

Northwoods Wilderness Recovery Wildlands Update



May, 2005

Special Issue: **Metallic Sulfide Mining**

Inside Wildlands

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Purpose: This newsletter was written to bring you a comprehensive overview of the metallic sulfide mining threat in Michigan's Upper Peninsula, introduce you to the people and organizations opposing this threat, and give you tools to make a difference. Our vision is to bring many, many people together in this battle. *Long live!*

"What is Metallic Sulfide Mining?" talks of issues common to all metallic sulfide mining. "Eagle Project" and "Back 40 Project" explores what's at risk in Marquette and Menominee Counties. "A Look Ahead" focuses on the current exploration by Bitterroot Resources in the western UP. Contact organizations and web sites are listed throughout this newsletter.

Sitting Around A Kitchen Table

By Nick VanDerPuy

Back in the early nineteen nineties, sitting around a kitchen table next to a wood cook stove, on a farm south of Ladysmith, Wisconsin, Sandy Lyon and Evelyn Churchill came up with a new question for the mining companies. The question simply "can you point towards a successfully reclaimed *metallic sulfide* mine?"

The companies threatening to despoil our northwoods - Exxon, Noranda, and Rio Tinto Zinc - were used to framing questions about mining in terms of the product *they* wished to extract. Zinc, Copper, whatever. When asked about reclamation Exxon boasted about successful coal mine recovery.

But until Lyon and Churchill raised the question about metallic sulfide water pollution, over a cup of coffee on the Churchill family farm, the companies never had to deal with bad publicity about the nastier consequences of their mining proposed for the northwoods.

I was a budding public radio reporter holding a mike to Exxon official Jerry Goodrich,

when public radio station WOJB manager Dick Brooks asked the metallic sulfide question. Goodrich hemmed and hawed, finally breaking out in a sweat, when his PR handler, J. Wiley Bragg (honest, that's his name) interrupted



Menominee River forms much of the MI/ WI border photo by Doug Cornett

the interview, saying, "We'll get back to you with an answer, Dick." Well, about a decade later, Exxon never has gotten back to us. And furthermore, they've never opened a metallic sulfide mine in northeastern Wisconsin near the Mole Lake Sokaogon Chippewa homeland and the pristine Swamp Creek and Wolf River.

You see, Sandy and Evelyn's question and the way we posed it in the media ended up getting transformed into Wisconsin's successful mining moratorium law. To this day, the mining industry ranks our beloved north woods as the least attractive political mining climate in North America.

Nick is a journalist and can be visited at: www.superiorbroadcast.org. Nick and Sandy Lyon presented a media workshop in Marquette, MI on Earth Day April 22, 2005.

Mining Bill Passes



In December 2004, Michigan Governor Jennifer Granholm signed the Non-ferrous Mining and Reclamation Act, which amends the Natural Resources Protection Act of 1994 (PA 451). The purpose of this bill is to regulate mining of metallic sulfide ore bodies containing non-ferrous metals.

The statute is the result of a work group convened by the Department of Environmental Quality (DEQ) and made up of representatives from mining companies, state legislators, and environmental groups.

The new law requires mine-specific permitting, an Environmental Impact Assessment (EIA), financial assurance to fund reclamation and environmental protection measures, public hearings on permit applications, comment periods on EIA's, post-mining monitoring of 20 years or more, and the right of citizens to contest agency decisions.

To read the entire Act go to www.legislature.mi.gov and click "Search Wizard" in the left column. Start the Wizard, choose years 2003-2004, and then type in Bill No. 6243.

Currently, the DEQ work group is making rules for the legislation. While the new law is a step in the right direction, it will not prevent mining currently being considered, and could still allow dangerous loopholes.

Citizens Pressure Legislators to "Clean Up Loopholes"

On February 19, 2005, the Powell Township Board and Concerned Citizens of Big Bay held a public forum in Big Bay, MI. State Representative Rich Brown and Senator Mike Prusi heard testimony for over 2 hours. At least 150 people, mostly Powell Township residents, attended the meeting, the overwhelming majority against Yellow Dog mining.

All but one speaker opposed metallic sulfide mining. Questions were posed about the re-

cently passed mining bill, including a potential loophole in the law that would allow the DEQ to have discretion on letting mining companies out of a 20 year obligation to monitor a mine

"The value of the U.P. wilderness is unmatched."

— Senator Mike Prusi at Big Bay forum

once it was closed. DEQ official Joe Maki answered and told the audience this discretionary power would allow failing operations out of monitoring obligations "if the bottom fell out."

Senator Prusi pledged to close potential loopholes in the law. Representative Brown said the people's voice was being heard and proclaimed he would not be influenced by his prospect of being re-elected since he is unable to run again due to term limits.

The Nuts and Bolts

The State of Michigan, federal government, and large and small mineral rights owners have been leasing their rights to private mineral exploration companies for decades. But over the past 10 years or so, the pace of leasing has picked up, in anticipation of Michigan opening up a new metallic sulfide mining district. Instability of third world mining, and the desire of industry to establish new domestic sources, make the discoveries of Zinc, Nickel, and Copper ore deposits especially important. Potential mining and the widespread exploration of minerals, pose a clear threat to the environment, economy, and community of the Upper Peninsula.

