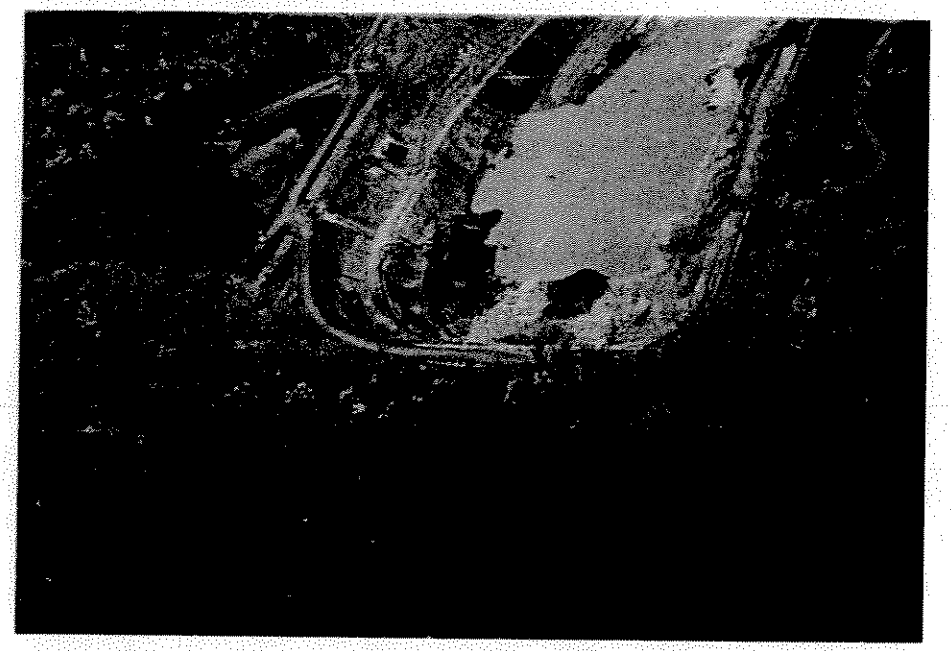
pt 67

JUST ONE DNR VARIANCE OF OUR MINING LAWS THREATENS THE FLAMBEAU RIVER



Note the Flambeau River lapping dangerously close to the mine because of a DNR variance.

State law prohibits mining within 300 feet of a river. County zoning laws further restrict the distance to 500 feet from a river. Yet, through one of the largest loopholes in our mining laws, the DNR gave Kennecott a variance to our "strong" mining laws and allowed them to mine within 140 feet of the Flambeau River.

The photo was taken in 1994, when the precariously high water level threatened to flood the mine and carry acid-laden toxics downstream. This threat will continue long after Kennecott has taken their profits and left the state because the pit is unlined and unable to prevent acid mine drainage from migrating into the groundwater and Flambeau River.

How was this possible? Many of Wisconsin's mining provisions contain exemptions and variances to the very environmental, public welfare and safety standards that the laws allegedly protect. As long as the mining companies can request exemptions from our mining laws, our clean rivers and healthy forests are at risk. Wisconsin needs to protect itself and repeal special loopholes granted to the mining industry.

Ad #2 - Final

Mining opponents were wrong in 1990...

Some people say we need a ban on mining in Wisconsin. These same people had a lot to say about the Flambeau Mine back before it was built. Like Chicken Little, they said the sky was falling. It wasn't.

They said "We cannot afford to allow mining in Northern Wisconsin that might jeopardize a major watershed in the state with severe pollution of sulfide mining and its waste." (June 26, 1990)

It didn't happen. The Flambeau Mine has had no adverse effect on groundwater or the Flambeau River.

They said, "...we can count on [the Flambeau Mine] polluting our pure and clean water to the level of New York City's water." (March 26, 1990)

It didn't happen. The Flambeau Mine has treated more than 500 million gallons of water. All of it was pure enough to protect the most sensitive of aquatic species and better than safe drinking water standards.

They said, "Mining a sulfide mineral, like the Ladysmith copper deposit, creates enormous amounts of sulfuric acid runoff." (March 24, 1990)

It didn't happen. There has been no runoff from the Flambeau Mine during the entire time of its operation.

They said, "The law does not ensure that the mining company will pay any taxes." (June 26, 1990)

Wrong again. The Flambeau Mine has paid more than $20 million dollars in state and local taxes. Half of that will come back into local communities.

...they're still wrong.

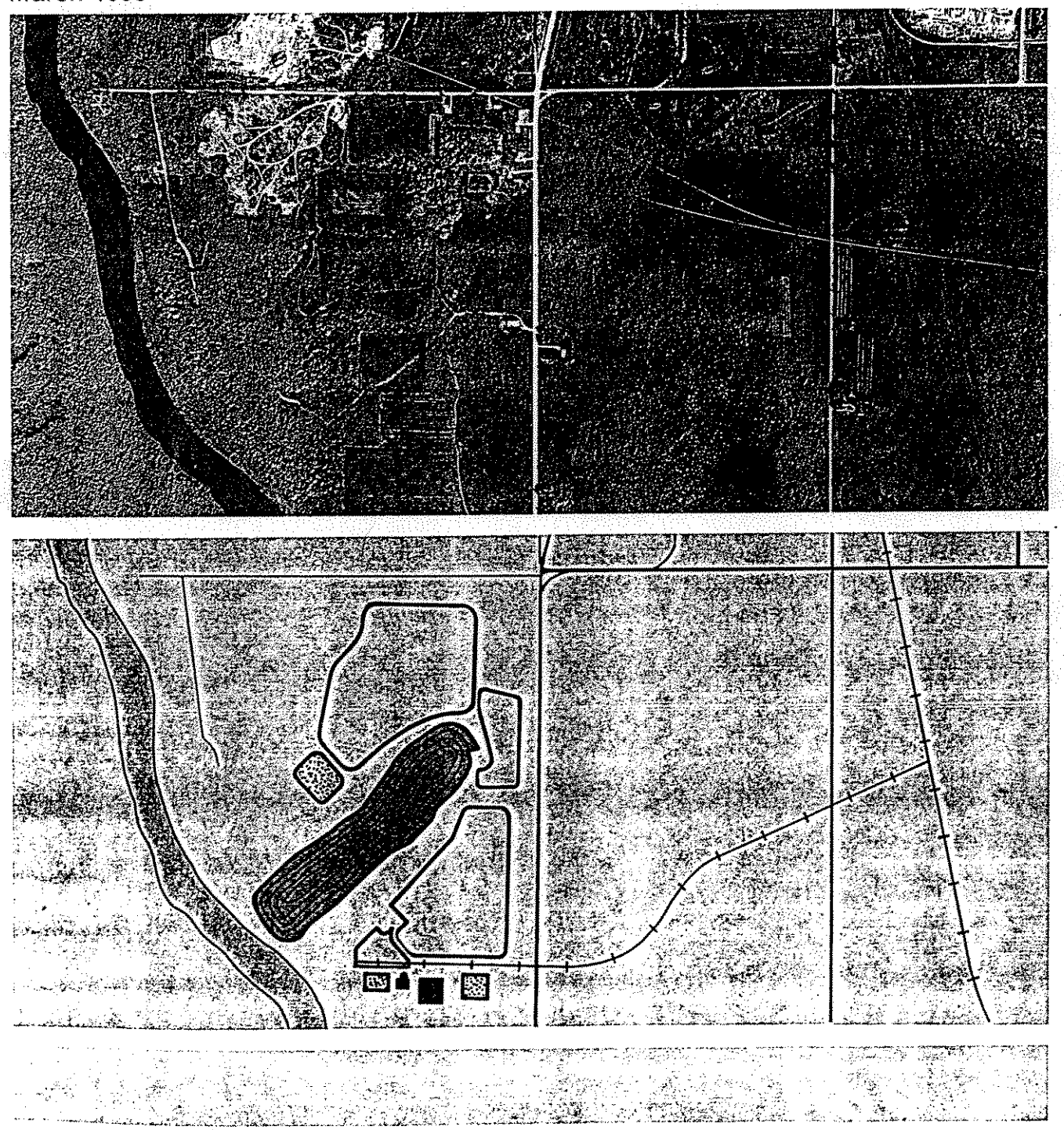
Partners In Progress
Flambeau Mining Company

Tell our lawmakers you don't want them to base decisions that affect your life on the word of people who haven't gotten one thing right. Oppose the mining ban. Attend the public hearing May 12 at 2:30 p.m. in the new Rusk County Community Library, West Corbett Avenue, or call toll free 1-888-422-9972.

State of Wisconsin
Department of Natural Resources

Final Environmental Impact Statement Flambeau Mining Co. — Copper Mine Ladysmith, Wisconsin

March 1990



High Sulfur Waste Stockpile, Ore Crushing and Loading Areas

The lining of these areas with a geomembrane would limit leachate migration to rates where no environmental impact to groundwater quality is expected. A worst-case leakage would lead to contaminants flowing into the mine pit where they would be treated prior to discharge. Delayed movement of contaminants after facility closure would be of limited environmental significance due to dilution as they flow into the adjacent Flambeau River.

Settling Ponds

Runoff collected from the low sulfur waste stockpiles would be directed to the settling ponds for retention and treatment prior to discharge to the Flambeau River. Since the settling ponds are unlined, wastewater would seep through the pond bottoms into the groundwater at a rate of at least 5,000-6,000 gallons per day. This seepage could cause an increase in contaminant concentrations in the groundwater near the ponds. However, most of the groundwater under the ponds would flow into the pit, thus limiting the potential zone of contamination. A small amount of contaminants from the settling ponds may be transported in the groundwater to the Flambeau River, but would not measurably affect the river water quality.

Post-Closure Impacts From Pit Backfilling

Acidic leachate could be produced by oxidation of pyrite contained in the mineralized waste rock. Acidic leachate can dissolve metals of environmental concern which can then be transported into the environment. The fragmented condition of the backfilled waste would increase its reactivity. The acid production of the waste would be controlled during backfilling the pit by liming the waste to maintain a pH of 6.5 or greater. Laboratory analyses indicates that about 2.5 pounds of lime per ton of high sulfur waste would be required to achieve this pH.

Once the reclamation activities are completed, the limited circulation of oxygen through the waste should reduce the potential for sulfide oxidation to insignificant levels. Although some attenuation of metals within the backfilled waste would occur due to their contact with low sulfur backfilled materials, some areas of waste leachate will probably be transported directly from the pit without attenuation. Therefore, a conservative evaluation of leachate concentrations would assume their concentrations would be controlled by their most soluble mineral forms. A conservative evaluation would also ignore common ion effects. Leaching tests and solubility data indicate copper hydroxide, ferric hydroxide, manganese hydroxide and gypsum are the mineral forms at the pH of 6.5 most likely to control the resultant leachate concentrations. These same minerals would comprise the bulk of the wastewater treatment sludge backfilled with the high sulfur waste rock. It is possible that manganese concentrations may exceed those predicted by solubility equilibrium calculations since it could form a neutral species complex with the high concentrations of sulfate ion present in the leachate. Using the above conservative assumptions, the maximum leachate concentrations for copper, iron, manganese and sulfate would be about 0.014 mg/l, 0.32 mg/l, 0.725 mg/l and 1360 mg/l, respectively.

The potential environmental impact of the movement of this leachate is limited by the restricted rate of movement of groundwater through the pit and by the discharge of any contaminated groundwater to the Flambeau River immediately west of the pit. Figure 3-8 shows that the saprolite layer above the wastes backfilled in the pit and the alignment of the pit along the groundwater flow path limits the amount of groundwater which can flow through the high sulfur waste. A cross section groundwater model along the pit length prepared by Prickett indicates about 1.4 gallons per minute would flow through the backfilled waste and discharge into the Flambeau River. A 50% uncertainty factor would increase this value to 2.1 gallons per minute. Since there are no groundwater users between the pit and the river, the only significant impact would be the discharge of leachate to the river. It is expected the leachate concentrations would be lower than the maximum values given above and that they would decrease over

time. However, the maximum values can be compared to the river flow adjacent to the pit to evaluate the maximum potential impacts to the river.

The Flambeau River's low flow discharge of about 500 cubic feet per second is equal to 224,000 gallons per minute. The maximum leachate flow of 2.1 gallons per minute discharging into the river would be diluted by a factor of about 107,000. Using the maximum leachate concentrations given previously, the incremental contaminant additions to the river would be 1.3×10^{-7} mg/l for copper, 3.0×10^{-6} mg/l for iron, 6.8×10^{-6} mg/l for manganese, and 1.3×10^{-2} for sulfate. These metal concentrations are not even measurable by today's instruments. A comparison of the incremental contaminant concentrations to the historical river background concentrations is shown in Table 3-1.

TABLE 3-1

Comparison of Contaminant Loading from Pit Leachate with Existing Water Quality

Contaminant	Incremental Contaminant Concentrations (mg/l)	Flambeau River Back-Ground Concentration (mg/l)
Copper	0.00000013	<0.115
Iron	0.000003	0.40
Manganese	0.0000068	<0.05
Sulfate	0.013	10

The results show that addition of the maximum concentrations of contaminants in groundwater flowing through the backfilled pit would not adversely affect water quality in the Flambeau River.

IMPACTS TO PRIVATE WELLS

The groundwater drawdown resulting from pit dewatering would cause levels in wells near the mine to drop. Figure 3-9 shows the maximum extent of the 2 foot drawdown contour and private wells in the mine vicinity. Water levels in the wells outside the 2 foot drawdown contour may decrease slightly, but probably not with adverse affects to the well performance. Water level declines of more than 2 feet could cause wells to become dry or to no longer comply with well regulations. The impacts to individual wells depends on the specific construction of each well and the amount of drawdown at the well. The model simulation of the maximum extent of drawdown (Figure 3-4) indicates that eight Flambeau Mining Co.-owned wells would experience maximum declines of 10-15 feet with one other well having between 0-2 feet of decline. Other private wells northeast of the pit in the STH 27 area would have less than 10 feet of drawdown. Of this group, one is predicted to have about 8 feet of drawdown, four would have between 2-5 feet of drawdown, and ten wells would experience 0-2 feet maximum drawdown. This last group of wells is adjacent to the Flambeau River and drawdown is expected to be insignificant due to the potential for the river to act as a constant source of groundwater recharge.

Groundwater contamination would pose a minor threat to private wells. The general groundwater flow pattern through the site is westerly, with all of the area groundwater discharging into the Flambeau River. The only private wells within the path of groundwater potentially contaminated by the mine site

Flambeau Mining Co. Completes Four Years Of Production At Ladysmith Copper/Gold Mine

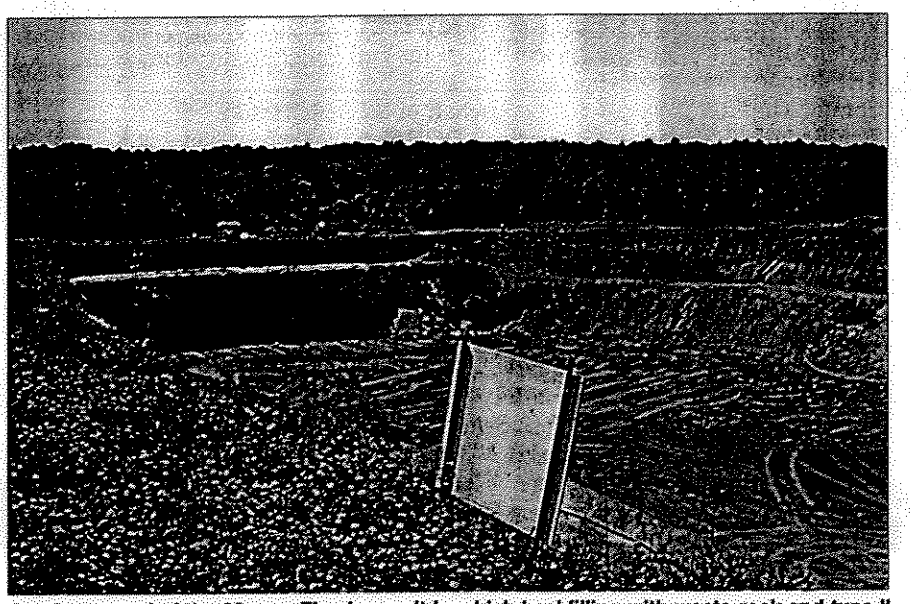
Closure and reclamation under way with site monitoring to continue after revegetation is completed in 1998

In August, Flambeau Mining Co., a wholly-owned subsidiary of Kennecott Corp., exhausted the ore reserve to complete operation of its mine at Ladysmith in northwest Wisconsin that ranked as one of the world's higher grade copper/gold properties. It was the only active metal mine in Wisconsin during this period.

