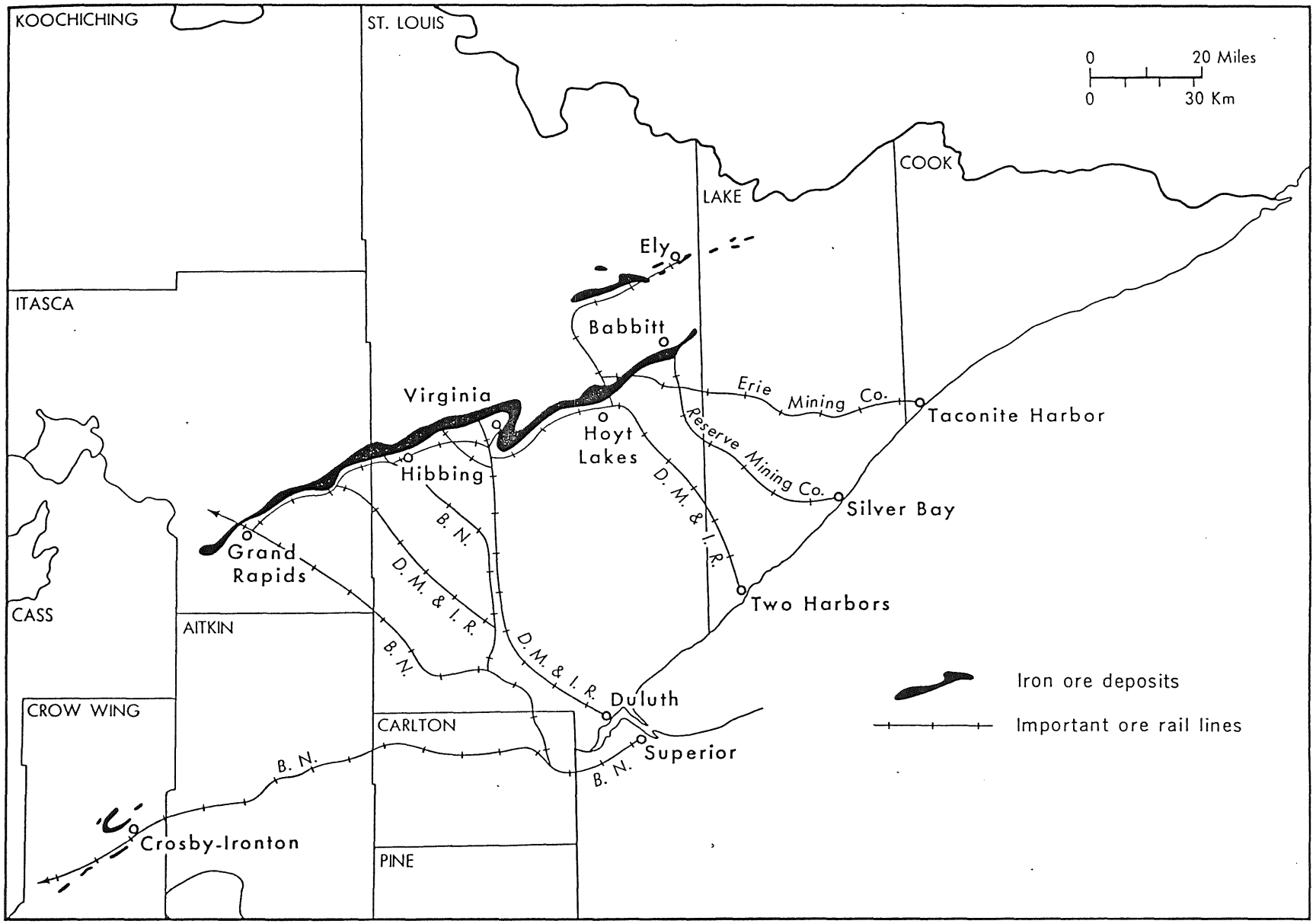
instead under a production tax that was in lieu of the ad valorem property tax. The production tax was imposed at the rate of five cents per ton of production. Later, after substantial private investment in taconite processing facilities had occurred, the tax rate was increased to provide the public sector with a greater share of mining revenues.

Now, with taconite plants operating at less than half capacity during the past two years, and with prospects for the future diminished due to a combination of continuing lower domestic steel production and increased competition from lower cost foreign ores, the State faces the problem of how to tax the mining industry as it nears the end of its economic reserves. Complicating this issue is the current earmarking of much of the state-collected mineral tax revenue for return to the Iron Range as local government aids and special property tax relief. Any reduction in state mineral taxes could trigger a need for additional state aid or for increased local taxes on the Iron Range.

This report examines the taxation of iron ore and taconite in Minnesota. Section II discusses the historic rationale for using special taxes on mining, and Section III describes Minnesota's existing system of mineral taxation. In Section IV, the report examines the State's use of two special taxes - the occupation tax and the taconite production tax - as substitutes for a corporate income tax on mining income and a property tax on mining property. Lastly, Section V examines two important policy issues facing the State: (1) the effect of existing mineral taxes on the economic health of the mining industry; and, (2) the treatment of mineral tax revenues for purposes of determining state aids for property tax relief and public school finance.

MAP 1

MINNESOTA IRON ORE DEPOSITS AND RAIL LINES



Source: University of Minnesota Bulletin, Mining Directory Issue

II. RATIONALE FOR MINERAL TAXATION

The rationale for the separate or special treatment of minerals in a tax system stems from the special character of the mineral resource, i.e., it is a "gift of nature" whose value reflects not only the labor and capital invested in its recovery, but the natural scarcity of the resource. The value of the latter factor is often deemed to be far in excess of the former. Because the mineral resource may be regarded in some unspecified manner and degree as the natural heritage of the people, it may be argued that government, through its tax system, should recapture some portion of this excess value for the benefit of present and future generations. This natural heritage argument has frequently been used to justify taxing mineral extraction at heavier levels (through higher tax rates and/or additional taxes) than other types of private business activity. While this same theory could be extended to other gifts of nature, such as farmland, timberland, and water power sites, minerals have been differentiated on the grounds that the private mining activity forever diminishes the value of the resource, i.e., a mineral deposit is a wasting asset.

Opposition to this argument is based on the high risk and speculative nature of the mining activity, and on the right of a private mining enterprise to enjoy its rights of private property in the same manner as any other business. This viewpoint suggests that government is unjustified in demanding a greater share of the profits from mining that it demands from other types of private business activity (or other types of business activity of comparable risk).

The rejection of the latter argument in favor of the former is evidenced in Minnesota's early history of mineral taxation. The natural heritage rationale first found expression in 1913, when the Legislature enacted a property classification system in which mined and unmined iron ore was valued at its "full and true value" (other property classes were valued at one-third of full and true value) and assessed at a higher ratio to such value (50%) than any other class of property. Later, a growing public opinion that mining companies were still undertaxed, and, in particular, the belief that foreign corporations were making large profits from Minnesota ores, led to the adoption of two special and additional taxes on mining net income and royalty income in the early 1920s.

Today, the slackening in demand for steel and the enormous losses of the steel industry have effectively dulled the potency of the natural heritage argument. Current economic conditions suggest that there is little or no excess value (i.e., unearned rewards) accruing to mining companies (or the owners of mineral rights) from the production of taconite. Today, Minnesota's continuing use of special taxes on the mining industry is related to reasons of administrative feasibility and efficient resource use. Such reasons are discussed in the next section.

III. MINERAL TAXES IN MINNESOTA

Minnesota imposes three major taxes on iron ore and taconite mining: the taconite production tax;[5] the occupation tax;[6] and the royalty tax.[7] These three taxes respectively replace an ad

valorem property tax on taconite and taconite processing facilites, a corporate income tax on mining net income, and a special income tax on royalties received in connection with the exploration and extraction of iron ore and taconite. Taconite companies are not liable for local property taxes on taconite mining property (the ore deposit, mine, and concentrating plant), nor are they subject to Minnesota's corporate income tax.

In 1983, Minnesota collected about $78 million in revenues from these three taxes, the bulk of which was raised by the taconite production tax (see Table 1). This represented about two percent of total state tax collections in that year. Such monies had almost no impact on the State's General Fund since most of the revenue was earmarked for return to local governments and residential property owners on the Iron Range. Less than fifteen percent of the total revenue was available for expenditures outside the Iron Range. Minnesota also collected an additional $10.3 million from four other general and special taxes on the mining industry,[8] for a total of $88.3 million in iron ore and taconite mining revenues in 1983. Additional taxes on copper-nickel and other types of mining have been enacted but are not currently producing revenue due to the lack of development activity in these areas.[9]*

Following is a discussion of the history and structure of the production, occupation, and royalty taxes, and the advantages and disadvantages of using these special taxes in lieu of the more traditional property and corporate income taxes.

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* In addition to taconite, Minnesota also has other ore bodies (copper-nickel, gold) that if developed, would be subject to the State's special mineral taxes and/or the local property tax. This report does not address tax policy in relation to the development of these resources.

TABLE 1

Minnesota Mineral Tax Collections
(Taconite and Iron Ore)
Selected Years

Tax	Tax Revenues ($000) 1970	1975	1980	1981	1982	1983
Occupation tax	$12,439	$23,993	$14,808	$13,940	$6,919	$7,386
Taconite production tax	4,253	30,347	87,179	99,078	80,305	67,341
Royalty tax	1,756	3,657	5,355	5,866	4,725	3,279
Total	$18,448	$57,997	$107,342	$118,884	$91,949	$78,006
Tons Produced	56,520	51,036	45,280	51,033	24,234	25,170

Source: 1983, Minnesota Mining Tax Guide, 1983, as updated by the Minnesota Department of Revenue, Minerals Tax Division.

A. THE TACONITE PRODUCTION TAX

1. History

Prior to 1941, all mineral deposits in Minnesota were subject to the local property tax. Fifty percent of the estimated market value of mined and unmined ore was included as part of the property tax base of those cities, counties, and school district that contained the mineral property. It was taxed at a rate equal to the sum of the millage rates of all the local units of government whose taxing jurisdictions contained such property.

This practice was of enormous benefit to local governments on the Iron Range. The value of the iron ore often dwarfed the commercial, industrial, and residential property values in the community, and taxes levied at only nominal rates produced substantial revenues. However, mining companies objected to the ad valorem taxation of mineral deposits (particularly of taconite) since unmined ore was taxed at the combined local millage rate year after year, placing what was felt to be an undue tax burden on the industry, especially for those companies with large, known reserves.[10] Additional problems associated with the use of an ad valorem property tax for both industry and government eventually prompted the State to seek an alternative form of taxation. These problems, which are still relevant today, are:

Administrative Feasibility: Determining the value of an unmined mineral deposit for taxation purposes is a complex and time-consuming process, even for a trained geologist. Typically, its value is derived by estimating the present value

of the future income stream that can be generated from the development of the resource. This requires estimating many unknown quantities such as the size and quality of the ore deposit, the likely costs of future extraction, and future mineral prices. The difficulties associated with these calculations have caused many states to use net income or some measure of gross output as a substitute for the market value of the mineral deposit, or to exempt the deposit from ad valorem taxation and rely on a state severance[11] tax.

Effect on Resource Use: An ad valorem tax on mineral property tends to encourage mining practices that are counter to sound conservation principles. For example, the value of a mining company's ore reserves comprises the largest portion of its taxable property value, and its property tax bill must be paid regardless of the current level of production or profitability. In this situation, a mining company can lower its total (cumulative) property tax bill by reducing the number of years over which the extraction of the ore is spread. This incentive to accelerate the mining schedule in order to "mine out from under the tax" results in a more rapid depletion of the mineral resource. It also encourages a practice called "high grading", i.e., extracting only the highest grade ore from a deposit and leaving the nearby lower-grade ore behind. Recovering the lower-grade ore at a later point in time may or may not be economically feasible.

Another tax distortion caused by the property tax is the variation in production cost that can result from differences in the local millage rate. Those taxing jurisdictions with more

than one mine within their boundaries will be able to levy taxes at a substantially lower rate than those containing only one mine. This produces a noticeable difference in the cost per ton of production between the two locations. This cost difference has no relation to the quality of the mineral deposit, the cost of extraction, or the cost of local government services required by the mining firm or its employees.

For the above reasons, most major mineral-producing states have discontinued their use of ad valorem property taxes and adopted some form of severance taxation. For example, in lieu of local property taxes on taconite, Minnesota uses a production tax, which is a per-unit tax on the volume of production (tonnage) from a mine. Other states impose severance taxes on the value of the annual output from the mine.[12]

2. Tax Structure

Minnesota's taconite production tax was enacted in 1941 at a rate of five cents per ton with an escalator equal to Ø.1 cent per ton for each one percent that the iron content of the taconite product exceeded 55%.[13] Its revenues were distributed 25 percent to the State, and 25 percent each to the city or town, county, and school district in which the mine was located. Since the 194Øs, the taconite production tax has been modified a number of times in terms of its base, rate, and revenue distribution; however, the basic principle of using a production tax in lieu of a property tax to provide revenue for local units of government has not changed.

a. Tax Base

Prior to 1984 legislative action, the base of the production tax was the current year's production tonnage or the average for the current and two previous years, whichever was greater.[14] This "either/or" rule was recently challenged by the Erie Mining Company, and although the Minnesota Supreme Court rejected several of Erie's arguments, it did uphold certain arguments that led to a clarification of the tax base. For 1984, the production tax base is 1984 production. For 1985, it will be the average of 1984 and 1985 production. Effective 1986, the tax will be levied on the three-year average of production. In a period of declining production, the averaging method assures that revenues decline less sharply than under the annual method.

b. Tax Rate

The production tax is currently levied at the rate of $2.Ø4 per ton of 1983 production. This is about forty times the initial rate of $.Ø5 per ton. Most of the increase in the rate (and in the iron content escalator[15]) has occurred since the late 196Øs. For example, after taconite production reached thirty million tons in 1969, the tax was increased to $Ø.11 per ton. In 1971, a schedule of additional taxes was enacted that increased the total tax rate to $Ø.25 per ton. An additional $Ø.39 was added to the tax rate in 1975. In 1977, after the most recent expansion of production capacity began, the tax rate was increased to $1.25 per ton. For 1978 and beyond, the rate was linked to the steel mill products index[16] so that tax revenues would keep pace with inflation. This price index escalator accounts for the difference between 1977 and current

tax rates. In 1984, the Legislature replaced the use of the steel mill products index, such that effective 1987, the tax rate will be linked to the percentage increase in the GNP implicit price deflator.[17] The Legislature felt the latter index was less volatile than the steel mill products index, particularly since the steel mill production index declined in 1983. The Legislature also phased out the iron content escalator, whereby the 1983 tax rate was increased by 1.6% for each one percent that the iron content of taconite pellets exceeded 62%. The escalator was decreased to Ø.8% for 1984 and eliminated effective 1985.[18] This action will keep the production tax rate near its present level and may remove what was perceived by the mining industry to be a disincentive to improve their product.

c. Collections

The taconite production tax is collected and distributed in the year following production. For example, the tax is estimated to produce about $67 million on 1983's production of 25.2 million tons, and such revenue is collected and distributed in 1984. In 1981, the last year in which taxes were based on production at near full capacity, the tax yielded about $99 million. In 1979, when the industry was at full capacity (about 6Ø million tons), the taconite production tax yielded $88.5 million. This illustrates how the three-year averaging method helped boost the taxable tonnage and thus revenues in 1981.

d. Distribution of Proceeds

Consistent with its role as a substitute for the property tax, the proceeds of the taconite production tax are returned to the Iron Range and distributed by statutory formula as illustrated in Table 2 (see Table 3 for actual dollar amounts). Note that in comparison to the 1941 law, the distribution of production tax revenues has broadened considerably. It now includes all cities, towns, and school districts in the taconite relief area (see Map 2 - p.5Ø) and not just those local taxing jurisdictions that contain an active mine.[2Ø] Since 1969, a portion of the production tax revenues has also gone to the taconite homestead property tax relief account (Item 5 in Table 2) which funds a special homestead credit program for owner-occupied homes and farms on the Iron Range.[21] This program provides property tax relief in a similar manner to the statewide homestead credit program. The difference is that homestead property on the Iron Range qualifies for both credits; thus, the property tax bills of residential property owners on the Iron Range are reduced by up to $475 more than those of homeowners in other parts of the State.

