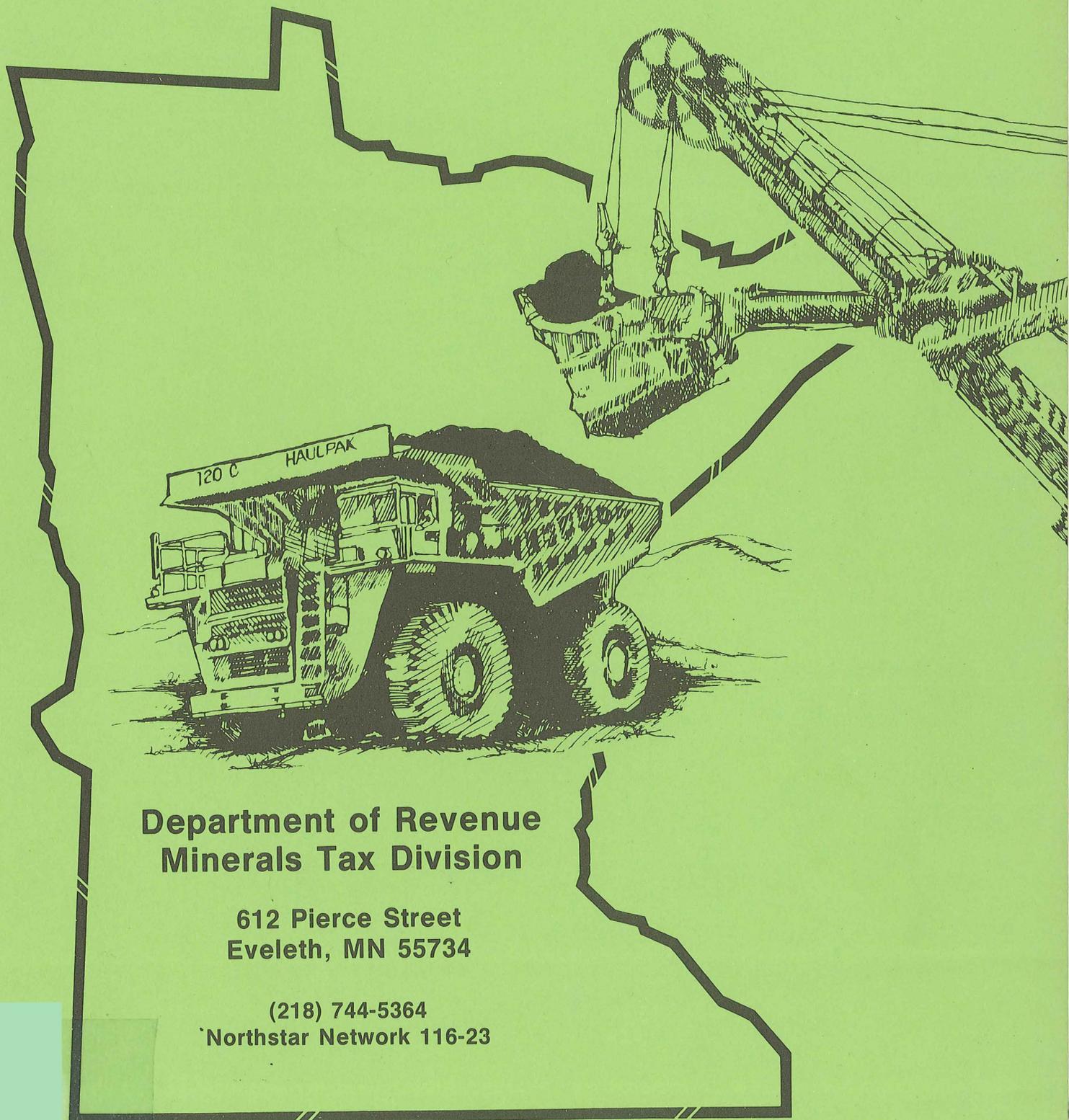


MINNESOTA MINING TAX GUIDE



**Department of Revenue
Minerals Tax Division**

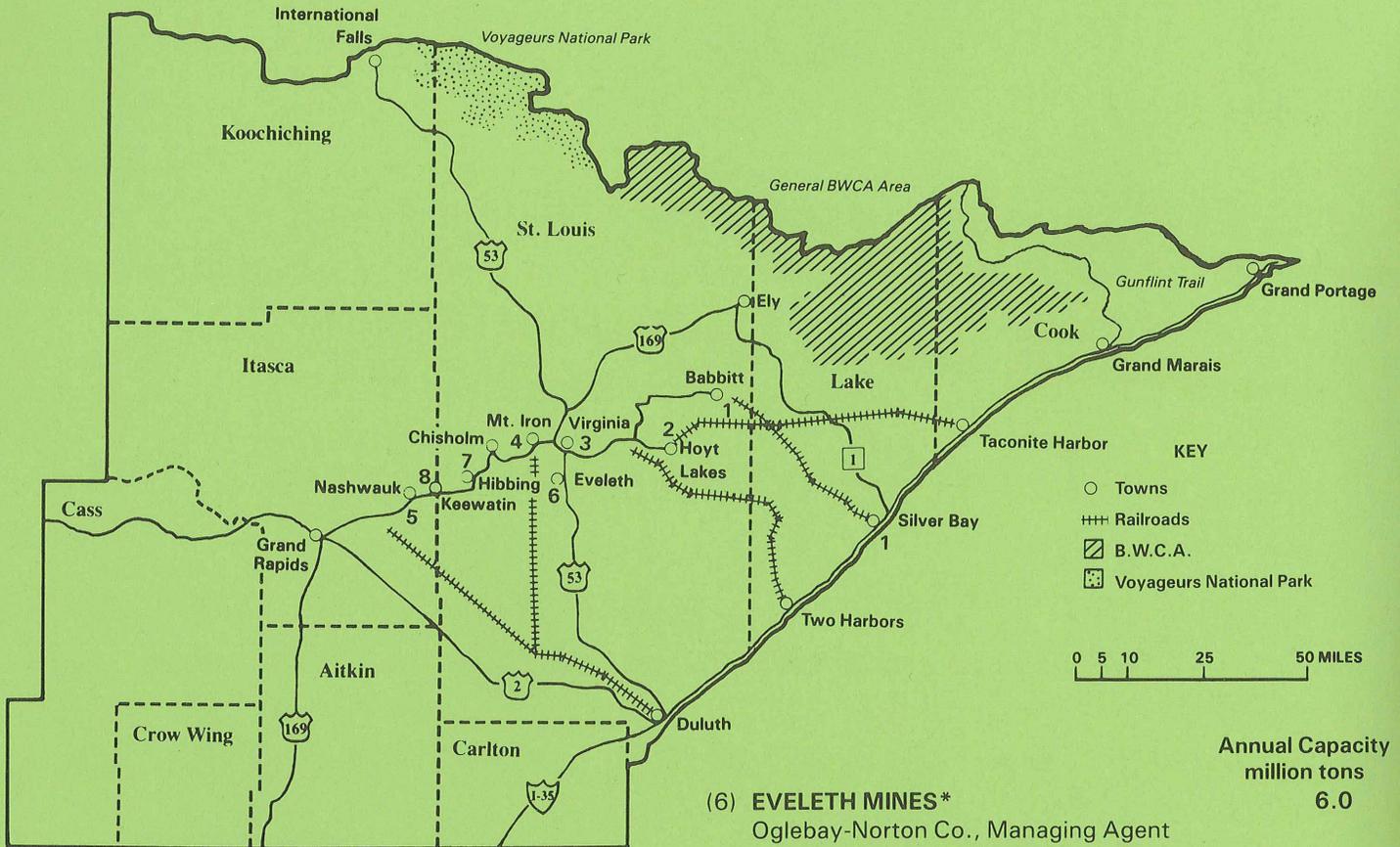
**612 Pierce Street
Eveleth, MN 55734**

**(218) 744-5364
Northstar Network 116-23**

December 1983

MAP OF NORTHEASTERN MINNESOTA

TACONITE COMPANY LOCATIONS, OWNERSHIP AND GENERAL INFORMATION



	Annual Capacity million tons	Annual Capacity million tons
(1) RESERVE MINING COMPANY No Managing Agent Owners: Armco, Inc. (50%), Republic Steel Corp. (50%)	9.6	
(2) ERIE MINING COMPANY Pickands Mather & Co., Managing Agent Owners: Bethlehem Steel Co. (45%), Jones & Laughlin Steel Corp. (35%), Interlake, Inc. (10%), The Steel Company of Canada, Ltd. (10%)	11.0	
(3) MINORCA PLANT No Managing Agent Owner: Inland Steel Mining Co. (100%)	2.6	
(4) MINNTAC PLANT No Managing Agent Owner: United States Steel Corp. (100%)	18.5	
(5) BUTLER TACONITE* The Hanna Mining Co., Managing Agent Owners: Inland Steel Mining Co. (38%) Itasca pellet Co. (62%) Itasca Pellet Ownership: The Hanna Mining Co. (60.5%) (37.5%) Wheeling-Pittsburgh Steel (39.5%) (24.5%)	2.65	
(6) EVELETH MINES* Oglebay-Norton Co., Managing Agent Owners: Eveleth Taconite Co. , 2.3 million tons Rouge Steel Co. (Ford) (85%) (31.7%), Oglebay-Norton Co. (15%) Owners: Eveleth Expansion Co. , 3.7 million tons Armco, Inc. (40%) (25%) Stelco, Inc. (23.5%) (14.8%) Dofasco, Inc. (16%) (10%)		6.0
(7) HIBBING TACONITE COMPANY Owners: Bethlehem Steel Co. (62.3%), Pickands Mather & Co. (15%), Republic Steel Corp. (16%), Steel Company of Canada (6.7%)		8.1
(8) NATIONAL STEEL PELLET COMPANY The Hanna Mining Co., Managing Agent Owner: National Steel Corp. (100%)		4.0

* The second percentage denotes the percent of ownership of the total company.

In September 1983, a proposed merger of Republic Steel Corporation and Jones & Laughlin Steel, Inc., (LTV subsidiary) was announced. If the merger is approved, the new company will be known as LTV Steel.

In September 1983, Armco, Inc., announced basic agreement with Dofasco, Inc., to exchange interest in mining property. If this exchange takes place, Armco would acquire Dofasco, Inc.'s 10% ownership of Eveleth Mines.

