

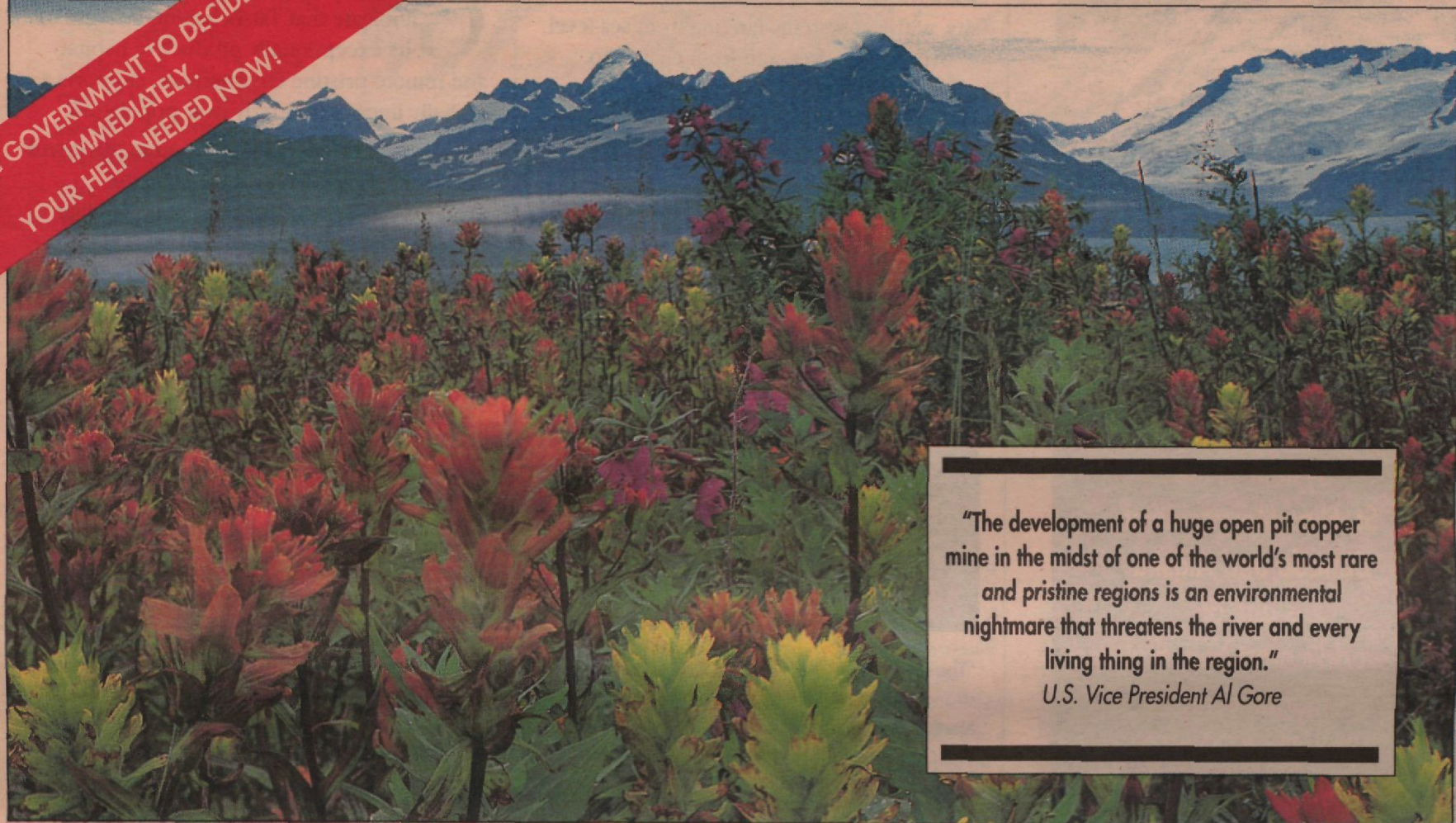
TATSHENSHINI

North America's Wildest River

FREE

SPRING/SUMMER 1993

BC GOVERNMENT TO DECIDE
IMMEDIATELY.
YOUR HELP NEEDED NOW!



"The development of a huge open pit copper mine in the midst of one of the world's most rare and pristine regions is an environmental nightmare that threatens the river and every living thing in the region."

U.S. Vice President Al Gore

GRAHAM OSBORNE

SAVE IT NOW...FOREVER!

Uplifted into the highest coastal mountain ranges on Earth, shaken by the strongest earthquakes to strike the North American continent, sculpted by the largest non-polar icefields and glaciers in the world, and eroded by its mighty mile-wide rivers, the Tatshenshini (TAT-SHEN-SHEE-NEE) wilderness has endured massive natural forces.