Since 1977, some money has also gone to two special funds -- the Taconite Environmental Protection Fund and the Northeastern Minnesota Economic Protection Trust Fund.[22] Neither of these funds provide revenues for local government services. Instead, they respectively provide monies for environmental and public works projects (e.g., abandoned mine reclamation, water pollution treatment facilities, sewer and water, libraries) and industrial development in the region.

TABLE 2
Statutory Distribution of Taconite Production Tax Revenue

Recipient		Receipts (Cents per Ton)
1. Taconite Cities and Town		2.5c
2. Taconite Municipal Aid Account		12.5c[a]
3. School Districts -		
a. Taconite schools (mining and/or concentrating in the district)	6.0c	
b. School districts that qualify for taconite homestead credit in proportion to their levies	23.0c	
Basic School District Total		29.0c + formula amount
c. School Index Fund	(formula amount)	
4. Counties -		
a. Taconite Counties	15.5c*[b]	
b. Electric Power Plant		
c. Taconite Counties Road & Bridge Fund	4.0c*	
Counties Total		19.5c
5. Taconite Property Tax Relief		17.75c*[c]
6. State of Minnesota (for administration purposes)		1.0c
7. Iron Range Resources and Rehabilitation Board		3.0c*
8. Range Association of Municipalities and Schools		0.2c
9. Northeast Minnesota Economic Protection Trust Fund (2002 Fund)		1.5c*
10. Taconite Environmental Protection Fund and Northeast Minnesota Economic Protection Trust Fund		any remaining tax proceeds

* Prior to 1988, such amounts are increased in the same proportion as the increase in the Steel Mill Products Index (base year 1977), and in 1988 and subsequent years, such amounts are increased in the same proportion as the increase in the GNP implicit price deflator.

[a] Less any amount distributed under Items 8 & 9.
[b] Less any amount distributed to Item 4b.
[c] Less any amount distributed to a school district and county containing an electric power plant providing electricity to the taconite industry.

Note: See Supplement to Table 2 for a description of the recipients of the production tax revenue.

Source: M.S. 298.24, Subd. 1, as amended by Article 7, Section 14 of the 1984 Omnibus Tax Bill.

TABLE 3

Distribution of Taconite Production Tax Revenue
Selected Years

Recipient	Production Year* 1975	1980	1981	1982
		(In Thousands)		
State	$ 240	$ 480	$ 551	$ 545
Cities and towns	936	1,353	1,382	1,362
Taconite municipal aid	3,400	6,811	6,776	6,702
School districts--regular	10,396	3,305	3,384	3,336
School districts--areawide	0	12,736	12,671	12,532
School districts--index fund	0	0	4,198	3,867
County	3,771	10,809	11,892	11,756
County road and bridge	592	2,785	3,057	3,028
Taconite property tax relief	8,688	17,352	19,317	15,684
Iron Range Resource and Rehabilitation Board	1,073	3,255	3,518	3,402
Range Assoc. of Munic. and School Districts	0	111	110	109
Taconite Railroad	0	3,160	3,160	3,160
District 710 School Bonds	0	0	0	240
Filtration Fund	1,250	0	0	0
Taconite Environmental Protection Fund	0	15,663	19,736	11,785
NE Minnesota Economic Protection Trust Fund	0	9,358	9,265	2,793
TOTAL	$30,347	$87,178	$99,018	$80,303

* The production tax is collected and distributed in the year following production, e.g., the 1982 production tax was collected and distributed in 1983.

Note: See Supplement to Table 3 for a description of the recipients of the production tax revenue.

Source: Minnesota Mining Tax Guide, Minnesota Department of Revenue, Minerals Tax Division, 1982, 1983.

Supplement to Tables 2 & 3

Description of Recipients of Production Tax Revenues

Table 2 Recipients:

1. Taconite Cities & Towns
   Each city or township in which mining and/or concentrating occurs receives an equitable portion of this account. (M.S. 298.28, subd. 1 (1)).

2. Taconite Municipal Aid Account
   Taconite Municipal Aid is distributed to the cities and townships in the taconite relief area in direct proportion to the latest federal population census (see M.S. 298.282). Such distribution is made after first distributing to each city and township the amount it was entitled to receive in 1975 from the occupation tax.

3a. School District 6c Fund
   Each school district in which mining and/or concentrating occurs receives an equitable portion of this account.

3b. School District 23c Fund
   Each school district receives the amount which it was entitle to receive in 1975 from the taconite occupation tax. The remainder is then distributed to the school districts in direct proportion to school district tax levies (all school districts in the taconite relief area).

3c. School Index Fund
   The School Fund Index is the escalated portion of the 23-cent school fund using the steel mill products index escalation factor (or the GNP implicit price deflator beginning in 1988). Since 1982, taconite school districts can qualify for an additional $150 per pupil unit over and above state aids by passing a two mill levy referendum. Such school districts will then receive additional taconite aid from the School Fund Index in the amount of $150 per pupil unit less the amount raised locally by the two mills.

4a. Taconite Counties
   Each county receives a portion of the aid in the same manner as (1), less any amount distributed under (4b).

4b. Electric Power Plant
   If an electric power plant owned by and providing the primary source of power for a taconite plant is located in a county (currently only Erie-Cook County) other than the county in which the mining and concentrating processess are conducted, one-cent of the 15.5-cents-per-ton is distributed to the county in which the power plant is located (this one-cent is not escalated).

4c. Taconite Counties Road & Bridge Fund
   Each county receives a portion of the aid in the same manner as (1) to be deposited in the county road and bridge fund.

5. Taconite Property Tax Relief
   The Taconite Homestead Credit reduces the tax paid by owners of certain properties located on the Iron Range. The properties taht receive this credit are owner-occupied homes and owner-occupied farms. The tax on all of the land comprising the farm is used in determining the amount of credits for a farm. Prior to 1983, the credit on farms was limited to 240 acres. If an owner-occupied home or farm is located in a city or town which contained at least 40 percent of its valuation as iron ore on May 1, 1941 (but does not exceed 60 percent) or currently has a taconite mine, plant or electric generating facility, the taconite credit is 66 percent of the tax on that property. For taxes payable in 1984, the maximum credit is $475. If the property is not located in such a city or town, the taconite credit is 57 percent of the tax on the property to a maximum credit of $420 for taxes payable in 1984. Under current law, the credit increases $15 per year.

6. State of Minnesota
   This payment covers the State's cost of administering the production tax.

7. Iron Range Resources & Rehabilitation Board (IRRRB).
   Organized in 1941, the IRRRB is a special state agency that funds various types of development projects and programs on the Iron Range. Its production tax appropriation must be expended within or for the benefit of the taconite relief area.

8. Range Association of Municipalities & Schools.
   Such revenues are distributed to the Range Association for the purpose of providing an areawide approach to problems that demand coordinated and cooperative actions, and that are common to those areas of Northeast Minnesota affected by iron ore and taconite mining operations. Such monies may also be expended for the purpose of promoting the general welfare and economic development of Iron Range cities, towns, and school districts..

9. Northeast Minnesota Economic Protection Trust Fund (2002 Fund).
   Created in 1977, this Fund provides monies for the economic rehabilitation and industrial diversification of the Iron Range (see Endnote 22).

10. Taconite Environmental Protection Fund.
   Created in 1977, this Fund provides monies for the purpose of reclaiming, restoring, and enhancing those areas of northeast Minnesota that are adversely affected by environmentally damaging mining operations, and for promoting the economic development of the region (see Endnote 22).

Table 3 - Additional Recipients:

Taconite Railroad.
For 1978 and subsequent years, the amount that each city, town, county, and school district received in 1977 from the distribution of the gross earnings tax on taconite railroads is provided from production tax revenues.

District 710 School Bonds.
Beginning with the 1982 production year a $240,000 payment is made by the Department of Revenue to School District 710 for payment of school bonds. An amount equal to 4c per ton of Eveleth Mines production is subtracted from money otherwise payable to the Northeast Minnesota Economic Protection Trust Fund. Any remaining amount required to equal $240,000 is paid as provided by M.S. 298.225..

3. Advantages and Disadvantages of Current Structure

A production-based severance tax resolves most of the objections to the ad valorem property tax. For example, Minnesota's taconite production tax is much simpler to administer since the only requisite information is the number of tons of ore mined or concentrated[23] during the year. The tax also removes the incentive to accelerate production since the ore is taxed only at the time of extraction. It also ensures that all mines are liable at the same tax rate, regardless of location. State collection of the tax also allows revenue to be distributed to all local governments affected by the mine, and not simply those in which the mine is located.

Production taxes, however, do have two disadvantages. They are not perfectly neutral with respect to resource use as there is still some incentive to high-grade. Because the tax is levied as a fixed amount per ton of production, it represents a smaller share of gross revenues derived from the extraction of higher-grade ores vs. lower-grade ores. (Because the grade of current ore extractions are not highly variable, this problem is very minor). Production taxes also introduce the potential for greater revenue instability. If mines operate at a consistent rate throughout their life, revenues are relatively stable. But, if the industry is subject to extended shutdowns or cutbacks in production, revenues for local government will fluctuate substantially (although less so if a three-year average is used as the tax base). Unfortunately, revenues will decline just when local governments are facing more severe financial pressures due to increased demands for social services and lower local tax revenues. Despite these two problems, most mineral taxation experts

agree that a production-based tax is more desirable than an ad valorem tax that raises the same amount of revenue.

B. THE OCCUPATION TAX

1. History

In response to growing public pressure to levy a special tax on the "occupation" of mining,[24] the Minnesota Legislature adopted the occupation tax by constitutional amendment in 1921.[25] Although it is a type of severance taxation, the occupation tax closely resembles a net income tax in that mining companies are allowed to deduct certain costs from the ore value in order to reach the taxable value of production. It was not until 1933 that the net incomes of other types of firms in Minnesota were taxed. The occupation tax is payable in lieu of the corporate income tax and in addition to the taconite production tax.

2. Tax Structure

a. Tax Base

The base of the occupation tax is the value of iron ore at the mouth of a Minnesota mine.[26] Because there is no published market price for ore at the mouth of the mine, its value must be approximated rather than directly set by the market. It is determined by deducting expenses incurred beyond the mouth of the mine from the recognized and published market price for iron ore that is delivered to the Lake Erie ports. Thus, the mine mouth value is established by deducting a mining company's costs of beneficiation[27] and transporta-

tion from the Lake Erie value of iron ore. Then, in order to arrive at the taxable value of the ore, additional deductions are allowed, e.g., amortized development costs, mining costs (labor and supplies), depreciation on plant and equipment, royalties payable by a non-owner operator, and a production tax allowance (see Table 4). In this manner, the occupation tax base approximates the net income from mining. However, certain deductions that are not allowable under the occupation tax are allowable under most corporate income taxes. Such items include other state and federal taxes, contributions, legal fees, certain interest payments, and certain methods of depreciation. In addition, the occupation tax has no provisions for a depletion allowance or a loss carryover.

b. Tax Rate

Occupation tax rates have increased substantially during the past sixty years. Originally levied at a rate of six percent of value, the current rate on taconite mining is fifteen percent. The rate on taconite producers was limited by statutory provision in 1963 and by the Taconite Amendment to the Minnesota Constitution in 1964.[28] These provisions provided that the sum of occupation, royalty and excise (general sales) taxes payable by a taconite producing company in any of the next 25 years should not be increased so as to exceed the greater of: (a) the amount of those same taxes payable under the laws of 1963; or (b) the amount that would be payable if taconite firms were taxed under the income and excise tax laws applicable to manufacturing (see Appendix A).

In accordance with its sunset provision, the Taconite Amendment expires on November 4, 1989.