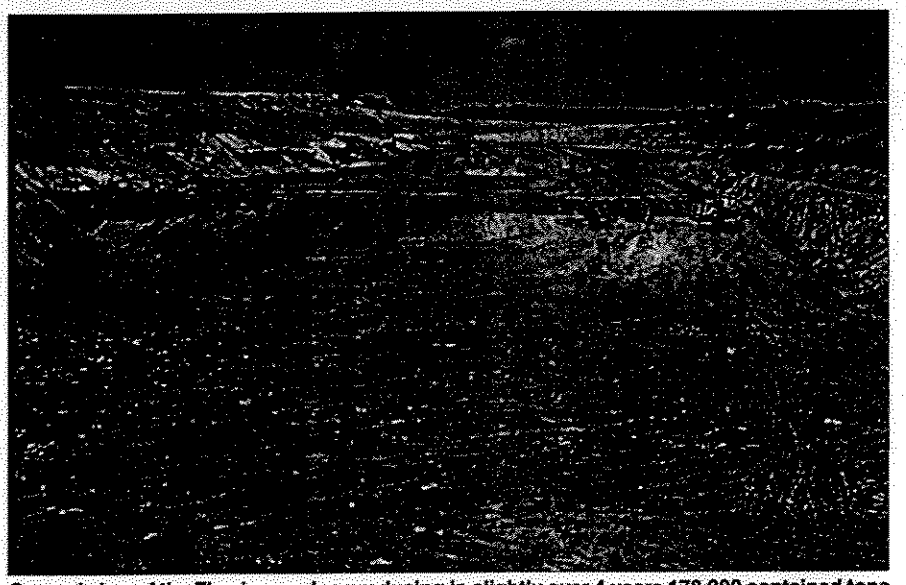
On Aug. 15, the final ore was crushed at the Flambeau mine, and on Aug. 25, the last crushed ore shipment was made in a train of nineteen cars to processing facilities in Canada. The 1000-mile distance via the Wisconsin Central in the US and CP-Rail and Ontario Northland in Canada was the world's longest for transportation of coarse ore from a mining operation.

During slightly over four years of activity, 1,894,000 tons of ore averaging 8.9% copper and 0.10 oz. of gold per ton were mined, crushed to minus 8 in. and shipped from the Flambeau mine. This tonnage includes 400,000 metric tons of direct smelting ore (DSO) containing up to 30% copper and 150,000 tons of gold-bearing gossan overlying the copper deposit delivered to Noranda's Horne smelter in Noranda/Rouyn, QC and the remainder was milling ore averaging 8.9% copper processed in Falconbridge Ltd.'s Kidd Creek concentrator at Timmins, ON.

Since March 1997 backfilling of the 32-acre open pit with waste rock and low sulfur material of plus 1%, which was segregated during mining, has been under way for completion in October. The equipment includes eight 50-ton Cat haulage trucks and five 631 Cat scrapers, with two front-end loaders with 5 and 7-cubic yard buckets.



Southwest end of the 32-acre Flambeau pit in which backfilling with waste rock and type II material began in March.



General view of the Flambeau mine producing in slightly over 4 years 178,000 contained tons of copper and 328,000 oz. of contained gold. Currently backfilling is under way in the 550-ft. wide by 2600-ft. long pit.

Gossan Shipments Start in May 1993

After several delays, environmental clearances were issued by the state of Wisconsin in 1992 to develop the high grade Flambeau deposit. Following a $28 million expenditure, Flambeau commenced shipments of gold-bearing ore from the gossan overlying the copper deposit on May 12, 1993, to Noranda/Rouyn.

On June 28, 1993, the first shipment of crushed copper ore was railed to the Kidd Creek concentrator, in which crushed ore was processed in a separate circuit. Also in 1993, shipments of direct-smelting ore (DSO) containing up to 30% copper began to Noranda/Rouyn.

At a ceremony held on July 31, 1993, the Flambeau project was officially dedicated by Gov. Tommy Thompson of Wisconsin and Bob E. Cooper, president/CEO of Kennecott. The ceremony was held exactly 25 years after discovery of the Flambeau orebody in 1968 by Great Lakes Exploration Co., a wholly-owned subsidiary of Kennecott.

In 1993, production of marketable copper contained in ore from the enriched zone by Flambeau totaled 24,100 metric tons and in the next three years were at higher levels of 42,000 tons, 39,480 and 41,500 tons in 1994, 1995 and 1996, respectively. In 1993, gold production amounted to 88,000 oz. contained principally in ore from the gossan, and then declined to lower rates of 63,000 oz., 69,930 and 60,840 oz. in 1994, 1995, and 1996, respectively.

Reclamation of Flambeau Pit

According to the original Flambeau mine reclamation program, which was thoroughly designed and approved by the Wisconsin Department of Natural Resources, backfilling of the open pit mine with waste rock and type II material of plus 1% sulfur that was segregated during mining, began in March and will be completed in Oct. 1997.

The area under the 36 by 42-in. jaw crusher and the rail spur will be reclaimed last.

In the Flambeau mine laboratory, paste pH and conductivity of the waste rock to be backfilled are measured. Limestone to achieve neutralization is added in varying amounts to the waste rock depending on the values measured in the laboratory tests.

The reclaim area was laid out in 60 by 60-ft. blocks for sampling and limestone addition. Limestone supplied by the Cutler plant in Superior was spread using a paddle-wheel scraper and reclaimed rock was spread with dozers and then compacted in 3-ft. lifts.

In the reclamation, type I rock, containing less than 1% sulfur, is placed on top of type II material and then covered with saprolite, sandstone and till, also applied in 3-ft. lifts.. The pit was mined to a depth of 220 ft. and on surface is 2600 ft. long in a northeast/southwest direction with a 550-ft. width.

Total Copper/ Gold Production

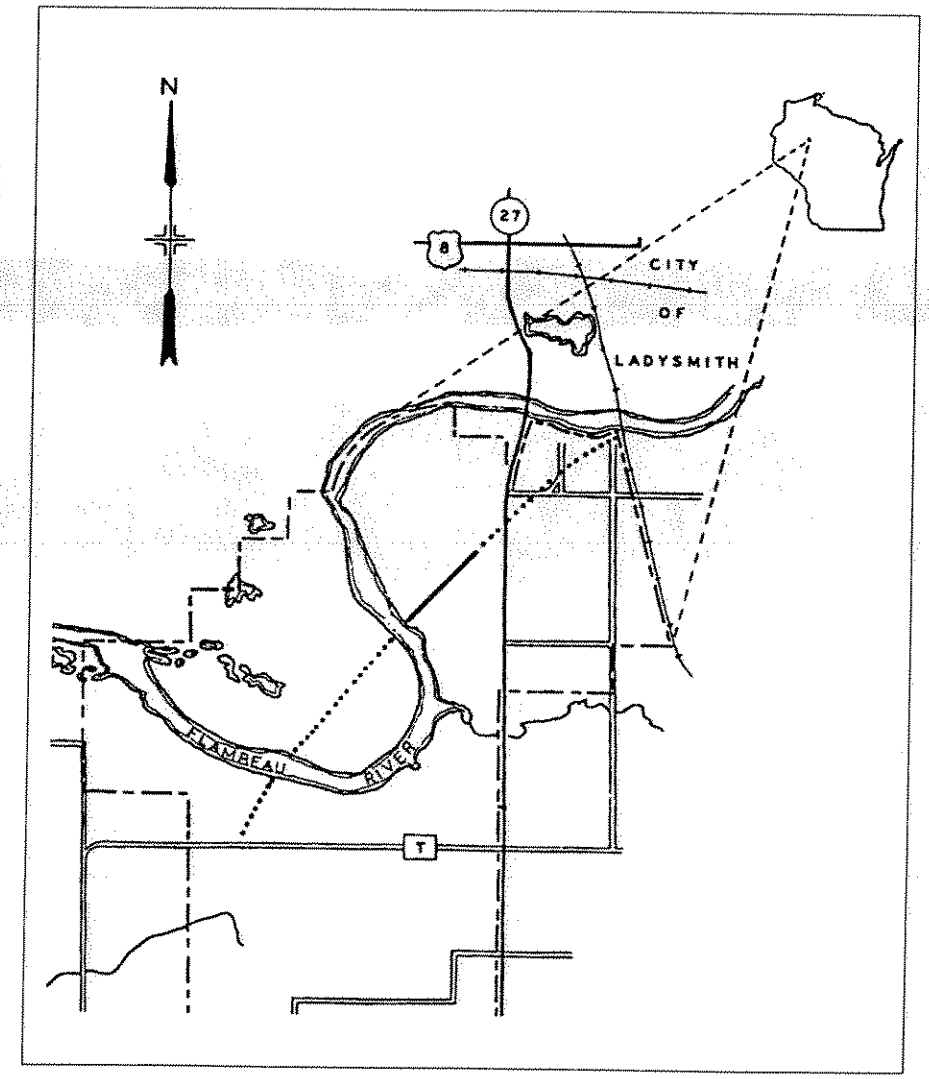
During the 4-year and 2-month period of activity of the Flambeau mine, production totaled 178,000 contained metric tons of marketable copper, which is roughly equivalent to the 4-year requirement of the state of Wisconsin, and 328,000 oz. of contained gold.

Site monitoring of the Flambeau property, which has three drainages, the same as originally, will continue after revegetation is completed next spring.

In July 1992, the mining contract was awarded to Ames Construction Co., Burnsville, MN, and to provide access a 1.6-mile spur was completed by the Wisconsin Central early in 1993 from its north/south main line between Duluth/ Superior and Chicago.

On a 6-day per week schedule, 20 open top gondola cars daily were loaded with an average of 92 metric tons of copper ore or 84 tons of gossan and moved from the Flambeau mine to the mar-shalling yard in Ladysmith, which is a major station on the Wisconsin Central with main north/south and east/west lines.

From Ladysmith, loaded rail cars were moved on the WC 365 miles east to Sault Ste. Marie, MI. On crossing the St. Mary's River the cars were



transferred to CP-Rail for movement 375 miles to North Bay. From this point they moved onto the Ontario Northland Ry. and were pulled another 260 miles to the Kidd Creek concentrator in Timmins or 250 miles to Noranda's Horne smelter in Noranda/Rouyn.

At the Kidd Creek concentrator, 1000 metric tons of Flambeau ore were processed daily.

During the 4-year period, $25 million were invested in the community of Ladysmith as a result of taxes paid by Flambeau. It is anticipated that as a result of the investment of $25 million in new industrial infrastructure 300 to 400 new jobs will be created in the community over the next one or two years. A $500,000 contribution was made by Flambeau toward a new library in Ladysmith that opened in July.

Visitors to the viewing stand on Wisconsin Highway 27 overlooking the property totaled 28,000 a year.

The Flambeau mine property covers 170 acres.

At the Flambeau mine, the underground ore reserve remaining in place is estimated at 2 to 3 million metric tons grading 2% to 3% copper.

Jeff Earnshaw, mine manager for Flambeau Mining Co., pictured at the property just prior to completion of slightly over 4 years of copper/ gold production.

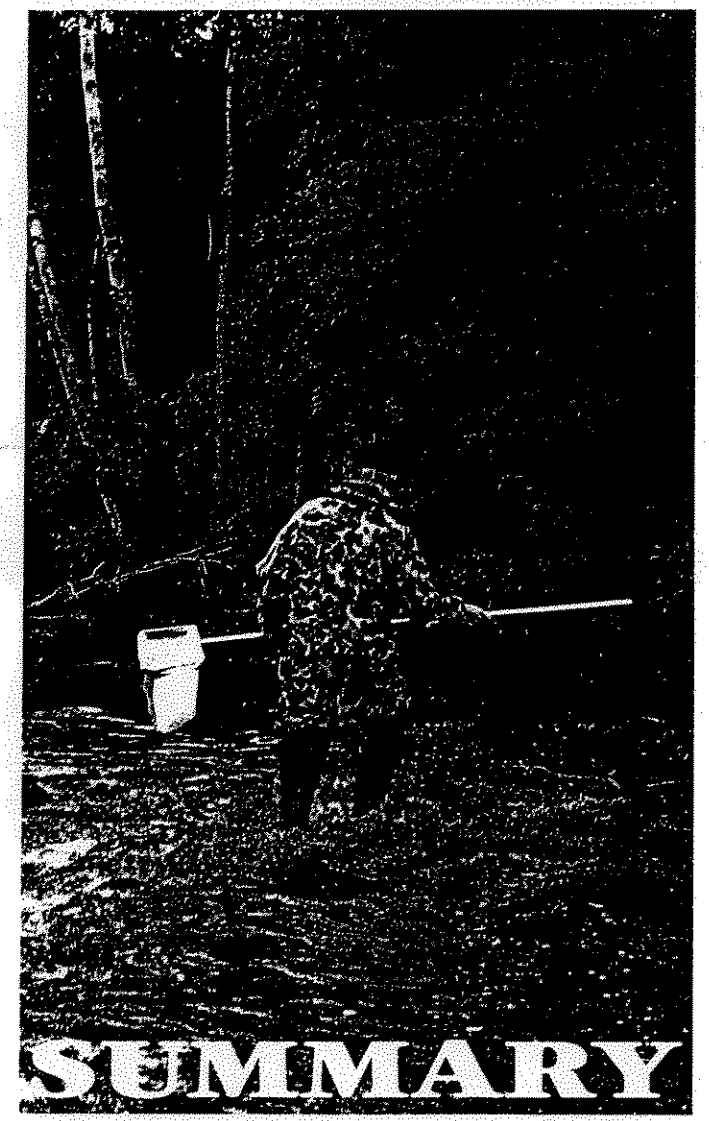
Effective on May 1, Thomas Myatt was promoted from general manager for Flambeau Mining Co. to director-finance and control for Kennecott Energy Co., Gillette, WY. Since Nov. 1, 1994, he was general manager for Flambeau succeeding Gregory P. Fauquier, who became vice president-US mines of Barrick Gold Corp., Toronto.

Until Oct. 13, 1993, Lawrence E. Mercando, who had been associated with Flambeau since the 1980s, was general manager for Flambeau. Mr. Mercando returned to Kennecott in Salt Lake City as director-technology for the research and development group in Salt Lake City, from which he retired effective on June 30, 1997.

On May 1, Jeff Earnshaw was promoted from operations manager to mine manager for Flambeau, with Laura Childs, controller, Ron J. Vick, health, safety and human resources manager, and Jana Murphy, environmental manager.

The Flambeau mining operation averaged 70 employees. ▲

The Crandon Project



Mine Plan and Environmental Impact Report

Crandon Mining Company

Crandon Mining Company

To the Residents of Forest County and Wisconsin:

Plans for the Crandon zinc and copper mine are now complete and will undergo a thorough environmental review conducted by the Wisconsin Department of Natural Resources and the U.S. Army Corps of Engineers. We are pleased to present this summary of the mine's operations, environmental impacts and economic benefits. As outlined herein, we are committed to building a mine that will:

- Meet or exceed all federal and state environmental regulations, protect or enhance all local resources, and operate in harmony with Northwoods life.
- Provide hundreds of long-term jobs and new tax revenue to support a higher standard of living and help local communities build a strong, prosperous future.

We welcome you to review our plans and to bring any questions or concerns to our attention. We also encourage your involvement in the mine permitting process. Please see Page 18 of this booklet if you would like more information.

Sincerely,

Jerry Goodrich, President
Crandon Mining Company

TABLE OF CONTENTS

THE CRANDON PROJECT - FACTS AND FIGURES

PROJECT DATA

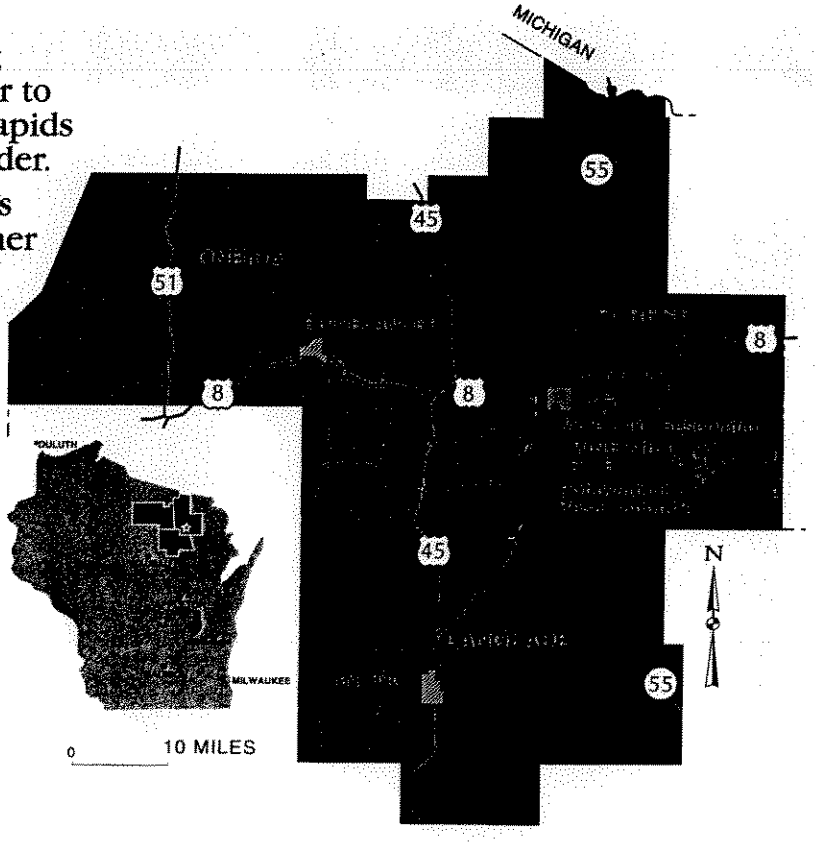
Project location	Forest County, 5 miles south of Crandon.	
Project site	550 acres including mine, mill and all related facilities.	
Orebody	55 million tons of recoverable ore, primarily zinc and copper, smaller amounts of lead, silver and gold.	
Production rate	5,500 tons of ore per day, extracted by underground methods.	
Project Schedule	Construction	3 years
	Operations	28 years
	Reclamation	4 years
	Long-term care	40+ years

ENVIRONMENTAL PROTECTION

Surface water	Sophisticated water treatment plant releasing high-quality treated water to Wisconsin River at Hat Rapids Dam, south of Rhinelander.
Groundwater	Engineered tailings ponds with top and bottom liner systems, drain system, monitoring wells and other safeguards.
Other control	Project design minimizes air emissions, noise, erosion and runoff.
Permits	More than 40 federal, state and local permits required.