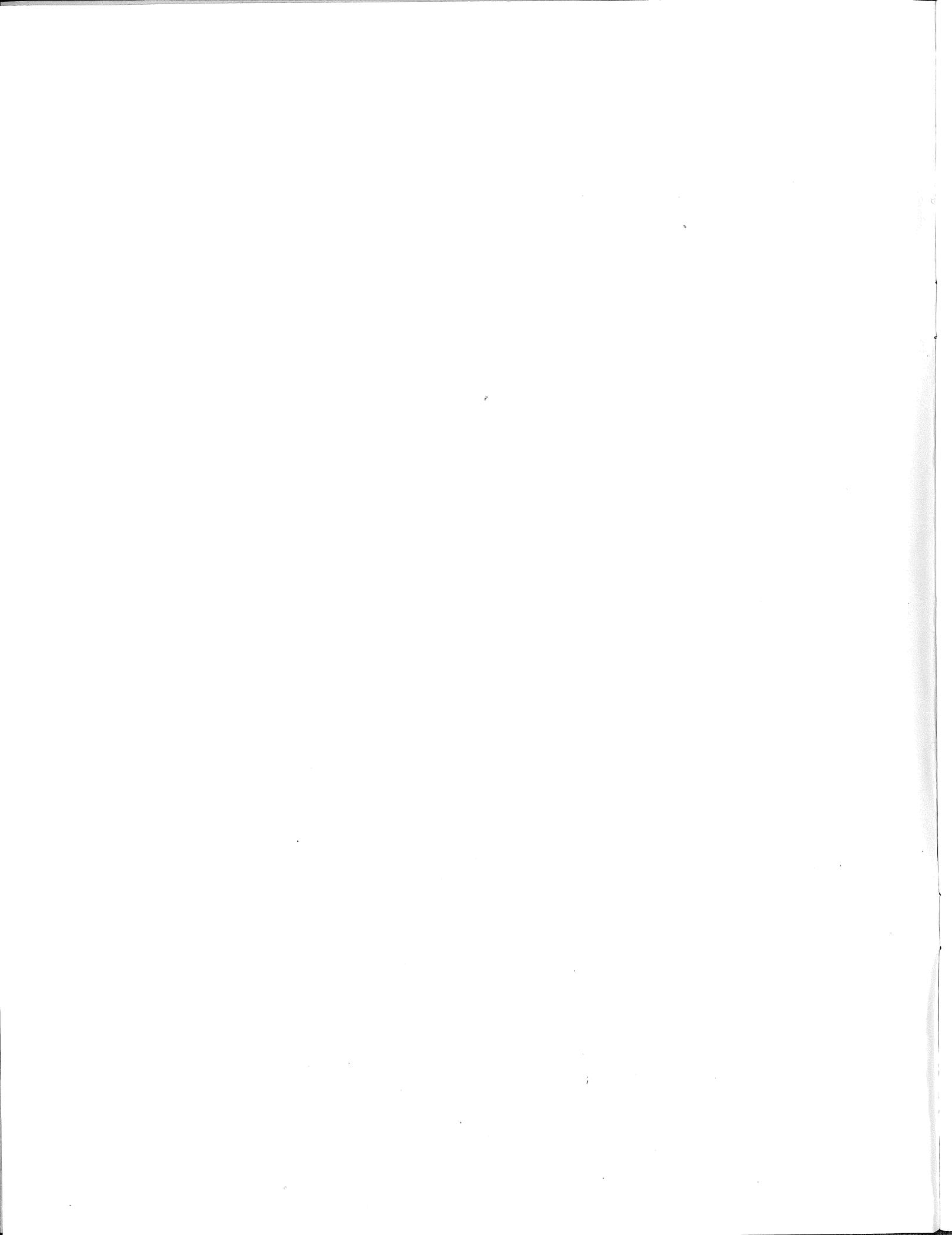
TABLE OF CONTENTS

	PAGE
I. THE IRON ORE AND TACONITE MINING INDUSTRY IN MINNESOTA	1
II. TACONITE PRODUCTION TAX (M.S. 298.22 - M.S. 298.294)	5
III. OCCUPATION TAX ON TACONITE, SEMI-TACONITE AND IRON ORE (M.S. 298.01 - 298.21)	16
IV. AD VALOREM TAX ON UNMINED NATURAL IRON ORE (M.S. 273.13, Subd. 2; M.S. 273.11; M.S. 273.1104; M.S. 272.01; M.S. 273.15)	22
V. GROSS EARNINGS TAX ON TACONITE RAILROADS (M.S. 294)	24
VI. ROYALTY TAXES (M.S. 299.04 - M.S. 299.14)	25
VII. SALES AND USE TAX (M.S. 297A)	27
VIII. TAX ON UNMINED TACONITE (M.S. 298.26)	29
IX. TAX ON SEVERED MINERAL INTERESTS (M.S. 273.13, Subd. 2a; M.S. 272.039; M.S. 272.04; M.S. 272.05)	30
X. TAXES ON COPPER-NICKEL MINING (M.S. 298.51 - 298.67)	31
XI. TAXES ON OTHER MINING	33

This tax guide is intended to serve as a quick reference to Minnesota's mining tax structure as it exists today. This publication essentially updates a previous publication entitled "Minnesota Mining Tax Guide," dated December, 1982.

The original Minnesota Mining Tax Guide was published by the Revenue Research Office in April 1977 and revised in July of 1978.

This year's book is dedicated to the memory of Larry Ring, our fellow worker and friend, who died November 24, 1983.



THE IRON ORE AND TACONITE MINING INDUSTRY IN MINNESOTA

The iron ore mining industry in Minnesota is approximately 100 years old and is found exclusively in the northeastern part of the state. (See map, page 2).

While J. G. Norwood noted the existence of iron formations at Gunflint Lake and Lake Vermillion in the early 1850's, it wasn't until 1865 that the first important discovery of iron ore was made by Henry H. Eames, Minnesota State Geologist. In 1884, after a railroad line had been built from Tower to Two Harbors, the first lake cargo of iron ore was shipped. The first shipments of ore were from the Soudan mine in the Vermillion Range. Development of the Mesabi Range began in the early 1890's by the Merritt Brothers. Production in the Cuyuna Range did not begin until 1911.

By 1900, Minnesota's mining industry had an annual production of 9,465,000 tons. Many of the early iron ore mining operations were underground. However, it was not long before most of the larger operations switched to open pit mining using steam shovels and rail hauls from the pits. These were later replaced by electric shovels and diesel and electric locomotives and trucks.

The shift in Minnesota's mining industry from iron ore to an emphasis on taconite production began in the later 1940's and early 1950's. The shift in emphasis to taconite production is shown in the following table:

**TABLE 1 — THE CHANGING STRUCTURE OF MINNESOTA'S
IRON ORE MINING INDUSTRY**

<u>Year</u>	<u>Total Production (000's of Tons)</u>	<u>Percent of Total</u>	
		<u>Iron Ore</u>	<u>Taconite</u>
1950	65,235	99.9%	0.1%
1955	67,893	98.0	2.0
1960	57,425	76.7	23.3
1965	52,466	63.8	36.2
1970	56,520	37.5	62.5
1975	51,067	20.1	79.9
1980	45,280	4.9	95.1
1981	51,033	3.3	96.7
1982	24,234	3.3	96.7

Minnesota's share of total U. S. production has been consistently greater than 60 percent, generally falling in the 60 to 70 percent range. While Minnesota's share of total U.S. production has remained steady, Minnesota's share of total world production has been steadily declining. In 1950, Minnesota's mining industry produced over 25 percent of the total world production of iron ore and taconite. By 1960, this had dropped to just over 11 percent and, in 1975, was just under six percent. Since 1975, Minnesota production has been holding at about six percent of the world production.

TABLE 2
MINNESOTA'S SHARE OF U. S. AND WORLD
PRODUCTION OF IRON ORE

<u>Year</u>	<u>Minnesota¹ Production Tons (000's)</u>	<u>% Minn. U.S.</u>	<u>U.S.² Production Tons (000's)</u>	<u>% Minn. World</u>	<u>World² Production Tons (000,000's)</u>
1950	65,235	66.5	98,045	26.4	247
1955	67,893	65.9	103,003	18.7	363
1960	57,425	64.7	88,784	11.2	514
1965	52,466	60.0	87,439	8.6	611
1970	56,520	63.0	89,760	7.5	757
1975	51,036	64.8	78,866	5.8	888
1976	50,069	62.6	79,993	5.7	886
1977	31,019	55.6	55,751	3.7	828
1978	55,450	68.0	81,583	6.6	834
1979	59,563	69.5	85,716	6.7	890
1980	45,281	65.0	69,613	5.1	882
1981	51,033	69.7	73,174	6.0	847
1982	24,234	66.4	36,500*	3.1	771*

*Preliminary figures

Source of Information

1 Minnesota Occupation Tax Reports

2 American Iron Ore Association

TABLE 3
SUMMARY OF ALL TAXES PAID BY THE
MINNESOTA MINING INDUSTRY
(TACONITE AND IRON ORE)
(000 DOLLARS)

<u>TAX</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983 est.</u>
Ad Valorem - Unmined Natural Ore	\$ 10,222	\$ 4,560	\$ 3,688	\$ 3,805	\$ 3,547	\$ 3,400
Occupation	12,439	23,993	14,808	13,940	6,919	5,200
Taconite Production	4,253	30,347	87,179	99,078	80,305	66,600
Railroad Gross Earnings	1,769	3,072	2,984	4,961	1,354	700
Royalty	1,756	3,657	5,355	5,866	4,725	3,150
Unmined Taconite	64	64	232	240	285	285
Sales and Use	N/A	7,214	9,982	9,799	7,828	6,000
TOTAL:	\$ 30,503	\$ 72,907	\$ 124,236	\$ 137,688	\$ 104,962	\$ 85,335
TONS PRODUCED:	56,519,939	51,036,283	45,280,403	51,032,645	24,234,480	24,500,000
TOTAL TAXES PAID ON PER TON BASIS:	.540	1.428	2.744	2.698	4.331	3.483

TABLE 4

MINNESOTA TAXES LEVIED ON TACONITE AND SEMI-TACONITE ONLY

<u>Production Year</u>	<u>Unmined Taconite</u>	<u>Sales and Use</u>	<u>Production</u>	<u>Occupation</u>	<u>Royalty</u>	<u>Excise⁽¹⁾</u>	<u>Railroad Gross Earnings</u>	<u>Total Taxes</u>	<u>Total Tons Produced</u>	<u>Total Taxes Per Ton</u>
1960	—	—	735,708	638,489	1,280,553	1,741,820	815,952	5,212,522	13,383,000	.39
1965	—	—	1,107,097	1,740,307	502,167	1,443,170	1,337,497	6,130,238	19,004,162	.32
1970	64,000	Not Avail.	4,252,668	3,161,186	787,108	1,346,642	1,768,702	11,316,306	35,347,844	.32
1975	64,000	7,214,111	30,347,065	18,955,051	2,657,458	193,905	3,072,496	62,440,086	40,808,917	1.53
1976	—	7,446,168	30,857,046	18,269,842	2,841,120	188,325	3,338,487	62,940,988	40,574,591	1.55
1977	—	7,375,115	48,757,124	3,190,408	2,626,141	182,745	1,509,773	63,641,306	26,371,588	2.41
1978	—	8,573,833	69,221,559	19,226,372	3,279,861	177,165	3,267,247	103,746,037	49,544,671	2.09
1979	239,748	12,590,482	88,483,670	23,856,757	4,775,352	165,726	3,634,407	133,746,142	55,333,032	2.42
1980	232,218	9,981,715	87,178,532	13,807,599	4,619,799	138,476	2,983,819	118,942,158	43,059,750	2.70
1981	240,064	9,797,691	99,018,289	12,707,553	5,392,864	183,267	4,960,605	132,300,333	49,368,518	2.68
1982	284,701	7,827,049	80,305,437	3,347,835	4,939,497	176,421	1,354,173	98,235,113	23,445,104	4.19

(1) Special School and Village Taxes

TACONITE PRODUCTION TAX

Taconite and semi-taconite are generally exempt from the ad valorem tax but have been taxed under a production tax which is "in lieu of" ad valorem taxes. Certain limited ad valorem taxes which do apply to the taconite industry are discussed in more detail in the section covering unmined taconite taxes.

Prior to the 1940's, taconite had little value, but through preliminary work by the Mesabi Iron Company and from research by E. W. Davis the development of taconite was greatly assisted. In 1941, the legislature imposed a production tax on taconite and semi-taconite that was at the rate of five-cents-per-ton with an escalator equal to 0.1-cent-per-ton for each one percent that the iron content of the finished product exceeded 55 percent. The proceeds of this tax were shared equally by the state, the counties, the school districts, and the cities and townships at 25 percent each.

At the time of the passage of this Act, no taconite operations existed, and only one—Reserve Mining Company—appeared on the horizon. However, since the inception of the 1941 law, taconite production has increased substantially. As production increased, major changes were made in the rate of the production tax and in the distribution. In all, there was five changes either in the amount of the tax or in its distribution.