But today it is the plans of a Vancouver-based mining company,

Geddes Resources, to build a highly hazardous mega-mine in its heartland that most endangers this unique and magnificent region in Canada and United States.

Only the efforts of those who value wilderness — people like you — will save North America's wildest river today ... and for all future generations to come.

Protection of the Tatshenshini would:

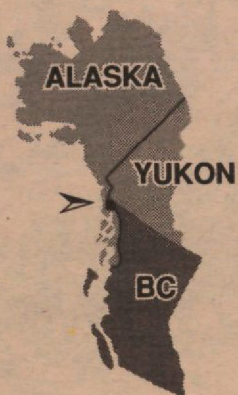
- Link together national parks in United States and Canada to complete the largest international preserve on Earth.
- Ensure the long term survival of grizzlies on our continent and protect the very rare glacier bear.
- Complete the protection of the only large pristine watershed from source to mouth in North America.

Development of Geddes mining scheme could:

- Poison the transboundary Tatshenshini-Alsek river system in perpetuity with massive amounts of acid and heavy metals.
- Permanently devastate fisheries in US & Canada worth more than \$50 million/year.
- Desecrate a wilderness landscape the calibre of the Grand Canyon with pipelines, roads and bridges.



ART WOLFE



(1) The rare Glacier Bear.



ART WOLFE

WORLD CLASS WILDERNESS



ANDREW KLAVER

"The Tatshenshini-Alsek river system in the St. Elias Mountains of Canada and Alaska is one of the world's most beautiful and magnificent."

World Conservation Union (IUCN)

The only river system to penetrate the St. Elias Range (the highest coastal mountains on Earth), Tatshenshini/Alsek carves a low elevation corridor of life amidst the ice fields and peaks to link together World Heritage Sites in Canada and the United States. Consequently, this wilderness features extraordinary biodiversity, with ecosystems ranging from sea-level to over 15,000 feet, and from coastal to sub-tundra. In the lower reaches immense glaciers descend to river's edge to sheer off thunderously as icebergs.



ART WOLFE

"The Tatshenshini/Alsek area is one of the last strongholds of a thriving grizzly population in North America..."

B.C. Government Tatshenshini-Alsek Wilderness Study

Unparalleled Wildlife Populations

Government and research studies indicate that Tatshenshini, because of its exceptionally productive habitat and remote pristine environment, supports a globally important grizzly bear population:

- "The grizzly bear habitat found in the lower Tatshenshini/Alsek area does not exist anywhere else in British Columbia. Wildlife biologists estimated that the Alsek Ranges' ecosystem has bear food productivity that is unique in Canada."

Tatshenshini-Alsek Wilderness Study

- "...the Tatshenshini River valley could be thought of as the green line that cuts through the mountain and ice barrier, and connects coastal and interior grizzly bear populations."

Dr. Stephen Herrero-Head, IUCN Bear Research Group

Tatshenshini is the only place where the rare silver-blue glacier bear occurs in Canada. As well, Tatshenshini supports the sole year-round populations of Dall's sheep in British Columbia and exceptional numbers of mountain goat, moose, wolves, eagles (bald & golden) falcons (peregrine & gyr), and trumpeter swans.



Geddes says:
"This isn't
pristine
wilderness,
it's barren land"

CARL CHAPLIN

Surrounded by National Parks in Canada and the United States, protection of the Tatshenshini wilderness heartland would link together and complete the largest international preserve on the planet. The headwaters

of the Tatshenshini, and the Alsek with which it merges, flow through Yukon's Kluane National Park and its lower reaches, through Alaska's Glacier Bay National Park. Only in B.C. is it unprotected...and vulnerable.

WINDY CRAGGY MEGA MINE THREATENS TATSHENSHINI

The world-class wilderness and wildlife values of the Tatshenshini are in dire jeopardy. In the heart of the Tatshenshini Wilderness, just 15 miles east of the U.S. border, Geddes Resources (Vancouver) proposes to take the top off 6,000' Windy Craggy Mountain, transforming it into an immense open pit copper mine (30,000 tons/day), and generating 375 million tons of waste rock and tailings.

The company plans to ship the ore concentrate 150 miles via slurry pipeline to port at Haines, Alaska. Geddes is also proposing to build a major 70 mile access road through outstanding wild-life habitat supporting grizzlies, wolves, Dall's sheep and eagles. The consequences of the Windy Craggy scheme could be catastrophic.