ECONOMIC BENEFITS

Employment	550 construction employees at peak (30% local hires); 402 full-time operations employees for 28 years (70% local hires); 341 jobs in related businesses.
Local purchases	$43 million total during 3 years of construction; $1.2 million annually during 28 years of operations.
Tax revenue	$119 million in Net Proceeds Taxes over project life.
	$110 million increase in local tax base, benefiting towns of Lincoln and Nashville, Forest County, Crandon School District.



MINE PROFILE

The Crandon mine will use modern technology to protect the surrounding environment, maximize worker safety, and remove ore and metals efficiently.

THE OREBODY

The Crandon orebody, discovered in 1975, lies in Forest County, five miles south of the city of Crandon and two miles east of State Highway 55. It contains 55 million tons of ore, mainly zinc and copper with smaller amounts of lead, silver and gold. The orebody is about 4,900 feet long from east to west and about 100 feet wide from north to south. It begins about 200 feet below the surface and extends to a depth of about 2,200 feet.

THE MINE SITE

Mine facilities will occupy about 550 acres, including mainly forest and also smaller tracts of wetlands and open land. Major facilities on the surface include the headframe housing the opening to the main shaft, a mill for ore processing, a tailings management area, a water management and treatment system, offices, maintenance shops, storage buildings, and parking.

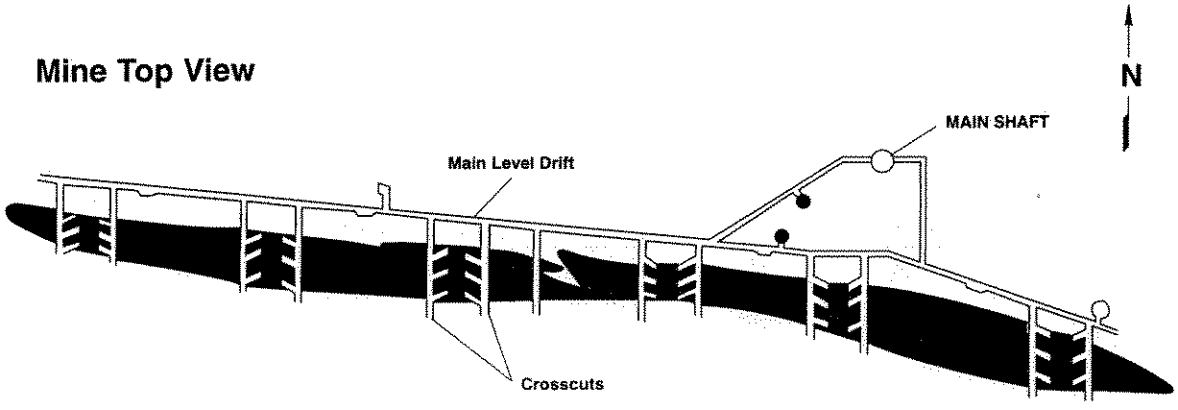
TRANSPORTATION AND UTILITIES

Cars and trucks will reach the mine using a 3-mile service road running southeast from Highway 55. A 2.7-mile railroad spur will connect the mine to the Wisconsin Central Limited tracks northeast of the site. A 115-kilovolt power line will connect the mine with an electric power substation near Monico, about 14 miles to the northwest. To supply natural gas, a pipeline will connect the mine with an existing gas main one-half mile north of Crandon.

MINING THE ORE

The mine will produce about 5,500 tons of ore per day. Ore will be mined underground by blasthole open stoping, a method proven both safe and efficient. To reach the ore, miners will construct three vertical shafts and a series of horizontal tunnels called drifts. Ore will be blasted loose from chambers called stopes, each 100 feet wide, 75 feet long and 300 feet high. The ore will be hauled to an underground crusher, then hoisted to the surface for processing. Mined-out stopes will be backfilled with waste rock from the mine, coarse tailings from the mill and, if needed, cement.

Mine Top View



SEPARATING THE METALS

In the mill, ore will be combined with water and ground to a consistency of fine sand. This mixture will go through a series of steps that separate metal particles from the rock and float them to the surface. The mill will produce separate concentrates of zinc, copper and lead. These will be shipped by rail to smelters outside the state. Small amounts of silver and gold will be recovered during smelting.

MANAGING MINE TAILINGS

Tailings - rock particles left after ore minerals have been removed - will be used to backfill the mine. Tailings not needed for backfill will be placed in four engineered basins designed for permanent groundwater protection. As each basin is filled, it will be closed and reclaimed.

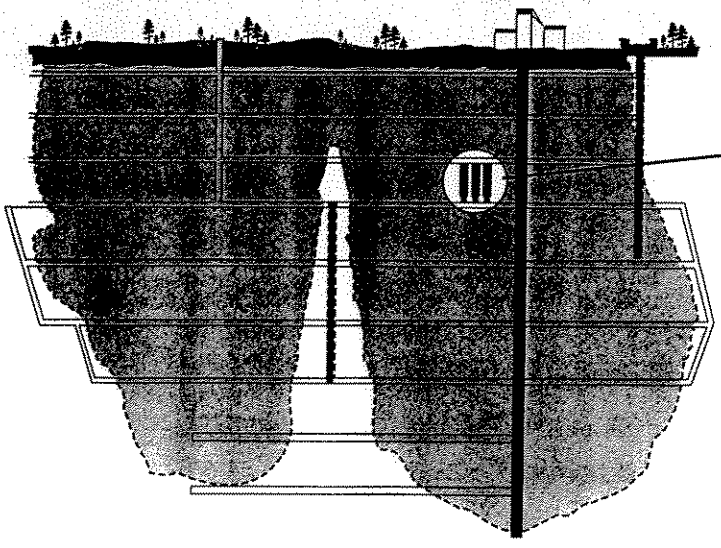
KEEPING WATER CLEAN

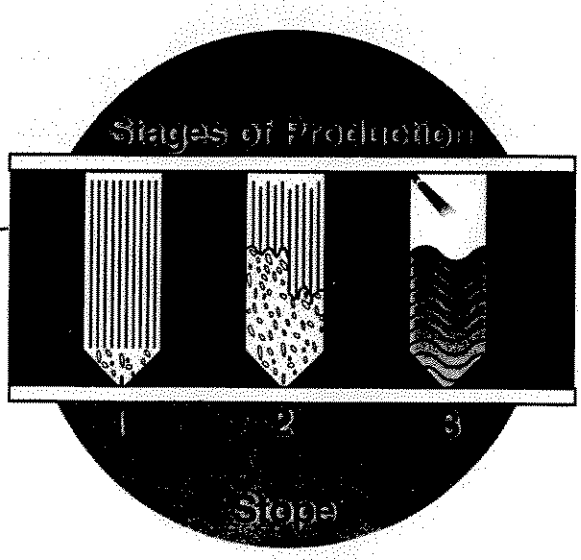
Groundwater that seeps into the mine will be collected and used in mine and mill operations. Water in excess of the mine's needs will be treated in a sophisticated water treatment plant to meet strict quality standards set by the Wisconsin Department of Natural Resources. After treatment, the water will be discharged by way of a buried pipeline to the Wisconsin River.

RECLAIMING THE LAND

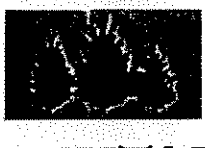
Site reclamation will be a continuous process: as soon as work is completed on a given part of the site, reclamation in that area will begin. When the entire project is completed, final reclamation will start. Under state law, Crandon Mining Company must provide financial guarantees that the site will be reclaimed to a long-term, environmentally stable condition.

Mine Cross Section





1. New stope just starting production
2. Active stope in full production
3. Stope being backfilled



ENVIRONMENTAL STUDIES

Exhaustive scientific studies show that the Crandon mine will protect lakes, streams, groundwater, wetlands, wildlife and other natural resources, while bringing substantial economic benefits.

As required by state and federal laws, Crandon Mining Company has prepared a complete Environmental Impact Report for the Crandon project. The following pages explain how the mine will affect local natural resources and the economy.

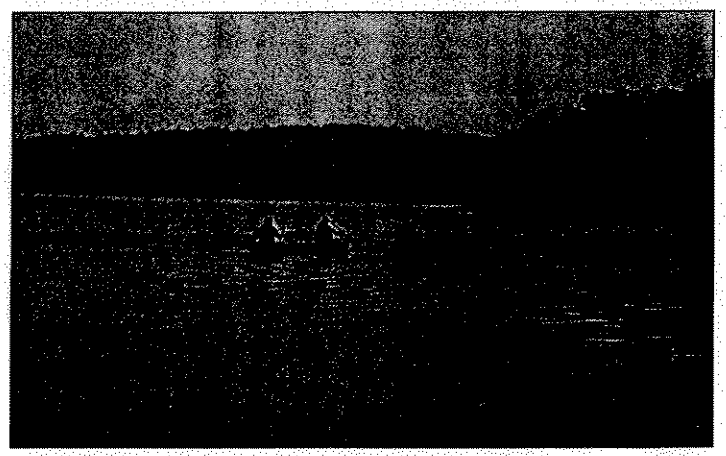
These findings are based on a series of scientific studies believed to be the most thorough ever conducted for an industrial project in Wisconsin. The studies, conducted by Foth & Van Dyke, an environmental engineering firm based in Green Bay, involved more than 140,000 hours of work by 150 engineers, scientists and technical personnel. For added assurance that these studies are accurate, Crandon Mining Company asked independent experts to review and critique study methods and findings.

Measuring stream flow rates.

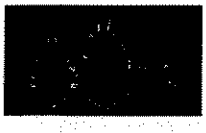
All of this work built upon, updated and refined previous studies of the local environment conducted in the 1970s and 1980s. Volumes of data have been collected, including soil and rock samples, well surveys, groundwater and surface water testing and flow analyses, lake studies, water and sediment samples, fish samples, bird and mammal studies, air monitoring, recreational resource inventories, wetlands assessments, socioeconomic studies, archaeological surveys and traditional cultural property inventories.

Taken together, the studies provided a comprehensive body of knowledge that CMC used to design the mine for the lowest possible impact on the environment, in full compliance with all relevant environmental standards.

Preparing stream water samples for testing.



Studying aquatic life in local lakes.



WISCONSIN'S MINING REGULATIONS

Under Wisconsin's mining regulations, the Crandon mine will proceed only if it is scientifically proven environmentally safe.

All of CMC's environmental studies are required to show that the Crandon mine will comply with Wisconsin's mining regulations, which are among the strictest in the nation.

All told, the mine needs more than 40 federal, state and local permits before construction can start.

Under the state's mine permitting process, the Crandon mine will receive a thorough, scientific review conducted by the Wisconsin Department of Natural Resources. In addition, the U.S. Army Corps of Engineers will conduct its own review.

The two agencies will prepare separate Environmental Impact Statements, first a draft for public review, then a final document. The Final Environmental Impact Statements will be the subject of a formal Master Hearing, leading to a final decision on whether the mine goes forward.

During the process, the DNR and COE will hire their own scientific experts to review CMC's environmental studies and mine plans. Any individual or group in the state has the right to do the same. In the end, before receiving a permit, the Crandon mine must meet six criteria specified in state law and listed at the right.

The Crandon mine will receive a permit only when it is proven to:

1. **Comply with all state and federal environmental regulations.**
2. **Protect public health, safety and welfare.**
3. **Safeguard lands with unique features, critical ecological importance or historical value.**
4. **Have a net positive socioeconomic impact.**
5. **Comply with local zoning laws.**
6. **Include suitable plans for reclamation.**

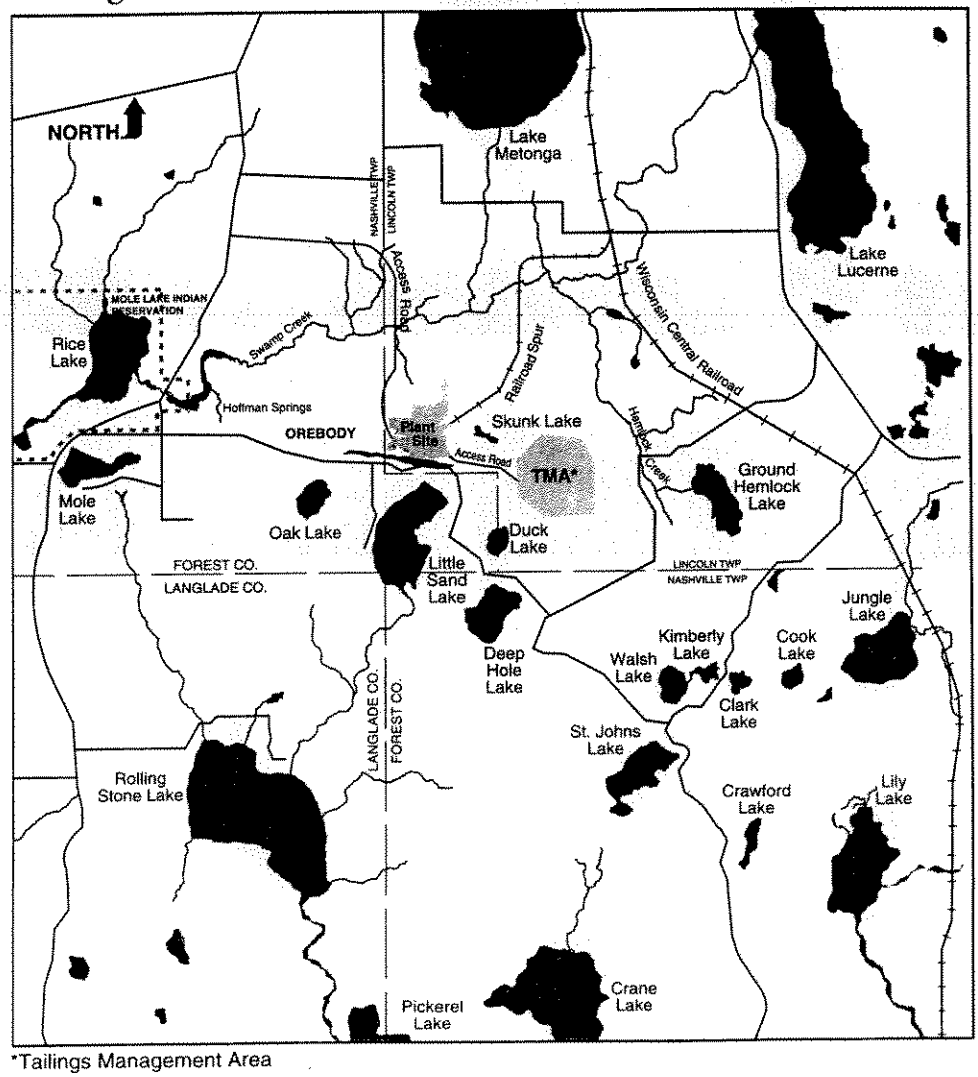
SUSTAINING WATER LEVELS

Mining at Crandon will have minimal effects on lake and stream levels, and only in the immediate area of the orebody. All private water supplies will be fully protected.

As the Crandon mine is built and operated, water will seep into the mine from the overlying groundwater at the rate of about 600 gallons per minute. Over several years, this will gradually lower groundwater levels in the immediate area of the mine.