Environment: Acid Mine Drainage (AMD) has the potential to pollute water bodies and ground water with acid and heavy metals. Most mines deal with AMD by placing tailings and contaminated water into lined holding pits. At a recent Western Mining Action Network meeting in Marquette, Dr. Dave Chambers told the audience that "all liners leak acid, it is just a question of how much." Unfortunately, this technology fails to prevent pollution, and will negatively impact rare and endangered aquatic species, including the Salmon-Trout River

populations of Coaster Brook Trout.

Economy: The companies currently exploring minerals in the UP are owned by international corporations; most of the profits from mining will leave our area, and many of the environmental problems we anticipate will stay. Bonding will most likely be inadequate to pay for the monitoring and clean up of closed mines.

The few jobs created will be temporary. For example, Kennecott's Eagle Prospect mine would employ less than 70 NON-UNION workers for a period of from 5 to 10 years. Many of the high paying jobs would be filled from experts from other areas.

Community: Metallic sulfide mines will require massive development of infrastructure, destroying the rural and wild nature of the UP. Mining will require processing areas and tailing ponds, electric power grids to supply the power needed for mining, paved roads replacing gravel and dirt roads, and rail lines where there were none before. Fences and no trespassing signs will replace public access.

Eagle Project

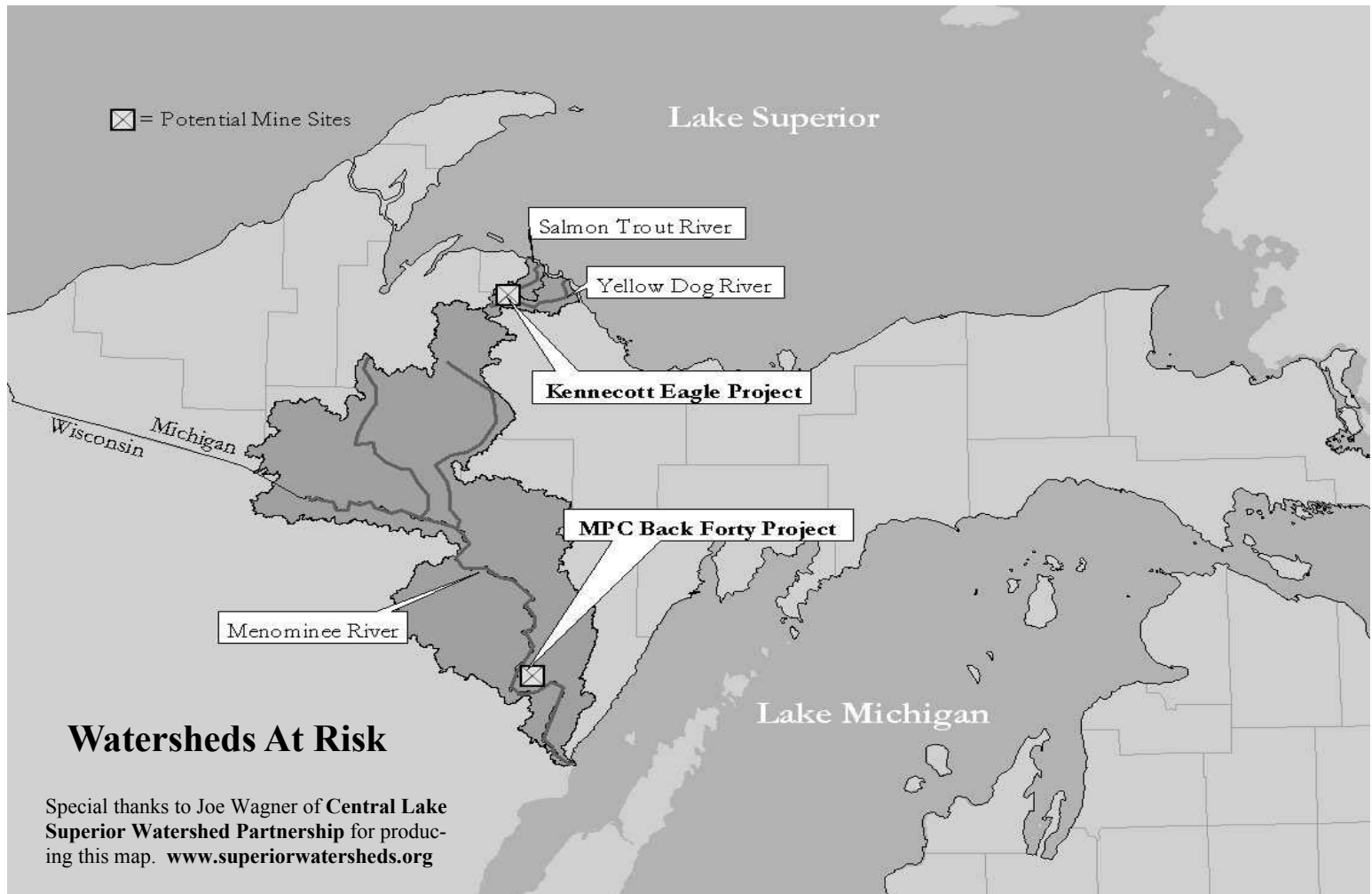
Kennecott Corporation wants to place an underground sulfide mine in the Escanaba

River State Forest, 1000 feet beneath the headwaters of one of our most pristine streams and last refuge for reproducing Coaster Brook Trout—the Salmon-Trout River. The aquifer that will be impacted feeds headwaters of a number of rivers including the Yellow Dog, Huron, Dead, and Peshekee (a headwater stream of Menominee River). A mine here would also impact the small rural towns of Big Bay, Skanee, and L'Anse, who increasingly rely on the natural environment and tourism as a sustainable base for their economics.