KEVIN SCHAFER



AL HARVEY



The Geddes scheme would transform Windy Craggy Mountain into a huge open pit mine and waste rock dumps.

CARL CHAPLIN



Acid Mine Drainage: A Massive, Permanent Hazard

The ore in Windy Craggy mountain is up to 40% sulphide. When this rock is exposed to atmospheric oxygen through mining, it can generate vast amounts of sulfuric acid (or battery acid) and leach out heavy metals from the bed-rock. Called Acid Mine Drainage (AMD) this acid/heavy metal combination is lethal to fish and consequently impacts on the wildlife depending on them for food. The leading Canadian authority on AMD says "...no massive sulphide mines are known which have not become acid producers."

Errington, 1987

Acid Mine Drainage is essentially permanent and irreversible. Consider the following:

- "The U.S. mining industry spends over \$1 million every day to treat acidic mine water."

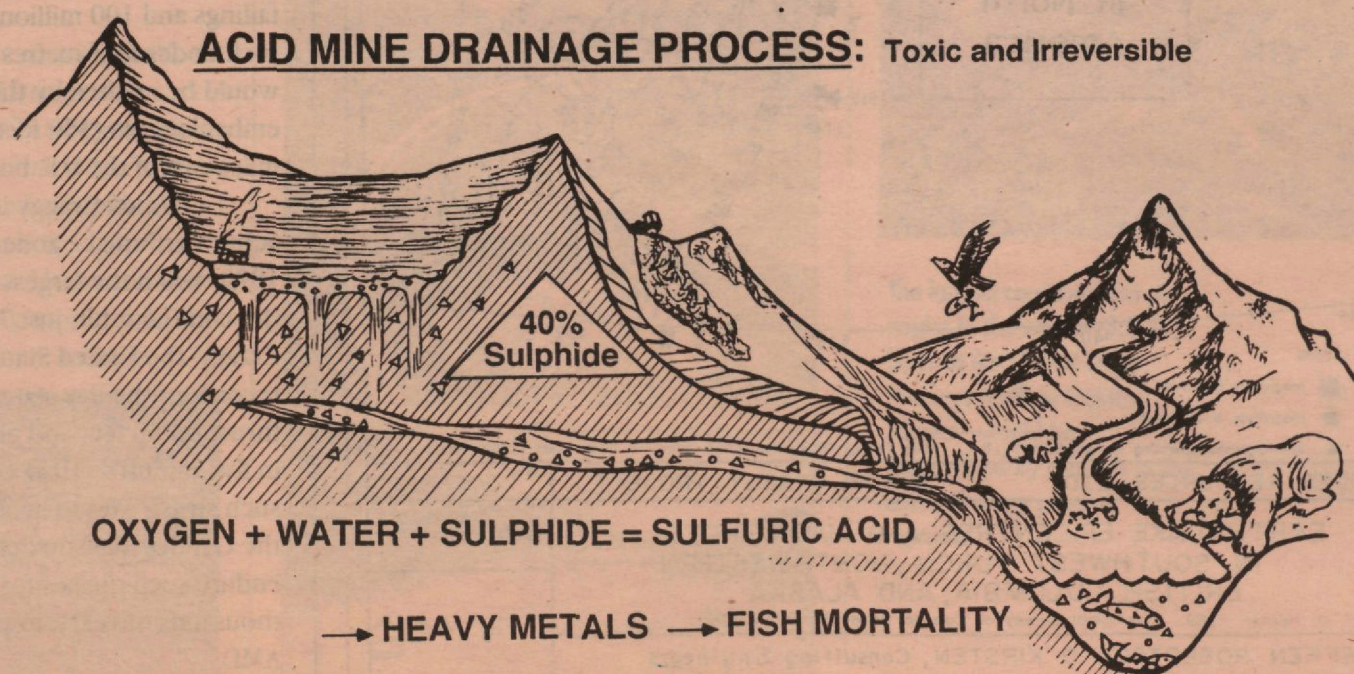
U.S. Bureau of Mines

- "The estimated cost to control AMD caused by open pit copper mining (of a scale of Windy Craggy) in the Butte, Montana area is \$1 billion."

Worldwatch Institute



Once acid mine drainage starts—as here at the Equity Mine in Northern B.C.—it cannot be stopped. The threat it poses to the environment persists for thousands of years.



"We consider the principal threat posed by mining activity past, present and future to be Acid Mine Drainage...it frequently occurs only after mining has come to an end, is almost impossible to reverse and very expensive to clean up."