To learn about the effects of lower groundwater levels, Crandon Mining Company conducted extensive environmental studies, including computer simulations of the effects on lakes and streams. These studies show that the effects on surface waters will be small. All lakes and streams will be sustained at levels that protect fishing, boating, swimming, wild rice gathering and other public uses, as required by state law. Among the findings:

- Only 12 private wells in the immediate area of the mine that are not owned by CMC will be potentially affected. CMC will monitor groundwater and will deepen or replace, at its expense, any wells that monitoring shows are likely to be affected by the mine.
- Water levels will not change on Lucerne, Metonga, Ground Hemlock, Mole, St. Johns, Oak, Crane, Pickerel, Post, Kimberly, Walsh and other lakes more than two miles from the mine.
- Effects on Rolling Stone and Rice lakes will be too small to measure.
- Among lakes closest to the mine, there will be minor effects - less than one inch - on Little Sand, Duck and Deep Hole lakes.



*Tailings Management Area

Of all area lakes, only the 6-acre Skunk Lake, located on CMC property, will require mitigation.

- The only lake significantly affected will be Skunk Lake, a shallow, 6-acre lake on the mine property with no fish population and no cottages. To maintain this lake, CMC will build a system to pump in groundwater, as necessary from a well on the mine property. This is called mitigation.
- There will be no measurable change in the flow rate of the Wolf River. Swamp, Hemlock, 12-9, 11-4, Hoffman and Upper Pickerel creeks will see some reductions in flow, but mitigation will not be necessary.
- Effects of lowered water levels on wetlands will be limited to changes in the mix of plant life around the edges of some wetlands near the mine site. These wetlands will retain their value for wildlife habitat, stormwater storage and other environmental functions.

The decline in groundwater levels will be temporary. Within a few years after the mine is closed and reclaimed, groundwater and local lakes and streams will return to their previous levels, and wetlands affected by groundwater levels will revert back to their present conditions.

Effect of Mining on Lake Levels

Change in Water Level (Inches)

Lake	Expected Case	Practical Worst Case	Natural Variation
Duck	0.1	1.0	31.7
Deep Hole	0.2	5.9	26.8
Little Sand	0.6	3.2	31.9
Skunk	18.5	22.2	56.0

Effect of Mining on Stream Flows

Change in Flow Rate (Cubic Feet per Second)

Stream	Expected Case	Practical Worst Case	Natural Variation
Swamp Creek (STH55)	0.5	0.8	8 to 228
Hemlock Creek	0.14	0.24	2.4 to 53
Hoffman Creek	0.14	0.24	Up to 5
Creek 12-9	0.18	0.6	1.1 to 42
Creek 11-4	0.06	0.14	0.6 to 1.5
Upper Pickerel Creek	0.2	0.4	Up to 23

PROTECTING SURFACE WATERS

The Crandon mine's sophisticated water treatment plant and a comprehensive water management system will protect all lakes and streams in the project area.

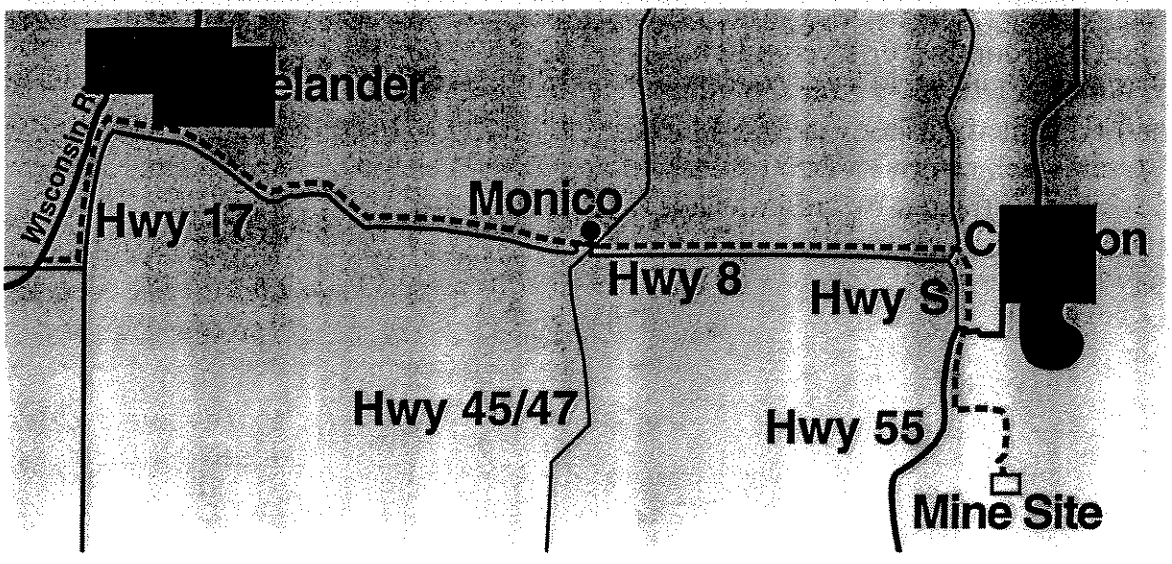
The Crandon mine will discharge treated water through a 38-mile buried pipeline to the Wisconsin River at the Hat Rapids Dam, south of Rhinelander. All water discharged will meet strict standards set by the Wisconsin Department of Natural Resources to protect water quality, fish and wildlife in the river. CMC studies show that the treated water will be consistently better than DNR standards.

The treatment plant will be built according to plans approved by the DNR and will use a lime/sulfide treatment process that has been tested to prove that it is effective. The plant will be staffed by state-certified operators with thorough knowledge of modern industrial water treatment systems.

The treatment plant will process both groundwater that seeps into the mine and surface runoff water from production and storage areas. After treatment, the water will be held in storage basins, where it will be tested. If at any time the water does not meet DNR standards, it will be recycled and re-treated. Water will be discharged to the Wisconsin River at about 460 gallons per minute, less than half of one percent of the river's flow at the Hat Rapids Dam measured at times of low water. This discharge will have no adverse effects on the river.

Throughout its life, the mine and mill will recycle and reuse water extensively to keep discharges as low as possible. During mine construction, runoff basins and erosion controls will keep soil and sediment out of local lakes and streams.

Expected route for water pipeline from Crandon mine to Wisconsin River



The mine's buried water pipeline, which will be installed within highway rights-of-way already disturbed by road work, will have minor, temporary effects on the environment.

MANAGING MINE TAILINGS

Mine tailings will be placed in engineered basins designed for long-term environmental safety. The tailings basins will provide permanent protection for groundwater.

Mine tailings consist of finely ground rock that remains after ore has been processed to remove valuable metals. The Crandon mine will use the latest, widely accepted technologies to manage these tailings for long-term environmental safety.

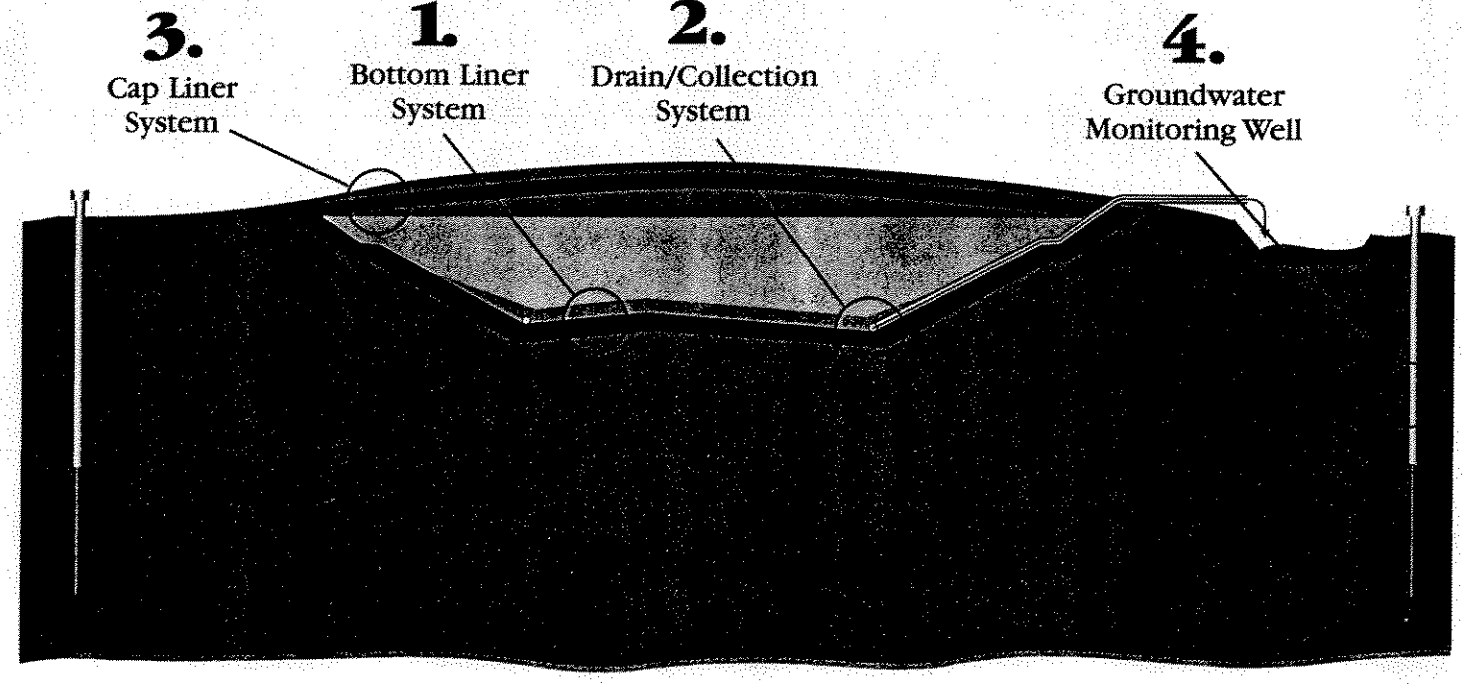
Engineered tailings basins will be built with multiple safeguards to prevent the condition known as acid rock drainage that has occurred at some old, unregulated mines. The basins will permanently protect groundwater to meet strict quality standards set by the Wisconsin Department of Natural Resources.

Each of the four tailings basins will be designed from the start to be reclaimed to an environmentally safe and stable condition. Each basin will include:

1. A bottom liner system that holds water within the basin.
2. A drain system that collects water at the bottom of the basin and above the liner system so that it can be pumped out and recycled or treated.
3. A cover liner system - called a cap - that limits the entry of water and oxygen and keeps tailings in a neutral condition.
4. Monitoring wells to detect changes in groundwater quality so that corrective action can be taken at an early stage, if that should be required.

Both the top and bottom liner systems will have multiple layers that include a heavy-duty plastic membrane and a 12-inch-thick layer of clay.

The basins will effectively isolate the tailings from the surrounding environment and surface waters. They will be constructed to withstand even major natural disasters such as earthquakes, tornadoes and floods.



PROTECTING WETLANDS AND WILDLIFE

The Crandon mine poses no threat to the survival of any species of plant or animal. It will protect wetlands and wildlife habitat to the maximum extent possible.

ENDANGERED SPECIES

During 1994 and 1995, CMC conducted an extensive search for threatened and endangered species around the proposed mine site. The search involved some 8,000 hours of study performed by more than 30 biologists and technicians. It covered 30 square miles, including nine lakes, 20 miles of streams and 1,700 acres of wetlands.

Among all the endangered species targeted in the search, only the goblin fern was found on land that would be disturbed by the mine. The goblin fern, listed by the state as endangered, lives on the site of the proposed tailings management area. However, in follow-up work, CMC biologists found the plant in more than 40 other places in six counties. Goblin fern habitat is common in Wisconsin, and the plant is also known to live in Minnesota and Michigan. Therefore, the construction of the mine will not endanger the survival of the goblin fern.

CMC studies have added greatly to scientific knowledge of the goblin fern and of the plant and wildlife communities of the Northwoods.

WETLAND PRESERVATION

CMC designed the mine facilities to keep effects on wetlands to a minimum. The project will result in a net gain of high-quality wetlands in the Fox-Wolf River watershed.

Mine facilities will directly affect 29.5 acres of wetlands, a tiny fraction of the wetland acreage in the surrounding area and Forest County. CMC will replace this acreage with 57 acres of high-quality wetlands, a ratio of nearly 2 to 1. The new wetlands will be created by reflooding land in Shawano and Oconto counties that was drained for farmland years ago. The land has natural wetland soils and will revert to a high-quality wetland within a few years. Ultimately, CMC plans to turn the property over to a public agency for permanent use as a conservancy area.

The goblin fern is a tiny plant newly discovered as a species in 1981. Wisconsin listed it as endangered in 1985 mainly because very little was known about it. CMC studies show this plant is far more abundant than previously thought.

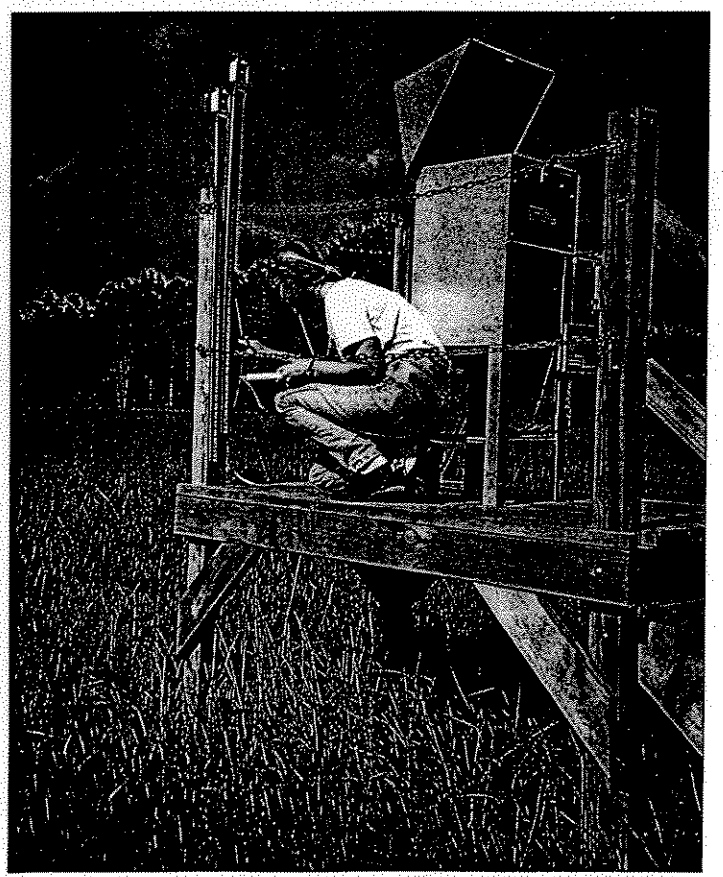
PROTECTING AIR, SCENERY AND QUIET

The Crandon mine will meet all federal and state air-quality standards. The mine will operate quietly, and mine facilities will be hidden by surrounding forests.

AIR QUALITY

The Crandon mine will be designed, built and operated with controls to keep the release of dust and other air pollutants as low as possible. As a result, mine emissions will have a minimal effect on local air resources and will be well within federal and state air standards.

Effective dust control devices will be used on underground mine equipment used for drilling, blasting, hauling and conveying of ore and rock.



Air monitoring stations will continuously measure air quality in the area to make sure the mine meets all air standards.

Mobile diesel-fueled machines will have exhaust scrubbers similar to catalytic converters.

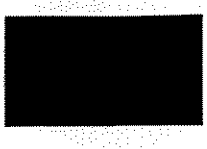
The mine's air-heating system and the standby electric generators will be fueled with clean-burning natural gas. CMC will monitor air quality around the mine during construction and operations to make sure the mine complies with all air standards.

NOISE AND VIBRATION

As an underground operation, the Crandon mine will operate quietly. CMC will minimize construction noise by limiting work to daylight hours and selecting low-noise equipment. Mine ventilation fans will be designed and built for low-noise operation. Fan intakes and exhausts will be equipped with silencers, as will the emergency electric power generators. Vibration from underground mine operations will not be noticeable outside the mine property.

SCENIC RESOURCES

The mine will be compatible with local scenery. Even its tallest structure, the headframe over the main shaft, will be effectively screened by surrounding forests and will be visible from only a few locations. CMC will use low-intensity, downward-directed lighting outside mine buildings, on interior roads and in the parking area.



PRESERVING LOCAL HISTORY AND CULTURE

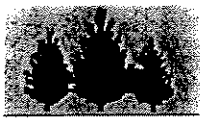
The Crandon mine affects no major historical features. It will protect Native American reservation resources, off-reservation activities and cultural sites.

In surveys covering more than 5,000 acres around the mine site, CMC researchers found a small number of historic sites, all but one outside the immediate area of the project. The most significant historic site was the former Keith's Siding railcamp settlement northeast of the mine along the route of the proposed rail spur. This site may qualify for the National Register of Historic Places. If so, artifacts will be recovered using techniques approved by state and federal agencies.