The last major change in the production tax was made by the 1977 legislature. The base tax rate was increased to \$1.25-per taxable ton. For 1978 and beyond, this base rate of \$1.25-per-ton is adjusted by the ratio of the steel mill products index for January of the production year to the steel mill products index of January 1977. In no case shall this base rate drop below \$1.25-per-ton. The steel mill products index is published by the U. S. Department of Labor, Bureau of Labor Statistics, in the monthly Producer Price Index. This adjusted rate is then increased by 1.6 percent for each one percent that the dry iron content exceeds 62 percent.

In addition, the 1977 law change, as a means of stabilizing production tax revenues, applies the tax rate against the taxable tons of the taconite companies. The taxable tons are the greater of the current year's production tons or the three-year average of production tons. This provision has been challenged by the taconite industry and is currently in litigation. It is presently on appeal to the State Supreme Court with a decision expected sometime in early 1984.

The average production tax rate for 1982 was \$2.08 per taxable ton after the price index escalation of 1.58427 and the iron content escalations were computed. The average rate for the 1983 production tax is estimated to be \$2.05 per taxable ton using the three-year production average for taxable tons and a price index escalation of 1.55310. An increase of 3% or less is anticipated for the 1984 tax rate due to increases in the steel mill products index.

The proceeds of the taconite production tax are distributed by statute as follows (all figures are cents per taxable ton):

M.S. 298.28, Subdivision 1.

1. Taconite Cities and Town:		2.5¢
2. Taconite Municipal Aid Account:		12.3¢
3. School Districts -		
a. Taconite schools (mining and/or concentrating in the district):	6.0¢	
b. School districts that qualify for taconite homestead credit in proportion to their levies:	23.0¢	
Basic School District Total:		29.0¢
c. School Fund Index:	(formula amount)	
4. Counties -		
a. Taconite Counties:	15.5¢*	
b. Electric Power Plant		
c. Taconite Counties Road/Bridge:	4.0¢*	
Counties Total:		19.5¢*
5. Taconite Property Tax Relief:		25.75¢*
6. State:		1.0¢
7. I.R.R.R.B.:		3.0¢**
8. Range Assn. of Municipalities and Schools:		0.2¢

*These base year amounts will be increased in 1979 and subsequent years by the rate of growth in the steel mill products index (base year 1977). For the 1982 production year, the county was 30.4¢ and road and bridge was 7.8¢ with escalation.

**This base year amount will be increased in 1981 and subsequent years (base year 1977). For the 1982 production year, the IRRRB was 8.8¢ with escalation.

1. TACONITE CITIES AND TOWNS

Each city or township in which mining and/or concentrating occurs (split 40% and 60% to each respectively) receives an equitable portion of the mining aid and/or concentrating aid.

2. TACONITE MUNICIPAL AID ACCOUNT

The taconite Municipal Aid payment is made on September 15. Each city or township first receives the amount it was entitled to receive in 1975 from the occupation tax. The remainder is then distributed to the cities and townships in the taconite relief area in direct proportion to the latest federal population census. The conditions necessary for a municipality to qualify for municipal aid are identical to the qualifications for the 66% taconite property tax relief listed under part (5)a of the Production Tax section of this Mining Tax Guide. The statutory references governing Municipal Aid are M.S. 273.134 (qualifying municipalities), M.S. 298.28, Subd. 1, Clause 2. and M.S. 298.282.

3. a. **SCHOOL DISTRICT 6¢ FUND**

Each school district in which mining and/or concentrating occurs (split 40% and 60% to each respectively) receives an equitable portion of the mining aid and/or concentrating aid.

b. **SCHOOL 23¢ FUND**

Each school district receives the amount which it was entitled 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).

c. **SCHOOL FUND INDEX**

The School Fund Index is the escalated portion of the 23-cent school fund using the steel mill products index escalation factor. Payments were first made from this fund in 1982 and are made on July 15 of each year. Taconite school districts qualify for an additional \$150 per pupil unit over and above state aids by passing a two mill levy referendum. The school district will then receive additional taconite aid in the amount of \$150 per pupil unit less the amount raised locally by the two mills.

4. a. **TACONITE COUNTIES**

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

b. **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 processes are conducted, one-cent of the 15.5-cents-per-ton shall be distributed to the county in which the power plant is located (this one-cent is not escalated).

c. **TACONITE COUNTIES ROAD/BRIDGE**

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. a. **TACONITE PROPERTY TAX RELIEF**

A total of 25¢ per ton escalated by the steel mill products index is allocated to the Taconite Property Tax Relief Account. The qualifications and distribution of taconite property tax relief are described in the following paragraphs.

The Taconite Homestead Credit reduces the tax paid by owners of certain properties located on the Iron Range. The properties that 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 credit 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 per cent 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, but is located in a school district containing 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.

Most of the other property tax credits that a property may be eligible to receive are deducted from the gross tax on the property before the Taconite Homestead Credit is determined. An example of this deduction is the Agricultural Credit which also reduces the tax on farm property. The one credit that is not deducted before determining the Taconite Homestead Credit is the 54 percent state-paid homestead credit. This credit is determined after the Taconite Homestead Credit. The maximum credit under the 54 percent state-paid homestead credit is \$650 for taxes payable in 1984.

The statutory references governing taconite property tax relief are contained in M.S. 273.134, M.S. 273.135, and M.S. 298.28, Subd. 1, Clause (5). This credit is guaranteed by the N.E. Minnesota Economic Protection Fund as stated in M.S. 298.293.

b. ELECTRIC POWER PLANT

For any electric power plant located in another county (as described in 4b) .75 cents of the 25.75-cents-per-ton in the Taconite Property Tax Relief account shall be distributed to the county and school district in which the power plant is located with 25 percent going to the county and 75 percent to the school district. This .75 cents is escalated by the steel mill products index. (Only Erie Mining Co. & Cook Co. are affected).

In addition to the preceding distribution, additional amounts are distributed as follows:

1. In 1978 and each year thereafter, there will be distributed to each city, town, school district, and county the amount that they received in 1977 from the distribution of the gross earnings tax on taconite railroads.

Amount: \$3,160,899

2. In 1978 and each year thereafter, there will be distributed to the Iron Range Resources and Rehabilitation Board the amount it received in 1977 from the distribution of the taconite and iron ore occupation taxes.

Amount: \$1,252,520

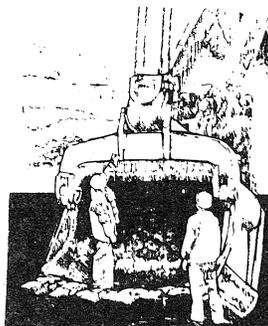
3. Beginning with the 1982 production year a \$240,000 payment is made by the Department of Revenue to School District 710 for payment of school bonds. An amount equal to 4¢ per ton of Eveleth Mines production is subtracted from money otherwise payable to the Northeast Minnesota Economic Protec-

tion Fund. Any remaining amount required to equal \$240,000 shall be paid as provided by M.S. 298.225.

4. All proceeds from the taconite production tax remaining after the above distributions shall be divided between the Taconite Environmental Protection Fund and the Northeast Minnesota Economic Protection Fund. The Taconite Environmental Protection Fund will receive two-thirds, and the Northeast Minnesota Economic Protection Fund will receive one-third.
5. The 1982 Legislature increased the taconite production tax credit to four-cents per gross ton for school district bonds. However, a credit of seven-cents per ton is allowed for Independent School District 703, Mt. Iron. The school bond credits are subtracted from the amount which would otherwise be distributed to the Northeastern Minnesota Economic Fund. These credits are for bond payments made by the companies and are not collected or distributed by the Department of Revenue.

MS 298.225 If aid payments provided in MS 298.28, subdivision 1, clauses (1) to (4) and 5(b) to 8 are reduced due to a plant shutdown, the level of aid received from the last full year of production prior to shutdown is guaranteed for 2 years following the year of shutdown. This aid guarantee is funded equally by the Taconite Environmental Protection Fund and the Northeast Minnesota Economic Protection Fund. The aid payments covered by this guarantee are listed as follows:

1. 2.5¢ City and Town Fund
2. 12.5¢ Taconite Municipal Aid
3. a. 23¢ School Fund
b. 6¢ School District Fund
c. School Fund Index
4. a. 15.5¢ Taconite County Fund
c. 4¢ Taconite County Road and Bridge Fund
5. a. Taconite Property Tax Relief is not covered by MS 298.225, but guaranteed separately by the Economic Fund as stated in MS 298.293
b. .75¢ Electric Power Plant Fund (Erie-Cook Co.)
6. 1¢ State for Administration
7. 3¢ Escallated to I.R.R.R.B.
8. .2¢ RAMS



**TABLE 5 — AVERAGE DISTRIBUTION OF THE PRODUCTION TAX
(CENTS-PER-TON)**

**1983 DISTRIBUTION (1982 PRODUCTION YEAR)
BASED ON 38,624,458 TAXABLE TONS**

<u>Aid Recipient</u>	<u>Cents Per Taxable Ton</u>
Taconite Cities and Towns	3.5
Taconite Municipal Aid	17.4
School Districts	51.1*
County	30.4
County Road and Bridge	7.8
Taconite Property Tax Relief	40.6
State of Minnesota	1.4
I.R.R.R.B.	8.8
R.A.M.S.	.3
Taconite Railroad Grand- father Amount	8.2
Taconite Environmental Protection Fund	30.5
N.E. Minnesota Economic Protection Fund	7.2
School Bond Credits & Payment	<u>1.1</u>
	208.3

* 41.1¢-per-ton will be subtracted from aids or levies a taconite school district would otherwise receive.

TABLE 6 — SUMMARY OF TACONITE PRODUCTION TAX DISTRIBUTION*

PRODUCTION YEAR	1975	1980	1981	1982
City & Township	\$ 936,388	\$ 1,353,460	\$ 1,382,071	\$ 1,361,734
Taconite Municipal Aid	3,399,588	6,810,913	6,776,025	6,701,700
School District - Regular	10,396,319	3,304,789	3,383,849	3,336,407
School District Fund	-0-	12,735,853	12,670,617 ^a	12,531,638 ^a
School District Fund Index	-0-	-0-	4,198,133	3,866,675
County	3,771,167	10,809,240	11,891,939	11,756,167
County Road & Bridge	591,524	2,784,744	3,056,888	3,028,085
Taconite Property Tax Relief	8,688,442	17,351,585	19,317,006 ^a	15,684,072 ^a
State	240,363	480,280	550,897	544,853
I.R.R.R.B. (3¢ Indexed)	1,073,275	2,001,839	2,265,289	2,150,722
Range Association of Municipalities & Schools	-0-	110,747	110,181	108,972
Taconite Railroad (Fixed)	-0-	3,160,899	3,160,899	3,160,899
I.R.R.R.B. (Fixed)	-0-	1,252,520	1,252,520	1,252,520
710 School Bond Payment	-0-	-0-	-0-	240,000
Filtration Fund	1,250,000	-0-	-0-	-0-
Taconite Environmental Protection Fund	-0-	15,663,492	19,736,911	11,785,651
N.E. Minnesota Economic Protection Fund	-0-	9,358,171	9,265,064	2,793,123
TOTAL:	\$30,347,066	\$87,178,532	\$99,018,289	\$80,303,218

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

^aActual distribution payments differ due to overpayments made from the School District Fund from the 1981 production year.