Back Forty Project

This prospective mine is owned by Mineral Processing Corporation, and found east of the town of Stephenson, MI, near the Menominee River and Shakey Lakes. It is within an important ecological area, the Shakey Lakes Savanna, which is known for its rare, endangered, and unusual plants. These lands are steeped in rich Native American history, and known to contain important remnants of past Indian settlement, that date back to prehistoric times.

For more details see corresponding sections in this Wildlands Update.



Sulfide Ore

Mining is by no means a new industry to the UP. But mineral exploration and the prospect of new metallic sulfide mines across the north woods pose a new and present danger.

Current exploration is occurring in a rock formation known as a *sulfide ore body*, a reactive ore. When exposed to air and/or water, it breaks down into sulfuric acids and byproducts, leading to Acid Mine Drainage (AMD).

Minerals contained in these ore bodies in-

clude Copper, Nickel, Gold, Zinc, Lead, and sometimes Platinum and Palladium. Most UP mining has occurred in *iron oxide* ore bodies. These ores are not as reactive and don't produce AMD or leach heavy metals.

A few metallic sulfide ore bodies have been mined in places like Ropes Gold Mine, Gratiot Lake Mine, and some of the mines in the Copper Range and Iron River. AMD is a continuing problem between Iron River and Caspian.

Acid Mine Drainage

Acid mine drainage (AMD) results from weathering of sulfide minerals and storm water runoff. AMD contains elevated levels of acidity and dissolved metals. If not properly managed, environmental impacts from AMD can result in serious degradation of water quality, wildlife habitat and vegetation. AMD can also degrade drinking water quality, and be toxic to plants and animals.

AMD is a water solution formed when sulfide minerals combine with water and oxygen. The rate at which AMD forms is a function of temperature, pH, sulfide mineral surface area, oxygen concentration of air or water, degree of water saturation, and presence of certain bacteria. Resulting sulfuric acid and dissolved

metal concentrations depend on sulfide mineral composition, rate of oxidation, and interactions with neutralizing materials. Iron sulfides (such as Pyrite) and other metallic sulfides (such as of Zinc, Copper, and Lead) are minerals that can form AMD.

Although significant progress has been made in understanding and controlling AMD, site-specific conditions in the western UP, including high snow and rain fall, widespread presence of wetlands and aquifers, acidic nature of soils, and unpredictable weather, are likely to work against effective control. Any mining that may occur here will result in concentrated ore stockpiles and tailings (crushed rock) which will be exposed to air and water.

Wisconsin's Mining Law

In 1998, Wisconsin's Mining Moratorium bill was signed into law. Act 171 requires mining permit applicants to present evidence that they have operated and closed a mine without water pollution. A company must show an example of a metallic sulfide mine that has operated for 10 years without polluting surface or ground water from the mine or its tailings. It must also show a mine that has been closed for 10 years without polluting surface

or ground water. This law, and grassroots resistance to metallic sulfide mining makes Wisconsin one of the least desirable places for a mining company to try to open an operation.

When the Michigan Mining Work Group sat down to establish a mining law in Michigan, the Department of Environmental Quality blocked efforts to even discuss the Wisconsin law, despite repeated requests by the public to consider it in their deliberations.

Michigan's Mining Law Loopholes

Comments from the Keweenaw Bay Indian Community and US Rep. Bart Stupak are very critical of Michigan's new mining law. Both have stated Bill 6243 lacks "minimum standards [which] make the rules for conducting mining activity unenforceable."

The law fails to place standards on data gathering and analysis for modeling predictions, the environmental impact statement, and monitoring analyses. It also allows mining companies to conduct the EIS, rather than an impartial 3rd party, such as the US Geological Survey. Such loopholes allow a company to manipulate data and use it in favor of their project.

Local power and control via local laws was

removed. Local governments have no control over construction, operation, closure, monitoring, reclamation, and remediation of a mine.

Native American cultural resources such as graves, archeological sites, and hunting and fishing rights to lands under lease aren't protected. Further, risky practices such as heap leaching and cyanide use aren't regulated. The bill fails to enforce response standards for detected pollution such as leaking liners.

No financial assurance protects tax payers from bearing the costs of clean up, if a company goes bankrupt and the state has to deal with pollution. As it stands, Bill 6243 is too weak to protect humans or the environment. Can current rule-making remedy this?

Mineral Rights

Full, or "fee" ownership includes land from property boundaries to the center of the earth. Sometime within the last couple hundred years, the law began to allow property owners to separate mineral ownership and other property rights from the land deed. Today, many land owners retain only the surface rights to the land.