University of California Mining Waste Study. Undertaken for California State Legislature, 1988

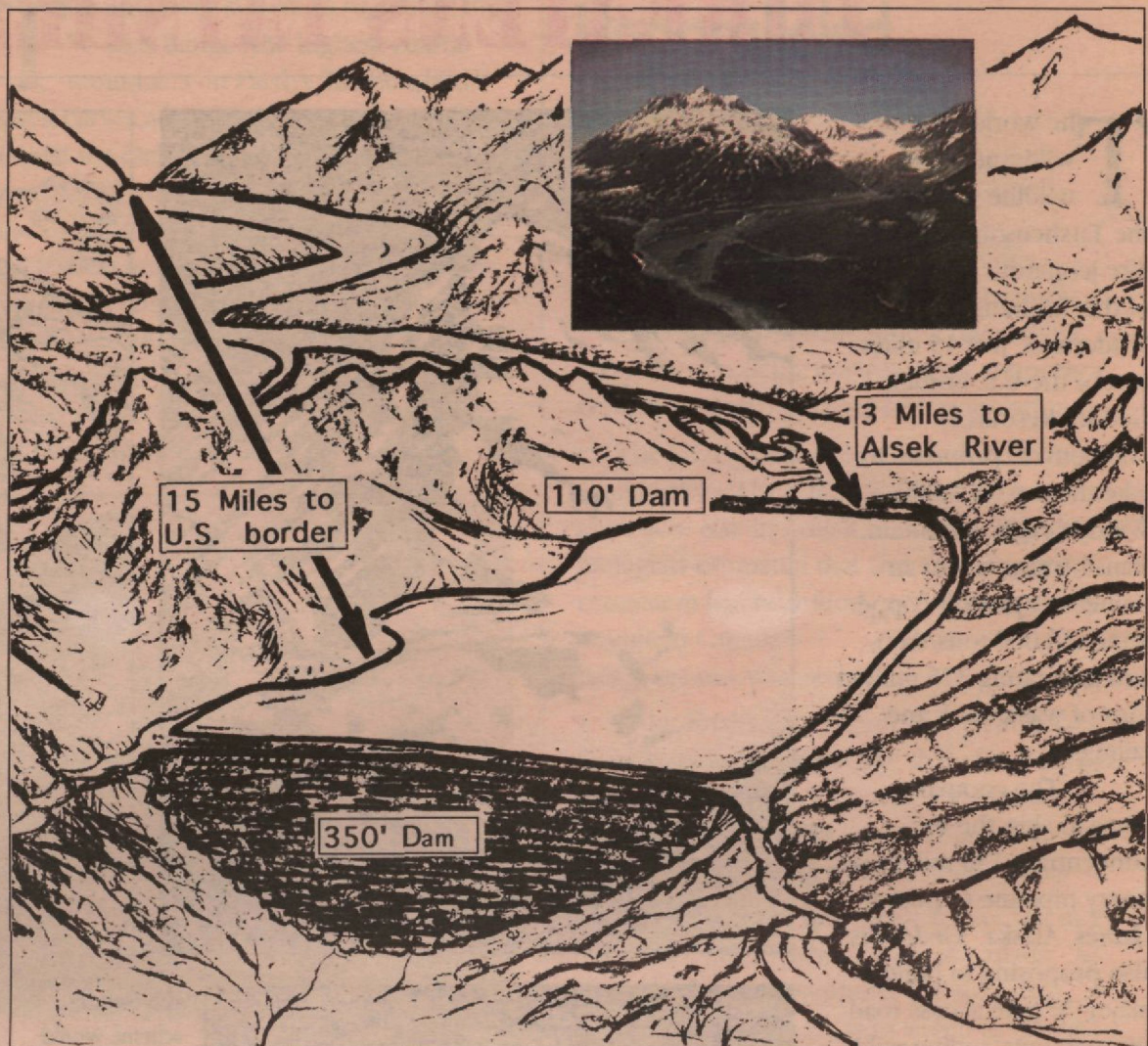
CARL CHAPLIN

TAILINGS DAMS: FAILURE IMPACTS

The greatest hazard of the Windy Craggy project would result from tailings dam failures and the consequent generation of huge amounts of acid mine drainage. The Commission on Resources and Environment (CORE) Report, undertaken for the British Columbia Cabinet, details the dangers:

- "A breach of the dams as a result of either earthquakes or other reasons (flooding and erosion) would cause tailings and water to flow into Tats and/or Noisy Creek and from there into the Tatshenshini or Alsek River. Exposed tailings left along stream and river banks after such a breach would continue to generate acidity and metals in solution indefinitely. Destruction of fish habitat would be essentially permanent." CORE Report
- "The risk assessment process identified 86 potential sources of environmental risk, of which 12 were considered to have potentially severe consequences ... All 12 were associated with a potential breach of the tailings dam." CORE Report

The 350' & 110' dams and tailings reservoir would be located just three miles from the mainstem Alsek, and 15 mile from the US border in the most active earthquake zone in North America.