Due to the presence of substantial tax credits, the effective rate of the occupation tax is far below its statutory rate. Of greatest significance is the labor credit for high cost ores, which allows a specified percentage of such costs to be credited against the occupation tax liability of a mining company.[29] The labor credit can reduce the statutory 15 percent rate to a net effective tax rate of 6.75 percent, and all eight taconite producers were taxed at that effective rate in 1982 and 1983.[30] Credits for investment in pollution control equipment and costs incurred for exploration and research on Minnesota ores are also available.

c. Collections

Taconite occupation tax revenues peaked in 1979 at $23.8 million on 55.3 million tons of production. This represents an average tax of $0.44 per ton. In contrast, taconite occupation tax revenues totaled about $6.2 million in 1982 with production tonnage at 23.4 million, or an average tax of $0.14 per ton. The reduction in revenue reflects the higher per unit costs associated with operating taconite plants at levels substantially below capacity, the reduced production tonnage, and the affect of credits due from overpayments made in previous years.

d. Distribution of Proceeds

Stemming from the natural heritage argument that led to its adoption, all proceeds from the occupation tax go to the State

TABLE 4

Calculation of the Value of Occupation Tax Base
Taconite Industry Only

	Average $ Per Ton	
1981 LAKE ERIE VALUE		$51.106
Less: Cost of Beneficiation[a]	$21.171	
Cost of Transportation[b]	13.254	
VALUE OF ORE AT MOUTH OF MINE		16.68
Less: Cost of Development	2.155	
Cost of Mining	5.135	
Depreciation of Plant & Equipment	Ø.646	
Administrative Expenses	1.202	
Miscellaneous	1.ØØ3	
Royalty	1.7Ø4	
TAXABLE VALUE OF PRODUCTION		$ 4.836
NET OCCUPATION TAX (after deduction of allowable credits and credits due from overpayments in previous years)		$ Ø.257
1981 Production Tonnage		Approximately 49,369,ØØØ Tons
TOTAL OCCUPATION TAX PAID (Taconite Only)		$12,7Ø7,553

[a] Cost of Beneficiation includes labor, supplies, depreciation and interest, miscellaneous, sales and use tax expense, marketing and marine insurance.

[b] Cost of Transportation includes rail and lake transportation allowances.

Source: Minnesota Mining Tax Guide, Minnesota Department of Revenue, Minerals Tax Division, 1983.

-- fifty percent to the General Fund, forty percent to elementary and secondary education, and ten percent to the University of Minnesota. Such distributions are constitutionally mandated.

3. Advantages and Disadvantages of Current Structure

Currently, the advantages of using an occupation tax are related to administrative convenience and efficient resource use.

Administrative Feasibility (Tax Enforcement): All taconite producers in Minnesota are either wholly or jointly owned by the major U.S. steel and iron ore companies. Normally, taconite pellets are sold at market price to the customer or to the owner, or they may be sold to the joint partners in proportion to their relative share of equity ownership. The Lake Erie (market) price for iron ore is established by the few independent producers that operate in the Lake states; therefore, this price is based on a very small number of true arms-length transactions. Under these conditions, the determination of the net income of a taconite producer for purposes of corporate income taxation is extremely difficult. The occupation tax avoids this problem somewhat by using the value of the ore at the mouth of the mine less certain statutory deductions as a proxy for taxable net income.

Effect on Resource Use (Neutrality): Unlike the property tax, the occupation tax does not become effective until the industry is in a position to pay, i.e., production has begun and the Lake Erie value of the ore produced over its cost has been achieved. Because the tax is a tax on net taxable value, it does not affect a producer's decision as to the timing,

quantity, and quality of the ore extracted. Therefore, it does not create an incentive to high-grade or to accelerate production in order to mine out from under the tax. The tax also does not disproportionately affect the less profitable producer since it is assessed only after allowable costs are deducted. And, to the extent that the Taconite Amendment provides that the tax rate on the taxable value of production of mining firms approximates that on the net income of other types of business activity in the state, the occupation tax is neutral with respect to investment in the mining sector, neither encouraging nor discouraging it.

A major disadvantage of the occupation tax is that the revenues flowing from it can be unstable due to fluctuations in production costs and production tonnage. For example, taconite occupation tax revenues averaged about $20 million between 1975 and 1979, with the exception of 1977, when they dropped to $3.2 million. From 1979's peak of $23 million, revenues dropped to $13.8 million in 1980 and $3.3 million in 1982. These declines reflect a major strike in 1977 and extended shutdowns and low production in the 1980s, as well as credits received for overpayments in previous years. Although these revenue fluctuations are largely unavoidable, the occupation tax raises a very small percentage of total state revenues and therefore does not create undue hardship on the state budget during years of decline.

C. THE ROYALTY TAX

The royalty tax was adopted in 1923, two years after the adoption of the occupation tax. It provided for a six percent tax on any royalties received by owners of ore-bearing properties who were leasing such lands to mining companies for purposes of mineral exploration and extraction. Since its enactment, the statutory rate of the royalty tax has exactly followed that of the occupation tax. For example, the current tax rate on royalties received in connection with the exploration and mining of taconite is 15 percent, which is also the current rate of the occupation tax. Similarly, a credit can be taken against the royalty tax on actively mined land in order to make its net effective tax rate equal to the net effective rate of the occupation tax (i.e., 6.75%). The tax rate on royalties received in connection with the exploration and mining of natural iron ore is 15.5%. Although a less generous labor credit previously applied to the natural iron ore and royalty taxes, the 1984 Legislative conformed the effective tax rate for royalties paid on natural iron ore to that of the occupation tax.[31]

As originally enacted, the royalty tax was assessed against the recipient of the royalty income (the lessor or owner of the mineral rights). However, the terms of most mining leases assigns this responsibility to the mining company (the lessee). Accordingly, the mining company pays the royalty tax to the State. As previously noted, the royalty paid is an allowable deduction in the computation of its occupation tax liability (no deduction is allowed if

the company is an owner-operator). This relationship between the royalty and occupation taxes keeps the total tax liability imposed on mining the same, regardless of whether the operator is a lessee or a fee owner.

As shown in Table 1, the royalty tax raised about $3.3 million in 1983, down from a high of $5.9 million in 1981. This decline in royalty income reflects the decline in mining production.

All revenue received from this source is deposited in the State's General Fund and is not earmarked for any specific distribution.

IV. EVALUATING THE YIELD OF MINNESOTA'S MINERAL TAXES

This section examines the occupation and taconite production taxes in light of their respective roles as substitutes for a corporate income and an ad valorem property tax on mining. The occupation tax, which raises only about one-fifth as much revenue as the production tax, is addressed first. It is followed by a longer, more detailed examination of the taconite production tax.

A. THE OCCUPATION TAX

Minnesota's occupation tax has long been a controversial tax. Iron mining companies originally objected to it because it was one of the first income-based taxes on mining, and later because it was levied at a rate higher than the corporate income tax paid by other firms. At

the same time, there was widespread public support for the tax since it was believed that the out-of-state steel companies (the owners of the mines) were getting unconscionably large profits from mining the State's ore. As years passed, however, the occupation tax has gained greater acceptance by both sides as a practical solution to the problem of taxing the net income of mining companies.

Several forces have helped bring this about. First, the 1964 Taconite Amendment, which sought to establish parity between increases in the occupation, royalty, and excise taxes, and increases in the corporate income tax, was instrumental in resolving tax disputes that were sparked by a series of rate hikes in the 1950s and early 1960s and from the lack of parallelism between allowable deductions and credits under the two taxes. Secondly, the costs of beneficiation and transportation (which are deducted from the Lake Erie value to reach the mine mouth value) have increased slightly faster than net income, thus producing a decline in the ratio of the tax to the final delivered price of ore to the lower lake ports. For example, in 1975, the taconite occupation tax averaged about $0.46 per ton, or about 1.6 percent of the Lake Erie Price of about $28.85 per ton. In the 1981 production year, the tax averaged about $0.26 per ton, or about 0.5 percent of the Lake Erie Price of $51.11 per ton. Third, inflation has boosted wage rates and thus labor costs to the point where all taconite producers qualify for the maximum labor cost credit against the occupation tax. As previously noted, all producers are now taxed at the effective rate of 6.75 percent, as opposed to the statutory rate of 15 percent. Finally, public support for raising mineral taxes has weakened as news of temporary closures and permanent shutdowns, as well as publicity about the financial

losses of the steel industry and the threat of foreign competition, has changed the perception that taconite mining is an immensely profitable business.[32]

This report has not attempted to determine whether the occupation tax, as currently levied, produces revenues that are approximately equal to that which would be obtained under the Minnesota corporate income tax.* If the taconite companies were subject to the corporate income tax, they would probably be required to file as multistate corporations that are part of unitary groups (three of Minnesota's eight taconite firms are solely owned by a major U.S. steel company, and the remaining five are jointly owned by two to four of the steelmakers - see Section V). Estimating their tax liability in accordance with the unitary definition would involve difficult problems of data collection and legal interpretation, particularly for those held under partnerships.

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* For purposes of administering the taconite tax limitation imposed by the Taconite Amendment and M.S. 298.40, a hypothetical Minnesota corporate income tax has been computed for the years 1974 to 1983. In accordance with the Department of Revenue guidelines, the hypothetical corporate income tax treats a taconite firm as a 100% Minnesota corporation. Like the occupation tax, it uses the Lake Erie Value as the starting point for defining the taxable income base. In general, a firm's hypothetical tax liability is less than its occupation tax liability due to the greater number of allowable deductions under the former tax. However, because of the M.S. 298.40 limitation on taxation, a taconite producer's total tax liability (occupation, royalty, and sales taxes) cannot exceed its corporate income and sales tax liability if treated as a Minnesota manufacturer; therefore, its occupation tax liability is limited to approximately that of its hypothetical corporate income and sales tax liabilities (or to its 1963 liability if the calculation is under clause (b) of M.S. 298.40. See Appendix A for (a) how to calculate the limitation; and (b) a summary of net revenues collected under the occupation tax in 1980 - 1983.

Given current economic conditions on the Iron Range, it is unlikely that taconite producers would show a profit for purposes of corporate income taxation. Therefore, it is likely that the State is presently receiving at least as much (if not more) revenue from the occupation tax than it would if taconite producers were taxed under a corporate income tax. With prospects for the future of Minnesota taconite uncertain, the existing occupation tax appears to be a good compromise between a corporate income tax and a severance tax on gross sales, both of which are difficult to administer when there are few market transactions from which prices for the taconite product can be obtained. The deduction of certain expenses from the Lake Erie value of iron ore makes the occupation tax somewhat responsive to the economic condition of a mining firm (e.g., the tax as a percentage of the Lake Erie price per ton dropped from 1.Ø percent in 1979 - a high production year - to Ø.3 percent in 1982 - a low production year), while continuing to provide the State with a moderate amount of revenue when times are bad. Further, the existing tax rate (in relation to the Lake Erie value or iron ore) is low enough that it is unlikely that significant resources are being diverted from mining to other investments due to tax considerations. Finally, the tax is not so large as to influence decisions to close existing plants and mines. The latter points are discussed in Section V in greater detail.

The major remaining objections to the occupation tax are its administrative complexity and compliance costs. For example:

- Construction of the mine mouth value from the Lake Erie price is a cumbersome process that involves substantial effort on the

part of both the State and mining firms. It is, however, probably as good a method for identifying a (shadow) price for the mine mouth value of the ore as is possible given that few open market transactions in unbeneficiated taconite occur.[33]

- The labor credit for high labor cost ores no longer serves a useful purpose since all producers now qualify for the maximum credit. Elimination of this credit and the consequent reduction of the statutory tax rate from 15 percent to 6.75 percent would eliminate the administrative burden of keeping records and auditing labor costs for both the mining industry and the State. For purposes of consistency, this same change should also be made to the royalty tax (i.e., elimination of the royalty tax credits and reduction of the statutory rate to 6.75 percent). These changes would leave tax revenues largely unaffected.

- The limitation on taxation imposed by the Taconite Amendment and M.S. 298.40 is administratively cumbersome in that it calls for the calculation of the combined occupation, royalty and excise tax liability under three different premises (Tax Laws of 1963, Tax Laws of 1974 - 1983, and Corporate Income Tax Laws - see Appendix A). If, at the time of collection, the total tax liabilty paid and not yet paid exceeds the <u>greater</u> of (a) the tax liability under the Laws of 1963, or (b) the hypothetical amount of income and excise taxes payable if taxed as a corporation, then the taconite firm has overpaid its taxes and receives a credit. For 1980 - 1983, the total annual amount of tax in excess of the limitation (and not collected) ranged from $2.1 million to $4.5 million.

In summary, with the exception of the suggested administrative improvement, the State's occupation tax is an acceptable substitute for an income tax on mining and no immediate changes are proposed. However, the 1989 sunset date of the Taconite Amendment to the Minnesota Constitution provides an opportunity to simplify its structure and increase its uniformity to other business taxes by basing the corporate income tax limiation solely on current Minnesota law or by eliminating the limiation altogether. Morever, it appears useful for the State to begin consideration of the pros and cons of bringing the taconite companies under the corporate income tax.

B. THE TACONITE PRODUCTION TAX

The taconite production tax is by legislative intent a substitute for ad valorem property taxes on mines, concentrating plants, and ore reserves in Northeastern Minnesota. This interpretation of the production tax has been tested in the courts numerous times, and was reaffirmed in a recent ruling of the Minnesota Supreme Court.[34] Thus, when evaluating this tax, one should look for consistent treatment of the revenue raised by the production tax with that which might have been obtained through a property tax. One can think of the two taxes as being identical except that when ore deposits are assessed, the assessed value happens to be that which, when multiplied by local millage rates, results in a tax of $2.Ø4 per ton of production for each mine. The equivalency of the production tax and the property tax in terms of total revenue collection and distribution is examined below.

1. The Production Tax as a Property Tax: Revenues

As previously noted, the production tax is currently levied at

the rate of $2.Ø4 per ton of production. Thus, a mining firm that produces five million tons of taconite pellets per year would pay $1Ø.2 million in production taxes. A relevant question is how closely this approximates what such a firm would pay under an ad valorem property tax.

Estimating how a mine, concentrating plant, and taconite ore reserves would be taxed under a property tax is a complex process for a number of reasons. First, it is important to stress that Minnesota does not have an ad valorem property tax on taconite ore reserves; therefore, one must use the methods and rates for valuing, assessing, and taxing natural iron ore, which may not be reflective of the taconite situation. Given that caveat, the difficulties of valuing natural iron ore for taxation purposes are also true of taconite. For example, the configuration and characteristics of the ore in the ground differs for each mining company. Therefore, each company's development, processing, and equipment costs will vary accordingly. These costs can affect the determination of the market value of the ore reserve since such value is generally based on the present value of the future income stream that can be generated from the development of the ore resource.

Despite the inherent uncertainty of determining a market value for taconite property, this section attempts to estimate the property tax liability of a hypothetical five million ton per year mine, concentrating plant, and ore reserve, for purposes of comparing that liability with the tax due under the production tax. Property taxes on the mine and concentrating plant are computed separately from those on the ore reserve and then summed to equal the total tax liability.

a. Estimated Tax on Mine and Concentrating Plant

The estimated capital cost of a five million ton per year taconite plant in 1978 was approximately $52 per ton or $260 million.[35] Updating this cost to 1983 by using the producer price index for metals and metal products yields a capital cost of about $68.50 per ton or a total cost of $343 million to develop a taconite mine and plant at 1983 prices.