CMC studies show that the mine is compatible with the protection of Native American reservation resources, off-reservation activities, economies and traditional cultural properties. CMC continues to seek assistance from the Tribes in evaluating these matters and resolving any concerns.

CMC is committed to building a productive dialogue with the Mole Lake Sokaogon Chippewa Community, the Forest County Potawatomi Community and the Menominee Indian Tribe of Wisconsin on matters of environmental, economic and cultural concern. In line with this commitment the company has pledged to:

- Respect the separate sovereignty, culture, traditions, heritage and diversity of each of the Tribes.
- Comply with the letter and spirit of all applicable laws governing Native American rights.
- Make active efforts to evaluate, understand, avoid and minimize any potential adverse effects of the mine on Native American Tribes, their members and the cultural resources they use.
- Explore possible service, supplier and other business relationships that could mutually benefit the Tribes and the company.



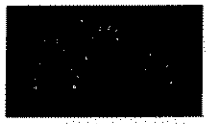
MONITORING AND CONTINGENCIES

CMC's monitoring and contingency plans will ensure the environment is protected throughout mine construction and operation.

CMC will monitor the environment throughout the life of the mine to verify compliance with state and federal laws. CMC will regularly monitor groundwater levels and quality, surface water quality, water levels in lakes and streams, water levels and plant life in wetlands, water seepage into the mine, air quality, and more.

If the monitoring program should detect any unexpected conditions, contingency plans would help CMC find the cause and take prompt, effective action, if needed. CMC also has contingency plans to ensure effective response to such events as storms, floods or fires.

To keep the chance of unexpected events as small as possible, CMC has designed its environmental controls with back-up safety systems. For example, the water treatment plant includes two separate treatment units, each able to treat all the mine water if the other should need repairs. Mine buildings and the tailings management area are designed to withstand even major natural disasters.



RECLAIMING THE LAND

CMC must guarantee that the mine site will be reclaimed to a long-term, environmentally stable condition. Environmental monitoring will continue for at least 40 years after the mine closes; environmental liability will last forever.

After the mine closes, CMC will reclaim the land so that it can return to productive uses, and so that the environment is protected for the long term. State law provides extensive guarantees that the site will be properly reclaimed and that the mining company covers all costs. Before receiving a mining permit, CMC must:

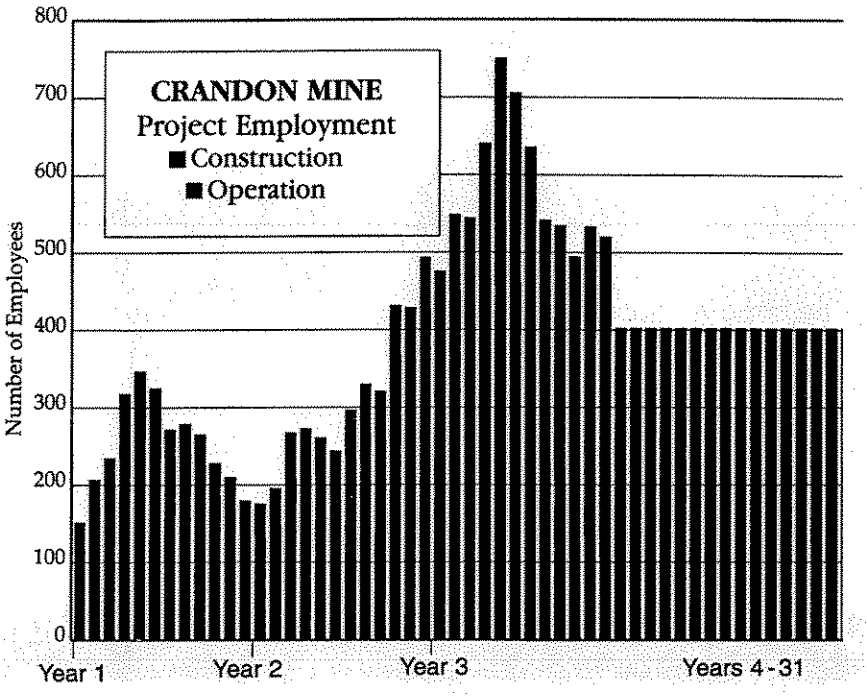
- File an environmental monitoring plan and prove financial responsibility for long-term care and monitoring on the site for 40 years after the mine closes - or longer if the state Department of Natural Resources determines it is necessary.
- File a financial guarantee large enough to pay for full reclamation of the site at any point in the life of the project.
- Assume perpetual environmental liability for the site. (Wisconsin Statutes 144.441 (2) (c) says: "... the owners' responsibility for the long-term care of an approved facility does not terminate.")

Mine reclamation will be an ongoing process. When work is completed on any part of the site, reclamation in that area will start promptly. When the entire project is completed, mine shafts will be plugged with concrete and surface facilities will be removed or converted to other uses. The land will be regraded, planted with trees or other vegetation, and converted to forestry or recreational uses.

ENHANCING THE LOCAL ECONOMY

The Crandon mine will add about 740 long-term mining and mine-related jobs in the three-county area, while adding just 1.2 percent to the area population.

The Crandon mine will provide a major increase in jobs, tax base and tax revenue in Forest, Oneida and Langlade counties while having minor effects on population. That is the conclusion of a study forecasting the mine's socioeconomic effects over a 40-year period, starting with the onset of mine construction. Here is a summary of the major findings:



EMPLOYMENT

The mine construction work force will start at about 175 in the first year, then gradually increase to a peak of about 550 during the third year. CMC will encourage contractors to give hiring preference to qualified tri-county area residents.

During 28 years of mine operations, CMC plans to employ about 402 people full-time. CMC will give hiring preference to tri-county area residents and will provide job training so as many local people as possible have the opportunity to work at the mine.

People employed at the mine will spend money throughout the tri-county area, stimulating the economy and helping create more new jobs. For every 10 jobs at the mine, approximately eight jobs will be created in related businesses. CMC estimates that 402 mining jobs will lead to an additional 341 jobs in local communities.

CRANDON MINE
ESTIMATED NET PROCEEDS TAX PAYMENTS

Jurisdiction	Total Payments Over Project Life
Town of Lincoln	$ 4.0 million
Town of Nashville	$ 4.0 million
Forest County Potawatomi Community	$ 2.4 million
Sokaogon Chippewa Community	$ 2.4 million
Forest County Reserve Fund	$ 7.9 million
Discretionary Grants for Local Impacts	$ 8.6 million
Total Local Share	$ 42.6 million **$ 71.9 million**
State of Wisconsin Badger Fund	$ 47.2 million
GRAND TOTAL	**$119.1 million**

Crandon Mine Employment Projection

Type of jobs	Number of jobs	Duration	Local hires
Construction	175 to 550	3 years	30%
Operations	402	28 years	70%
Local mine-related	341	28 years	

LOCAL SPENDING
The mine will spend about $43 million for goods and services in the tri-county area during three years of construction. During 28 years of operations, the mine's local spending will total about $1.2 million per year, or about $33.6 million over the project's life.

POPULATION
Because a large majority of mine workers will be hired locally, the mine will have a minor effect on population in the tri-county area. During operations, the mine will add about 713 more people (1.2 percent more population) than if the mine were not built. About 34 percent of the new residents will live in Forest County, 38 percent in Oneida County and 28 percent in Langlade County. During the peak of mine construction, the population of the tri-county area will be about 1,174 people (2.2 percent) higher than if there were no mine.

HOUSING
The housing supply in the tri-county area can support the small population growth created by the mine. Long-term mine operations workers will need a maximum of 1.1 percent of the available homes in the tri-county area. During the peak of construction, mine workers will require about 2.7 percent of the area housing supply.

LOCAL GOVERNMENT EXPENSES
Because of the modest growth in population, the mine project will not require any major expenses for additional fire and police protection, social services, highways, water supply, wastewater treatment or other government services.

SCHOOL DISTRICT ENROLLMENT
The area's eight school districts will have ample space for the children of new families. The mine will bring about 150 more students than if the mine were not built, but those students will be spread across the Antigo, Crandon, Elcho, Laona, Rhinelander, Three Lakes, Wabeno and White Lake districts. No schools will have to be built or expanded because of the mine.

TAX REVENUE
CMC will pay federal and state income taxes totaling an estimated $175 million over the life of the mine. In its first year of operation, the mine will add an estimated $110 million to the local property tax base, to the benefit of taxpayers in Forest County, the Crandon School District, and the towns of Lincoln and Nashville. Local governments will be able to use this increased tax base to provide property tax relief, to improve local facilities and services, or both.

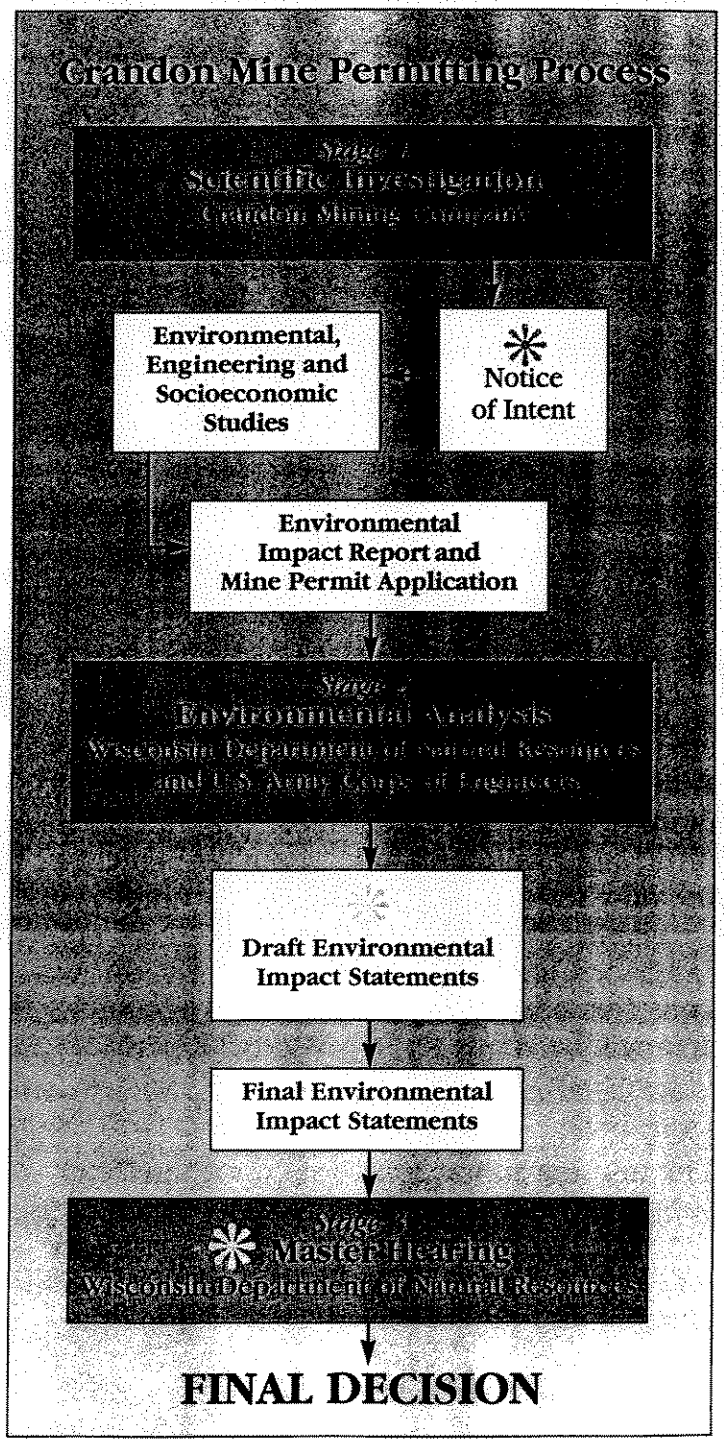
Over its life, the mine will pay an estimated $119 million in Net Proceeds Taxes to the state. Of this amount, $71 million (60 percent) will go into the Mining Investment and Local Impact Fund available to local communities as direct payments and discretionary grants.

STAYING INVOLVED

Wisconsin's mine permitting process encourages public involvement.

Plans for the Crandon mine will receive a thorough review conducted by the Wisconsin Department of Natural Resources and the U.S. Army Corps of Engineers under federal and state laws. In addition, the mine requires zoning approval from six local jurisdictions: Forest and Oneida counties, the towns of Lincoln, Nashville and Crescent, and the City of Crandon.

The accompanying diagram shows how the state mine permitting process will proceed. Complete copies of CMC's Mine Permit Application, Environmental Impact Report and other official documents related to the mine project have been placed on file at local libraries and at town, city, county and tribal offices. All tri-county area and Wisconsin residents are welcome to review the documents and become actively involved in the process.



Crandon Chronicle

PUBLISHED BY Crandon Mining Company DECEMBER 1995

Mine Offers Business Opportunities

Construction purchases estimated at $43 million locally

Crandon Mining Company expects to spend approximately $300 million to construct its zinc and copper mine in Forest County. Of this amount, about $43 million will be spent for goods and services in Forest, Oneida and Langlade counties. All told, the mine will spend about $85 million in Wisconsin during three years of construction, expected to start in 1998. Here, Ken Collison, CMC vice president, discusses the impact of mine purchases on the tri-county area.

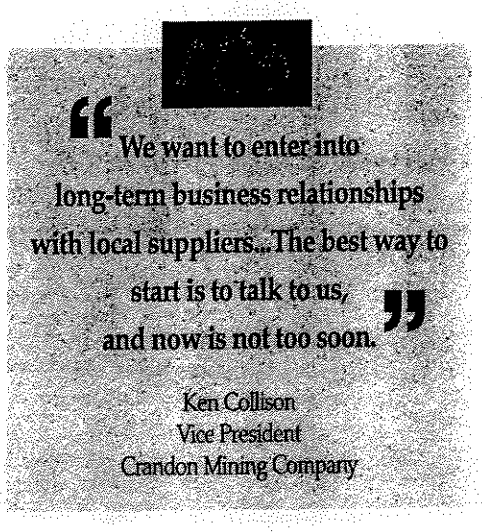
Q. What kinds of goods and services will the mine buy?

Collison: The biggest share will relate to construction of the underground workings and above-ground facilities. This includes earth moving and landscaping; plumbing, heating and electrical work; custom and pre-fabricated buildings; and construction of access roads, parking lots, pipelines and a rail spur.

Beyond that, the mine will use a large variety of materials: heavy equipment such as tractors and forklifts; office items like furniture, computers, pens, pencils and paper; hardware items like hoses, belts, gaskets, pipes, valves and vehicle parts; fuels like propane, gasoline and diesel; and much more.

Q. How much of the construction work will go to local contractors?

Collison: We will encourage the hiring of contractors from the tri-county area whenever possible, because that creates job opportunities for local residents. We expect that 20 to 30 percent of the construction labor will come from the area. In part, the amount of work contracted locally depends on how aggressive local businesses are in preparing for the work and bidding on projects.



Q. Do area businesses offer the kinds of goods and services the mine needs?

Collison: In many cases, yes. But a better question is what local businesses can do to take advantage of the opportunities that are coming. For example, a local retailer may want to set itself up as a source of hardware for the mine. Or perhaps a service station or jobber would like to supply fuel for mine machinery. Or maybe a print shop would like to provide letterhead and business forms. We want to buy those kinds of products locally, and we want to enter into long-term business relationships with local suppliers.

Q. How can local businesses prepare to serve the mine?

Collison: The best way to start is to talk with us, and now is not too soon. We may not yet know exactly how much we'll need of which kinds of products, but we do have a general idea of our needs and the kinds of supplier relationships we want to build. Sometime in 1996, we will hold a vendor conference where local firms can learn about opportunities to do business with us.

Q. Will the mine continue to buy locally after construction?

Collison: Absolutely. Once the mine begins operations, we expect to spend over $1 million every year for goods and services in the three-county area. Over a 28-year project life, that will amount to nearly $34 million. Local purchases during construction and operation add up almost $77 million. That is a major boost to the area economy, and it is in addition to the benefits that go with a minimum of 400 long-term jobs.

Chronicle Changing to Bi-Monthly Schedule

Starting with the next issue, the *Crandon Chronicle* will be published every second month, rather than monthly.

"The *Chronicle* has done a good job of keeping area residents informed about the mine and the progress of our environmental studies," says CMC President Jerry Goodrich. "Under the new schedule, it will continue to carry news of major developments related to the permitting process."

Look for 1996 issues of the *Chronicle* in February, April, June, August, October and December.

Crandon Mine Work Force Breakdown

The Crandon mine expects to employ a minimum of 402 people throughout its 28-year operating life. An estimated 70 percent of these jobs will go to residents of Forest, Langlade and Oneida counties. The vast majority of jobs will require either a technical school degree or high school diploma. Crandon Mining Company will provide training to help local residents adapt their education and skills to the special needs of underground mining.