North America's Highest Earthquake Risk

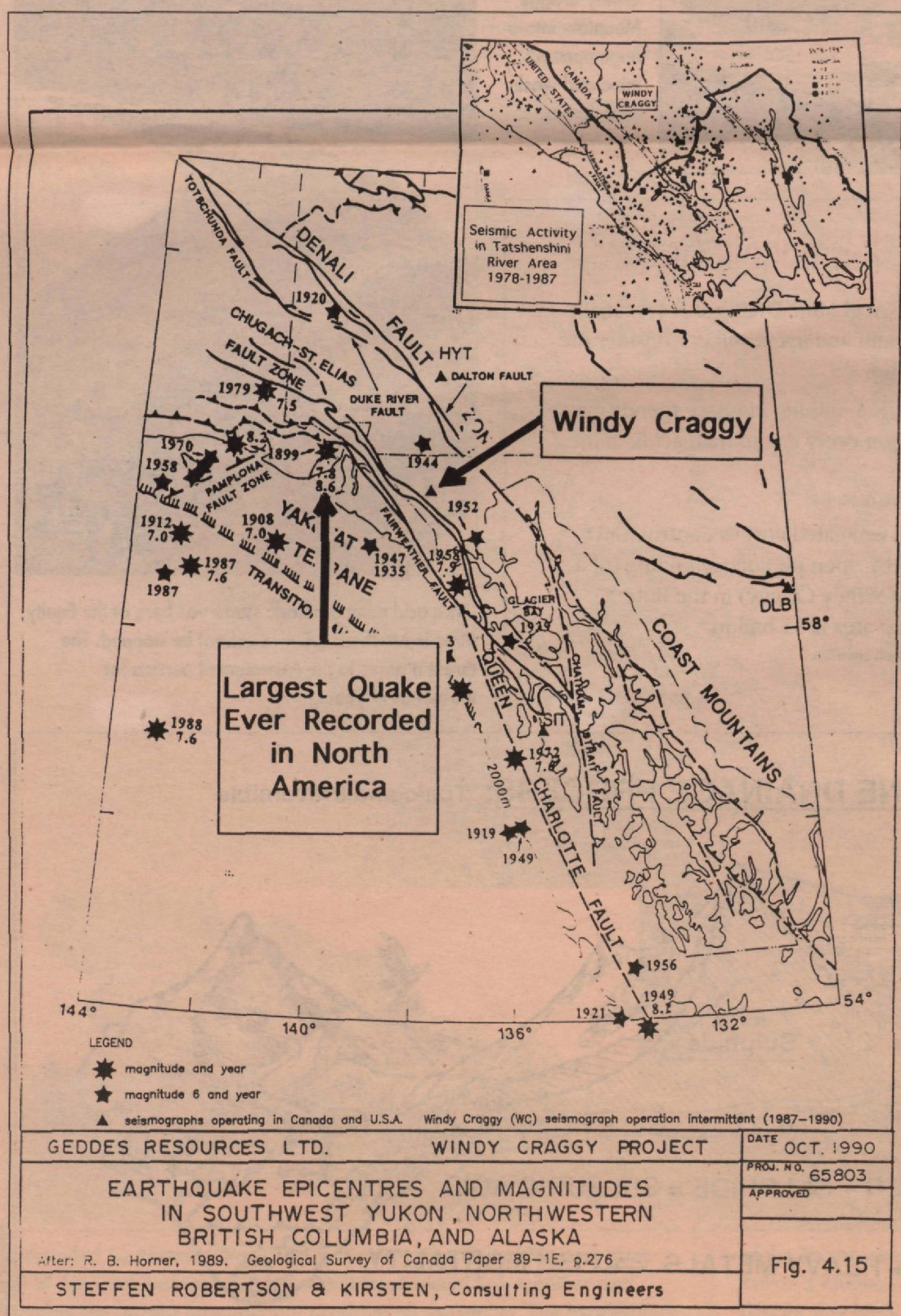
Geddes proposes to deal with the potentially catastrophic AMD risk by storing vast amounts of acid-generating waste rock and tailings under water, out of contact with oxygen, in a 2.5 mile long tailings impoundment. This would be constructed just three miles from the Alsek River.