A mineral right allows the owner to extract minerals from the earth, or receive royalties from mineral extraction. "Mineral" generally includes fossil fuels, metals and metal-bearing ores, and non-metallic mineral and rock products.

A mineral right is real property that can be sold, transferred, or leased. It is distinct from surface rights. Mineral rights can be severed from the surface rights, and can also be divided up and sold in fractions. Ownership may specify rights to only one kind of mineral (such as oil and gas), or one formation, or a depth interval. Ownership of mineral rights can usually be determined on the deed and/or title abstract of the property.

Most mineral owners lease their rights to a mineral company because of the high cost of exploration and development. Most leases include a payment when the lease is signed and royalty from any minerals produced. Leases usually have a specific term, and may require a yearly rental payment.

The owner or lessee of mineral rights has the right for reasonable use of the surface to extract minerals. The surface right owner is usually entitled to compensation for use of the land and damage to trees, crops, and other surface features.

Public Act 154 of 1997, amended the Marketable Title Act (MCL 565.101) to protect property owners from old claims that don't appear in the recorded chain of title. This new law makes void mineral interests not reflected in the 20 year chain of title, or recorded within 3 years of the passage of the law. A surface owner can now file a Notice of Interest form with the County Register to try to re-attach the mineral rights to the surface land deed.

This special issue of Wildlands was funded in part by:

Fund for Wild Nature

P.O. Box 42523. Portland, OR 97242
www.fundwildnature.org

Great Lakes Aquatic Habitat and Network Fund

426 Bay St.
Petoskey, MI 49770
www.glahabitat.org

**Location**

Threatened Plant Near Proposed Project Site

In the Summer of 2004, a large population of Linear-leaved Gentian (*Gentiana linearis*) was discovered in the headwaters of the Salmon-Trout River. The plant is listed as Threatened under the Michigan Endangered Species Act. Although populations can be quite large, *G. linearis* seems to be limited to acidic soils and closely associated with granitic areas. In Michigan, Linear-leaved Gentian is found only in Marquette and Baraga Counties.

Over 800 flowering stems and several hundred immature plants of *G. linearis* were counted, making this population perhaps one of the largest reported in the state. A Kennecott mine will put this population of Linear-leaved Gentian at-risk.

Concerned Citizens of Big Bay

Concerned Citizens of Big Bay (CCBB) is a grass-roots organization formed to enrich the lives of people in Powell Township by defining, discussing, educating, and taking action on critical issues. CCBB is opposed to metallic sulfide mining on the Yellow Dog Plains.

CCBB currently has a good working relationship with Powell Township and has petitioned the township board to speak and take action on their behalf.

CCBB circulated a petition in Big Bay and City of Marquette for the US Geological Survey to conduct an independent third party hydrological study of the Yellow Dog Plains. Nearly 3,000 signatures were collected in less than 6 weeks and presented to the Legislative Mining Work Group. The petition fell on deaf ears.

The Powell Township Board made a formal request for the same third party hydrological study to the DEQ. This too was rebuked in a confusing letter from DEQ spokesman Harold Fitch. CCBB was not deterred and presented

the petition to Governor Granholm's UP representative. CCBB continues to email, call, and question elected officials of all levels of government on this issue.

CCBB just completed a door-to-door and mail-in petition of Powell Township voters asking the Township Supervisor to inform the Kennecott Community Advisory Group residents do not want a metallic sulfide mine. Over 380 people signed the petition, and over 80% of people directly contacted oppose the mine. Petitions were presented to Kennecott at its January 31, 2005 meeting.

CCBB and the Powell Township Board, hosted a February meeting to discuss metallic sulfide mining with State Senator Mike Prusi and Representative Rich Brown.

CCBB will continue to lobby government representatives at the township, county, state, and federal level, and network with other citizen groups to unite in opposition to metallic sulfide mining.

CORA Adopts Mining Resolution

In June 2004, the Chippewa Ottawa Resource Authority (CORA) adopted a resolution against any new mines in the headwaters of the Yellow Dog or Salmon Trout Rivers. They also support the enactment of stringent environmental requirements for any metallic sulfide ore mining in Michigan. CORA recognizes this area for its importance for fish and wild-

life, especially the last native Coaster Brook Trout habitat in Michigan in Marquette County's Salmon Trout River.

The Chippewa Ottawa Resource Authority is an inter-tribal management body for fisheries in Michigan's 1836 treaty waters. For more information on CORA see: www.1836cora.org

Coaster Brook Trout—AT RISK

Coaster Brook Trout (*Salvelinus fontinalis*) is a large form of lake dwelling Brook Trout spending much of its life in Lake Superior. "Coasters" were historically common in the rocky, shallow coastal waters of Lake Superior. The fish typically spawn in tributaries in the fall. The young remain in streams during early development before moving to the lake. Shoal-spawning Coasters may spend their entire life cycle in Lake Superior, but others migrate between stream and lake habitats and are considered anadromous.

Coasters historically spawned in at least 106 Lake Superior tributaries, including 25 rivers in Michigan. They were probably in most cold-water streams along the south shore.