TABLE 7 — TACONITE PRODUCTION TAX DISTRIBUTIONS TO CITIES & TOWNSHIPS - 1983*

<u>Cities & Townships</u>	<u>Mining & Concentrating</u>	<u>Taconite¹ Railroad</u>	<u>Taconite Municipal Aid</u>	<u>Total</u>
Aurora	\$	\$	\$ 175,195	\$ 175,195
Babbitt	120,163	166,767	217,868	504,798
Biwabik			92,070	92,070
Bovey			52,418	52,418
Buhl			82,786	82,786
Calumet			30,239	30,239
Chisholm			382,335	382,335
Coleraine			71,954	71,954
Crosby			143,005	143,005
Ely			310,768	310,768
Eveleth	63,722		328,608	392,330
Franklin	20		1,741	1,761
Gilbert			177,042	177,042
Hibbing	293,227		1,392,160	1,685,387
Hoyt Lakes	182,652	152,153	298,312	633,117
Ironton			34,623	34,623
Keewatin	22,716		101,363	124,079
Kinney			28,820	28,820
Leonidas			6,125	6,125
Marble			48,807	48,807
McKinley			14,829	14,829
Mountain Iron	341,846		412,208	754,054
Nashwauk	11,331		99,569	110,900
Riverton			7,221	7,221
Silver Bay	107,227	152,706	246,052	505,985
Taconite			21,341	21,341
Trommold			5,416	5,416
Virginia	9,905		715,674	725,579
Balkan Township			60,219	60,219
Bass Brook Township			120,632	120,632
Bassett Township		11,745	---	11,745
Beaver Bay Township		12,565	---	12,565
Biwabik Township			66,667	66,667
Breitung Township			60,155	60,155
Crystal Bay Township		6,951		6,951
Fayal Township	2,795		140,233	143,028
Grand Rapids Township			204,965	204,965
Great Scott Township	16,664		40,021	56,685
Greenway Township	29,340		82,044	111,384
Irondale Township			53,965	53,965
Lone Pine Township	4,728		2,820	7,548
McDavitt Township	66,550		43,960	110,510
Nashwauk Township	14,407		60,723	75,130
Rabbitt Lake Township			11,863	11,863
Schroeder Township		47,700	20,954	68,654
Silver Creek Township		20,612	---	20,612
Stony River Township		19,943	---	19,943
White Township	25,894		174,291	200,185
Wouri Township	48,547		48,356	96,903
Wolford Township			11,283	11,283
TOTALS:	\$ 1,361,734	\$591,142	\$ 6,701,700	\$8,654,576

* All distributions in 1983 result from 1982 production year tax revenues.

1 Taconite railroad aids are a fixed amount paid from current production tax revenues based on 1977 Taconite Railroad Gross Earnings Tax distributions.

**TABLE 8 — TACONITE PRODUCTION TAX DISTRIBUTION
TO COUNTIES - 1983***

<u>County</u>	<u>Regular County 15.5¢ Escalated</u>	<u>County Road & Bridge 4¢ Escalated</u>	<u>Taconite Railroad</u>	<u>Total</u>
Cook	\$ 120,464	\$ —	\$ 187,190	\$ 307,654
Itasca	629,487	162,497	—	791,984
Lake	969,125	250,097	243,034	1,462,256
St. Louis	<u>10,037,091</u>	<u>2,615,491</u>	<u>354,153</u>	<u>13,006,735</u>
TOTAL:	\$11,756,167	\$3,028,085	\$ 784,377	\$15,568,629

* Distribution in calendar year 1983 is based on 1982 production year.

**TABLE 9 — TACONITE PRODUCTION TAX DISTRIBUTION
TO SCHOOL DISTRICT - 1983***

<u>School Districts</u>	<u>6¢</u>	<u>23¢</u>	<u>Taconite Railroad</u>	<u>School Fund Index</u>	<u>Total</u>
1 - Aitkin	\$ —	\$ 754,096	\$ —	\$ 144,428	\$ 898,524
166 - Cook County	67,586 ¹	369,248	427,383	59,731	923,948
182 - Crosby - Ironton	—	571,398	—	167,475	738,873
316 - Coleraine	116,153	539,257	—	255,555	910,965
318 - Grand Rapids	—	2,641,590	—	414,055	3,055,645
319 - Nashwauk- Keewatin	159,852	298,968	—	123,673	582,493
381 - Lake Superior	257,346	828,552	552,774	380,060	2,018,732
691 - Aurora - Hoyt Lakes	438,363	350,208	345,802	239,271	1,373,644
692 - Babbitt ²	288,390	81,054	459,421	156,067	984,932
693 - Biwabik	62,147	232,291	—	42,863	337,301
694 - Buhl	39,993	150,407	—	—	190,400
695 - Chisholm	—	396,186	—	176,834	573,020
696 - Ely	—	318,964	—	132,792	451,756
697 - Eveleth	159,642	330,126	—	200,896	690,664
699 - Gilbert	—	168,016	—	95,096	263,112
701 - Hibbing	626,451	1,374,176	—	514,763	2,515,390
703 - Mt. Iron	820,431	156,062	—	114,682	1,091,175
706 - Virginia	140,333	722,402	—	266,957	1,129,692
708 - Tower-Soudan	—	393,897	—	42,913	436,810
710 - St. Louis Cty. ³	<u>159,720</u>	<u>1,157,587</u>	<u>—</u>	<u>338,564</u>	<u>1,655,871</u>
	\$3,336,407	\$11,834,485	\$1,785,380	\$3,866,675	\$20,822,947

* - Distribution in calendar year 1983 is based on 1982 production year.

1 - Erie Power Plant distribution 2 - Reserve Mining received school bond credit of \$176,421 for school bond payment.

3 - SD 710 received school bond payment of \$240,000 from Commissioner of Revenue.

**TABLE 10 — TACONITE PRODUCTION AND TAX REVENUE
PRODUCTION YEAR 1982 — BY FIRM**

<u>Firm</u>	<u>1982 Production Tons</u>	<u>1982 Taxable Tonnage¹</u>	<u>Tax Rate²</u>	<u>Production Tax Revenue³</u>
Butler	1,040,799	1,603,738	\$2.1020157	\$ 3,371,082
Erie	4,178,584	6,127,330	2.0624089	12,637,060
Eveleth	4,611,260	5,423,125	2.0807864	11,284,365
Hibbing	5,703,410	6,543,170	2.1051843	13,774,579
Inland	1,792,702	1,862,089	2.1115214	3,931,841
National	1,291,211	2,537,353	2.0947281	5,315,065
Reserve	1,520,113	4,582,306	2.0798359	9,354,024
U. S. Steel	3,307,025	9,945,347	2.0750831	20,637,421
TOTAL:	23,445,104	38,624,458	\$2.0837019	\$ 80,305,437

ESTIMATED FOR PRODUCTION YEAR 1983

<u>Firm</u>	<u>Production Tons</u>	<u>Taxable Tonnage¹</u>	<u>Tax Rate²</u>	<u>Production Tax Revenue³</u>
Butler	1,500,000	1,578,586	\$2.0606468	\$ 3,211,206
Erie	2,100,000	4,870,090	2.0218195	9,846,443
Eveleth	3,050,000	4,513,706	2.0367292	9,193,197
Hibbing	4,150,000	5,659,769	2.0628212	11,675,091
Inland	2,100,000	2,100,000	2.0671698	4,341,057
National	3,150,000	3,150,000	2.0531920	6,366,442
Reserve	1,050,000	3,404,640	2.0482221	6,837,273
U. S. Steel	7,400,000	7,696,325	2.0357973	15,129,415
TOTAL:	24,500,000	32,973,116	\$2.0446314	\$ 66,600,124

1 - Taxable tonnage is the larger of the year actual production or the average production for the last three years.

2 - The base rate of \$1.25 per ton is adjusted for any increase in the steel mill products index over the 1977 base and for each firm by the iron content of the pellets produced by the firm. The steel mill products index escalation factor for the 1982 production year was 1.58427474 and is estimated for 1983 to be 1.5530953.

3 - Does not include credit for overpayments in previous years. Production tax revenue does not include school bond payments by some companies.

TABLE 11

**TACONITE PRODUCED (THOUSANDS OF TONS) AND
PRODUCTION TAX COLLECTIONS (THOUSANDS OF DOLLARS)
1955 - 1983**

<u>Year</u>	<u>Production Tons</u>	<u>Production¹ Tax Revenue</u>	<u>Revenue Rate Production Ton</u>	<u>Taxable² Tons</u>	<u>Tax Rate² Taxable Ton</u>
1955	1,341	78	.058		
1956	5,069	297	.059		
1957	6,812	397	.058		
1958	8,574	500	.058		
1959	8,414	528	.063		
1960	13,390	735	.055		
1961	13,187	766	.058		
1962	14,526	842	.058		
1963	16,701	972	.058		
1964	18,505	1,075	.058		
1965	19,004	1,104	.058		
1966	21,677	1,257	.058		
1967	24,311	1,427	.059		
1968	30,269	1,782	.059		
1969	33,410	3,778	.113		
1970	35,348	4,253	.120		
1971	33,778	5,539	.164		
1972	34,544	7,002	.203		
1973	41,829	10,159	.243		
1974	41,053	11,952	.291		
1975	40,809	30,347	.744		
1976	40,575	30,857	.760		
1977	26,372	48,891	1.854	37,759	1.295
1978	49,545	69,394	1.401	49,614	1.399
1979	55,333	88,485	1.599	55,373	1.598
1980	43,060	87,179	2.025	50,296	1.733
1981	49,369	99,018	2.006	51,799	1.912
1982	23,445	80,305	3.425	38,624	2.079
1983	24,500*	66,600*	2.718*	32,438*	2.045*

*Estimated

¹Production tax revenue does not include school bond payments by some companies.

²The 1977 law was the first to apply the production tax rate against "taxable tons," which is the greater of the current years production or the 3-year average of production tons.

OCCUPATION TAX ON TACONITE, SEMI-TACONITE AND IRON ORE

INTRODUCTION

In 1921, the Minnesota State Legislature imposed a special tax, the occupation tax, upon "...every person engaged in the business of mining or producing iron ore or other ore in this state." Although the occupation tax resembles a corporate income tax, it is somewhat more restrictive concerning deductible expenses.

DETERMINATION OF VALUE OF ORE FOR PURPOSE OF TAX

The determination process consists of two major steps. The **first step** is the determination of the value of iron ore at the mouth of a Minnesota mine, the starting point for Minnesota's occupation tax. Because no published market price exists for ore at the mouth of a Minnesota mine, the value is calculated rather than directly set by the market. The value is determined by deducting expenses incurred **beyond** the mouth of the mine from the recognized and published market value of iron ore delivered to Lake Erie ports. In effect, this value is obtained by working backward from a Lake Erie port dock to the mouth of a Minnesota mine.

Expenses subtracted from the Lake Erie value of iron ore to arrive at the mouth of the mine value are known as **Nonstatutory Deductions**. These deductions are not specified by statute but result from administrative practice and court decisions regarding valuation. Included in this Lake Erie value of ore.

The **second step** is the procedure of determining the value of ore for purpose of tax. Subtracted from the value of iron ore at the mouth of a Minnesota mine are certain expenses, specified by statute, called the **Statutory Deductions**. Included in the statutory deductions are:

1. Mining costs
2. Amortized development costs
3. A portion of the ad valorem taxes applicable to tonnage mined (for taconite producers, a portion of the production tax)
4. Royalty expense
5. Plant and equipment depreciation
6. Other miscellaneous expenses

After subtraction of the statutory deductions, a taxable value of ore is established.

Minnesota's occupation tax is more restrictive than a corporate income tax. Most noticeable as nonallowable expenses are:

1. Federal income taxes
2. Contributions
3. Legal fees
4. General out-of-state administrative expenses
5. Depletion allowances
6. Royalty taxes
7. Loss carryover
8. Entertainment expense

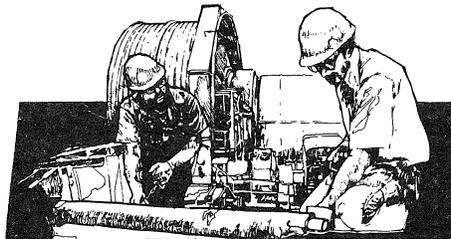
The occupation tax rate has been increased and decreased over the years from its initial rate of six percent in 1921, but generally the trend has been toward increases to its present rate of 15.5 percent for natural ore and 15 percent for taconite. The net effective rate actually paid is only 6.75% for taconite (see below).