Job Type	Number	Education Requirements: College Degree	Technical Degree	High School*
Administration	**48**	**18**	**15**	**15**
Executive/management	9			
Accounting/purchasing	18			
Marketing	4			
Environment/safety	13			
Human resources	4			
Mine	**183**	**12**	**12**	**159**
Engineering	6			
Supervision	10			
Geologist	4			
Surveyors/technicians	7			
Clerical	1			
Equipment operators	155			
Mill	**52**	**5**	**9**	**38**
Engineering	3			
Supervision	5			
Assaying	5			
Equipment operators	36			
Clerical	1			
Metallurgical technician	2			
Maintenance	**119**	**2**	**100**	**17**
Supervision	11			
Repairs	69			
Electricians	16			
Engineering	2			
Instrument technicians	4			
Other	17			
TOTALS	**402**	**37**	**136**	**229**

*or equivalent

A Year of Public Involvement

1996 offers many opportunities to comment, question and learn

Wisconsin often receives credit for having an open mine permitting process. In the year ahead, it will become clear why that is so.

Through most of 1995, Crandon Mining Company worked on its environmental studies. All meetings with the Wisconsin Department of Natural Resources during that time were open to the public. Now, since the filing of the Environmental Impact Report in October, the permitting process has entered a phase which involves the general public to an even greater degree. From now until the process ends with the Master Hearing, probably sometime in 1997, area residents will have numerous chances to learn about the Crandon mine, ask questions, and express opinions.

I am glad that's the way it is. Each time our project is discussed in a public forum, a little more rhetoric slips away, and more people better understand the mine's environmental safeguards and the benefits it offers to the area. In the year ahead, public involvement will occur in four key areas.

Technical review. The DNR and the U.S. Army Corps of Engineers (COE) are now reviewing the 15,000 pages of documents that make up the Environmental Impact Report and major permit applications. Along the way, we are meeting with agency staff in public sessions to explain our findings and answer questions. Members of the public who attend these meetings get a look at how thorough our studies have been, and how carefully state and federal officials are reviewing the project.

Comment

by Jerry Goodrich
President, Crandon Mining Company

Official public hearings. When the DNR and COE complete their review, each agency will prepare a Draft Environmental Impact Statement, probably during the second quarter of 1996. These documents will be the subject of public hearings required by state law. The agencies must record comments made at these hearings and consider them when preparing their Final Environmental Impact Statements. In this way, public input becomes part of the official documents used as a basis for the final mine permitting decision.

Local approvals. The mine requires zoning approvals from Forest and Oneida counties, the City of Crandon, and the Towns of Lincoln, Nashville and Crescent. We expect to negotiate Local Agreements with these jurisdictions under procedures set by state law. The Local Agreements will deal with such matters as jobs for local residents, local revenues, protection of water wells, citizens' advisory committees, and plans for economic development after the mine closes.

Under state law, before any Local Agreement can be signed, there must a public hearing, and the local governing body must vote on the agreement at a public meeting. This ensures that all local residents and taxpayers have a chance to make sure the agreement addresses the community's needs.

Community outreach. Since Crandon Mining Company was formed in September 1993, we have maintained an open door policy. We conducted a series of community forums in spring 1994. All told, in just over two years, we have made more than 300 presentations to community groups. We will continue this dialogue throughout the mine permitting process. As part of that, we have relocated our director of community relations, Dick Diotte, to Crandon, where he is easily available to anyone who wishes to discuss the mine.

Meanwhile, the DNR has expanded its own community presence by scheduling regular office hours in Crandon for its staff (see story below).

It all means one thing: Everyone in the tri-county area who is interested in the Crandon mine will have many chances to hear and be heard. I am confident that the more people know and understand the project, the more they will support it.

Crandon Chronicle

Crandon Chronicle is published by Crandon Mining Company for residents of Forest County. It is distributed through the Forest Republican and Pioneer Express. Submit questions, comments, suggestions, news items or photos to:

Crandon Mining Company
Crandon Office
P.O. Box 336
Crandon, WI 54520-0336
715/478-3393

Rhinelander Office
7 N. Brown St., Third Floor
Rhinelander, WI 54501-3161
715/365-1450

Crandon Mining Company

• Environmentally Responsible •

DNR Sets Local Office Hours to Discuss Mining Matters

The Wisconsin Department of Natural Resources mine reclamation staff now holds office hours at the Crandon Ranger Station, 404 North Lake Street, on the second Wednesday of every month from 9 a.m. to 3 p.m.

Mine reclamation staff members will meet with area residents to discuss mine permitting issues and other matters related to the Crandon mine project. The next session will be held on January 10. You can drop in during the scheduled hours, or call for an appointment at 715/478-3717.

At other times, residents who have questions about the mine may contact Archie Wilson (715/365-8915) or Ken Markart (715/365-8959) at the DNR's North Central District Headquarters in Rhinelander.

Winter Activities Heat Up In The Northwoods

Makin' a List. Don't miss your last chance to tell Santa what you want for Christmas. He'll be at the Santa House in downtown Antigo on Saturday, December 23, from 1 to 4 p.m. The Santa House is also home to a co-op store where area crafters display their wares. The store is sponsored by Antigo High School's DECA Club. Santa House hours are 11 a.m. to 5 p.m.

Ring in the New Year at Holiday Acres this December. Holiday Acres, Rhinelander, is the perfect place to bring your New Year's Eve party. Groups can order off a holiday menu, enjoy entertainment of a DJ or the music of Terry Hall, and not have to worry about cleaning up in the morning. Call Holiday Acres to plan your big bash.

Art Enthusiasts. The Nicolet College LRC Gallery is calling you to come and visit the Wulf/Grinvalsky-Bolin exhibit. The print-making, drawing and clay sculpture exhibit runs December 6 through January 8.

Snowshoe Rendezvous is planned for Saturday, January 13 at the Bear Paw Inn, White Lake. If you're a winter weather lover, don't miss this gathering for snowshoeing, racing and workshops on wilderness skills and camping.

Iceland Activity. Ice racing enthusiasts will want to head outdoors January 13 and 14 for the North Central National Ice Races. Motorcycle and ATV ice races in both pro and novice classes are scheduled. Competition begins at 4 p.m. on Saturday and 11 a.m. on Sunday at the Langlade County Fairgrounds, Antigo.

Cabin Fever Reliever. Need to experience some outdoor fun? Why not try the 8th Annual Elton Sled Dog Races? Enjoy sprints, mid-distance races and a host of other family-fun activities January 13 and 14 in Elton. Or try your hand at the cross-cut saw contest. Heated tents and hot food and beverages will be available for warming cold fingers and toes.

Heat it Up at Maple Lake on January 13 and 14 for the 4th Annual Mid-Season Championship Snowmobile Races. The Charger Snowmobile Club will be in Three Lakes for two full days of racing action. Fifty-seven classes will line up with divisions of drag, oval, and cross-country racing. Sunday will also feature kitty cat races. Competition begins at 11 a.m. both days.

Crandon Mining Company

Crandon Mining Company
P.O. Box 336
Crandon, WI 54520-0336

James Buchen
VicePresident - Government Relations
Wisconsin Manufacturer's & Commerce
P.O. Box 352
Madison, WI 53701-0352

The Flambeau Mine: A History of Success

Introduction

On January 14, 1991 State of Wisconsin Hearing Examiner David Schwarz issued his decision that Flambeau Mining Company be granted the necessary permits to operate an open pit copper mine in Ladysmith, Wisconsin. In making that decision he said, "I am persuaded that if Flambeau [Mining Company] complies with each and every one of the approvals granted, an economically viable mining operation can be established without environmental degradation."

That decision followed a three and one-half year permitting and review process and a two-week long contested case master hearing. Attesting to the thoroughness of this process, Mr. Schwarz noted, "The record in this proceeding is one of the most expansive ever produced by an administrative agency in the state of Wisconsin." The Flambeau mine permits regulate all aspects of the operation. They include monitoring requirements and enforcement provisions. In all, there are more than 200 special conditions attached to the Flambeau mine's eleven state-issued operating permits.

More than 50 experts testified during the contested case phase of the master hearing. This expert testimony was given under oath and was subject to cross examination by all parties to the hearing. Flambeau Mining Company and the DNR shouldered the burden of proof that the company had met the criteria established under Wisconsin law for permitting mineral mining projects.

On this matter, the hearing examiner was clear:

> **"Witness after witness testified in detail, as to the design of the various components of the mining operation. Each explained the basis for his or her judgment. While each expert witness was subjected to extensive cross-examination, the credibility of these witnesses was only reinforced by the lengthy explanations that were elicited. The more the witnesses for Flambeau and the DNR were pushed to back up their professional judgments, the more it became clear that these individuals had carefully studied and accurately assessed the impacts of the mining operation."**

To those who opposed the Flambeau project, Mr. Schwarz said, "The waters of the Flambeau River and the ecology of northwest Wisconsin are valuable treasures to the people of this State. No one wants to be a party in the despoiling of these resources. While no one can issue guarantees that this project will operate with absolutely no problems, I am convinced that the permits contain adequate controls to ensure a safe and clean operation."

Dire Predictions that Didn't Happen

Wisconsin's rigorous permitting process notwithstanding, some skeptics remained unconvinced that the project would protect the environment.

Opponents said:

"Mining a sulfide mineral, like the Ladysmith copper deposit, creates enormous amounts of sulfuric acid runoff. The acid then dissolves and leaches heavy metals such as mercury, arsenic, and others from the ore and tailings. These contaminants can then enter the ground and surface water." (March 24, 1990)

It didn't happen

- No runoff occurred at the Flambeau mine during the entire time of operation. All water that came in contact with ore or waste rock containing sulfur was collected and treated at the project's water treatment facility.
- The water discharged at the Flambeau mine – more than 500 million gallons of it – was of significantly better quality than the mine's permit requires.
- The water quality permit standards were specifically designed to protect the most sensitive of aquatic species and human health.
- Monitoring has shown that the mine has had no impact on the Flambeau River water, fish or habitat.

"We are very happy with the way things are going. The water treatment facility is especially pleasing to us. They are way below their effluent limits."

- Larry Lynch, Wisconsin Department of Natural Resources, Dec. 27, 1994

Opponents said:

"[The Flambeau Mine] has serious potential to pollute our groundwater supply for over 100 years." (September 1990)

It didn't happen

- Groundwater monitoring has shown that the Flambeau Mine has had **no** effect on groundwater quality.

- According to Thomas J. Evans of the Wisconsin Geological and Natural History Survey, Wisconsin law holds a mining company "perpetually liable for the environmental integrity of the site." This liability extends to "any subsequent company successor or owners."

Opponents said:

"[The Flambeau Mine] will inject into the Flambeau River large volumes of acids, heavy metals and chemicals threatening to aquatic life and mankind." (September 1990)

It didn't happen

- The mine's water treatment facility has consistently produced high quality water that is better than permit standards designed to protect the most sensitive of aquatic species.

- For example, the DNR has set the Flambeau mine's permit limits at 42 parts per billion of copper – that's 31 times lower than the EPA's safe drinking water standard. The company has set its own goal of 25 parts per billion. The mine has produced treated water averaging just 12 parts per billion of copper. That's less than a third of the limit for copper set by the state and more than 100 times lower than federal and state safe drinking water standards.

The Flambeau Mine has met every one of the requirements of its permits and regular monitoring shows that it has protected the local environment.

Opponents said:

"Massive bio-accumulation effect of toxic elements [are] probable in quiet areas such as the Holcombe Flowage." (September 1990)

It didn't happen

- The Flambeau mine has monitored water, aquatic life and sediment at the site and downstream of the mine. This monitoring program is part of the permit requirements that the project must meet in order to be allowed to operate in Wisconsin.

- Monitoring data show that the mine has had no bio-accumulation effects at or downstream of the project.

Opponents said:

"The present stable renewable industries such as farming, forestry, woodworking, tourism and other potential clean industries would be destroyed or be unwilling to locate in Northern Wisconsin." (September, 1990)

It didn't happen

- Rather than discouraging industries from locating in the area, the Flambeau mine has been a major factor in encouraging business and industrial development through local impact fund payments of almost $6 million, Net Proceeds tax payments of almost $3.5 million and voluntary contributions of more than $500,000.

- Over 100,000 visitors have stopped to view the Flambeau Mine operation. These tourists come from Wisconsin, and throughout the U.S. and the world.

Opponents said:

"Mining almost always creates a boom and bust effect in small communities. Will 40 jobs for six years offset the potential long-term environmental effects, and the resultant harm to our fishing, tourism, agricultural and forestry industries?" (April 23,1990)

It didn't happen

- The Flambeau mine has protected water quality, aquatic life and human health and safety throughout its operation.
- The mine's work on wetland projects beginning during construction and continuing during the entire life of the mine laid the foundation for improved habitats when reclamation is complete.
- The Flambeau mine has paid more than $20 million in state and local taxes.
- Local communities and Rusk County have benefited from more than $10 million in direct payments for job creation and economic development.
- With tax money and other matching grants made possible by Flambeau Mining Company, Rusk County will experience an influx of more than 400 new jobs.
- The Flambeau mine, like all mines, invests more than most other industries in goods and services. It has purchased more than $1 million in products and services from Ladysmith and Rusk County businesses.

Lessons Learned

While the potential for environmental problems in any industrial activity are legitimate concerns and must be responsibly addressed, none of the catastrophic predictions of opponents of the Flambeau mine were born out. Yet, comparing the horrible outcomes predicted by mining opponents to actual events makes one thing very clear. Decisions about projects like the Flambeau Mine that have the clear potential to provide substantial economic benefits to the people of Wisconsin must be based upon careful research and sound science. There is too much at stake to allow important decisions to be based on fear and misinformation.

Wisconsin's mining laws, the elected officials who passed them and the DNR experts who implement them recognize that mining can be a responsible activity with important economic benefits. The Flambeau mine is proof that they are right.

A Profile of the Flambeau Mine

The Flambeau mine was an open pit operation. The deposit consisted of approximately 1.9 million tons of copper ore containing small amounts of gold and silver. On average, about 1,300 tons of ore were removed each day between May 1993 and March 1997. At its largest, the pit was about 600 feet wide, 2,600 feet long and 220 feet deep. It had a surface area of approximately 34 acres. Mining of the ore body is complete and final reclamation activities will continue until approximately the middle of 1999.

Mining consisted of ore removal and crushing. Crushed ore was transported by rail to an existing processing facility in Timmins, Ontario. No ore processing took place at the mine site.

The 181 acre project site also contains a wetland soil storage area, a topsoil storage area, a nursery, and a one acre wetland test plot. Ancillary facilities consisted of a water treatment plant, administration building, laboratory, a railroad spur and contractor equipment and maintenance facilities.

Reclamation activities have been an ongoing part of the Flambeau mine operation since construction began. The company is currently backfilling the pit in an engineered sequence that has been approved by the DNR as providing the desired level of long-term environmental protection. Type II material (rock containing one percent or more sulfur) is mixed with limestone to neutralize the pH and prevent the formation of acid and then returned to the pit.

Next, Type I rock will be replaced into the pit. This material contains less than one percent sulfur and is not acid producing. Finally, the surface will be covered with topsoil, contoured and planted with grass, trees and shrubs.

Upon completion of reclamation, the mine site will provide a woodland and grassland habitat and 8-1/2 acres of high quality wetlands.

Flambeau Mining Company must monitor reclamation until the DNR is satisfied that all plantings are well-established. The company and its parent, Kennecott, is responsible for monitoring groundwater for a minimum of 40 years after reclamation and is responsible forever for the environmental integrity of the site.

♻ *These materials have been developed and produced by Flambeau Mining Company and printed on recycled paper. April 1997.*

Experts endorse current technology and laws to provide high quality environmental protection.

"The waters of the Flambeau River and the ecology of northern Wisconsin are valuable treasures to the people of this State. No one wants to be a party to the despoiling of these resources. While no one can issue guarantees that [the Flambeau Mine] will operate with absolutely no problems. I am convinced that the permits contain adequate controls to ensure a safe and clean operation."

- State of Wisconsin Hearing Examiner David Schwarz

The proposed blanket ban on mining is based on misguided assumptions.

The proposed ban on sulfide mining in Wisconsin is based on assumptions that are wrong and on criteria that are irrelevant, that is, they offer no meaningful way of measuring environmental benefits. Advocates of a ban on mining base their conclusions on two key assumptions; 1) that we don't have proven technology to protect the environment at sulfide mining operations, and 2) that Wisconsin's laws are not sufficiently strong to protect our environment.