Overexploitation is considered a primary cause for the dramatic decline of Coaster Brook Trout populations after the 1860s. Coasters are very vulnerable to angling because they inhabit shallow shoreline areas and congregate at stream mouths for feeding and spawning. The incidental catch of Coasters in near shore gill nets increased in the early 1900s, and spawning fish were often netted at

stream mouths, leading to extirpation of local populations. Anglers from across North America targeted the large Brook Trout in Lake Superior's waters and tributaries, and by the early to mid-1900s, Coasters were reduced to small, scattered populations.

The Salmon Trout River contains the last naturally reproducing population of Coaster Brook Trout on the south shore of Lake Superior. A metallic sulfide mine at the headwaters of this high-quality stream could eliminate the last natural population of a fragile species.

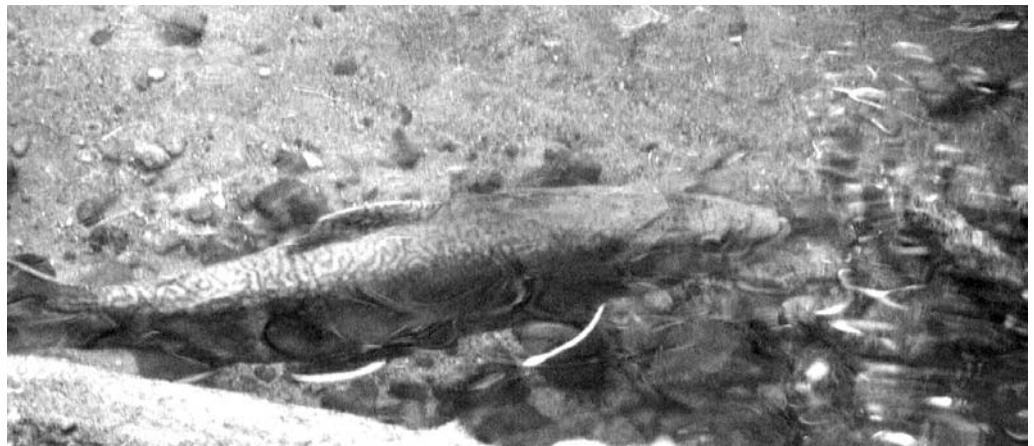
**Coaster Brook Trout in Salmon-Trout River**

Photo by Joe Wagner, CLSWP

DEQ Rejects USGS Study

The Department of Environmental Quality has rejected the idea of an independent third-party baseline hydrologic survey for the Yellow Dog Plains. State geologist Harold Fitch claims the survey is not necessary to evaluate the potential impact of a proposed Kennecott mine, in a letter responding to Powell Township Supervisor Vincent Bevins' request for the US Geological Service study.

Fitch believes environmental impact studies conducted by Kennecott will be adequate to do the job. Fitch is chairman of the Mining Work Group that developed the non-ferrous mining legislation approved in December by the Michigan Legislature. The group is now working on rules for the legislation.

In a February 7, 2005 letter to DEQ's Fitch, State Representative Rich Brown and Senator Mike Prusi, reiterated Powell Township's request. Brown and Prusi believe "[T]he lack of pre-existing hydrological data... make this review imperative."

A 5-year USGS study of the plains is estimated to cost around \$1.5 million. Keweenaw Bay Indian Community, L'Anse Township, and Marquette County Board also support Powell Township's request.

The Yellow Dog Road: an old trail to wild places

Traveling the Yellow Dog Plains gives one the feeling of being in a remote wilderness. The Yellow Dog Plains are deep in the woods, but for centuries it has been a well-traveled area.

When the French Voyageurs reached Lake Superior's south shore in the mid-1600's, they found Native American trails that had been used for generations. This includes a trail between Marquette and L'Anse that traversed Yellow Dog country.

In 1857, shortly after the first European settlers came, this trail became the first state road in the UP. The Marquette-L'Anse Road ran north of Marquette near the Lake Superior shore. It cut inland through the Yellow Dog Swamp, south of Lake Independence, and followed the north side of the Yellow Dog River for several miles and then crossed to the south side. It then left the river corridor to the Yellow Dog Plains, crossing the headwaters of the Salmon-Trout River, and then went southwest to L'Anse.

Much of this road still traverses wild lands. However, development of a Kennecott mine would end the long history of this road being a remote trail to wild places.

Kennecott & Rio Tinto's Track Record

Kennecott, the company proposing a Yellow Dog Plains mine, is owned by Rio Tinto, one of the world's largest mining corporations. Rio Tinto has more than 60 operations in 40 countries, and is known worldwide for violating environmental, human, and labor rights.

Kennecott's Utah Copper mine is one of the US's worst toxic generators, polluting at least 72 square miles of groundwater. Kennecott's Green Creek mine is the second biggest polluter in Alaska. Kennecott's closed Wisconsin Flambeau Mine exceeds ground water standards and produces far more acidic waste than expected.

Rio Tinto's Papua New Guinea Bougainville mine dumped billions of tons of untreated mine waste into the environment, displacing people and causing serious health problems. The government helped Rio Tinto wage war and blockade Bougainville people, causing villages to relocate and hospitals to close. When the war ended, approximately 15,000 civilians were killed, but the mine was closed down.