OCCUPATION TAX CREDITS

Substantial credits are allowed against the occupation tax. Foremost of the various credits is a credit for high labor cost ores.

Presently, taconite producers benefit from the **labor credit** with **ALL** producers reducing their net effective occupation tax rate from 15 percent to 6.75 percent. For natural ore, the 15.5 percent is usually reduced to approximately 14 percent. Additionally, all ore producers are eligible for credits for investment in pollution control equipment and costs incurred for exploration and research on Minnesota ores.

Natural ore producers are also allowed a credit for mining costs exceeding the value of ore (loss mine credit). Small independent iron ore producers are allowed a credit for selling ore below the quoted Lake Erie value of the ore (discount credit).



M.S. 298.40 AND THE TACONITE AMENDMENT

Minnesota Statute 298.40 and the Taconite Amendment to the Minnesota Constitution were passed by the voters in 1963 and 1964. These provisions limited the taxes imposed upon the two existing taconite producers (Reserve Mining Company and Erie Mining Company) and any new taconite producers through 1989.

This provision states that "the combined occupation, royalty, and excise taxes" of any taconite producing company for any of the next 25 years "shall not be increased so as to exceed the greater of" (a) the amount of these same taxes computed under the laws of 1963, or (b) the hypothetical amount of taxes (income and excise) which would be payable if the taconite company was a manufacturing corporation, with certain modifications.

Beginning with the 1974 Occupation Tax the State and the mining companies have had differing interpretations of the taconite amendment. These differing interpretations have been in litigation for several years.

In May, 1983 the Minnesota Supreme Court held that in computing the hypothetical income tax limitation, 100 per cent of the hypothetical income is allocated to Minnesota. The taconite companies have asked the U. S. Supreme Court to review the decision.

Even though the State generally prevailed in the limitation litigation, for some years specific taconite companies paid taxes in excess of the limitation. For the years 1974 through 1982 the overpayments total approximately \$27 million. This is being "repaid" to the companies affected by:

1. Not collecting current Occupation Taxes Due.
2. Not collecting current Use Tax Due.
3. Not collecting current Railroad Gross Earnings Tax Due.

OCCUPATION TAX ALLOCATION

The proceeds from the occupation tax are deposited in the state general fund. Distribution is constitutionally mandated with 40 percent to elementary and secondary schools, 10 percent for the University of Minnesota, and 50 percent remaining in the general fund.

Some of the present production tax distributions are "grandfathered" amounts which, in the past, were distributed from the Occupation Tax or based upon Occupation Tax collections.

<u>City/Township</u>	<u>Municipal Aid</u>	<u>School District</u>	<u>School Aid</u>
Aurora	\$ 3,047	710	\$ 16,096
Babbitt	60,872	316	63,088
Eveleth	3,526	319	7,124
Gilbert	1,606	701	51,493
Hibbing	25,747	706	2,470
Mt. Iron	145,670	697	13,475
Virginia	2,841	694	23,820
Hoyt Lakes	92,896	692	121,743
Great Scott Twp.	11,910	693	51,971
McDavitt Twp.	8,048	381	115,957
White Township	29,481	703	291,340
Lone Pine Twp.	2,820	691	198,878
Greenway Twp.	7,511		<u>\$957,455</u>
Nashwauk Township	8,370		
Keewatin	8,326		
Nashwauk	8,079		
Silver Bay	57,979		
	<u>\$478,729</u>		

These distribution amounts became effective with the collection and distribution of the 1975 production tax. They are based upon the amounts distributed from the Occupation Tax in 1974.

The Iron Range Resources and Rehabilitation Board is currently funded by the Taconite Production Tax and is explained in that section.

The I.R.R.R.B. was originally funded from the Occupation Tax. From 1942 - 1969, 10% of the Occupation Tax collected was dedicated to the I.R.R.R.B. From 1970 - 1977, this was reduced to 5 percent. Effective with the 1978 production year, no occupation tax was distributed to the I.R.R.R.B. However, \$1,252,520 was fixed as a distribution from the Production tax to the I.R.R.R.B. This was the amount which the I.R.R.R.B. received as their 5 percent share of the occupation tax. I.R.R.R.B. receives a 1 cent a ton tax which is called the Region 3 fund. This money is used to provide environmental development grants in Region 3.

**TABLE 12 — IRON ORE AND TACONITE PRODUCED IN MINNESOTA (THOUSANDS OF TONS)
AND OCCUPATION TAX COLLECTIONS (THOUSANDS OF DOLLARS)
1955 - 1982¹**

Year	Iron Ore		Taconite		Totals	
	Tons Produced	Occup'tn. Tax	Tons Produced	Occup'tn. Tax	Tons Produced	Occup'tn. Tax
1955	66,545	\$31,501	1,341	\$ 0	67,886	\$31,501
1956	57,529	27,480	5,069	0	62,598	27,480
1957	61,304	33,106	6,812	154	68,116	33,260
1958	33,247	16,353	8,574	161	41,821	16,514
1959	27,578	11,942	8,414	93	35,992	12,035
1960	44,042	20,655	13,390	638	57,432	21,293
1961	30,458	13,010	13,187	898	43,645	13,908
1962	30,543	11,276	14,526	1,108	45,069	12,384
1963	28,682	10,886	16,701	1,426	45,383	12,312
1964	30,636	12,921	18,505	1,658	49,141	14,579
1965	33,462	15,646	19,004	1,740	52,466	17,386
1966	32,601	15,545	21,677	1,898	54,278	17,443
1967	25,480	12,646	24,311	1,611	49,791	14,257
1968	21,893	10,802	30,269	1,807	52,162	12,609
1969	22,511	10,968	33,410	2,285	55,921	13,253
1970	21,172	9,278	35,348	3,161	56,520	12,439
1971	17,530	7,301	33,778	5,379	51,308	12,680
1972	14,439	6,376	34,554	3,659	48,993	10,035
1973	17,941	8,836	41,829	6,824	59,770	15,660
1974	17,654	9,698	41,053	10,092	58,707	19,790
1975	10,227	5,038	40,809	18,955	51,036	23,993
1976	9,494	6,480	40,575	18,270	50,069	24,750
1977	4,647	2,641	26,372	3,190	31,019	5,831
1978	5,905	3,937	49,545	19,266	55,450	23,203
1979	4,230	2,663	55,333	23,856	59,563	26,519
1980	2,221	1,000	43,060	13,808*	45,281	14,808
1981	1,664	1,232	49,369	12,708*	51,033	13,940
1982	789	719	23,445	6,200*	24,234	6,919

* Adjusted by provisions of M.S. 298.40

¹The years are production years, tax was assessed in the following year and collected on June 15.

TABLE 13

OCCUPATION TAX REPORT AVERAGES
ON A PER TON BASIS

TACONITE INDUSTRY ONLY

<u>Year</u>	<u>Tons Produced (000 Tons)</u>	<u>Lake Erie Value</u>	(1) <u>Cost of Beneficiation</u>	(2) <u>Transportation</u>	(3) <u>Development</u>	<u>Cost of Mining</u>	<u>Depreciation: Std. Plant & Motor Equip.</u>	<u>Admin. Expense</u>	<u>Misc.</u>	<u>Royalty</u>	<u>Taxable Value of Production</u>	<u>Occupation Tax Paid</u>
1971	33,778	17.408	6.922	4.421	.579	1.578	.289	.133	.221	.655	2.609	.159
1972	34,554	17.437	7.398	4.420	.665	2.019	.300	.148	.250	.657	1.569	.106
1973	41,829	18.034	7.018	4.719	.600	1.961	.267	.140	.220	.679	2.419	.163
1974	41,053	22.122	8.188	5.790	.737	2.142	.270	.150	.300	.818	3.648	.246
1975	40,809	28.846	9.720	6.835	.890	2.715	.330	.186	.435	.976	6.746	.464
1976	40,575	32.200	11.560	7.557	1.219	3.030	.470	.208	.570	1.077	6.496	.450
1977	26,372	34.827	17.816	8.075	1.415	4.116	.900	.440	.928	1.110	(.031)	.121
1978	49,545	37.080	14.950	8.710	1.497	3.827	.519	.310	.766	1.259	5.234	.388
1979	55,333	41.306	16.440	9.789	1.760	4.000	.516	.417	.880	1.320	6.166	.435
1980	43,060	46.365	21.181	10.627	2.006	4.556	.722	.587	.932	1.444	4.308	.321
1981	49,369	51.106	21.171	13.254	2.155	5.135	.646	1.202	1.003	1.704	4.835	.257
1982	23,445	53.946	31.339	12.600	2.212	5.290	1.357	3.002	1.438	2.078	(5.372)	.140

- (1) Cost of Beneficiation includes labor, supplies, depreciation and interest, miscellaneous, sales and use tax expense, marketing and marine insurance.
- (2) Transportation includes the rail and lake transportation allowances in accordance with the occupation tax directives for each year.
- (3) Cost of Mining includes mining labor and supplies, plus the production tax deduction allowance for each year.

**AD VALOREM TAX ON UNMINED
NATURAL IRON ORE**

Since 1909, Minnesota's natural iron ore reserves have been estimated and assessed by the state for ad valorem tax purposes. The actual ad valorem tax levy is set by the county, the school district, and the local township or municipality. The tax levy is collected by the county auditor.

A Minnesota Supreme Court decision in 1936 established the present worth of future profits method for valuing the iron ore reserves. This is accomplished through the use of a complex formula known as the Hoskold Formula. The formula takes into account ore prices and all the various cost factors in determining the value of the unmined ore. Uneconomic ores which cannot be valued by the Hoskold Formula are valued according to a "class rate" system. The Department maintains a schedule of minimum rates for this purpose.

The schedule currently in use was adopted in 1974 and is listed as follows:

CLASSIFICATION	UNIT RICE RATIO
<u>Open Pit -</u>	
Merch Ore	\$.009276
Wash Ore	.004992
Heavy Media Ore	.003865
Paint Rock Ore	.002495
<u>Underground -</u>	
Merch Ore	\$.001546
Wash Ore	.000832
Heavy Media Ore	.000644
Paint Rock Ore	.000416

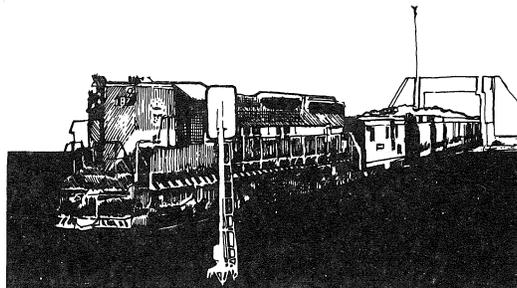
The rice ratio is the ratio of the dry iron to the sum of the dry silica plus the dry alumina.

The assessed rate per ton is determined by multiplying the rice ratio of a particular ore times the unit rice ratio for the appropriate classification. This rate per ton is then multiplied by three to determine the value of the unmined ore as per M.S. 273.1104.

A record of iron ore ad valorem taxes since 1970 is listed as follows:

<u>YEAR PAYABLE</u>	<u>COUNTY</u>	<u>LOCAL</u>	<u>TOTAL</u>
1971	3,448,777	6,773,671	10,222,448
1972	3,250,105	4,391,721	7,641,826
1973	2,921,888	4,011,868	6,933,756
1974	2,692,412	3,820,836	6,513,248
1975	2,364,788	3,264,638	5,629,426
1976	1,860,429	2,599,476	4,459,905
1977	1,741,437	2,298,178	4,039,615
1978	1,838,862	2,401,434	4,240,296
1979	1,920,313	2,483,562	4,403,875
1980	2,243,224	2,107,416	4,350,640
1981	1,786,269	1,902,005	3,688,274
1982	1,713,327	2,091,716	3,805,043
1983	1,212,745	2,333,815	3,546,560

According to the provisions of M.S. 273.1104, a public hearing to review the valuations of unmined iron ore shall be held on the first secular day following the 10th day of October. This hearing provides an opportunity for representatives of the mining companies and taxing districts to formally protest any of the ore estimates or valuation procedures which they believe to be incorrect.