✔ *Experts and the evidence say technology has been proven effective.*

✓ *Experts and the evidence say our laws work.*

Yet experts - geologists, engineers, hydrologists and regulators - have weighed in on both of these issues. They report that modern technology is able to reliably protect the environment around sulfide mining projects. And, they have said, regulations like the ones already in place in Wisconsin are the real keys to ensuring the safe operation of sulfide mines and other industries. Indeed, among engineers and scientists who have worked with and observed this technology in operation, there is a strong consensus on both of these points.

Department of Natural Resources Secretary, George Meyer:

> **"I am confident that any mine proposed in this state cannot obtain approval until a demonstration has been made that it will be environmentally safe, which demonstration needs to be as rigorous as would be required of any other type of project. Furthermore, if an environmental problem is identified after a mine has been approved and is operating, more than adequate authority has been provided to the Department by the Legislature to cause the mine to cease operations and correct the problem."**[1] (emphasis added)

1. Letter from Secretary George Meyer to Senator Robert Cowles, July 13, 1996.

The Department of Natural resources staff concluded in a 1995 report:

> **"The Department of Natural Resources staff believe appropriate application of currently available and developing technology for pollution prevention combined with the comprehensive regulatory controls provided in state laws and rules are capable of providing the necessary level of environmental protection for future mining projects in this state.** Staff share the view that a project should not be advanced if it cannot be designed, operated and closed in a manner which would effectively control the development of long-term acidic drainage and seepage conditions." (Emphasis added) [2]

Commenting on that report, Larry Lynch, Department of Natural Resources (DNR), said:

> "[Proponents of a mining ban argue] that no mining in Wisconsin should occur until successful analogous operations are documented elsewhere. In a report to the Natural Resources Board last year, Department staff stated that the main reason such successful sites have not been documented is due to the short regulatory history of requiring sound environmental protection provisions in the design of mining waste facilities. The report further indicated that if such sites did exist, there is no guarantee that the technology employed at a given site would be effective for a specific application in Wisconsin. **Staff emphasized that while this type of information may be interesting, it has little use in determining the acceptability of a specific proposal. Only through comprehensive case by case review of the specific waste materials, facility design and environmental characteristics of a proposed site can a meaningful evaluation be conducted."** (Emphasis added)[3]

Again, DNR experts:

> "The chemistry of the problem, specifically the dissolution of minerals is the same regardless of whether the site is a coal mine or another kind of

2. Wisconsin Department of Natural Resources, Bureau of Solid and Hazardous Waste Management, "An Overview of Mining Waste Management Issues in Wisconsin, July 1995, p. II.
3. Larry Lynch, Memo to George E. Meyer, July 18, 1996.

> mining operation. . . .the basis for much of the technology currently applied to metal mining sites comes from the coal industry which does have a significantly longer period of regulation and research. . .
>
> " In addition, experience gained in the solid and hazardous waste management industry in landfilling wastes is also applicable to mining sites, since management of each kind of waste shares the primary goal of isolating the waste from the surrounding environment. **This is especially important since the design and construction of solid waste facilities has reached a high level of sophistication and effectiveness"** (emphasis added)

And, the DNR concludes:

> **"All of these features [necessary for effective environmental protection] exist in Wisconsin's mining and mining waste laws and rules and provide additional assurances that proposed mining sites in the state, should they be permitted and become operational, will not result in the uncontrolled release of contaminants seen historically at mining sites throughout western United States."** (Emphasis added)[4]

Secretary Meyer was also specific in his comments about Wisconsin's mining and environmental laws:

> He begins by reminding his readers that under Wisconsin law, "If there is a standard under other state or federal statutes or rules which specifically regulates in whole an activity also regulated under [the mining law] the other state or federal statutes or rules shall be the controlling standard. . ." Mr. Meyer continues, **"No one has argued to the best of my knowledge that this state is powerless to prohibit unacceptable impacts to our resources. If air or wastewater discharges do not meet the applicable standards, they must be better treated or be discontinued. The same is true for other state regulated environmental consequences.** And the legislative directive quoted above [144.937 - Effect of other statutes] makes clear that a mine is subject to the majority of environmental requirements that apply to other activities in the state.

4. "An Overview of Mining Waste Management Issues in Wisconsin," pp. 30 - 32.

"There are two exceptions to this principle worth noting. One, mines are subject to different wetland standards than are other projects in the state. This is due to two factors. First, the Legislature made mines subject to wetland restrictions prior to similar regulations being made applicable to other activities. Second, it was recognized that mines are located where ore exist -- there is not the ability to relocate the project to another location. **The restrictions which were adopted by the Legislature require minimum disturbance of wetlands."** (Emphasis added)

> [It is worth noting that modern mines throughout the country, including the Flambeau Mine in Ladysmith are not only meeting this requirement and restoring disturbed wetlands, they have had many remarkable successes in creating additional and improved wetland habitats.]

"The second difference is that the groundwater pollution statute applicable to mines is different from that applicable to all other state activities. Again, the groundwater statute applicable to mines was passed by the Legislature before a similar but slightly different statute was passed applicable to other activities. **And, as the Department has testified at several legislative hearings, the application of the two laws is functionally the same."** (Emphasis added)[5]

Schafer and Associates addressed the question of technology and regulation in a 1995 report:

> **". . .conditions responsible for acidic drainage need not result from well designed and constructed, adequately monitored, and appropriately bonded modern sulfide mine, milling and storage facilities."** (Emphasis added)[6]

In summary, statements made to support a mining ban are short, easy to understand and designed to frighten. The facts could fill a library and they do not support a mining ban. We must base important environmental policy decisions on scientific fact and measurable evidence. The conclusion of people who have studied the science of the matter is that SB 3 is not an appropriate or relevant way to measure the ability of a project to protect our environment. We should weigh more carefully the judgments of these experts.

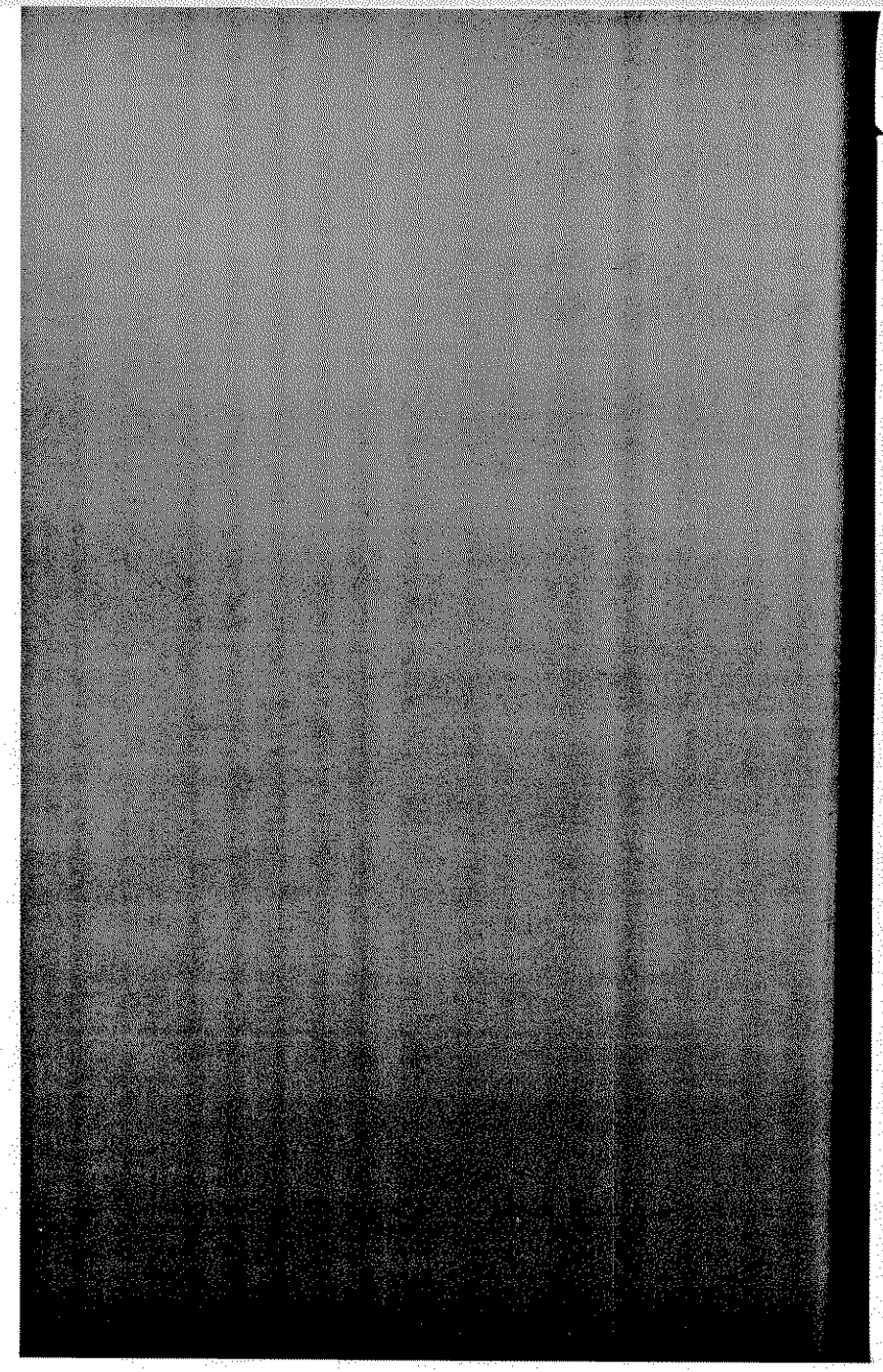
5. Meyer
6. Schafer and Associates, "Wisconsin Mining Association Whitepaper on Sulfide Mining," prepared for Flambeau Mining Company," March 1, 1995, p. V.

Spokes: stainless steel or titanium.

Pavement: cement, sand, and gravel.

Everything Begins With Mining

Brought to you by the National Mining Association www.nma.org

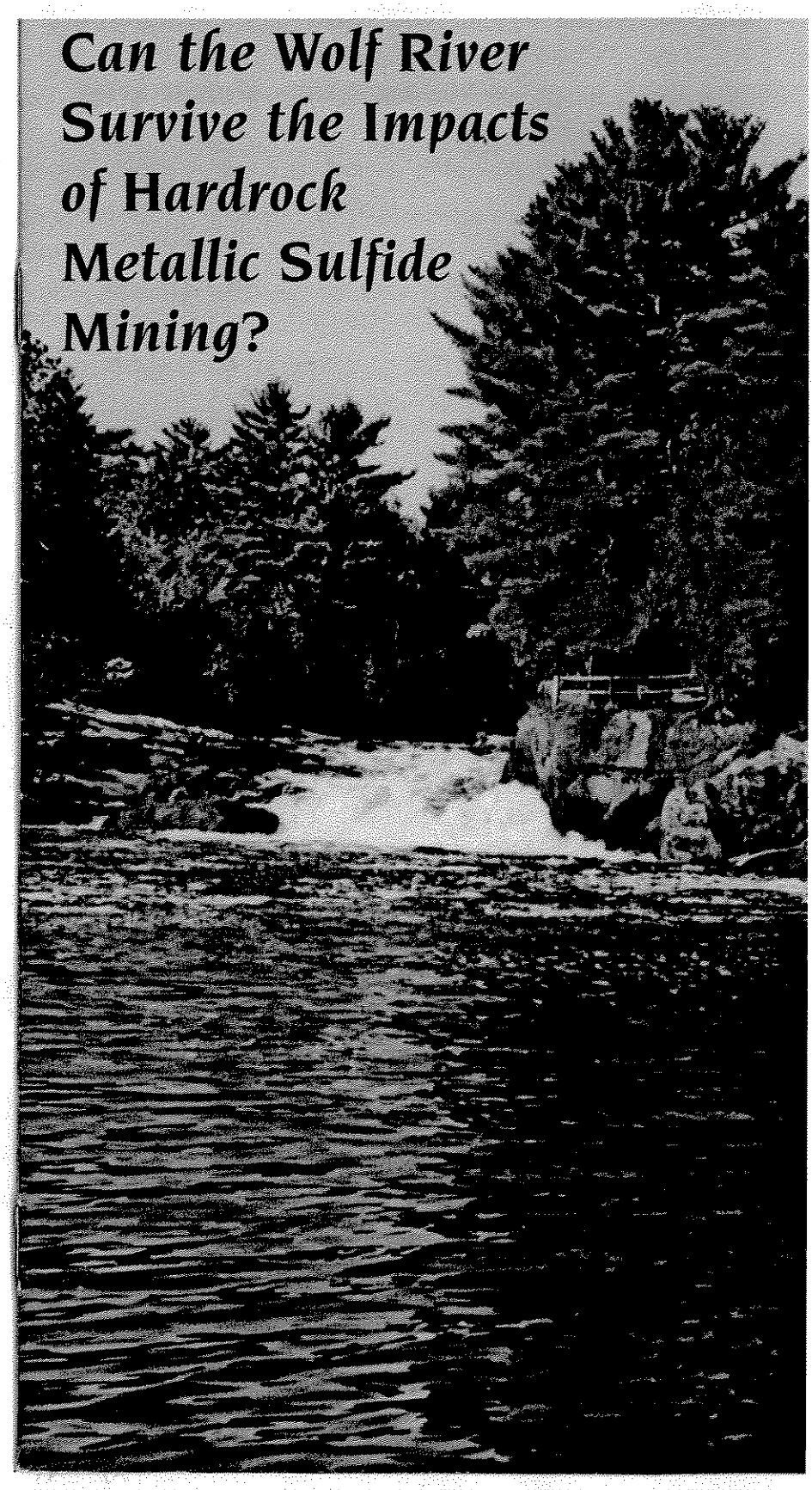


Protect
Wisconsin's Rivers

Protect The Wolf and Wisconsin Rivers
Vote YES on SB 3 with NO Amendments

Any amendment is designed to kill the bill.
SB 3 requires mining companies to prove they can safely mine a sulfide-rock ore body before they mine in Wisconsin.

Can the Wolf River Survive the Impacts of Hardrock Metallic Sulfide Mining?



There has never been a metallic mine in the upper Wolf River watershed. The Wolf River is listed by the American Rivers organization as one of "The Most Threatened and Endangered Rivers in North America" due to threats of pollution posed by Crandon Mining Company's Proposed Hardrock Mine.

THE WOLF RIVER IS ONE OF THE GREATEST NATURAL RESOURCES IN THE MIDWEST.

- **PRISTINE** - High quality waters flow through dense forest, granite outcroppings and waterfalls.

- **FISHING** - The upper Wolf River is considered one of the premier trout fishing rivers in the midwest, sporting native brook, brown, and rainbow trout.

- **EAGLES** - Bald eagles, our majestic national symbol, nest along and fish the waters of the Wolf River along with other rare and endangered species.

- **STURGEON** - The largest freshwater fish, Lake Sturgeon, has lived and spawned in the Wolf River for thousands of years.

- **WILD RICE** - Annual harvests of wild rice from the Wolf River are of cultural significance to the area, and provides a gourmet delight for everyone.

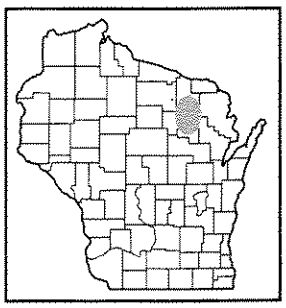
- **TOURISM** - The Wolf River is the backbone of northeastern Wisconsin's summer tourism industry.