Rio Tinto and Freeport-McMoRan's West Papuan mine has been accused of horrific human rights violations, including the murder and suppression of native people. Toxic wastes and development destroyed huge areas of rainforest and polluted pristine rivers. Locals suffer from skin rashes when they

bathe and can no longer catch fish relied upon for protein, and water is so contaminated with mine wastes that it's too dangerous to drink.

Rio Tinto subjected workers in a Brazilian mine to Lead poisoning, while company doctors told them the poison would cause no harm. Security guards were urged to use violence and torture to discourage collecting small amounts of Gold from the mine, and security shot and killed local people for this. Employees were fired if they became active in unions.

Rio Tinto's Uranium mine in Namibia has been accused of using "virtual slave labour under brutal conditions" by a United Nations Council, and of "direct violation of UN resolutions." Mine profits were once used to support South Af-

rica's apartheid government to continue control over Namibia.

Rio Tinto's company Rio Algom owns the Elliot Lake uranium mine in Ontario. This mine destroyed 55 miles of the Serpent River through the production of sulfides and highly radioactive waste. In a 1970's study, no living fish were found downstream of the mine. Government reports showed abnormally high levels of lung cancers among miners, exceeding Canadian averages by 300-500%.

References: www.corpwatch.org
www.hagens-berman.com
www.nocrandonmine.com



Kennecott Exploration Site—Yellow Dog Plains photo by Chauncey Moran

KBIC Adopts Resolution

In July, 2004, the Keweenaw Bay Indian Community (KBIC) adopted a resolution prohibiting mining and all other related activities within the L'Anse Reservation.

KBIC believes Kennecott cannot show evidence mining activities can be undertaken without polluting ground and surface water, and that they cannot show they will protect the water resource.

The resolution strongly proclaims "the method of mining... deeply offends the traditional and cultural values of the Keweenaw Bay Indian Community," and that "any temporary gains... are far outweighed by the potential for enduring and severe damage."

Additionally, the Michigan Anishinaabek Cultural and Repatriation Alliance (MACPRA) adopted a resolution supporting KBIC's prohibition. www.macpra.com

Contact Organizations

Concerned Citizens of Big Bay

c/o Gene Champagne
 P.O. Box 21
 Big Bay, MI 49808
 E-mail: cjgmc9@aol.com

Eagle Alliance

P.O. Box 562
 Marquette, MI 49855
 Web: www.ydeaglescry.com
 E-mail: eaoutreach@ydeaglescry.com

Yellow Dog Watershed Preserve

P.O. Box 5
 Big Bay, MI 49808
 Phone: (906) 345-9223
 Web: www.yellowdogwatershed.org
 E-mail: ydwp@yellowdogwatershed.org



Lake Township Adopts Mining Ordinance

In December 2004, The Lake Township Board enacted an ordinance to regulate and license mineral extraction operations. Lake Township is located in Menominee County, MI and contains mineral-rich deposits that Mineral Processing Corporation and its partners are assessing for mining.

The Mineral Extraction Ordinance establishes a 5 member Mineral License Board. A mineral extraction license is required before any mining operations can begin. The application

requires thorough documentation of a mine plan including an environmental impact assessment, security deposits, liability insurance, and plans for cleanup and monitoring for a minimum period of 20 years following closure.

In addition, the ordinance adopts hours of operation and numerous provisions to protect water quality and adjacent property. The ordinance can be downloaded at:

www.northwoodswild.org/ordinance.pdf

Natural History of Shakey Lakes Savannah

Shakey Lakes is a cluster of lakes on the Shakey River located west of Stephenson, MI and adjacent to the Menominee River. Land here was first described as "burnt plains" in the 1848 General Land Office Survey. At the time the first European settlers arrived, this land was most likely a tree-studded savannah, kept open from lightning strikes and fires set by Native Americans.

Since pre-historic times, the Menominee River corridor was a major travel route for Native Americans and settlements occurred all along the river, especially in the vicinity of Sixty Islands. The river supplied abundant fish, and its banks a good site for agriculture. Nearby savannah made good habitat for game and forage.

Botanist Don Henson developed interest in Shakey Lakes and began work here in the mid-1980's, after finding references to prairie plants in W. H. Beals 1905 *Flora* and specimens from a 1930's collection by Carl Grassl. Henson first found plants like Big Bluestem, Sand Dropseed, Western Sunflower, and Rough-leaved Blazing Star on Escanaba River State Forest lands.

By the 1980's, farms and tree plantations established by European settlers altered much of the savannah, and prairie habitat was diminished. Trees encroached the grasslands from wide-spread fire suppression. Today, much of the upland forests are crowded with Northern Red Oak, Hill's Oak, Jack Pine and Large-tooth Aspen.

In 1988, Henson convinced the Michigan DNR to conduct an experimental burn on 30 acres. Species never recorded before started to grow after the fire – Arrow-leaved Violet, Spicate Lobelia, Large-flowered Ground Cherry, Scarlet Indian Paintbrush – apparently from dormant seeds that may have been in the ground for decades. Plants already growing on the site such as Big Bluestem, June Grass, Little Bluestem, and Hill's Thistle began to grow more abundantly. Where most or all trees were killed, Big Bluestem grew profusely.