GROSS EARNINGS TAX ON TACONITE RAILROADS
M.S. 294.21 - M.S. 294.26

Every company owning or operating a taconite railroad shall pay annually into the state treasury a sum of money equal to five percent of the gross earnings derived from the operation of such taconite railway within the state. The gross earnings shall be the sum of money equal to the amount which would be charged under established tariffs of common carriers for the transportation of iron ore from the Mesabi Range to ports at the head of Lake Superior. If coal or other commodities are transported, the gross earnings shall include an amount equal to the established tariffs of common carriers for the same quantities of similar commodities.

At the present time, the tax applies only to Reserve Mining Company and Erie Mining Company railroads.

The tax is due twice a year in six month increments:

<u>PERIOD COVERED</u>	<u>DUE</u>
January 1 - June 30	On or before September 1
July 1 - December 1	On or before March 1

The companies submit a report with their payment containing such information as number of tons shipped, freight and handling rates, taxable earnings, transportation of other commodities, track mileage in each taxing district, and a summary of taxable earnings.

Prior to 1978, the revenue from the gross earnings tax on taconite railroads was deposited in the State's general fund and distributed to the various taxing districts in which such railroad operations were conducted in the following proportions:

City, Village or Town	22%
School District	50%
County	22%
State	6%
	100%

The first three accounts were distributed to individual taxing districts based on the location of terminal facilities and trackage.

Beginning in 1978, the amount of the 1977 distribution to the first three accounts was frozen and the distribution made from the taconite production tax. The revenue collected from the gross earning tax on taconite railroads is now allocated 100 percent to the state general fund.

GROSS EARNINGS TAX ON TACONITE RAILROADS

<u>Calendar Year</u>	<u>Tax</u>
1977	\$1,509,773.00
1978	\$3,267,250.00
1979	\$3,634,407.00
1980	\$2,983,819.00
1981	\$4,960,605.00
1982	\$1,354,173.00

ROYALTY TAXES

In 1923, the Minnesota legislature passed a royalty tax law providing for a six percent tax on any royalties received. Since that time, the gross tax rate has exactly followed the occupation tax rates. Prior to 1959, no labor credits were allowed. The 1923 law assessed the tax against the royalty recipient, but because of the terms of mining leases, the courts have ruled that the lessee was responsible for payment of the tax. This was affirmed by both the Minnesota and United States Supreme Courts in a series of rulings beginning in 1926. Presently, all royalty taxes are collected from the lessee. Royalties can include rents, bonus payments, option to purchase payments, non-recoverable lease payments, etc.

Who is liable for the royalty tax—lessor or lessee—is determined by the language written in the lease. If the lessor is liable, M.S. 299.08 requires the lessee to withhold the amount of the tax from payments made to the lessor. If the lessee is liable according to the terms of the lease, the tax is in addition to the royalty paid to the lessor. Regardless of who is liable, all royalty tax will be remitted to the Commissioner of Revenue by the lessee. Royalty tax payments are due when royalty payments are made to the recipients. However, it is possible to remit an annual royalty tax payment. This method has proven to be more convenient for exploration companies.

The present tax on royalties received in connection with the exploration and mining of taconite and semi-taconite is 15 percent. A credit which reduces the effective tax rate to the net effective tax rate for occupation taxes is allowed for taconite and semi-taconite royalty taxes on land that is being actively mined. "This credit also applies in cases where the minimum royalty is, in fact, a prepaid royalty specified in the terms of the mining lease." In most cases, the net effective occupation tax rate for taconite mining is 6.75 percent.

The tax on the royalties received in connection with the exploration and mining of iron ore is 15.5 percent. A less generous labor credit applies to the mining of natural iron ore which, in most cases, reduces the effective occupation tax rate for an active open pit mine to approximately 14 percent.*

The royalty tax rate which would apply to all other ores including base or precious metals is 15.50%. A special labor credit is available which would probably reduce the rate for an active open pit mine to about 14.00%. (This estimate is based on the experience of the natural iron ore industry with the same rate and credit available.) A more generous labor credit formula is available to underground mines. For an operating underground base or precious metal mine, labor credits would probably reduce the net effective rate to about 7.25%.

1. Special tax provisions apply to royalty on copper-nickel. The tax on royalties received in connection with the exploration and mining of copper-nickel ores is one percent plus an additional one percent of the amount of royalty paid on gold, silver, platinum and other precious metals.
2. There are also special tax provisions that govern a mine where the cost of production exceeds the value of the ore produced, or a "loss mine". In this instance, the rate for a natural ore mine is 8.90%; the rate for a taconite

*However, labor credits for an underground mine would probably reduce the net effective rate to approximately 7.25%.

mine is 6.75%; the rate for copper-nickel mines remains at 1%; the rate for minerals other than the afore mentioned is also 8.9% unless the mine is underground where the rate of 7.25% would then apply.

3. State owned leases are not subject to a royalty tax. All royalty tax revenue is deposited in the general fund and is not earmarked for any specific distribution.

The royalty tax is not in lieu of personal income tax on royalties. Resident and non-resident recipients of royalties are subject to state income tax in the same manner as if the royalty income were from rents or other business activities in the State of Minnesota.

**TABLE 14 — IRON ORE, TACONITE, COPPER-NICKEL
AND URANIUM ROYALTY TAX
1970 - 1982**

Year	Iron Ore Production (000's of Tons)	Iron Ore Royalty Tax (000's)	Taconite Production (000's of Tons)	Taconite Royalty Tax (000's)	Cu-Ni & Uranium Royalty Tax (000's)	Total Revenue (000's)
1970	21,172	\$ 966	35,348	\$ 787	\$ 3	\$ 1,756
1971	17,530	705	33,778	1,323	3	2,031
1972	14,439	904	34,554	1,402	2	2,308
1973	17,941	1,289	41,829	1,886	2	3,177
1974	17,654	1,351	41,053	1,994	2	3,347
1975	10,227	998	40,809	2,657	2	3,657
1976	9,494	686	40,575	2,841	2	3,529
1977	4,647	748	26,372	2,626	2	3,376
1978	5,905	894	49,545	3,280	21	4,195
1979	4,230	807	55,333	4,775	34	5,616
1980	2,221	713	43,060	4,619	22	5,355
1981	1,664	429	49,369	5,392	44	5,866
1982	789	619	23,445	4,093	13	4,725

SALES AND USE TAX

Imposition of the sales and use tax became effective on August 1, 1967. Both natural ore mining and taconite facilities are subject to this tax, just as are other manufacturing businesses.

"Sales" and "Use" taxes are essentially identical. The sales tax is assessed by the vendor at the time of the sale of taxable personal property; the use tax is imposed on the use, storage or consumption of taxable personal property which was purchased without sales tax having been assessed.

All sales and use tax revenue is deposited in the general fund and is not earmarked for any specific distribution.

The current rate of tax is six percent, having been increased from five percent on January 1, 1983. The same manufacturing exemptions available to other Minnesota businesses are utilized by the mining companies. The industrial production exemption allows for "chemicals, fuels, petroleum products, lubricants, electricity, gas and steam used or consumed in agricultural or industrial production." Explosives, a major item for the mining industry, are exempt under the "chemical" classification.

The "accessory tool" exemption is also available to all "manufacturing-type" businesses. This provision, M.S. 297A.25, Subd. 1(h), as amended January 1, 1974, defines exempt accessory tools as separate detachable units used in producing a direct effect on the product, having a useful life of less than 12 months. Shovel dipper teeth, "cat" ripper teeth, cutting edges, crusher bowls, drill bits, and reamers are examples of this type of exemption.

Currently, there is just one exemption unique to the taconite industry not available to the natural ore facilities or other Minnesota concerns. Under M.S. 297A.25(o), mill liners, grinding rods, and grinding balls which are substantially consumed in the production of taconite, the material of which primarily is added to and becomes a part of the material being processed, are specifically exempted from sales and use tax. These are items subjected to both extreme wear and high cost.

The one other exemption specifically granted to the taconite industry was for the express purpose of encouraging investment and plant expansion in the State of Minnesota. As provided by M.S. 297A.251, supplies and equipment used in the construction of new or expanded taconite facilities begun prior to February 1, 1975 and used or incorporated in the plant prior to July 1, 1978, were exempt from tax. A minimum increase in productive capacity of at least 10 percent was required to qualify. This exemption was one of the factors encouraging new plant investment in Minnesota.

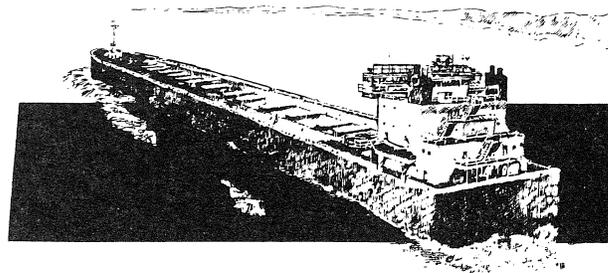
The Minerals Tax Division has the responsibility of insuring compliance by the iron ore industry with the Sales and Use Tax Law. In the interest of better administrative control, the Revenue Department does authorize Direct Pay Permits to any concern which supports extensive and varied purchase inventories. Every taconite company has elected this system of self-assessment of use tax on taxable purchases. To insure the integrity of the various systems of self-assessment, the minerals Tax Division utilizes auditing and monitoring procedures for each company on a continuous basis.

A review of the sales/use tax revenue generated annually by the iron ore industry clearly establishes that the totals are substantial amounts, and are of major ranking of all tax revenues paid by the mining industry:

1975	\$ 7,214,111
1976	7,446,168
1977	7,375,115
1978	8,573,835
1979	12,590,481
1980	9,981,715
1981	9,798,782
1982	7,827,642
1983 estimated	6,000,000

Sales Tax Rate History

August 1, 1967	3%
July 1, 1974	4%
July 1, 1981	5%
January 1, 1983	6%



M.S. 298.26 TAX ON UNMINED TACONITE

A tax not exceeding \$10.00 per acre may be assessed upon the taconite or iron sulphides in any 40-acre tract from which the production of iron ore concentrate is less than 1,000 tons.

The heading on M.S. 298.26 is somewhat misleading in that it refers to a TAX ON UNMINED IRON ORE OR IRON SULPHIDES. The tax clearly applies to unmined taconite and has been administered in that manner. The wording "iron ore" does not refer to high-grade natural ore in this instance.

The tax, as presently administered, applies to all iron formation lands on the Mesabi Range with certain statutory exemptions administered by the county. These exemptions are 40-acre tracts or government lots with 1,000 tons or more of concentrate produced, as mentioned above, or lands used in the production of taconite as referred to in M.S. 298.25. The County Assessors have generally exempted specific acreages used for tailings basins, power lines, railroads, main service roads, and acreage devoted to actual production facilities. The use of five or ten acres of taconite reserve lands for these purposes does not exempt an entire 40-acre parcel. Also, actual platted townsite areas have generally been exempt, but there can be exceptions to this, such as dwellings on leased lands.

The exemption for 1,000 tons of production applies only to the unmined taconite tax. However, the exemption for acreages and facilities used in the production of taconite applies to all real estate taxes.

The remaining iron formation lands on the Mesabi Range which are not exempt are divided into two categories by the Engineering Section of the Minerals Tax Division. This was done through evaluation of exploration and mine planning data submitted by the mining companies.