"In terms of both size and frequency of earthquakes, the Windy Craggy vicinity ranks among the most seismically active parts of the world."

B.C. Government CORE Report

The tailings and waste rock reservoir would be designed to store 124 million tonnes of tailings and 100 million tonnes of acid waste rock under four metres of water. This reservoir would be created by the construction of two embankments (350 feet and 150 feet high) 15 miles east of the U.S. border.

Windy Craggy is located in the most active earthquake zone in North America. In 1899, when the largest quake ever recorded on the continent hit, just 75 miles from Windy Craggy, the United States Geological Survey records of the day state that the mountains were thrust up 50 feet and glaciers advanced 1/2 mile in five minutes. How could any dam survive such stress? Yet to avoid environmental disaster, the Geddes' dams would have to repeatedly endure such quakes for hundreds, even thousands of years, to prevent the release of AMD.



INTERNATIONAL FISHERIES AT RISK



GRAHAM OSBORNE

Geddes says:
"Acid is
unattractive
to fish."

"Exposed tailings left along stream and river banks after a (dam) breach would continue to generate acidity and metals in solution indefinitely. Destruction of fish habitat would be essentially permanent." B.C. Government CORE Report

The waters that could be impacted by the Windy Craggy plan support prime transboundary fisheries. According to the United Fishermen of Alaska:

- "The Alsek and the Tatshenshini Rivers support important commercial, subsistence and sports fisheries valued in excess of \$8.5 million annually."
- "Lynn Canal (into which the slurry pipeline effluent would be dumped) sustains harvests of salmon, bottomfish,

shellfish, and other fisheries resources valued at \$41 million annually."

- "The Alsek and Tatshenshini Rivers provide important habitat for all five species of Pacific salmon which are protected by international treaty."

The B.C. Government's CORE Commission confirms that Windy Craggy would pose major hazards to U.S. fisheries:
"[The] estimate of risks of impacts on salmon indicate that events

leading to severe impacts [would be expected from Windy Craggy] once every 12 years.

These severe impacts would be associated with tailings dam failures."

The CORE Report defines severe consequences as:

- "Permanent or large-scale habitat destruction
- Lethal to significant portion of population
- Avoidance not possible"

Permanent Pipeline and Road Impacts

Geddes' proposed road and pipelines would parallel and bridge the Tatshenshini, visually scarring what is now an international-calibre wild river. As well, ore concentrate and oil spills from pipeline ruptures could endanger the Chilkat River salmon run in Alaska and the largest concentration of eagles in the world (3,500 birds) that gather there to feed.

"A bridge and visible access road would have very serious deleterious effects on what is now one of the premier wilderness float trips in the world."

Marvin Jensen, Superintendent, Glacier Bay National Park

PAT MORROW

Geddes Proposed
Tatshenshini
Bridge

PAT O'HARA

The largest concentration of eagles in the world—3,500 birds at the Chilkat Eagle Preserve north of Haines, Alaska—would be jeopardized by fish kills in the event of slurry pipeline ruptures.

BEAR POPULATIONS THREATENED

The Windy Craggy project would place one of the premier bear populations in the world in jeopardy for the following reasons:

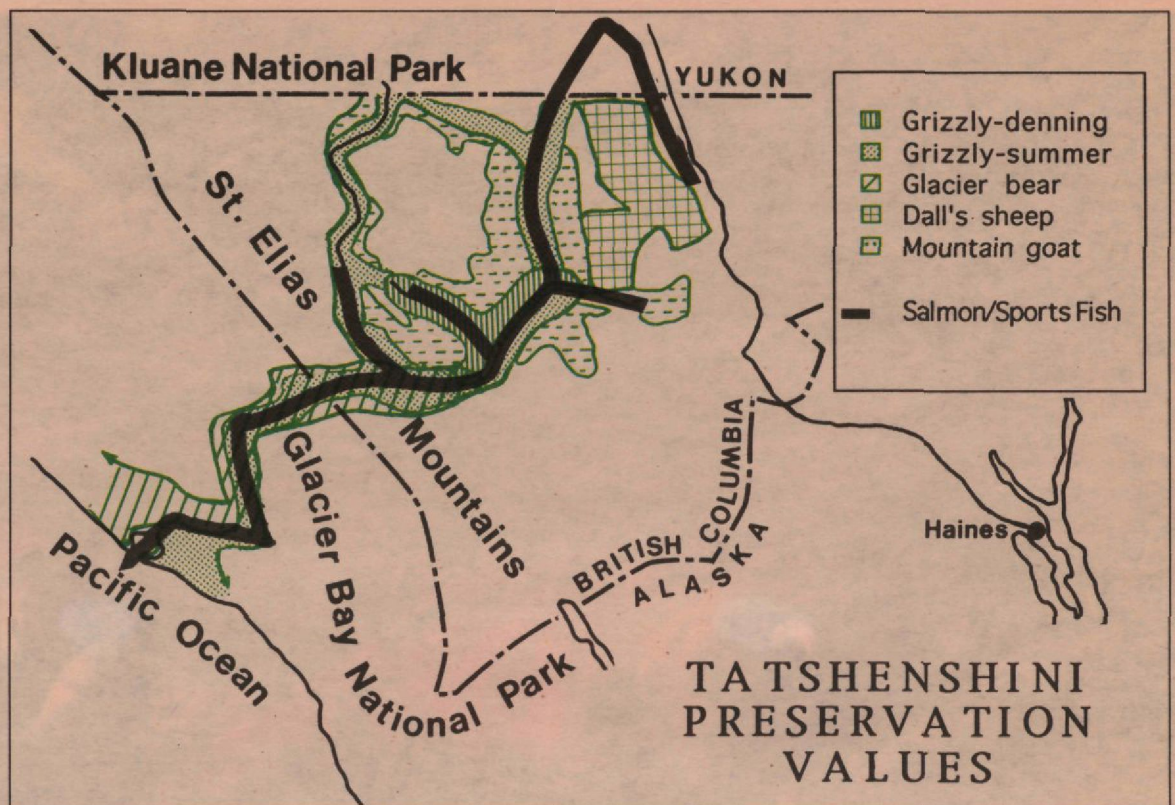
- Destruction of fisheries from acid/heavy metals would devastate the crucial fish food source.
- The mine, mill and road would be located in the very heart of the finest denning territory in Canada.
- The tailings dam would block a critical migration route.
- The losses would be transboundary since bears migrate between Canada and Alaska's Glacier Bay National Park.

Dr. Stephen Herrero, head of the I.U.C.N. Bear Research Group says: "The current wilderness environment would be altered forever by the proposed development. Impacts on grizzly and black bears should not be viewed only in terms of habitat units lost, but also in the terms of a wilderness homeland lost."

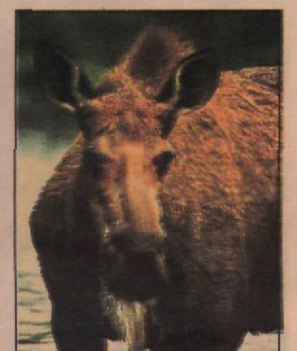
"Grizzly bear populations would be lowered, degraded, fractionated and alienated from prime habitat..."

The most important area in the Tatshenshini drainage known for grizzly bear denning would likely be abandoned."