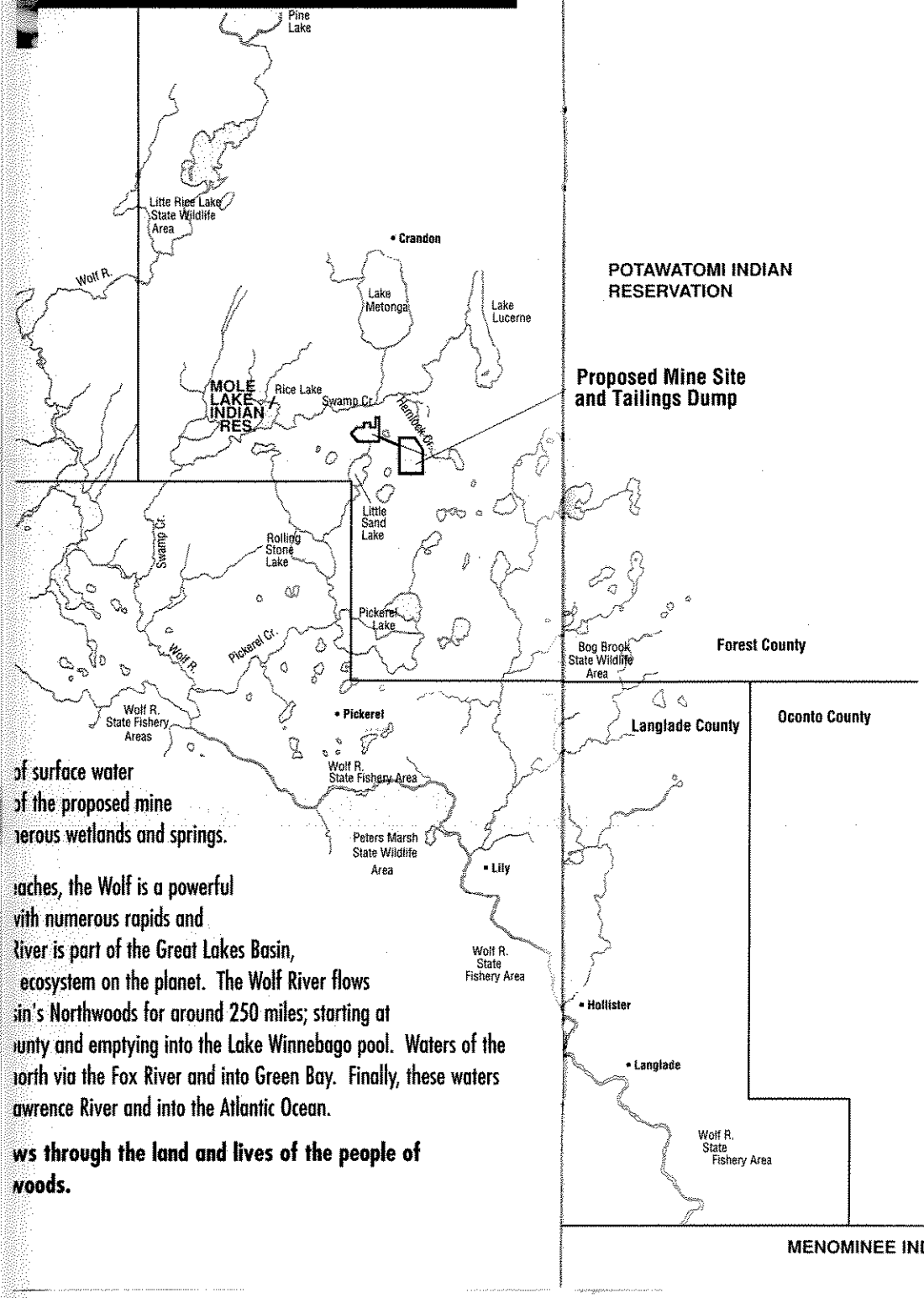
THE WILD AND SCENIC WOLF RIVER IS IMPERILED BY CRANDON MINING COMPANY'S PROPOSED HARDROCK METALLIC SULFIDE MINE.

Photograph: Mineral Policy Center
— Mine wastes leach acid and heavy-metal contamination in Fisher Creek near Yellowstone.

Cover Photo: Big Smokey Falls, Menominee Reservation

Headwaters of the Wolf River





The sensitive Wolf River and its headwaters region supports perhaps the greatest biological diversity in the state and cannot tolerate hardrock metallic sulfide mining.

The mining company's own studies found over 750 plant and animal species on and around the proposed mine site, of which more than 50 are listed as rare and endangered by the state.

of surface water
of the proposed mine
erous wetlands and springs.

aches, the Wolf is a powerful
vith numerous rapids and
River is part of the Great Lakes Basin,
ecosystem on the planet. The Wolf River flows
sin's Northwoods for around 250 miles; starting at
unty and emptying into the Lake Winnebago pool. Waters of the
orth via the Fox River and into Green Bay. Finally, these waters
awrence River and into the Atlantic Ocean.

ws through the land and lives of the people of
woods.

The Proposed Hardrock Sulfide Mine

mpany **(CMC)** is a partnership formed by Exxon and Rio
an mining firm. CMC proposes to mine an ore deposit that
g, running east to west, located in the headwaters of the
hey say they want to mine primarily copper and zinc, and
l gold.

e place underground in a deep-shaft mine. Crushed ore,
posit would be delivered to the surface for processing.
led to the crushed ore, which will be pumped to special
icals will separate metallic minerals from the ore.

ine from flooding, the area around the mine would be
quantities of waste water, well over one million gallons per
e discharged. Area groundwater would be drawn down for
e site, affecting surface water levels.

[redacted]

gs would be stored in the largest dump in the State of
uld be larger than 322 football fields and over 90 feet
xic acid generating heavy metal laden waste could reach
g term pollution threats to the integrity of the Wolf River
g from the waste storage alone, are alarming.

dwaters would be adversely impacted if hardrock mining
g the lakes, streams, and people that depend on these
th could be negatively affected.

[redacted]

Acid Mine Drainage will enter the Wolf River, damaging the Wolf River Ecosystem, if Metallic Mining is Permitted.

[redacted]

- "Flows of acid drainage often create large, toxic, metal bearing sediment loads in stream channels. When acid and metal drainage enter streams, fish are often depleted in a short period of time. Copper ions are especially lethal to fish...a copper concentration of as little as one part per million may be lethal to trout."
  — U.S. Forest Service

- "Potential for damage may be so severe as to require perpetual monitoring and maintenance similar to that done by federal authorities with radioactive waste material."
  — Michael McNamara, UW Madison Center for Geographical Analysis

- "There are at least 500,000 abandoned mine sites nationwide and the cost of cleaning them ranges from 20 BILLION DOLLARS TO 70 BILLION DOLLARS."
  — Al Gedicks, phD, Muskie 10/94

- "High sulfide mine wastes retain the ability to generate acid as long as they exist, until either they become part of another permanent rock structure or until the acid is all generated and carried away. When we talk about sealing and capping them, we are talking about doing it for a millennium."
  — Philip Hocker, Chairman - Mineral Policy Center

- "There are no ideal metallic mining sites which can be pointed to as the model approach in preventing acidic drainage industry-wide."
  — Larry Lynch, WI Dept. of Natural Resources

Some of the WORST polluted sites in the world are old hardrock metallic mine sites. NO COPPER SULFIDE MINE HAS EVER BEEN SUCCESSFULLY RECLAIMED ANYWHERE IN THE WORLD.

Photograph: Mineral Policy Center
Acid mine drainage from McLaren mill tailings, Montana

Menominee Nation...Another Perspective

ominee Nation have been the caretakers of the waters rounds them for thousands of years. The waters that ams and rivers are the lifeblood of the Menominee. dians are the oldest continuous residents of Wisconsin, is land for more than 8,000 years. The name AEQNOMENĒWAK" means Wild Rice People. eservation, nearly 235,000 acres, features some of the tland within the Great Lakes Basin. In 1995 the ustained yield forestry management program was recog- onal ceremony by the United Nations at their headquar-

minee are recognized world wide for their conservation ever been proven outdated or ineffective. The ver wavered from their responsibility as caretakers of

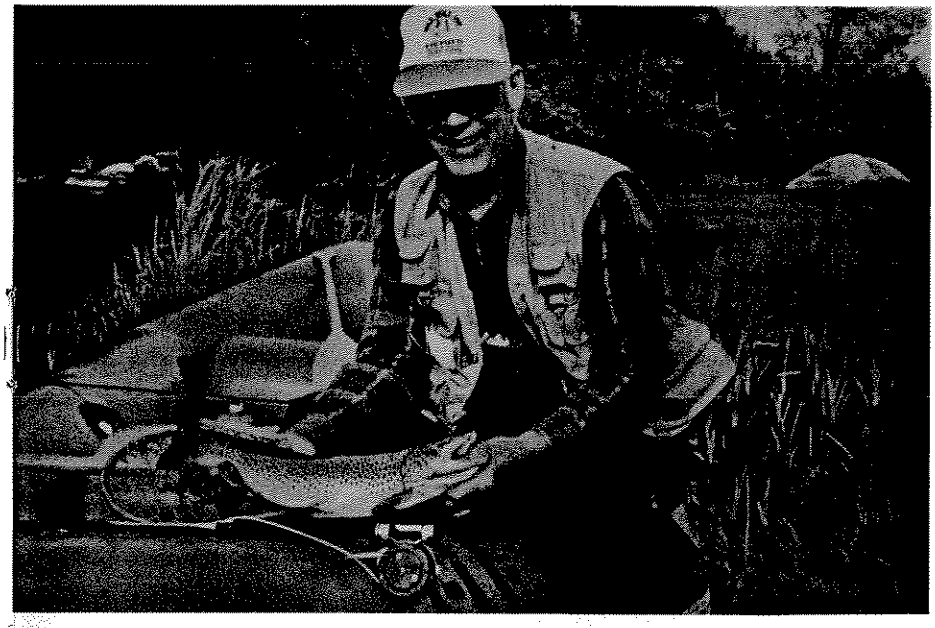
eservation, located directly downstream from the pro-, and precious Tribal resources, stand to be negatively minee have joined other concerned organizations and Potawatomi and Ojibwa, in opposition to the proposed e. The Tribe has resolved to permanently stop construc- f a hardrock metallic mine at the pristine headwaters of

RTHWOODS PERSPECTIVE

oposed would be a serious threat to the Wolf River as a ional river, and tourist economy. The Wolf River is, river, one of the last clean, large white water trout st. The river is irreplaceable and priceless." (Herb Chapter Trout Unlimited)

Mining Company) are proposing to build the largest the largest toxic landfill in Wisconsin." (George Rock, r)

ern to me are the amounts of reagents which are to be l site, if permitted to operate. For example, estimated n of sodium cyanide is 14,000 lbs...Federal guidelines f inhaled, swallowed, or absorbed through skin." (Robert -Town of Ainsworth/Nashville, next to the proposed



- "I'm a former neighbor of the Crandon people. I come from Iron River, Michigan, originally, where we had extensive mining, underground mining...all of them are closed today and we're left with the problems. I warned people...down the road you're going to have problems with the water, it came true." (Walter Brey, former Mayor of Iron River and Federal Mine Inspector)

- "The Wolf is home to healthiest self reproducing population of sturgeon on the planet. The proposed mine threatens waters that these fish depend on." (Doug Cox, WI Conservation Congress Member)

- "The Wolf River is the lifeblood of our people, and central to our existence. We will let no harm come to it." (John H. Teller, Menominee Tribal Chairman)

- "Crandon Mining Company threatens northeastern Wisconsin and could destroy tourism, a major component of our economy. People come to this area because of their perception that this is a clean environment, the hardrock mining industry will destroy this." (Jamee McCabe, Wolf River Territory Business Association Member)

Environmental Impact Statement (EIS)

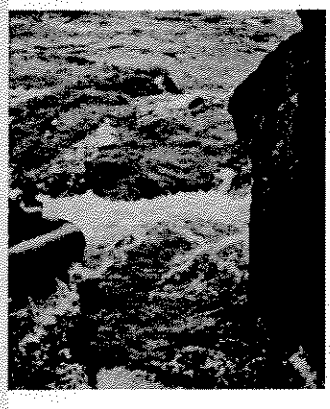
ıtal Impact Statement (EIS) will be prepared to evaluate the
ck mine over the next several years. Numerous federal,
ermits would be required before construction of the mine
EIS will be used by regulators to decide if the proposed
ermitted.

is a very unique resource which is threatened by what
the largest copper and zinc mines in North America if per-
tive headwaters area of the Wolf River could be permanent-
e proposed mine is constructed and operated — affecting
iver watershed.

al federal agencies have said the following about this pro-
nine:

significant natural, cultural, and Native American resources
ct area. Construction and operation of the mine could result
acts to these resources. In order to evaluate the permit
nmental Impact Statement will be prepared." *(US Army*
rs 12/15/94)

opinion of the Department of the Interior that the proposed



Crandon Mining Company project may have a substantial and unacceptable impact on aquatic resources of national importance. Accordingly, the department of Interior objects to issuance of a permit for this project at this time..." (DOI letter to USACE, 11/30/94)

recommends that the permit be denied because we find
not exist sufficient information to make a reasonable judg-
ter to USACE, 10/17/94)

WHAT CAN YOU DO?

SPEAK OUT IN OPPOSITION TO THE CRANDON MINING COMPANY. PLEASE SEND WRITTEN COMMENTS TO:

District Engineer
U.S. Army Corps of Engineers - St. Paul District
190 Fifth Street East
St. Paul, MN 55101-1638

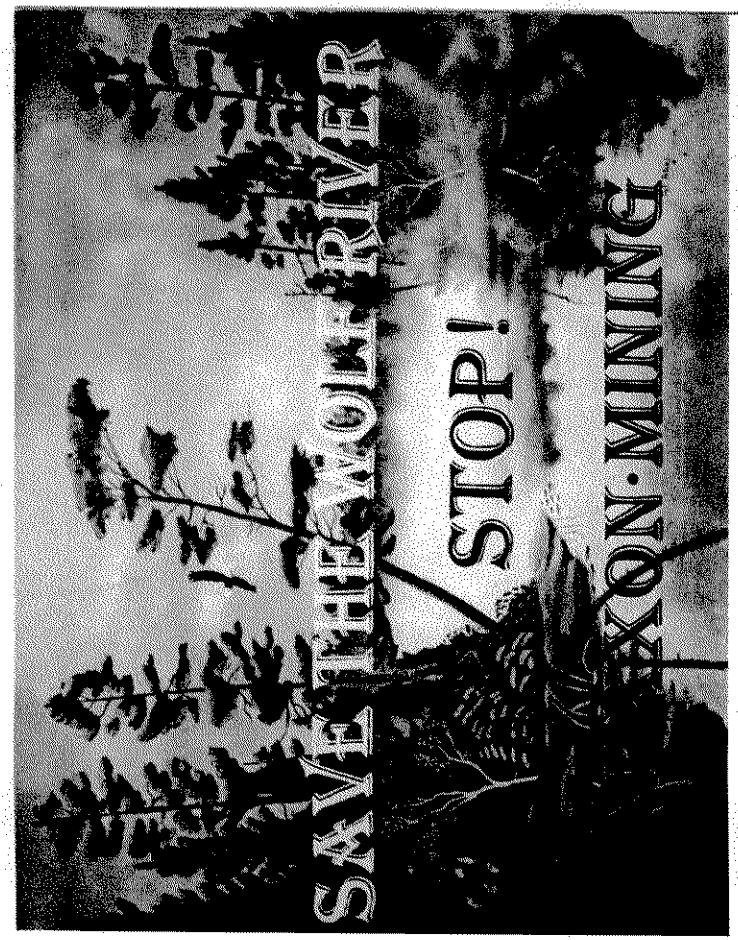
** write this code at the top of your comments:
94-01298-IP-DLB

Call **1-800-362-9472** to leave a message with your Wisconsin Senator or Representative.

Inform these officials that you:

- Value the Wolf River as it exists today, and these values are jeopardized by the proposed mine.
- Oppose permitting the proposed mine at the headwaters of the Wolf River.
- Recommend denial of mine related permits.

Lets protect the Wolf River for our children and future generations!



Menominee Tribal Environmental Services Department
P.O. Box 670
Keshena, WI 54135

For more information call: (715)799-4937
E-Mail: nomining@wi.frontiercomm.net
Web Site: www.menominee.com/a-one/mccombs/

PRINTED ON RECYCLED PAPER ♻

PRODUCED BY MENOMINEE INDIAN TRIBE OF WISCONSIN

SAVE THE WOLF AND WISCONSIN RIVERS
PASS THE SULFIDE MINING MORATORIUM BILL

Facts *Everyone* Should Know About Metallic Sulfide Mining

FACT: EXXON is proposing to dig a gigantic copper and zinc mine in a sulfide ore body at the headwaters of the Wolf River near Crandon Wisconsin. This mine will threaten to pollute both the Wisconsin and Wolf Rivers.

FACT: The Wolf River is one of Wisconsin's purest and most scenic rivers.

FACT: EXXON is proposing to dump over 1,000,000 gallons of wastewater each day into the Wisconsin River through a 38 mile pipeline.

FACT: EXXON's mine will leave behind a waste tailings pile 90 feet tall and the size of 350 football fields right at the headwaters of the pristine Wolf River.

FACT: EXXON's waste tailings pile will be the largest TOXIC waste dump in Wisconsin history and will need to be isolated from mixing with air and water for thousands of years in order to prevent contamination of area ground and surface water.

FACT: The Wisconsin Department of Natural Resources reports that no sulfide mine in a similar ore body has ever operated without polluting ground and surface waters. Nationwide, over 500,000 mining sites are contaminated and 52 of these are on the National Superfund Cleanup list.

FACT: Existing Wisconsin mining laws and DNR rules are riddled with loopholes and do not protect Wisconsin's taxpayers and environment from mining pollution and cleanup costs.

FACT: The Sulfide Mining Moratorium Bill, introduced by Representative Spencer Black, will prohibit the DNR from permitting a mine in a sulfide ore body in Wisconsin until a similar mine has been operated elsewhere in the United States or Canada for at least 10 years without causing significant pollution or area groundwater or surface water.

FACT: Wisconsin's economy and environment cannot afford to be EXXON's guinea pig for unproven mining technology.