The categories are listed as follows:

1. Those lands which are underlain by magnetic taconite of sufficient quantity and grade to be currently economic.
2. Lands either not believed or not known to be underlain by magnetic taconite of currently economic quantity and grade.

Lands in the first category have been appraised by the Minerals Tax Division as having a value of at least \$500.00 per acre. An assessment rate of 43 percent applies to unmined taconite. Therefore, through application of the above rates, all lands in Category 1 would yield \$10.00 per acre in tax at a \$500.00 market value using currently existing mill rates in St. Louis and Itasca Counties.

Lands in Category 2 have been assigned a nominal value of \$25.00 per acre for the unmined taconite mineral rights. These lands were taxed at \$1.00 per acre prior to 1977. The Category 2 lands have been placed on the tax rolls at an assessed value of \$25.00 x 43 percent, and the actual amount of the tax per acre will vary between taxing districts depending on the mill rate. The low mill rate districts may be less than \$1.00 per acre, while some high mill rate districts may exceed \$2.00 per acre.

TABLE 15 — TAX COLLECTIONS ON UNMINED TACONITE

<u>County</u>	<u>YEAR ASSESSED *</u>			
	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Itasca	30,832	28,263	30,946	32,690
St. Louis	<u>208,916</u>	<u>203,955</u>	<u>209,118</u>	<u>252,011</u>
Totals	239,748	232,218	240,064	284,701

* Taxes are payable in the year following the assessment.

TAX ON SEVERED MINERAL INTERESTS

Severed mineral interests are subject to local property taxation and constitute Class 1B. Severed mineral interests are taxed at a rate of \$.25 per acre with an undivided interest tax calculated at 25-cents-per-acre times the fractional interest owned. The minimum tax on any mineral interest (usually 40-acre tracts or government lots) regardless of the fractional interest owned, is \$2.00 per tract. No tax is due on mineral interests taxed under other laws (unmined taconite or iron ore) or mineral interests which are exempt from taxation pursuant to constitutional or statutory provisions.

The taxes received are apportioned to the taxing districts in the same proportion as the surface interest mill rate of the taxing district is to the total surface interest mill rates in the area taxed. Twenty percent of the revenues from this tax are remitted to the state treasurer and deposited in the general fund in two special accounts: Reservation Residents Loan Accounts and Non-reservation Residents Account. Loans may be made for the purpose of starting a business or expanding an existing business. The amount to be credited to each reservations loan account shall be the same percentage as the number of Indians living on each reservation is to all Indians living in Minnesota.

Both the registration and the tax were contested in the courts in the case of Contos vs. Herbst. In its decision, the Minnesota Supreme Court held that the tax is valid and that an ad valorem tax need not be related directly to value and that forfeiture for unpaid tax is valid. The court, however, held invalid the forfeiture for failure to register.

This issue was addressed by the Minnesota Legislature in 1979, Chapter 303, Article X. However, the question as to whether the 1979 amendment satisfies the Supreme Court's due process requirement has not been answered in the courts.

TAXES ON COPPER-NICKEL MINING

Significant exploration activity with regard to copper and nickel minerals in northern Minnesota began in the early 1950's. This activity centered primarily around the geologic formation known as the Duluth Gabbro. Although there has been no commercial production to date, several interesting mineralized areas have been discovered.

Discussion of what would be an appropriate tax policy toward copper-nickel development continues in the legislature and among several state agencies and interested private organizations. Currently, interest is centered on a deposit previously controlled by Amax Company near Babbitt, Minnesota. Environmental and economic feasibility studies have been conducted. However, it appears that development is at least several years away.

The following taxes currently in effect will apply to copper-nickel mining:

<u>Type of Tax</u>	<u>Description</u>
Corporate Income Tax	Same as other corporations, less credit for occupation tax paid
Occupation Tax	Based on one percent of net value of ore
Production Tax	Based on crude ore production
Property Tax	Applies to smelter and surface interests of reserve lands
Royalty Tax	One percent of royalty paid
Sales Tax	Same as other corporations

A somewhat more detailed explanation of the production and occupation taxes is useful.

PRODUCTION TAX

The base production tax is 2.5-cents per gross ton of crude ore plus 10 percent for each one-tenth of one percent that the average copper-nickel content exceeds one percent when dried at 212°F. This total is then subject to an increase proportional to the monthly average wholesale price index for all commodities for the taxable year in which the concentrate is produced compared with the 1967 index.

It should be emphasized that the production tax on copper-nickel ore applies per short ton (2,000 lbs.) of crude ore, while the taconite production tax applies per long ton (2,240 lbs.) of pellets. The copper-nickel would be applied against a much larger base than taconite because of this difference. Revenue from this tax is to be distributed in the same manner as specified for the taconite production tax in the laws of 1965.

OCCUPATION TAX

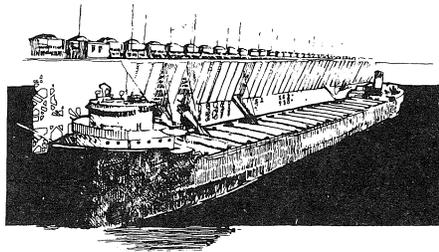
The current rate of occupation tax is one percent of the value of the ore. This value is obtained in a similar manner to values used for taconite occupation tax. Two special credits are allowable. One is for converting the copper-nickel ore into a refined or semi-refined metal within the State of Minnesota. This credit is in the amount of two-thirds of one percent.

The second credit, which is less significant, is for research, experimentation, and exploration. The total occupation tax is allowable as a credit against the corporate income tax.

The proceeds of the occupation tax are to be distributed 50 percent to the general fund; 40 percent for the support of elementary and secondary schools, and 10 percent for the general support of the University.

ROYALTY TAX

The present royalty tax is one percent of the royalties paid on copper-nickel leases, plus an additional one percent of the amount paid on gold, silver, platinum and other precious metals. A summary of taxes paid on copper-nickel and other mineral lease royalties is included in the section on Royalty Taxes.



TAXES ON OTHER MINING AND/OR EXPLORATION

Base Metals or Precious Metals

*(Copper, Lead, Zinc,
Etc.)

(Gold, Silver, Platinum
Group, Etc.)

Under current law, any of this type of mining activity would be subject to the following taxes:

- | | |
|----------------------|---------------------------------|
| 1) Occupation Tax | 3) Royalty Tax |
| 2) Sales and Use Tax | 4) Ad Valorem
(Property Tax) |

The Occupation Tax rate which would apply to base metal mines and precious metal mining is 15.5 percent. This tax is normally paid in lieu of corporate income tax. However, a special labor credit is available which would reduce the rate for an active open pit mine to about 14 percent. (This estimate is based on the experience of the natural iron ore industry with the same rate and credit available). For an operating underground mine, a more generous labor credit is available which would probably reduce the net effective rate to about 7.25 percent. The net effective occupation tax rate also applies to royalty taxes for operating mines.

Mining companies who are exploring for various metals in Minnesota for themselves would not incur any occupation tax liability until production had been started and would not be subject to income tax.

Companies who are exploring for various metals in Minnesota for others (contract exploration) would not be subject to the occupation tax, but would be subject to the income tax.

During the drilling and exploration phase, a mining company would be subject to property taxes on the property (land and buildings). Mineral rights would probably be subject to the \$.25 per ton severed mineral interest tax.

The Sales and Use Tax rate is 6 percent. The exemptions given industry are described in Section 7, Page 27, of this book. The exemptions unique to taconite would not extend to other mining without special legislation. However, the exemptions which apply to all manufacturing would also be applicable to mining.

Exemptions given for industrial production DO NOT APPLY to exploration. No tax exempt certificates should be used. All purchases by companies doing exploration are taxable.

The Royalty Tax is a tax placed on all royalties paid to mineral right owners, regardless of whether any actual mining is taking place or not. Royalties can include rents, bonus payments, non-recoverable lease payments, etc. The royalty tax rate is the same as the Occupation Tax rate after labor credits (net effective rate) for an active mine. The rate for inactive mines would be 15.5 percent, the same as Occupation Tax. Royalty paid to the State of Minnesota on state owned leases is not subject to Royalty Tax. Historically, privately negotiated leases in Minnesota have assigned the responsibility for the payment of royalty taxes to the mining company. The terms and responsibility for payment of the royalty tax is a matter of negotiation between the parties involved, depending on the terms of the lease. However, it is the responsibility of the lessee to withhold the amount of the tax even if the terms of the lease state that the lessor is responsible for the tax (M.S. 299.08).

*It should be noted that special tax laws apply to copper-nickel only and are covered in a separate section.

The Ad Valorem Tax or property tax is a matter of valuation of the ores in the ground by the state and the valuation of other property such as land, mill and smelter buildings, etc., by the county. The county establishes mill rates, assesses and collects this tax.

TAXES ON PEAT HARVESTING

As of the writing of this book, the only taxes on peat operations are the same as those on any other Minnesota agricultural or industrial operation. These taxes are the Income Tax (corporation or individual), the Sales and Use Tax, with the industrial production exemptions, and the Ad Valorem (property) Tax on the land and buildings, NOT on the value of the peat.

TABLE 16
APPLICABLE TAXES
BY TYPE OF MINERAL

	<u>Taconite Mining</u>	<u>Natural Iron Ore Mining</u>	<u>Cu-Ni Mining</u>	<u>Base Metal Mining</u>	<u>Precious Metal Mining</u>	<u>Peat Harvesting</u>
Occupation Tax	Yes ¹	Yes ²	Yes ³	Yes ⁴	Yes	No
Corp. Income Tax	No	No	Yes	No	No	Yes
Ad Valorem Tax (on ore value)	No ⁵	Yes	No ⁵	Yes ⁵	Yes ⁵	Yes
Ad Valorem Tax (on smelter, beneficiation plant or other facilities)	No	Yes	Yes	Yes	Yes	Yes
Royalty Tax ⁶	Yes	Yes	Yes	Yes	Yes	No
Production Tax	Yes	No	Yes	No	No	No
Sales Tax	Yes	Yes	Yes	Yes	Yes	Yes

This chart applies only to mining companies in commercial production. Mining companies in exploratory work are subject only to ad valorem taxes, royalty tax, and sales tax.

1 - Normally 6.75% after labor credit (nominal rate 15%).

2 - About 14% after labor credit (nominal rate 15.5%).

3 - 1% only, credit on corporate income tax.

4 - Approximately 14% for open pit mines and 7.25% for underground mines (after labor credit).

5 - Could be subject to \$.25 per acre severed mineral interest tax.

6 - No royalty tax on State of Minnesota owned minerals.

TABLE 17 — ACTIVITY SCHEDULE FOR MINING INDUSTRY TAXES

AD VALOREM TAX

<u>January</u>	—	Ad Valorem Tax Reports mailed to companies.
<u>January - June</u>	—	Estimates submitted by companies.
<u>May 15</u>	—	Ad Valorem Tax Reports due from mining companies.
<u>September 15</u>	—	Present Worth estimates mailed to companies.
<u>October</u>	—	Hearing on ad valorem mineral taxes held first secular day after October 10.
<u>November 1</u>	—	Final adjustments to property equalization sheets to county assessors.

OCCUPATION TAX

<u>March 1</u>	—	(Postmark) Tax report due from companies.
<u>May 1</u>	—	Tentative determination of tax mailed by the Division.
<u>May 15</u>	—	Evidence to support disagreement due in Division office.
<u>June 1</u>	—	Final determination mailed to companies.
<u>June 14</u>	—	Full tax payment due in Division office.
<u>December 31</u>	—	Tax forms mailed to companies.

RAILROAD GROSS EARNINGS TAX

<u>March 1</u>	—	Report and payment due in Division office for July - December of previous year.
<u>September 1</u>	—	Report and payment due in Division office for January - June of current year.