Much of this investment would not increase the taxable value of the mineral property, e.g., the value of personal property, such as ore haulers, power shovels, and conveyor systems, is not taxable since Minnesota no longer includes manufacturing machinery and equipment in the property tax base.

It is likely that only $100 million of the total $343 million development cost would actually become taxable property value. This analysis also uses a less conservative estimate of $140 million to insure that the comparison of property and production tax liabilities is accurately portrayed. Assuming the mine and concentrating plant is taxed as industrial property, the $100 million of estimated market value translates into approximately $43.0 million of assessed value ($100 million (x) 43% classification ratio for commercial and industrial property). Assuming an average tax rate of 80 mills,[36] the resulting tax payment is $3.44 million. If $140 million of the development cost is taxable, taxes paid on the five million ton per year mine and pellet plant would be approximately $4.82 million.

b. Estimated Tax on Ore Reserves

A Minnesota Supreme Court decision in 1936 established the present worth of future profits as the method for valuing iron ore reserves. Such value is estimated by using the Hoskold formula, which is simply a mathematical model for determining the present value of property that produces a stream of annual payments for a limited number of years and has no salvage value.[37] Under Minnesota law, the computed value is then multiplied by three to determine the market value of the unmined ore.

In accordance with the Hoskold formula and Minnesota valuation procedures for unmined iron ore, a twenty year supply of ore reserves would be valued at approximately $210.42 million. Assuming such reserves would be assessed at the 30% ratio for low recovery iron ore (class 1a), and then taxed at the same 80 mill rate as applied to the plant and mine, about $5.05 million in local property taxes would be realized. Total local property taxes for a five million ton plant under these assumptions would be about $8.49 million ($3.44 million for the mine and plant, and $5.05 million for the ore deposit). If the higher assessed value for the mine and plant is used ($140 million), local property tax revenues would equal $9.87 million ($4.82 million for the mine and plant and $5.05 million for the deposit). Thus, depending upon the assumptions used, the revenue collected under an ad valorem property tax would be approximately $8.49 to $9.87 million, in comparison to $10.2 million collected under the production tax.[38*]

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* See Endnote 38 for details of the calculation of the Hoskold formula and taconite ore taxable value.

This rough comparison of tax burden indicates that taconite producers pay somewhat higher taxes under the production tax than if they were taxed under the property tax. If the calculation for determining the taxable value of the ore deposit is performed using a lower expected value for the present worth of future profits, than the difference in the revenues collected under the production tax would be even greater.[39]

The higher tax rate, however, can be defended for a number of reasons. For example, the mining of iron ore and taconite generates air and water pollution and damages scenic vistas. These costs are often external to the actual costs of the taconite producer (labor, equipment, etc.). Instead, they are borne by members of the surrounding communities, adversely affecting their welfare. One way to minimize these social costs is to impose a higher tax on mining, and use the proceeds thereof to reclaim or restore the damaged areas or to provide tax relief to local residents. This results in a more efficient allocation of resources because it assigns the social costs of mining to the mining operation. Another way of minimizing these costs is through a permit system that requires companies to meet various environmental standards (e.g., Minnesota's air and water pollution control permits and mining reclamation permits require the taconite companies to expend monies for these purposes).

A second reason for a somewhat heavier tax burden is to offset the future public costs of the severance activity, e.g., the restoration of damaged areas, or the provision of employment assistance during unanticipated plant shutdowns. Some states

have created trust funds (with varying degrees of permanency) that are used to protect against unforeseen or long-term impacts to the environment and economies of mining communities, or to preserve some of the financial benefits of today's mining for future generations. As previously noted, a portion of Minnesota's taconite production tax revenues are deposited into two funds that are earmarked for environmental protection and economic development purposes. These funds are administered by a special state agency, the Iron Range Resources and Rehabilitation Board (IRRRB). They have been used to support a variety of activities, including mining research, the construction of water and sewer systems, business development loans, an emergency jobs program, and local property tax relief. To the extent the trust funds serve their statutory purposes, the higher tax rate of the production tax can be supported.

Thus, when examining the equivalency of revenues raised from a production or property tax, there is reason to suspect that taconite production taxes are somewhat higher than those that would be paid if mining property was subject to a local property tax. However, the difference is not without merit. Moreover, given the present and future public costs associated with mining activities (particularly the cessation thereof), their appears to be a continuing need to dedicate some portion of the production tax revenues for environmental and economic development purposes.

2. The Production Tax as a Property Tax: Distribution

Just like the property tax, the production tax is a source of revenue for local governments. Even though the tax is levied and collected by the State, almost all the revenue is earmarked for direct return to local governments on the Iron Range. Only one cent per ton is retained by the State and that is used to pay for the State's costs of administering the tax. In 1982, local units of government on the Iron Range received about $46.1 million of the $80.3 million collected under the taconite production tax. An additional $15.7 million was earmarked for direct property tax relief to individuals, making a total of about $61.8 million in lieu of property tax revenue available to local governments and homestead property owners. Of the remaining $18.5 million, about $3.4 million went to the Iron Range Resources and Rehabilitation Board, $11.8 million went to the Northeastern Environmental Protection Fund, and almost $2.8 million went to the Northeastern Minnesota Economic Protection Fund. Although these latter monies are not returned directly to local governments, they are earmarked for certain types of expenditures in Northeastern Minnesota.

The unusual feature about the aforementioned distribution pattern is that revenues from taxes on mining are shared across the entire Iron Range. For example, the community and school district in which a mine or plant is located receives a fixed allocation from the production tax--2.5 cents/ton for cities and 6 cents/ton for school districts--but a much larger amount--12.5 cents/ton for cities, and 23 cents/ton plus an indexed amount for school districts--is shared. The result is something not unlike the concept of tax base sharing in the Twin Cities metropolitan area. The major difference is that on

the Iron Range, the host community and school district keep only about 15 to 20 percent of the total revenue returned to cities, towns, and school districts, contrasted with 60 percent kept by the host community in the Twin Cities metropolitan area.

In summary, the production tax acts as a substitute to an ad valorem tax on mining property. Although taconite producers may be taxed at a somewhat higher rate than under the property tax, the difference does not appear to be without merit. The regional sharing of production tax revenues on the Iron Range reduces tax rate disparities among local units of government, and therefore distributes the benefits and costs of the region's economic circumstances across all those affected.

V. CURRENT MINERAL TAX POLICY ISSUES

This study raises two important policy issues for mineral taxation in Minnesota, the first of which is more readily apparent than the latter:

(1) Would changes in the production or occupation tax encourage additional production and thereby assist the recovery of the State's taconite industry?

(2) Are production and property tax revenues treated in a like manner for purposes of determining state aids for property tax relief and public school finance?

Following is a detailed examination of these issues.

A. TAXES AND THE ECONOMIC HEALTH OF THE TACONITE INDUSTRY

Mineral taxes present an unusually clear-cut problem for Minnesota tax policy, i.e., given the substantial cutback in taconite

production over the past few years, would a reduction in taconite taxes encourage additional production in the mining industry? As previously noted, a combination of decreased domestic steel production and competition from lower cost foreign ores caused production levels to drop to 40% of capacity in 1982 and 1983. Current production levels are somewhat higher, but still at less than two-thirds actual capacity. Although the future of Minnesota's taconite industry cannot brighten appreciably without a substantial recovery in domestic steel production, it is relevant to consider the potential impact of a reduction in taxes on taconite production in Minnesota and on domestic steel output in the lower lakes area. This issue is addressed by first describing the corporate structure and markets of taconite producing companies in Minnesota. It then examines how the decision to close a plant is made, and how tax changes might affect a plant owner's or operator's decision to shutdown.

1. Organizational Structure of the Taconite Industry

Minnesota's taconite industry began in the 1950s and 1960s when, in an effort to supplement their dwindling reserves of natural iron ore, the major U.S. steelmakers set up joint ventures to finance and build processing plants that would transform Minnesota's low-grade ore into iron-rich taconite pellets. Today, the State's taconite industry consists of eight separate plants with an annual production capacity of approximately 60 million tons per year (Table 5). Three of these plants are solely owned by individual steel companies. The remaining five are owned by partnerships between the major steelmakers, such that each partner's share of production is fixed in proportion to its share of ownership in the taconite operation. The

TABLE 5

Taconite Mine Ownership, Capacity, and Estimated Production
1984

Company	Location	Owners	Capacity million tons	Estimated 1984 Production million tons
Minntac	Mountain Iron	U.S. Steel	18.6	9-10.0
Erie Mining	Hoyt Lakes	Bethlehem Steel 45% LTV 35% Interlake 10% Stelco 10%	11.0	4.4
Reserve Mining	Silver Bay Babbit	Armco 50% LTV 50%	9.8	4.0
Hibbing Taconite	Hibbing	Bethlehem Steel 62.3% LTV 16% Picklands-Mather 15% Stelco, 6.7%	8.1	5-6.0
Eveleth Mines	Eveleth	Rouge Steel 31.7% Oglebay Norton 18.4% Armco 35.1% Stelco 14.8%	6.0	3.6
National Steel Pellet Co.	Keewatin	National Steel	4.6	4.6
Minorca	Virginia	Inland Steel	2.6	2.2
Butler Taconite	Nashwauk	Inland Steel 38% Hanna Mining 37.5% Wheeling Pittsburgh 24.5%	2.6	2.0

Source: Lake Superior Industrial Bureau, and Minneapolis Star-Tribune, May 20, 1984, page 14a.

the taconite firms sell nearly all their output to their parent or partnership. In fact, most of the steel companies are obliged, under long-term "take-or-pay" contracts, to cover the mine's ore production expenses, even if they cannot use the output. During the 1970s, the steel companies spent an estimated $2.5 billion to expand taconite production capacity and to bring their plants into compliance with pollution control laws. The subsequent slowdown in the domestic demand for steel not only left the steelmakers with excess iron-ore capacity, but with the obligation to service the debt used to finance the expansion.

2. Markets for Minnesota Taconite

The market for Minnesota taconite has historically been limited to the lower Great Lakes area, inland to Pittsburgh. East Coast steel mills, such as those in Baltimore and eastern Pennsylvania, can obtain ore more cheaply from other sources. The inability of the St. Lawrence Seaway to handle large ore carrying ships protects the higher cost Minnesota ore from foreign competition to some extent. More recently, however, the combination of ocean freighter to Baltimore and rail to Pittsburgh and surrounding areas has become competitive with the costs of delivering Minnesota ore, thus reducing the potential market for Minnesota ore. Since transportation costs from producer to consumer are reflected in the delivered price of steel, the demand for Minnesota ore is tied to steel production in the North Central United States. Increased production in the South, or on the East or West Coasts, will not stimulate demand for Minnesota taconite. Fur- ther, to the extent that mini-mills, which produce steel by using electric furnaces to melt scrap iron, capture an increasing share of domestic production, demand for Minnesota ore will also decline. For

Minnesota taconite to boom again, the large integrated steelmakers of the Midwest, who produce steel from concentrated iron ore, must substantially increase production. Given the current status of the U.S. steel industry and the world markets, this is not likely.

3. Taxes and the Shutdown Decision

Traditional economic theory notes that, in the short-run, profit maximizing firms will continue to operate as long as they are able to cover all variable production costs and some of their fixed costs. Only when revenues are insufficient to cover all variable costs will shutdown occur. In the long-run, the process is essentially the same except that all costs now become variable.

In either the short- or the long-run, a true net income tax, levied at the same rate as on net income from other sources, will have no impact on the shutdown decision. For example, in the short-run, a firm operating at a loss would have no net income, and therefore would pay no tax. In the long-run, its net income would be taxed at the same rate as net income derived from an alternative investment; thus, there would be no tax advantage to closing the plant and investing elsewhere. To the extent that Minnesota's occupation tax approximates a net income tax, it is unlikely to have any impact on plant closings in either the short- or long-run. Furthermore, in recent years the occupation tax on a per ton basis has been so small (on average, it was Ø.3 percent of the Lake Erie Price in 1983) that even if its rate were slightly higher or lower than the rate applied to other sources of income, it would be unlikely to have any significant impact on the decision to keep operating or to shutdown.

The production tax, however, may have a significant effect on both short- and long-run shutdown decisions since its "bite" is directly related to production levels. Every additional ton of production increases a firm's tax liablity by $2.Ø4 (ignoring the averaging provisions for determining the taxable tonnage). While changes in the occupation tax can be easily dismissed as ineffective in promoting increased taconite production, it appears that reducing the production tax offers the possibility of stimulating the taconite industry.

Using the above framework to analyze the closure of the taconite companies on the Iron Range requires certain modifications. As a beginning point, it is useful to separate those taconite companies with relatively light debt loads from those with substantial amounts of outstanding debt.

Owners of taconite companies with little or no debt will decide whether or not taconite pellets can be obtained elsewhere at a lower price. If the delivered price of taconite from an alternative source is less than the total cost of producing and transporting pellets from its own plant, the owner will maximize profits by closing its own taconite plant and purchasing pellets from others. For owners of taconite companies with substantial debt, the decision to close a plant is more complicated. Since the outstanding debt on their plant must be paid whether or not the plant is operating, the cost of servicing that debt must be added to the cost of delivered pellets from another supplier in determining whether a lower cost supplier of pellets can be found. Thus, they will close their plant only if the costs of production, transportation, and debt service exceed the sum

of the delivered price from an alternate source and the debt service on the plant to be closed.

In reality, however, there are several practical considerations that increase the complexity of the shutdown decision, particularly if it must be made by a multi-company partnership. For instance, the contractual agreements between the partners may require that major decisions be made with the unanimous consent of all partners. Even if this is not the case, the various partners all have different needs and disagreements may ensue. A decision to permanently close would force the partnership to assume the debt of its taconite company on its own balance sheet, thus further weakening its own financial position. A decision to sell an interest in a mine's holding may prove difficult since few companies are in the market to buy more production capacity. Thus, the complexity of these contractual and financial considerations far outweigh the tax aspects of the shutdown decision.[40]

4. Taxes and the Demand for Steel

It would appear that both short- and long-term closure decisions depend primarily depend on the demand for domestic steel rather than on tax considerations. A relevant question, therefore, is whether a reduction in production taxes could increase domestic demand for Minnesota ore to any significant degree.