The Department of Natural Resources had identified the presence of several rare and endangered species in the Shakey Lakes area, such as Dwarf Milkweed (state endangered), Dwarf Lake Iris (state and federally threatened), and the Bald Eagle (state and federally threatened).

To date, more than 100 prairie plants are recorded in the Shakey Lakes area.

Prairie restoration creates habitat and also helps animals such as Badger, Fox Snake and Eastern Hog-nosed Snake become more abundant.

At least 50,000 acres of prairie habitat and savannah exists on both sides of the Menominee River, from the its mouth at Menominee / Marinette, to Kingsford, MI and Florence, WI.

Information for this article was taken from "Shakey Lakes, Michigan," an article written by Robert H. Mohlenbrock in the March 1995 issue of Natural History.



Shakey River Sloughs Photo By Doug Cornett

Mineral Processing Corporation

A metallic sulfide mineral deposit was discovered near the Menominee River in Lake Township in 1999, by the VMS Development Company, who had obtained mineral rights in Michigan and Wisconsin from the Stephenson Lumber Company. VMS joined with Mineral Processing Corporation (MPC) to form the Menominee River Exploration Company (MREC) in 2001, and began the Back Forty Joint Venture.

Mineral leasing from the State of Michigan began in 2001, and exploratory drilling in 2002. Economically significant deposits were discovered in 2003. Exploration to date has focused on a 500 acre area in Lake Township containing concentrations of Zinc, Copper, Gold, and Silver.

In 2004, Menominee River Exploration Company joined with First Point Minerals Corporation to form Aquila Resources Corporation. First Point holds 22% interest in Aquila and MREC the remaining 78%. Aquila is incorporated in Canada. Aquila holdings consist of First Point's Cedros property in Honduras, and MREC's Back Forty property in Menominee County. The purpose of Aquila is to attract investment for further development of both mining projects.

Minerals Processing Corporation was founded in 1995. MPC purchased an ore processing facility in Humboldt, MI from the Callahan Mining Corporation. Callahan processed ore here from its now defunct Ropes Gold Mine, located just north of the town of Ishpeming.

Tom Quigley, president of MPC, is also the president and CEO of Aquila. Richard Lassin, a co-owner of VMS, is a director of Aquila.

For more information see:
www.aquilaresources.com
www.firstpointminerals.com
www.backfortympc.com

Fisheries History

Chappee Rapids, Grand Rapids, White Rapids and Pemene Falls are all historic Menominee River spawning areas where Native Americans fished. Large runs of Lake Sturgeon, Lake Whitefish, and Herring were a major food source for tribes that lived here. Walleye, Bass, Suckers, and Northern Pike were other species Indians fished for.

Sturgeon runs occurred all the way up to Sturgeon Falls, which is now dammed and the present day site of the Norway, MI municipal hydroelectric power plant.

Fish disappeared or diminished when European settlers arrived and established sawmills. The river was altered by log drives and pol-

luted with sawdust from the mills. By the 1870's Whitefish runs stopped and other fish had their habitat greatly reduced. Spawning areas were flooded and then filled with debris from logging, mining, and hydropower development.

Fisheries have improved since the end of log drives in the early 1900's and its sawmill pollution. However, makeup of fish species have been vastly altered and fish migration is impaired by the many dams. Acid mine drainage is still a problem in the Iron River area, and additional mines in Lake Twp., Mqt. Co., or the western UP could continue to pose threats to the largest river system in northern Michigan.

Sixty Islands

Sixty Islands is located in the Menominee River about 25 miles northwest of the city of Menominee, MI, and about half way between the towns of Stephenson, MI and Amberg, WI. It is just a few miles north of Shakey Lakes.



Native American Dance Ring
photo by Lisa Cronick

Namacachure is the name of a Native American spirit spot located among Sixty Islands. It is located just down stream from present-day White Rapids Dam.

Namacachure means Dog's Belly, referring to a place where a wooded island splits the channel of the Menominee River in two. It was believed that a spirit lived in this sacred place. Indians passing here were obligated to say a

prayer of good luck and leave a tobacco offering.

This spirit spot originates from a legend about a beautiful Indian maiden who undergoes a spiritual fast. She fasts but there is no vision so she continues to fast in a weakened state. She leaves her home at the mouth of the Menominee River and is never again found.

She then comes to her parents in a dream and tells them where she lives. She asks them to take their home at a beautiful spot along the Menominee River where game was plentiful. Legend says that at night she would come out of the eddy in the river to talk to her parents and comb her beautiful hair.

Menominee River



Trumpeter Swans at Shakey Lakes
photo by Doug Cornett

The Menominee River takes its name from the Menominee Indian tribe which had a settlement at the mouth of the river on Lake Michigan's Green Bay. The word Menominee comes from the Algonquin language and means "wild rice." Historical accounts refer to huge rice beds located here. The Chipewewa lived in the upper portion of the river basin and referred to the river as "Me-ne-cane Sepe" or Many Little Islands River. Today, the Menominee River forms over 100 miles of the border between Wisconsin and Michigan.