ROYALTY TAX (RENTS)

<u>February 1</u>	—	Annual Royalty Paid Report by companies due in Division office. Annual Royalty Received Report from recipients due in Division office. Quarterly royalty checks and reports from companies usually received in January, April, July and October.
-------------------	---	--

ROYALTY TAX (RENTS) cont.

December 30 — Royalty report forms mailed to companies.

SALES AND USE TAX

Monthly reports due from companies in Division office on the 25th of the month following.

TACONITE PRODUCTION TAX

February 15 — Ninety percent of the tax as estimated from the October 10 taconite production estimate is due in the Division office.

February 25 — Complete distribution of tax to taxing units.

March 15 — Final 10 percent tax figure with adjustments mailed to companies.

April 15 — Final payment due in Division office.

May 15 — Final aid payments made to taxing districts.

July 15 — School Fund Indexed distribution made by Division.

Finalize calculations for Taconite Municipal Aid accounts.

September 15 — Taconite Municipal Aid account funds distributed.

October 10 — Taconite production estimates due from companies.

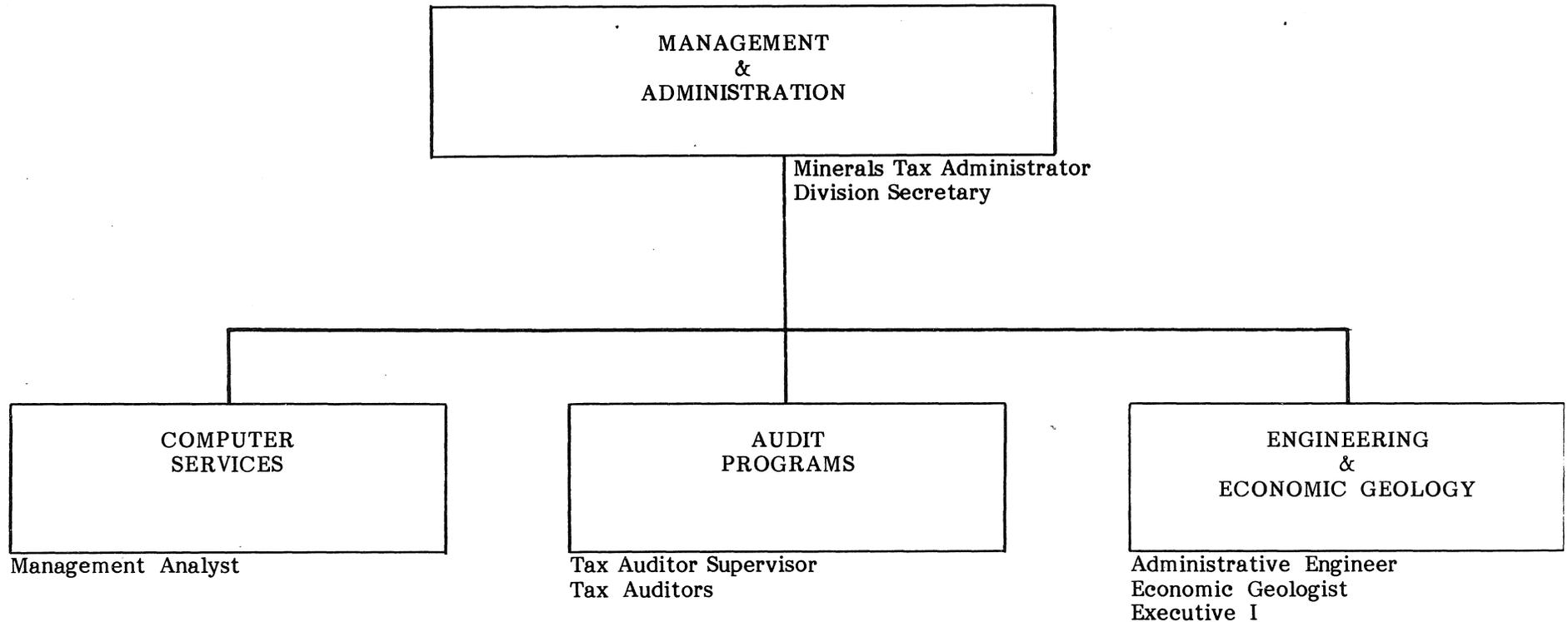
UNMINED TACONITE TAX

April 1 — Owner or leasee of mineral rights submits specified data on drill hole logs and lab tests for previous year.

December 1 — Division submits reports to county assessors.

MINNESOTA DEPARTMENT OF REVENUE

Minerals Tax Division



-38-

This report is the result of the valuable contributions of these individuals in the Minerals Tax Division: Don Walsh, Tom Schmucker, Sandy Gorrill, Bill Betzler, Steve Underhill, Norma Brusacoram, Mary Jo Grahek, Larry Ring and John Rioux.

MINERALS TAX DIVISION HISTORY

Responsibility for ore estimation activity was transferred from the University of Minnesota to the Department of Revenue on 1975. The Office of Ore Estimation was moved from the University in Minneapolis to Eveleth in November of 1975. In 1979, all activities dealing with mining taxes and production tax aids were combined into the Minerals Tax Division of the Department of Revenue and moved to Eveleth.

MINERALS AND MINING
Government Agencies

MINNESOTA DEPARTMENT OF REVENUE
Minerals tax Division
612 Pierce Street
Eveleth, Minnesota 55734
(218) 744-5364

VACANT, Tax Administrator
DONALD H. WALSH, Tax Examiner Supervisor
JOHN B. RIOUX, Tax Examiner - Occupation Tax
NORMA BRUSACORAM, Tax Examiner - Occupation Tax
BILL O'BRIEN, Tax Examiner - Sales & Use Tax
MARY JO GRAHEK, Secretary

THOMAS W. SCHMUCKER, Administrative Engineer -Production Tax, Valuations
WILLIAM F. BETZLER, Economic Mining Geologist - Minerals Information System
SANDRA D. GORRILL, Executive I - Royalty Tax, Gross Earnings Tax
VACANT, Management Analyst - Computer Programs

MINNESOTA DEPARTMENT OF NATURAL RESOURCES
Centennial Office Building
St. Paul, MN 55155
(612) 296-8157

J. A. ALEXANDER, Commissioner
K. F. RAFN, Director, Division of Minerals
R. B. HITCHCOCK, Director, Division of Forestry

Minerals Division
1525 3rd Ave. E.
Hibbing, MN 55746
(218) 262-6767

GODFREY ZAKULA, Assistant Chief Mining Engineer
GEORGE GLUMAC, Research
MARTY VADIS, Exploration
ROGER JOHNSON, Operations

MINERAL RESOURCES RESEARCH CENTER
University of Minnesota
56 East River Road
Minneapolis, Minnesota 55455
(612) 373-3341

K. J. REID, Professor & Director
I. IWASAKI, Professor, Mineral Processing/Hydrometallurgy
J. J. MOORE, Associate Professor, Process Metallurgy/ Plasma Technology (Associate Director)
N. F. SCHULZ, Research Associate, Agglomeration
K. A. SMITH, Assistant Professor, Mineral Processing/Hydrometallurgy
A. M. STARFIELD, Professor, Computer Applications/Simulation
R. L. STERLLING, Assistant Professor & Director, Underground Space Center
J. K. TYLKO, Adjunct Professor, Applied Plasma Metallurgy

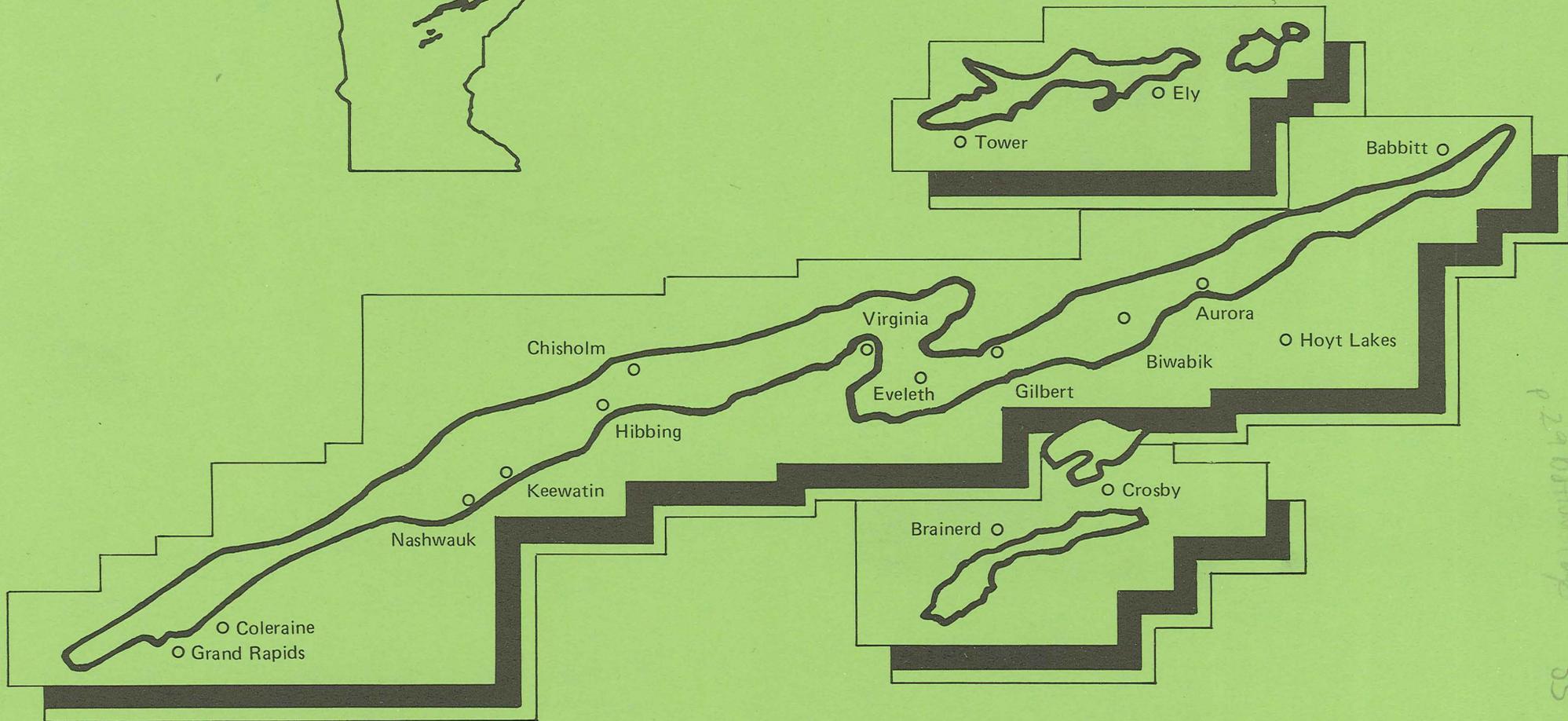
MINNESOTA GEOLOGICAL SURVEY
1633 Eustis Street
St. Paul, Minnesota
(612) 373-3372

M. S. WALTON, Director
G. B. MOREY, Associate Director and Chief Geologist
D. L. SOUTHWICK, Associate Chief Geologist
V. W. CHANDLER, Geophysicist
B. M. OLSEN, Well Log Data Base
J. F. SPLETTSTOESSER, Program Administrator
NANCY BALABAN, Editor

COUNTY MINE INSPECTORS

D. A. SANDSTROM, St. Louis Co. Mine Inspector, Court House Annex, Virginia, MN (218) 749-7121
S. P. JELENCICH, Crow Wing Co. Mine Inspector, Star Route 1, Deerwood, MN (218) 546-5868
ALVAR HUPILA, Itasca Co. Mine Inspector (218) 245-2261

MINNESOTA'S IRON MINING AREA



p. 29 bottom top 85