Estimates using current tax rates and the 1983 Lake Erie price indicate that a reduction in iron ore prices made possible by lower severance taxes would trigger a small increase in demand for

steel at best. The 1983 production tax of $2.04 per ton is about four percent of the delivered price of iron ore. Its complete elimination would decrease delivered ore prices by four percent, assuming that the tax reduction was fully passed on to the purchaser and not absorbed in part by increased production costs or by higher returns to shareholders. Since ore costs are about ten percent of all factor costs for integrated steel manufacturers, complete elimination of the production tax would, if all cost reductions were passed on to the consumer, decrease steel prices by 0.4 percent. Using Hekman's estimate of the price elasticity of demand for steel in the Chicago market of -1.27,[41] demand for lower lakes steel would increase by approximately 0.5 percent if the taconite production tax were eliminated. Based on existing production rates of about 40 million tons, this means total elimination of the production tax would increase demand for Minnesota taconite by only 200,000 tons per year.[42] Such an increase in production would have little impact on unemployment in Northeastern Minnesota and would do nothing to solve the region's long-range economic problems.

An alternative view is that by cutting its production tax, Minnesota might be able to capture an increased share of the lower lakes market for iron ore. With respect to Michigan, Minnesota's closest U.S. taconite competitor, there is conflicting evidence as to which state has an after-tax cost advantage. Michigan taconite companies are subject to the single business (value added) tax and a severance tax in lieu of the property tax. Like Minnesota, they are plagued by the problem of excess capacity in the market. One firm is shutdown and two are operating at reduced capacities.

With respect to Canada, it appears that Canadian ores do have a comparative advantage to U.S. ores,[43] and that advantage has been extended by the relative depreciation of the Canadian dollar. However, even if all Canadian ore had been kept out of the U.S. in 1983, the impact on Minnesota producers would not have been great. Canadian imports totaled only 8.8 million tons, a substantial portion of which was delivered to East Coast ports, where Minnesota taconite is not now competitive.

Even the complete elimination of taconite taxes is not likely to make Minnesota ores competitive at Pittsburgh or along the East Coast. Ores from Australia, Brazil, Labrador, Quebec, Liberia, and Venezuela can be delivered to Eastern seaboard locations at substantially lower costs than can Minnesota taconite.[44]

Thus, it appears that reductions in production taxes, or even the elimination of the tax, would not be sufficient to markedly increase demand for Minnesota taconite by either capturing market share from Michigan or Ontario mines or by stimulating increased steel demand through lower prices. In either instance, the amount of additional production likely to occur, even with complete elimination of the tax, would be insignificant.

Therefore, in response to the issue of taxes and the economic health of the taconite industry, the following can be concluded:

- To the extent that Minnesota's <u>occupation tax</u> is levied at the same rate as that on net income from other sources, it is unlikely to have any impact on plant closings in either

the short- or long-run. Even if its rate is slightly higher (lower), the occupation tax is still unlikely to significantly influence the shutdown decision since its rate on a per ton basis is less than one percent of the delivered price for iron ore.

- Because the burden of the production tax is directly related to the level of production, a reduction in its rate could potentially affect the decision to keep operating or to shutdown. However, this decision is complicated by the contractual agreements between the major steelmakers, their obligation to assume the debt of the taconite firms in the event of closure, and the difficulty of disposing of productive capacity in a market plagued with excess capacity. Such factors are likely to outweigh the tax considerations of the shutdown decision.

- The reduction or elimination of the production tax would not sufficiently lower the price of Minnesota taconite so as to significantly increase demand therefor, nor would it allow the Minnesota mining industry to enlarge its market share and thereby increase the demand for taconite.

B. EQUAL TREATMENT OF PRODUCTION TAX REVENUES

Equal treatment requires that for purposes of computing state aids, revenues received from the taconite production tax should be treated in the same manner as revenues received from the property

tax. If this principle is followed, state aids to local government should not vary depending on whether the local tax base contains a mine or an agricultural processing plant of similar value. There should be no aid-related advantage or disadvantage to living in the area that contains a mine.

This section, therefore, examines the interplay between the production tax and two forms of state aid: homestead property tax relief to owners of homestead properties; and, state basic foundation aid to school districts. It shows that the present relationship between the taconite production tax and the homestead credit and basic foundation aid programs creates an upward pressure on state spending, and thus state revenue raising.

1. Taconite Homestead Credit

Enacted just two years after the 1967 creation of the statewide homestead credit, the taconite homestead credit reflected the continuing concern over the level of property taxes in Northeastern Minnesota. At the time, most Iron Range communities had unusually high mill rates due to their lack of tax base (i.e., low value homes, little commercial property, large amounts of tax-exempt public land, and substantial holdings of property tax-exempt taconite facilities) and high public spending. It was largely the latter factor that prompted the Legislature to dedicate a portion of the production tax revenues for the purpose of providing a property tax credit to homeowners rather than returning such monies to the local governments.

Initially, only those homeowners located in taxing jurisdictions that contained tax-exempt taconite facilities were eligible for the credit; however, the eligible area has since expanded considerably and it now includes most of Northeastern Minnesota (see Map 2). The amount of property tax relief has also grown considerably. For example, in 1969, the credit ranged from 17% to 27% of the local property tax bill, up to a maximum of $190. In 1975, the credit was increased to 60% of the tax due with a maximum of $350, or 52% of the tax due with a maximum of $300, with the applicable amount depending upon the location of the property.[45] In 1977, the credit was increased to 66% of the tax due with a maximum of $385, or 57% of the tax due with a maximum of $330. Since 1979, the maximum credit amount has increased automatically by $15 per year, thus bringing the 1984 rates to 66% of the property tax due up to a maximum $475, or 57% of the tax due up to a maximum $420.

In computing the net tax due, the statewide homestead credit is taken before the taconite homestead credit; thus the taconite homestead credit is in addition to the homestead credit that is available to homeowners elsewhere in the State (see Table 6).

The use of severance tax revenues to provide special property tax relief directly to homeowners is unique to Minnesota. Most states that share severance tax revenues with localities do so by returning such funds to the local taxing bodies (cities, counties, and school districts), with or without earmarked purposes of expenditures. By directing the money to homeowners in the form of a credit, Minnesota is able to target its tax relief to certain recipients (i.e., to owners of homesteaded property rather than to rental

TABLE 6

Calculation of the Taconite Homestead Credit
(Current Law)

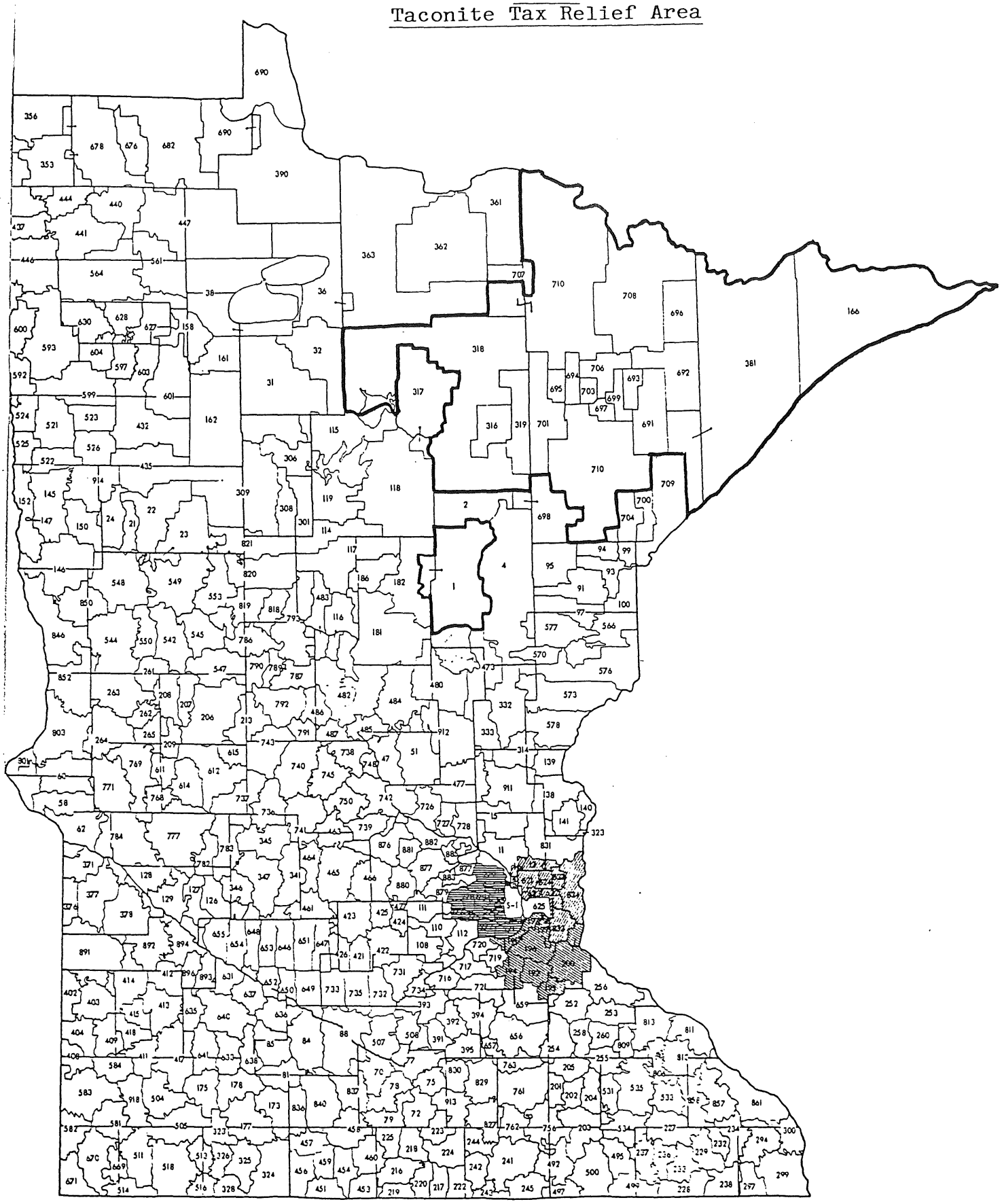
Assume: Owner-occupied residential property with estimated market value of $65,000. Taxes levied at rate of 125 mills. Homestead property located within boundaries of municipality meeting the qualifications of M.S. 273.134 and qualifying for the taconite homestead credit at the 66% rate.

Assessed Value <(17% * $30,000) + (19% * $30,000) + (30% * $5,000)>		$12,300.00
Property Tax Levy (.125 * $12,300)		1,537.50
Statewide Homestead Credit (54% of levy amount; $650 maximum)		650.00
NET PROPERTY TAX		887.50
Taconite Credit - Step 1 (66% of net tax up to $554.00*; $225.40 maximum)	$225.40	
Taconite Credit - Step 2 <54% of (Net Tax - $554); $264.60 maximum>	$180.09	
TOTAL TACONITE CREDIT	$405.49	405.59
FINAL TAX BILL (Levy - Homestead Credit - Taconite Credit)		$ 482.01
EFFECTIVE PROPERTY TAX RATE (Net Tax Due divided by market value)		0.7%

* In accordance with M.S. 273.134, amended 1984, $554 is the "taconite breakpoint" (see Appendix A for statutory language). The taconite breakpoint is a constant number that is related to the statewide homestead credit. Currently, the state homestead credit reduces the property tax on owner-occupied housing by 54 percent, up to a maximum of $650. The taconite breakpoint of $554 is calculated as follows:
$650 / 54% = $1,204 and $1,204 - $650 = $554.

MAP 2

Taconite Tax Relief Area



Source: Minerals Tax Division, Minnesota Department of Revenue.

housing or commercial-industrial property on the Iron Range) and to owners of certain property values (i.e., proportionately more aid is returned to owners of homes of low or medium value). If the taconite homestead credit were eliminated and all funds allocated to it were placed in funds that go to the local taxing jurisdictions instead of to homeowners, then the tax relief provided would be distributed to all taxpayers' property holdings (assuming the money was used for tax relief purposes). The current practice, however, has been supported as a matter of local discretion, i.e., since local governments decide how to spend their property tax dollars, so should Iron Range communities be permitted to decide how to spend their in lieu of production tax revenues.

This practice of providing both the state homestead and taconite homestead credits to Iron Range homeowners has resulted in residential property taxes that are quite low in comparison to other regions of the State. For example, in its 1983 evaluation of property tax relief programs in Minnesota, the Office of the Legislative Auditor found that the taconite homestead credit, in combination with the state homestead credit, reduces gross residential taxes in the six taconite counties by 58 to 78 percent, a reduction that is greater than that found in any other region of the State (with the exception of Mahnomen County in Northwestern Minnesota).[46]

The variation in property tax levels across Minnesota will be examined in the Tax Study Commission's upcoming study of the property tax. The focus here is on the non-local ramifications of the taconite homestead credit.

As previously mentioned, both the amount of the taconite homestead credit and the geographic area eligible to receive the credit has expanded considerably since the program's inception in 1969. In 1970, the program cost about $1.0 million; by 1979, its cost had climbed to $9.2 million, and it reached $17.6 million in 1983 (unadjusted for inflation).[47] Its cost should continue to rise in the future since the maximum credit automatically increases by $15 per year.

As originally enacted, the program was funded by a dedicated portion of the production tax revenues (viz, the taconite property tax relief account) on a prorata basis. If in any year the balance in the relief account was less than the specified amount of property tax reduction to be given, such amount was reduced proportionally so that the amount of tax relief granted equalled the available revenues.[48]

This method of balancing was eliminated in 1978 and replaced by a system, whereby if during any year, the relief account had insufficient funds to pay the specified amount of property tax relief, the required revenues could be drawn from the Northeastern Minnesota Economic Protection Trust Fund (the 2002 Fund).[49] Thus, the taconite homestead credit was no longer restricted to available revenues. It was now guaranteed by a fund whose original purpose, when it was established in 1977, was to "...be devoted to economic rehabilitation and diversification of industrial enterprises..." and funds were not to be expended for such purpose prior to January 1, 2002.[50]

In the first special session of 1981, the Legislature made this same fund available for another property tax-related purpose. An earlier (1977) provision of the law had already provided a "plant shutdown guarantee" such that if production tax distributions to cities, counties, and school districts were reduced due to a plant shutdown, the amount of their production tax payments in the last full year prior to shutdown would be guaranteed for two years following the year of shutdown.[51] This guarantee was funded by the Taconite Environmental Protection Fund, but effective 1982, it became equally funded by both the Environmental Protection and Economic Protection Funds.[52]

During the 1984 legislative session, it became apparent that, even with its statutory draw on the Economic Protection Fund, the taconite property tax relief account was facing a deficit in F.Y. 1985 and beyond. Moreover, the two statutory draws on the Economic Protection Fund could substantially reduce its corpus and thus lead it to eventual bankruptcy. Therefore, in an effort to maintain the existing level of homestead tax relief on the Iron Range while preserving the integrity of the Economic Protection Fund, the 1984 Legislature took two major actions:

1) it put the "plant shutdown guarantee" on a sliding scale such that production tax distributions to taconite communities affected by shutdowns would decline somewhat as the level of production declined, thus reducing the size of a potential draw on the Economic Protection Fund;[53] and,

2) it reversed the order in which the taconite homestead and state homestead credits were subtracted from the property tax due, such that the taconite homestead credit is now taken after first deducting the state homestead credit.[54]

As illustrated in Table 7, the effect of this switch in the subtraction sequence is to increase that portion of the total property tax reduction paid by the state credit and to decrease that portion paid by the taconite credit, while maintaining the same level of tax relief to the homeowner (i.e., no increase/decrease in the net tax due). By shifting a larger portion of the total cost to the State, it was then possible to reduce the amount of production tax revenue dedicated to the taconite property tax relief account (from 25.75 cents per ton to 17.75 cents per ton), and to eliminate the account's projected deficit and projected drawdown on the Economic Protection Fund. This made those monies that were formerly earmarked for property tax relief purposes available for deposit in the Economic Protection and Environmental Protection Funds.