Contact Organization

Front 40
P.O. Box 113
Stephenson, MI 49887
Web: www.menomineeriver.com

In wilderness I sense the miracle of life, and behind it our scientific accomplishments fade to trivia.—Charles A. Lindbergh

Please Support Those Fighting Metallic Sulfide Mining

Addresses of grassroot organizations fighting the Michigan metallic sulfide mining menace are listed throughout this issue of *Wildlands*. Please consider supporting them or NWR. Simply cut out the form below and address an envelope to who you want to support. Thanks!

Name: _____

Address: _____

City: _____

State _____ Zip: _____

Phone / E-mail: _____

Donation Return Form

General Contribution \$ _____ .00
Metallic Sulfide Mining Fund \$ _____ .00

Total Contribution \$ _____ .00

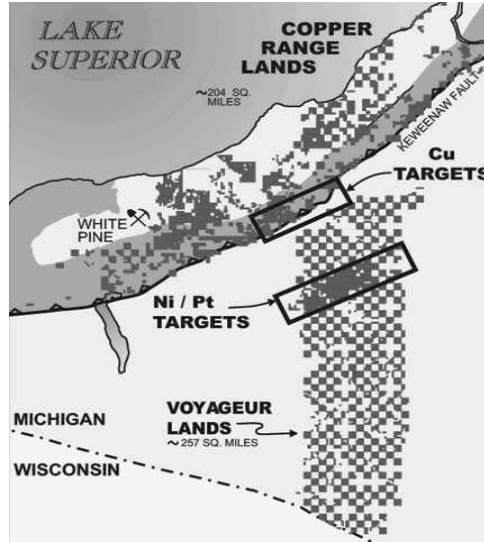
If sending Contributions to NWR, please mail to: **Northwoods Wilderness Recovery; P.O. Box 122; Marquette, MI 49855-0122.** Northwoods Wilderness Recovery is 501(c)3 tax deductible. Please check with other organizations regarding their tax status if not sending to NWR.

Western Upper Peninsula Exploration

Bitterroot Resources Ltd., a Canadian mineral exploration company, is currently exploring ore bodies in the western UP. Bitterroot has 2 wholly-owned subsidiaries in Michigan – Voyageur Lands Corporation, which was established in 1967, and Trans Superior Resources, established in 1995. All shares of Voyageur were purchased by Trans Superior in 1997.

In 2003, Bitterroot entered an option/joint venture agreement with Cameco Corporation (www.cameco.com) covering 780 square miles. Cameco will have the option to acquire a 65% interest in all targets within the area of interest by incurring exploration expenditures of \$15,000,000 over the next 18 years.

Trans Superior properties include 100% interest in mineral rights on 461 square miles of land that extend from the Keweenaw Peninsula and White Pine, south to the Michigan-Wisconsin border. This land is composed of two units – Copper Range Lands (204 square miles) and Voyageur Lands (257 square miles). Very little, if any exploration has occurred on this land. Since it is in the vicinity of numerous old copper mines, the current venture is especially attractive to investors.



Additionally, the company has mineral leases with Bureau of Land Management, State of Michigan and individual land owners.

The 1,800 acres leased from the state has just been made available after a temporary suspension of the lease program, following review of state leasing policies and proce-

dures. The 2,100 acres of federal BLM mineral rights leases for fifty cents per acre per year.

The Echo Lake intrusion, a 15 square mile area north of Kenton, MI was drill-tested by Trans Superior in 1997, and hosts platinum/palladium mineralization. Other areas on its 100% owned lands host gold and copper mineralization.

Due to an increase in UP exploration activity and strong mineral markets, Bitterroot is continuing to acquire land and review potential acquisitions. Exploration is targeting Gold, Silver, Uranium, Nickel, Copper, and Platinum group elements. Exploration activities include geological mapping, geochemical surveys, geophysical surveys (both airborne and ground-based), and core drilling.

Other companies exploring minerals in the UP include Prime Meridian Resources, Mineral Land and Exploration Co., Kennecott Exploration, Menominee River Exploration Co., and Cleveland-Cliffs. Prime Meridian acquired over 18,000 acres of leases in Marquette, Baraga and Houghton Counties from the state in 2001.

Reference: www.bitterrootresources.com

Calendar of Events

- May**
20-22 Trap Hills Hikes — sponsored by Sierra Club. Contact: jrebers@nmu.edu
- June**
25 Celebrate the Yellow Dog, 10th Annual Meeting & Campout—noon to ?? Contact YDWP at ydwp@yellowdogwatershed.org Ph. 906-345-9223
- July**
17 Lake Superior Day
- August**
TBA Connecting Waters, Connecting People
 Trek from Lake Superior to Green Bay to highlight threats of metallic sulfide mining to our waters.
- 20 Shakey Lakes Park**
 Speaker: US Rep Bart Stupak
- September**
2-3 Forest Watch Workshop

More information can be found at www.northwoodswild.org or call (906) 226-6649.

NWR Wish List

- ◆ Fuel Efficient Automobile
- ◆ Laptop & Desktop Computers
- ◆ Video Projector
- ◆ Slide scanner

Contact Info:

www.northwoodswild.org
info@northwoodswild.org
 (906) 226-6649