As illustrated in Table 8, the cost of this action is picked up by the state homestead credit program, which is financed by general fund revenues that are largely raised by the individual income and sales taxes. For a given market value and levy, Table 8 shows the respective contribution of the state homestead credit and the taconite homestead credit toward the same net property tax bill. Column 10 shows the net increase in state paid homestead credits due to the 1984 change in the law.

TABLE 7

Calculating the Iron Range Homestead
Property Tax Bill under Alternative Treatment
of the Taconite Homestead Credit

Assume: Owner-occupied residential property with estimated market value of $65,000. Taxes levied at rate of 125 mills. Homestead property located within boundaries of municipality meeting the qualifications of M.S. 273.134 and qualifying for the taconite homestead credit at the 66% rate.

Estimated market value	$65,000.00
Assessed Value <(17% * $30,000) + (19% * $30,000) + (30% * $5,000)>	$12,300.00
Property Tax Levy (0.125 * $12,300)	$ 1,537.50

Property Tax Bill Under 1977 Law (Taconite Homestead Credit taken before State Homestead Credit)		Property Tax Bill Under 1984 Law (Taconite Homestead Credit taken after State Homestead Credit)	
Tax Levy	$1538.00	Tax Levy	$1538.00
Taconite Homestead Credit (66% of Levy up to $490 Maximum)	490.00	State Homestead Credit (54% of Levy up to $650 Maximum)	650.00
State Homestead (54% of Net Tax up to $650 maximum)	566.00	Taconite Homestead Credit (See Table 6 for calculation)	$ 406.00
NET TAX DUE	$ 482.00	NET TAX DUE	$ 482.00

Significance of Subtraction Order:

	1977 Law	1984 Law	Effect
Amount Paid by Property Owner	$482.00	$482.00	No Change
Amount Paid by Taconite Production Tax Revenue	$490.00	$406.00	Reduced by $84
Amount Paid by State General Fund Revenue	$566.00	$650.00	Increased by $84

TABLE 8

Estimated Impact Of Changes In The Subtraction Sequence of the Taconite Homestead Credit And State Homestead Credit Effective 1985

1	2	3	4	5	6	7	8	9	10
		Current Law**			Prior Law***				
Market Value	Levy*	Homestead Credit	Taconite Homestead Credit	Tax Bill	Taconite Homestead Credit	Homestead Credit	Tax Bill	Change in Individual Tax Bill	Change in State Hstd Payments
$20,000	$ 425	$230	$129	$ 66	$281	$ 78	$ 66	0	+ $152
30,000	638	344	194	100	421	117	100	0	+ 227
40,000	875	473	225	177	490	208	177	0	+ 265
50,000	1126	608	225	293	490	343	293	0	+ 265
60,000	1350	650	304	396	490	464	396	0	+ 186
70,000	1725	650	490	585	490	650	585	0	0
80,000	2100	650	490	960	490	650	960	0	0

*Assumes tax rate of 125 mills.

**Taconite homestead credit applied after statewide homestead credit; 1984 taconite homestead tax formula (see Appendix A).

***Taconite homestead credit applied before statewide homestead credit; pre-1984 taconite homestead tax formula of 66 percent of levy up to a maximum of $490.

Estimates from the Department of Revenue show that reversing the subtraction order of the credits permitted the distributions to the taconite property tax relief account to be reduced by about $18.6 million over the F.Y 1985 - 1987 period, and eliminated the need to withdraw about $8.2 million from the Economic Protection Fund for purposes of relieving insufficiencies in the relief account. In total, it made available approximately $26.8 million in production tax revenues that could now be distributed to the Economic and Environmental Protection Funds and potentially to other recipients of production tax revenues.[55] In turn, the cost of the state homestead program was increased by $26.8 million through F.Y 1987.

This rearrangement of the credits results in the de facto partial funding of the taconite homestead credit program by state taxpayers (or, because it also preserves the integrity of the Economic Protection Fund, it could be viewed as a state subsidy to such Fund). The cost of this implicit subsidy will increase if more homes in the Iron Range reach the $650 maximum for the state homestead credit or if that maximum is increased in the future.

In summary, this analysis shows that, for purposes of property tax relief, production tax revenues are not treated in a like manner as property tax revenues elsewhere in Minnesota. Not only are production tax revenues used to provide special tax relief to one class of property (residential homestead property), but, as of 1985, the cost of providing that additional relief is partially shared by taxpayers statewide.

2. State Education Aids

Minnesota's complex system of public school finance includes three types of state aid to school districts: foundation aid, categorical aid, and tax relief aid. The foundation aid program is the heart of the state aid system in that it provides general funding for public school operating costs through a system of shared state and local finance. Its purpose is to assure that: (1) all districts have the financial resources necessary to operate educational programs; and, (2) the tax burden for school support is distributed equitably based on the school district's collective ability to pay. The State also provides schools with various special purpose or "categorical" aids, and with various tax relief aids that either provide tax relief or compensate for the presence of in the district of certain types of tax-exempt properties. In general, tax relief aids are deducted from both local levies and state foundation aids, so that districts receiving these aids do not have excessive funds available beyond the amount provided by the foundation aid formula.

One type of tax relief aid provided to Iron Range school districts is taconite production tax revenue. A portion of such revenue is distributed to 22 school districts in Northeastern Minnesota and is used to reduce both their local levies and foundation aids. In analyzing the relationship between taconite revenues and foundation aids, this section first describes Minnesota's foundation aid program in simplified form.

Basic foundation aid is one of several components in the state foundation aid program. It provides a certain amount of revenue to each district through a combination of state aids and local property

tax levies. The basic foundation aid program guarantees that each mill of local property tax effort will raise a uniform amount of revenue per pupil unit in each district.

For example, for school year 1984 - 1985, all school districts are guaranteed basic foundation revenue in the amount of $1,475 per pupil unit (the guaranteed sum). In arriving at this sum, all participating school districts must levy a tax of 24 mills on all taxable property in their district (the local contribution).[56] The difference between the guaranteed sum and the local contribution is the amount of state-paid basic foundation aid that will bring each school district up to the guaranteed sum.

In general, those districts with low property valuations receive a larger portion of their basic foundation revenue from foundation aid because their basic maintenance levies raise a smaller amount of property tax revenue. If a district's basic maintenance levy raises an amount equal to or greater than the formula allowance (i.e., the $1,475 (x) the number of per pupil units), then the district receives no basic foundation aid and "goes off the formula".

As previously discussed, Minnesota's taconite production tax is levied in lieu of property taxes on taconite mines, plants, and ore reserves. A certain portion of the production tax revenue is deposited in the School District 6 Cent and 23 Cent Funds (see Table 2). Monies from the 6 Cent Fund are returned to school districts in which mines and concentrating plants are located, and monies from the 23 Cent Fund are shared by all school districts in the statutorily-defined taconite relief area. Because these monies (hereafter

referred to as taconite revenues) represent in lieu of property tax revenues, it follows that some portion of this revenue should be counted as part of the local contribution.

Prior to 1976, however, taconite production tax distributions were not included in the definition of locally raised revenues. By ignoring their in lieu of property tax revenue, Iron Range school districts were able to receive more foundation aid (and make a smaller local contribution) than districts with similar taxing capacities elsewhere. State law has gradually been amended such that taconite revenues are now used to reduce both the local levy and foundation aid. The amount subtracted from the district's local levy is the greater of: (a) 50 percent of the taconite revenues received in the previous fiscal year; or (b) a formula-computed percentage of the taconite revenues that may be somewhat higher than 50 percent.[57] In no case, however, can the taconite school district's basic maintenance levy be reduced below 12.5 mills. The remainder of the district's taconite revenues are subtracted from its basic foundation aid entitlement.

At first glance, it may appear that these provisions have equitably distributed the tax burden for taconite school support based on their collective ability to pay. However, a closer analysis shows that taconite school districts are actually at a relative advantage to non-taconite school districts for purposes of state-paid foundation aid, given that the taconite district's property and production tax base approximately equals the non-taconite district's property tax base. Consider the following example[58]:

Assume two school districts, A and B:

- District A contains a manufacturing plant, which, if its assessed value is levied at 24 mills, would produce $100,000 in property taxes. District B contains a taconite mine and plant that is exempt from the local property tax. It receives $100,000 in taconite production tax revenues.

- For purposes of school finance, District A has a taxable property value, such that if levied at 24 mills, it would produce $500,000 in property tax revenue (i.e., $100,000 from its manufacturing plant and $400,000 from its remaining tax base). District B has a lower valuation since its taconite facilities are tax-exempt. Against a 24 mill levy, its tax base would produce only $400,000 in revenues. However, adding in its production tax revenues of $100,000 gives it a tax base that also produces $500,000. Thus, A and B are school districts of equal revenue-raising abilities.

Also Assume:

- A and B have the same number of per pupil units; given the state formula allowance, each is guaranteed Basic Foundation Revenue of $750,000.

- Both A and B have determined that their total expenditure requirement is $1,000,000; therefore, they need revenues of $1,000,000.

Ask, how do A & B raise the required revenue, given the State's foundation aid formula where:

Basic Foundation Aid	=	Basic Foundation Revenue	-	Local Contribution

Then, for District A (Manufacturing Plant):

Compute Local Contribution :	24 mills (x) Taxable Value of Plant	$100,000
	24 mills (x) Taxable Value of Other Property	400,000
	LOCAL CONTRIBUTION	$500,000

Compute Aid :	Aid = $750,000 - $500,000	
	Aid = $250,000	

Fund Sources For Budget :	$500,000	Basic Maintenance Levy
	250,000	State Foundation Aid
	$750,000	GUARANTEED SUM

and

$750,000	
250,000	An Additional Local Levy
$1,000,000	TOTAL REVENUE

For District B (Mine & Plant):

Compute Local Contribution :	24 mills (x) Taxable value	$400,000
	Can reduce levy by 50% of taconite revenues	(50,000)
	TAXES FROM BASIC MAINTENANCE LEVY	$350,000
	Must count 50% of Taconite Revenue as part of Local Contribution	50,000
	LOCAL CONTRIBUTION	$400,000

Compute Aid :	Aid = $750,000 - $400,000	
	Aid = $350,000	
		$350,000
Adjust Aid :	Must Use remaining 50% of taconite revenues to reduce foundation aid	(50,000)
	STATE FOUNDATION AID	$300,000
	Use taconite revenues to replace the aid	50,000
	TOTAL	$350,000

Fund Sources

For Budget :	$350,000	Basic Maintenance Levy
	50,000	Taconite Levy Replacement
	300,000	State Foundation Aid
	50,000	Taconite Aid Replacement
	$750,000	GUARANTEED SUM

and

$750,000	
250,000	An Additional Local Levy
$1,000,000	TOTAL REVENUE

Thus:	District A (manufacturing plant)	District B (mine and plant)
Cost to Local	$ 750,000	$ 600,000
Taconite Contribution (another Cost to Local)	NA	100,000
Cost to State	$ 250,000	$ 300,000
TOTAL REQUIRED REVENUE	$1,000,000	$1,000,000

Note that Taconite School District B receives $50,000 more in state-paid basic foundation aid and contributes $50,000 less from its

two sources of local revenue, even though Districts A & B have equal revenue-raising abilities. This disparity will increase if a taconite district can use the computed ratio (instead of the 50% rate) to lower its levy and in school year 1984 - 1985, two-thirds of the Iron Range school districts reduced their levies by 53 to 64 percent. Going back to our example, if District B reduced its levy by 64 percent of its $100,000 in taconite revenue, it would receive $64,000 more in state foundation aid and contribute $64,000 less in local revenues. If, instead, District B were required to count 100 percent of its taconite revenues as part of its local contribution, than both A & B would contribute $750,000 in local revenues and both would receive $250,000 in state foundation aid. For purposes of state basic foundation aid, both A & B would now be treated identically.

However, in order to finance their $1,000,000 budgets, each district has to raise an additional $250,000 in property taxes. District A presumably does this at a lower mill rate than B since its tax base has higher valuation. Therefore, an argument can legitimately be made that B should receive more state foundation aid and use something less than 100 percent of its taconite revenues in making its local contribution since part of its property tax base is tax-exempt. While that argument is not without merit, there are two other distributions of production tax revenues that also provide some compensation to District B. First, certain production tax revenues are deposited in the School Index Fund (see Table 2). If B levies a referendum levy of at least two mills, it will receive from the Index Fund an amount equal to the difference between the revenue raised by its two mill levy and the guaranteed sum of $150 per pupil unit.[59] Secondly, the taconite mining companies are allowed a credit against

the production tax for payment of taxes for bonds issued by a school district and for interest thereon. The amount of the credit is limited to four cents per gross ton.[60] District B can use this money to reduce its levy for servicing its outstanding bonded debt.

In summary, this analysis has demonstrated that, for purposes of determining state basic foundation aids, production tax revenues are not treated in a like manner as property tax revenues elsewhere in Minnesota. Although this analysis has not examined all the nuances of Minnesota's school aids system, it appears that the current treatment of taconite production tax distributions to school districts can understate their collective ability to pay. Since state foundation aid is intended to meet the current operating costs of schools, the percentage of taconite revenue used to reduce state aid should reflect the ratio of a district's non-maintainance levies (levies the proceeds of which are used for non-current operating expenditures) to its total levy. Thus, if such ratio was 63%, than 63% of its taconite revenue should be used to reduce state aid and the remainder to reduce its local levy (just the opposite of how it is currently handled). Use of this ratio as proxy for determining the taconite revenue's relative contribution to reducing foundation aid versus local tax effort would assure that those districts whose non-maintenance levies are a greater share of their total levy would get relatively less state aid, while those whose non-maintainance levies are a smaller share of total would get relatively more state aid.

Therefore, in response to the issue of the treatment of production tax distributions for purposes of determining both state homestead credits and basic foundation aids, the following can be concluded:

- the recent reversal in the order in which the taconite homestead credit and state homestead credit are subtracted from gross residential property taxes on the Iron Range has the effect of shifting a greater portion of the total cost of these two programs to the State, thus resulting in the de facto partial funding of the taconite property tax relief program by taxpayers statewide. By subsidizing the cost of the taconite relief program with state general fund revenues, the level of tax relief provided to Iron Range homeowners can remain unchanged, and production tax revenues that were formerly dedicated for tax relief purposes can now be deposited in the Taconite Environmental Protection and Economic Protection Funds. Without the reversal in the credits, it would have been necessary to reduce the taconite homestead tax relief program or to fund it with transfers from the Economic Protection Fund.

- at present, the special property tax relief that is provided to homeowners on the Iron Range is not limited to the available production tax revenue in the property tax relief account. Instead, this account has an open and standing draw on the Economic Protection Fund. In a period of low growth or declining production tonnage, the revenues generated by the production tax are likely to be insufficient to fund the mandated increases in the level of property tax relief. This may necessitate the use of the statutory drawdown at a time when using the Fund for economic development purposes is more important than ever. Although the change in the subtraction sequence for the taconite homestead credit alleviated this

fiscal pressure, it did so at a cost to all state taxpayers. If the Iron Range is facing a period of long-term decline, a more realistic solution may be to return the taconite property tax relief program to a prorata basis, whereby the level of tax relief equals available revenues. This would also enhance the economic diversification purpose of the Economic Protection Fund.

- the current system of shared state and local public school finance allows taconite school districts to make smaller local contributions (and receive greater state-paid basic foundation aid) than non-taconite school districts elsewhere whose property tax bases are of similar capacity to the combined production and property tax bases of the taconite districts. Since the production tax is in lieu of the property tax, its revenues should be treated for purposes of determining state foundation aid in a like manner as that used for property tax revenues.

- although the distribution of production tax revenue is primarily a spending and not a tax issue, current practices have important non-local implications for state spending and thus, state revenue raising. At present, the production tax does not appear to be a neutral in lieu of property tax; instead, it shifts certain local costs to state taxpayers without the benefit of an explicit state spending decision.

APPENDIX A: SUMMARY OF OCCUPATION TAX COLLECTIONS, AND CALCULATION OF THE M.S. 298.40 LIMITATION

	OCCUPATION TAX			
	1980	1981	1982	1983
Tax Due without M.S. 298.40 limit	15,910,944	17,175,966	6,200,496	11,401,855
(1) Tax in Excess of M.S. 298.40 Limitation (not collected)	(2,103,345)	(4,468,413)	(2,852,661)	(4,016,073)
Net Occupation Tax Due	13,807,599	12,707,553	3,347,835	7,385,782
(2) Tax Applied to Prior Year M.S. 298.40 Credits (not collected)	-0-	(1,335,265)	(3,347,835)	(4,999,484)
Actual Tax Collected	13,807,599	11,372,288	-0-	2,386,298

(Rev. 7/83)

1982 MINNESOTA

OCCUPATION TAX REPORT

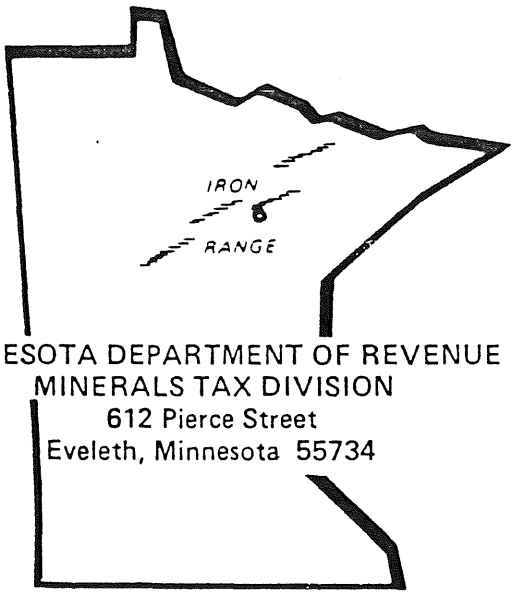
MS 298.40

LIMITATION CALCULATION

(Taconite only)

FOR

If any information on the label is wrong, draw a line through it and print the correct information.



Mail to

MINNESOTA DEPARTMENT OF REVENUE
MINERALS TAX DIVISION
612 Pierce Street
Eveleth, Minnesota 55734

For information or assistance, call: 218-744-5364

PRODUCTION TONS	Occupation Tax Under 1963 Laws	Occupation Tax Under _____ Laws
LAKE ERIE VALUE		
Less shrinkage (if documented) (1)		
Adjusted Lake Erie Value		
Beneficiation - Labor		
Supplies		
Depreciation		
Interest		
All Other Costs		
Transportation (2)		
Marketing (2)		
Marine Insurance (2)		
Sales and Use Tax		
Total Nonstatutory Deductions		
VALUE OF ORE AT MOUTH OF MINE		
Development		
Mining - Labor		
Supplies		
Depreciation (mine plant and motorized equipment)		
Administrative		
Miscellaneous Costs		
Royalty		
Taconite Production Tax (3)		
Total Statutory Deductions		
TAXABLE VALUE		
Apply Rate of Tax	12%	15%
OCCUPATION TAX BEFORE CREDITS		
Labor Credit		
Research Credit		
Pollution Control Credit		
NET OCCUPATION TAX		
ROYALTY TAX		
SALES TAX		
TOTAL TAXES FOR LIMITATION		

1. Laws of 1963 - Actual (documented) shrinkage allowed to maximum of ½%.
   Current year (1974 - 1976) - same as above.
   (1977 - 1982) -Absolutely no shrinkage.
2. Reduce by same % allowable for number 1.
3. Laws of 1963 - Decuct Total production tax paid.
   Current year - (1974 - 1976) - same as Laws of 1963.
   (1977 - 1982) - .25¢ per ton deduction allowable on Taxable Tons from the Production Tax Report (M.S. 298.03 (6)).

Corporate Income Tax Law

1982

Company

1.	LAKE ERIE VALUE		
2.	Less Transportation (Occupation Tax Allowance)		
3.	Marketing (Occupation Tax Allowance)		
4.	Marine Insurance (Occupation Tax Allowance)		
5.	GROSS RECEIPTS Market value at point where beneficiation plant processes within state are completed		
	Less Costs Allowable under Occupation Tax:		
6.	Beneficiation - Labor		
7.	Supplies		
8.	Plant Depreciation		
9.	Plant Interest		
10.	Miscellaneous		
11.	Sales and Use Tax		
12.	Development		
13.	Mining - Labor		
14.	Supplies		
15.	Depreciation on Standard Plant and Motorized Equipment		
16.	Administrative Expense		
17.	Miscellaneous		
18.	Royalty		
19.	Taconite Production Tax (Occupation Tax Allowance)		
	ADDITIONAL DEDUCTIONS ALLOWABLE UNDER CORPORATE INCOME TAX, NON-ALLOWABLE UNDER OCCUPATION TAX (All Costs Actual)		
20.	Taconite Production Tax (Not allowed on Occupation Tax)		
21.	Unmined Taconite Tax		
22.	Ad Valorem Taxes		
23.	Royalty Taxes		
24.	Administrative Expenses		
25.	Dues		
26.	Legal and Professional		
27.	Interest		
28.	Additional Depreciation		
29.	Cost Depletion		
30.	Total Deductions		
32.	NET VALUE OR NET INCOME		
33.	Less Contribution Credit		
34.	Taxable Net Income Before Net Operating Loss Deduction		
35.	Net Operating Loss Deduction		
36.	Taxable Net Income		
37.	Fill in the Amount from Line 36 or $25,000, Whichever is Less		
38.	Balance (Subtract Line 37 from Line 36)		
39.	Tax on Line 37 (Multiply Line 37 by 9%)		
40.	Tax on Line 38 (Multiply Line 38 by 12%)		
41.	Less Pollution Control Credit		
42.	Total Income Tax		
43.	Add Sales Tax		
44.	Total Tax for Limitation		

MT-4B

M.S. 298.40 SUMMARY

MINNESOTA DEPARTMENT OF REVENUE
MINERALS TAX DIVISION
612 Pierce Street
Eveleth, Minnesota 55734

_____
COMPANY

_____
YEAR

	Per Original		As Adjusted	
1) Higher of:				
a) Taxes under laws of 1963, or				
b) Corporation Income Tax				
This is the maximum liability:				
2a) Sales Tax Paid:				
b) Royalty Tax Paid:				
c) Occupation Tax Paid:				
d) Occupation Tax NOT PAID due to limitations, as adjusted				
per original				
3) Total Taxes Paid:				
Differences Between 1 and 2:				
If Line 3 exceeds Line 1, you have overpaid your taxes and have a credit.				
If Line 1 exceeds Line 3, your taxes paid are within the M.S. 298.40 limitation and you may owe all or part of the amount in 2(d).				
The amount of credit for _____ which has been "offset" to you through _____				

EXPLANATION OF ADJUSTMENTS:

Amount of credit (principal only) to be entered in the Minerals Tax Division's Accounts Payable. How this is computed.

Amount of tax (principal only) to be paid by your company to the Minerals Tax Division. How this is computed.

APPENDIX B: THE TACONITE HOMESTEAD CREDIT FORMULA

The 1984 Minnesota Legislature amended the taconite homestead credit provisions, such that the formula for computing the taconite homestead credit was revised from a relatively straightforward formula to a more complicated one. The amended statutory language is provided below. An example of how to calculate the credit is provided in Table 6 in the main body of this chapter.

Minnesota Statutes 1982, Section 273.135, Subdivision 2:

The amount of the reduction authorized by subdivision shall be:

(a) in the case of property located within the boundaries of a municipality which meets the qualifications prescribed in 273.134, 66 percent of the net tax up to the taconite breakpoint plus a percentage equal to the homestead credit equivalency percentage of the net tax in excess of the taconite breakpoint, provided that the reduction shall not exceed the maximum amounts specified in clause (c).

(b) in the case of property located within the boundaries of a school district which qualifies as a tax relief area but which is outside the boundaries of a municipality which meets the qualifications prescribed in section 273.134, 57 percent of the

net tax up to the taconite breakpoint plus a percentage equal to the homestead credit equivalency percentage of the net tax in excess of the taconite breakpoint, provided that the reduction shall not exceed the maximum amounts specified in clause (c).

(c)(1)the maximum reduction of the net tax up to the taconite breakpoint is $225.40 on property described in clause (a) and $200.10 on property described in clause (b), for taxes payable in 1985. These maximum amounts shall increase by $15 times the quantity one minus the homestead credit equivalency percentage per year for taxes payable in 1986 and subsequent years.

(2) The total maximum reduction of the net tax on property described in clause (a) is $490 for taxes payable in 1985. The total maximum reduction for the net tax on property described in clause (b) is $435 for taxes payable in 1985. These maximum amounts shall increase by $15 per year for taxes payable in 1986 and thereafter.

For the purpose of this subdivision, "net tax" means the tax on the property after deduction of any credit under section 273.13, subdivision 6, 7, or 14a, "taconite breakpoint" means the lowest possible net tax for a homestead qualifying for the maximum reduction pursuant to section 273.13, subdivision 7, rounded to the nearest whole dollar, and "homestead credit equivalency percentage" means a percentage equal to the percentage reduction authorized in section 273.13, subdivision 7.

ENDNOTES

[1] In 1858, the Minnesota Constitution provided that "all taxes...shall be as nearly equal as may be" and that they be "equal and uniform throughout the state". By distinguishing between types of property, the tonnage tax on iron ore violated this provision.

[2] The adoption of the "Wide-Open" tax amendment in 1905 removed the constitutional restriction that all taxes be equal and uniform throughout the State and instead required that taxes be uniform within the same class of property. This amendment made possible the adoption of a four class property classification system in 1913, in which iron ore was assessed at a higher ratio to value (Class I - mined and unmined ore assessed at 50% of market value) than the other three classes.

[3] It was estimated that in 1930 the average per capita expenditures of Iron Range towns and cities was two to four times higher than the average per capita expenditures of communities of comparable size elsewhere in Minnesota. See Blakely, Roy G., Taxation in Minnesota, Minneapolis: University of Minnesota Press, 1932, page 251.

[4] Iron ore, as it exists in the ground, is a compound of iron and oxygen mixed with other materials such as silica, alumina, and magnesia. High-grade ores contain no more than five to ten percent of such impurities, and lower-grade ores contain somewhat more. Taconite is a type of hard rock that contains fine particles of iron ore. In its natural state, taconite is not merchantable as iron ore. However, the fine particles of iron ore can be separated and combined into pellets which, when smelted, produce high quality steel more economically than any known natural ore. About two-thirds of the mined rock must be discarded to produce the taconite pellet.

[5] M.S. 298.22 - M.S. 2984.294.

[6] M.S. 298.01 - 298.21.

[7] M.S. 299.04 - M.S. 299.14.

[8] Other taxes to which the mineral industry is subject to include an ad valorem tax on unmined natural ore (M.S. 273.13, Subdivision 2; M.S. 273.11; M.S. 273.1104; M.S. 272.01; M.S. 273.15) which raised approximately $3.4 million in 1983; a tax on unmined taconite (M.S. 298.26) which raised approximately $285,000 in 1983; and the Minnesota sales and use tax (M.S. 297A). As with all manufacturing firms, many purchases by the mining companies are excluded from the sales tax base. Sales and use tax revenues were about $6.0 million in 1983. The State also taxes the gross earnings of taconite company-owned railroads that are not commercial carriers (M.S. 294.21; M.S. 294.26). This tax, which is often included with the taconite taxes even though it is not directly on the mining operation, raised about $5.0 million in 1981 and $700,000 in 1983. Total tax revenues from these sources totaled $10.3 million in 1983.

[9] Additional mineral taxes include a tax on severed mineral rights (M.S. 273.13, Subd. 2a; M.S. 272.039; M.S. 272.04; M.S. 272.05), taxes on copper-nickel mining (M.S. 298.51 - 298.67), and taxes on other types of mining activity (base or precious metals).

[10] In his 1964 publication, Pioneering with Taconite, E.W. Davis, a minerals scientist at the University of Minnesota, notes that "...if only a minimum valuation and an average range community mill rate were applied to the estimated fifty billion tons of taconite on the Mesabi, the total tax might well be over fifty to a hundred million dollars a year...it seemed obvious to us that if taconite were to be utilized, some changes would be required in Minnesota's mineral tax laws..."

[11] As defined by the U.S. Census Bureau, a severance tax is "a tax imposed distinctively on the removal of natural products from land or water and measured by the value or quantity of the products removed or sold." Generally, a severance tax assumes one of three basic forms: (1) a per-unit tax -- a tax of $X per ton or per barrel extracted; (2) a gross production tax -- a tax of Y percent of the gross proceeds from the sale of the product at some point in the processing chain; and, (3) a net-proceeds tax -- a tax of Z percent of the net income derived from the extraction of the resource. The point at which the tax is applied varies across states as does the tax rate. In some states, severance taxes are in lieu of all other taxes; in others, they are in addition to other taxes.

[12] Detailed descriptions of mineral tax systems in individual states can be found in Thomas F. Stinson and George S. Temple, State Mineral Taxes, 1982, Rural Development Research Report No. 36, U.S. Department of Agriculture, March 1983.

[13] Chapter 375, Minnesota Laws of 1941.

[14] The now-defunct definition of the production tax base as the greater of current year or three-year average production was adopted by the Legislature in 1977 in an effort to make the tax a more stable source of revenue.

[15] As adopted in 1941, the iron content escalator increased the base rate of the production tax by 0.1% for each one percent that the iron content of the taconite product exceeded 55%. By 1983, the escalator had increased to 1.6% for each one percent that the iron content exceeded 62%.

[16] The Steel Mill Products Index is published by the Bureau of Labor Statistics, U.S. Department of Labor, in the monthly Producer Price Index. For 1978 and subsequent years prior to 1985, the base rate of $1.25 per ton was adjusted by the ratio of the steel mill products index for January of the current production year to the index for January 1977. In no case could the base rate drop below $1.25 per ton.

17 M.S. 298.24, Subd. 1(a).

18 M.S. 298.24, Subd. 1(b).

19 Under current law, the estimated taconite production tax rates for 1984 and 1985 are $2.10 per taxable ton and $2.05 per taxable ton, respectively. Under prior law (with the iron content escalator), the estimated tax rate for 1984 was $2.14 per taxable ton.

20 The taconite relief area is defined in M.S. 273.134.

21 M.S. 273.135 - 273.136; M.S. 273.1391.

22 The Taconite Environmental Protection Fund was created in 1977 for the purposes of reclaiming, restoring, and enhancing those areas of northeast Minnesota that were adversely affected by environmentally damaging mining operations and for promoting the economic development of the region. The Northeastern Minnesota Economic Development Trust Fund (popularly known as the 2002 Fund) was also created in 1977. Its original purpose was to provide a source of funds for the economic rehabilitation and industrial diversification of the Iron Range after the year 2002 (the date of the expected exhaustion of taconite ore reserves). Until that time, revenues were supposed to accrue within the Fund. However, under 1978 law and effective for taxes payable in 1979, the Fund was made available to pay for taconite homestead credits if monies in the taconite property tax relief account were insufficient (see M.S. 278.293) In 1982, the Fund also became available for purposes of guaranteeing for two years certain production tax distributions in the event of an extended taconite plant shutdown (see M.S. 298.28, Subd. 1). Monies from the Environmental Protection Fund had already been made available for this purpose in 1977. The Legislature also authorized in 1982 the release of monies from the 2002 Fund for purposes of funding an emergency jobs program on the Iron Range.

23 Concentration is the process of separating the valuable mineral from the worthless rock that surrounds it. For further explanation, see Endnote 27.

24 The 1956 Minnesota Tax Study Commission notes "there was a widespread feeling in the state that foreign corporations were reaping large profits from the exploitation of a diminishing, irreplaceable Minnesota resource and that something should be done about preserving at least a portion of their 'natural heritage' for the benefit of the people of the state... The Legislature responded by imposing a tax at the rate of 6 percent on the value of all ores mined." See Report of the Governor's Minnesota Tax Study Committee, 1956, page 80.

25 Article 9, Section 1a, Minnesota Constitution.

26 The value of the ore at the mouth of the mine is the value of the ore after it has been hoisted to the surface and before the process of beneficiation (see Endnote 27) has occurred.

27 Beneficiation (or concentration) is the process of physically changing the quality of the mined ore by removing some of the worthless material in the rock. Typically, this process involves

grinding the ore into small pieces and then separating the mineral content by specific gravity or by magnetic methods. All low-grade ores are beneficiated so that the cost of shipping the ore from mine to the smelter can be reduced. The high-grade natural ores that used to be prevalent on the Iron Range did not need to undergo this process.

28 The "Lake Erie Price" is the price reported for the few true arms-length sales of Minnesota ore that occur in the Lower Lakes ports. This price is periodically published in trade journals, such as Skillings Mining Review. In 1982, the Lake Erie price was slightly less than $54 per ton, of which costs for beneficiation and transportation averaged $31.34 per ton and $12.60 per ton, respectively.

29 Minnesota law (M.S. 298.02) grants the labor credit against the occupation tax to encourage the utilization of lower-grade ores since the recovery of such ores usually involves a larger labor expense. At present, all taconite mining companies in Minnesota qualify for the maximum credit.

30 In 1981, only one taconite company paid at a higher rate than 6.75%, and they paid the occupation tax at a net effective rate of 7.4%.

31 M.S. 298.02, Subd. 1.

32 This is not to say that disputes concerning the occupation tax have abated in full. For example, disagreement over how to compute the hypothetical corporate income tax limitation of the Taconite Amendment was recently decided in favor of the State by the Minnesota Supreme Court. As a result of such ruling, however, the State has an accounts payable balance of $20 million in credits owed to the taconite companies as of June 30, 1984. In addition, $13 million of occupation tax, royalty tax, and railroad gross earnings tax have not been collected in order to "offset" credits owed to the taconite companies.

33 The 1956 Minnesota Tax Study Commission reached a similar conclusion, noting that, "the so-called `Lake Erie Price' has been the focus of much controversy and a frequent subject of inquiry for tax study committees. Upon examination, the conclusion has generally been that the Lake Erie price is probably the best value approximation possible in an industry in which only a small fraction of the total product enters the market..." See Report to the Governor's Minnesota Tax Study Committee, 1956, page 321.

34 In the Erie Mining Company v. the Commissioner of Revenue ruling, filed January 6, 1984, the Minnesota Supreme Court rejected Erie's argument that the "either/or" method of computing the production tax base (i.e., using current year or three-year average production, whichever is greater) resulted in double taxation. The Court noted that such argument might have been compelling if the tax was truly a production tax, however, the Court reaffirmed that the production tax "clearly is in lieu of all other real or personal property taxes..." and, "...the use of production is merely a computational method chosen by the Legislature to arrive at the value of property used for taconite production." As part of the decision, however, the Court agreed

with Erie that if Minnesota averages production for tax purposes, it must also use a three-year average for the iron content escalator and the steel mill products index, which are used to adjust the tax rate. The Department of Revenue had been using a three-year average for iron content, but not for the price index. This portion of the Court's decision produced a one-time tax will be returned in steps over the next five years.

35 Terry D. Monson, The Effects of Domestic and International Competition Upon Michigan's Iron Ore Steel Industries, Bureau of Industrial Development, Michigan Tech. University, March 1980, pages 86-88.

36 Current mill rates on the Iron Range vary from about 80 to 125 mills, depending on the location of the property. One can assume that if mineral property were to be taxed under an ad valorem property tax, the mill rates of those taxing bodies that contained mineral property would be reduced.

37 In determining the present value of unmined ore, the Hoskold formula uses estimates of four factors: the expected annual income from the mine; the estimated life of the ore deposit; the risk rate of interest (the rate of return that an investor would require upon his/her investment before he/she would be willing to invest in a mine), and the safe rate of interest (the rate that can be obtained on the investment of sinking funds, such that funds set aside from annual income would equal an investor's original investment when the mine is exhausted).

38 Estimate of property tax payable on ore reserves using Hoskold formula where:

$3.00 per ton = the expected profit per ton
12% = the safe rate of interest
20% = the risk rate of interest
20 years = the expected life of the ore deposit

$$\frac{20 \text{ years (x) } 5 \text{ million tons (x) } \$3.00/\text{ton}}{\frac{1}{\frac{.12}{1.12^{20}-1} + .20}} - 20 = \$300{,}000{,}000 \times .2338 = \$70{,}140{,}000$$

$70,140,000 Estimated Value of Unmined Ore

This value is then multiplied by three to determine the market value of the unmined ore (M.S. 273.1104), so $70,140,000 (x) 3 = $210,420,000. Applying the 30% classification ration for low recovery iron ore yields $63,126,000. Applying the 80 mill rate yields $5,050,080 in taxes.

39 If, in estimating the expected profit the figure lowest to $2.00 per ton instead of $3.00 per ton as in Endnote 38, the estimated value of the unmined ore would be $46.76 million (x) 3 = $140.28 million. If th 30% classification ratio and 80 mill rate is then applied, the tax due on the ore reserve would be $3.37 million or a total of $6.81 million c the mine, plant and reserve (or a total of $8.19 million if the 140 million taxable value for the mine and plant is used).

40 See Barrons, October 31, 1983, pages 13, 32-36.

41 Hekman, John S. "An Analysis of the Changing Location of Iron and Steel Production in the Twentieth Century", American Economic Review, March 1978, pages 123-133.

42 If one assumes the average response of the industry to changing ore prices during the period 1921-1972, slightly more new production will occur. Under those assumptions, a 0.4 percent decrease in ore prices yields a decline in the supply price of steel of about 1.2 percent. Again, using the estimated price elasticity of -1.27, demand would increase about 1.5 percent to about 600,000 tons annually.

43 See Monson, Endnote 35.

44 The advantage to the U.S. steel industry of using lower cost imported iron ore is illustrated by Brazil, whose delivered price for iron ore in 1982 was $12 - $15 less per ton than Minnesota prices. Overall, imported ore is forecasted to rise from 14 million tons in 1980 to 35 million tons by 2000, while domestic production declines from 49 million to 44 million tons of contained iron.

45 Homesteads located in cities or towns which currently contain an active taconite mine or beneficiation plant, or those located in a city or town for which iron ore comprised between 40 and 60 percent of the property value in 1941, qualify for the higher amount. Homesteads outside those communities, but within the school district of a qualifying community receive credits at the lower ratio.

46 See Evaluation of Direct Property Tax Relief Programs, Office of the Legislative Auditor, State of Minnesota, February 1983, pages 30 - 46.

47 Ibid., page 6.

48 Chapter 1156, Sec. 5, Subd. 5, Minnesota Laws of 1969.

49 Chapter 721, Article 9, Minnesota Laws of 1978. This provision became effective in 1979.

50 Chapter 423, Minnesota Laws of 1977. Although the 1977 law specified that funds were not to be expended from the Economic Protection Fund prior to January 1, 2002, it also included a borrowing provision, whereby the Governor could borrow up to 50 percent of the amount in the Fund for a period terminating no later than December 31, 2001. Such loan would be backed by the full faith and credit of the State and would be payable at an interest rate of five percent.

[51] Chapter 423, Minnesota Laws of 1977.

[52] Chapter 1, Article 10, Section 13, Minnesota Laws of 1981, First Special Session.

[53] 1984 Omnibus Tax Bill, Article 7, Sec. 13.

[54] 1984 Omnibus Tax Bill, Article 7, Sec. 1 to 6.

[55] As of March 22, 1984 (before the changes made in the 1984 legislative session), the Department of Revenue had estimated distributions to the Property Tax Relief Account of $15,434,300 in FY 1985, $15,487,400 in FY 1986 and $16,817,400 in FY 1987, for a total of $47,739,100 over the three year period. Also included in the account were transfers from the Economic Protection Fund of $4,022,400 in FY 1986 and $4,182,600 in FY 1987, or a total of $8,205,000. Estimates from July 5, 1984, which reflect the law changes made in the 1984 legislative session, show distributions to the Property Tax Relief Account of $9,542,400 in FY 1985, $9,871,000 in FY 1986, and $9,712,700 in FY 1987, or a total of $29,126,100 over the three year period. No transfers from the Economic Protection Fund are included.

[56] For school year 1985-1986, the Basic Foundation Revenue has been increased to $1,585 per pupil unit, and the Basic Levy has been reduced to 23.5 mills.

[57] In accordance with M.S. 275.125, Subd. 9, the amount subtracted from a school district's local levy is calculated as the greater of:

(a) 50 percent of the amount of taconite payments received in the previous fiscal year; or

(b) $$\text{Taconite payments received in the previous fiscal year} - \text{Taconite payments received in the previous fiscal year} \times \frac{\text{Basic maintenance levy limit}}{\text{Total levy limit}}$$

[58] This example is based on a simplification of Minnesota's tiered levy and aid program for primary and secondary education. Besides the basic foundation program described in the text, there is also a tiered system, whereby if a school district chooses to levy a certain number of additional mills, the State will guarantee (at ratios of 50% to 100%, depending on the tier level) a certain maximum dollar amount per pupil unit. Districts may also levy additional property taxes at their discretion if they hold a voter referendum to ratify the decision. No state assistance is guaranteed for referendum levies. These other levies do not invalidate the basic concepts presented in this example.

[59] Effective 1983, taconite school districts that have referendum levies of two mills or more receive additional taconite revenue according to the following formula:

$$\text{Taconite Referendum Revenue} = [(\$150 \times \text{No. of Pupil Units}) - (2 \text{ mills} \times \text{taxable valuation})]$$

In districts where the certified referendum levy is less than two mills, the taconite referendum revenue is reduced proportionately. The fund source for this provision is the School Index Fund, which receives production tax distributions of 23 cents per ton, multiplied by the proportion by which the steel mill products price index has increased over the base year of 1977 (as of 1988, the Fund will be tied to the increase in the GNP implicit price deflator). If funds are insufficient, the entitlement of $150 per pupil unit is reduced so that the formula distributes no more money than the amount available.

60 See M.S. 298.24, Subd. 3. One exception to the four cents per ton limit on the taconite debt service credit is School District #703, for which the credit is limited to seven cents per ton.