Dr. Stephen Herrero,
Head, IUCN Bear Research Group

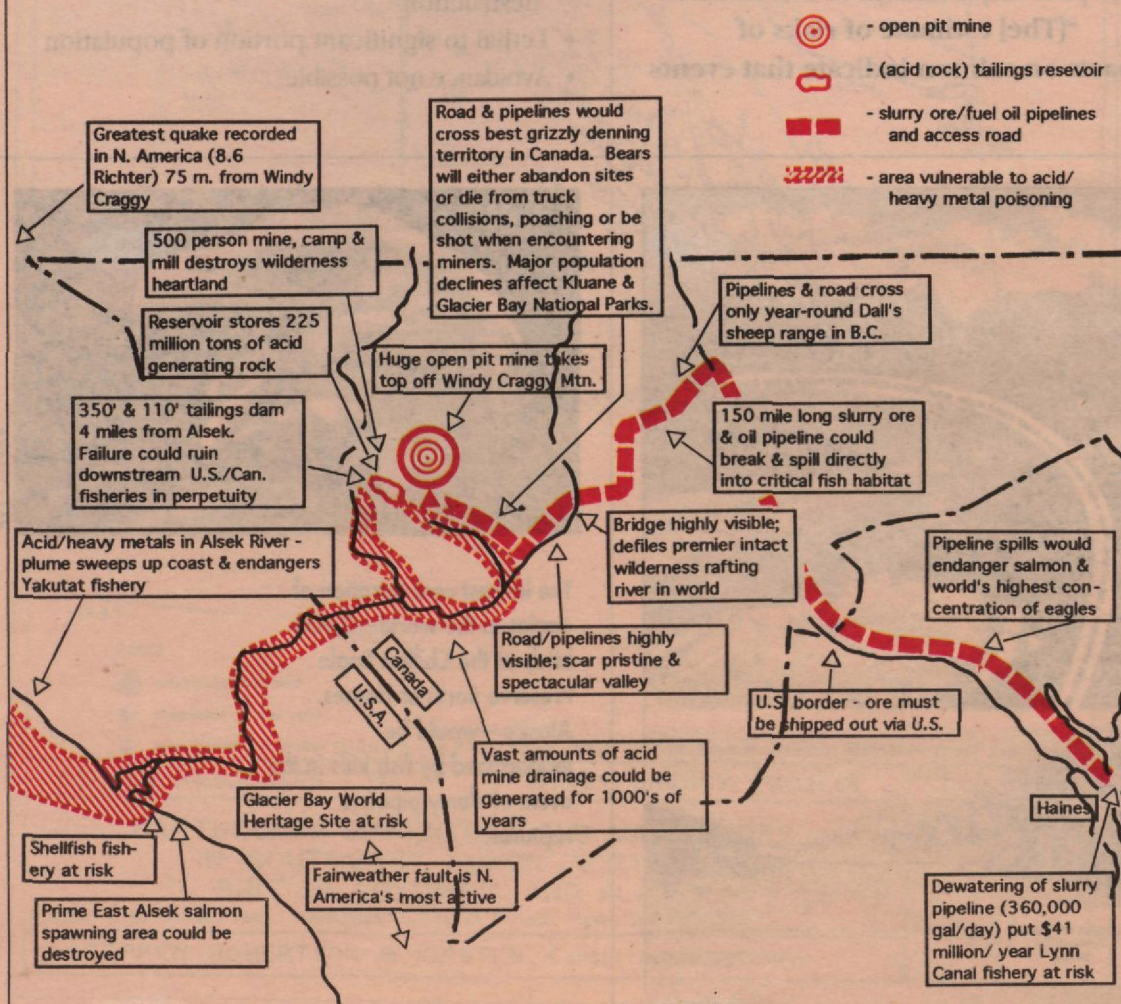


ART WOLFE



Tatshenshini is critical and exceptional denning territory for grizzlies. From here the great bears migrate into the Yukon's Kluane National Park and Alaska's Glacier Bay National Park. Other key species would be at risk.

Impacts of the Windy Craggy Project



Impacts to the Tatshenshini Could be Devastating

The immense risks of the Windy Craggy scheme have been extensively documented by US, Canadian and B.C. agencies. As the B.C. Ministry of Mines itself says:

"The risk of serious environmental damage is high at this project, considering the large size and complexity of the proposed mine, the remote location, the severe weather and extreme topography, all combined with the potential for AMD... It is clear that there is a serious lack of understanding (by Geddes) of the actual potential for AMD from the pits, both during and following mine operations. This makes it impossible to design appropriate means of collection and method of treatment for pit effluent."

BC Ministry of Energy, Mines and Petroleum Resources

Geddes says:

"Its (Windy Craggy's) impact on the environment would be negligible."

WINDY CRAGGY WOULD CONTRAVENE FOUR INTERNATIONAL TREATIES

"Each party to this Convention undertakes not to take any deliberate measures which might damage directly or indirectly the natural heritage situated on the territory of other Parties to this Convention."

World Heritage Convention, 1972

The permitting of Windy Craggy would be in direct contravention to four existing international treaties.

1. The World Heritage Convention
2. The US-Canada Boundary Waters Treaty
3. The Pacific Salmon Treaty
4. The Migratory Birds Convention

As CORE says:

"Events leading to impacts on salmon could be expected to have severe consequences...[and] could lead to suits under international law..."

The B.C. CORE Report also states: "In December 1992, the World Heritage Committee of UNESCO named Glacier Bay National Park a World Heritage Site - a designation intended to recognize 'outstanding universal value to mankind'. Glacier Bay National Park borders the Tatshenshini/Alsek area to the south and west and contains within its borders the lower Alsek River, into which the Tatshenshini flows a few miles east of the international border. As a signer of the World Heritage Convention, Canada is obliged not to take any deliberate measures which might damage directly or indirectly the 'natural heritage' of the Site."

"The World Heritage Site designation will likely drive the need to satisfy American interest that there is no prospect for damage to habitat of salmon and other marine life along the Alsek River... this assurance is not possible."

"U.S. jurisdictions hold a virtual veto on the mining proposal."

B.C. Government CORE Report



RIC CARELESS

The US-Canada Boundary Waters Treaty says "Waters flowing across the boundary shall not be polluted on either side to the injury of health or property of the other." Because of its risks, permitting Windy Craggy would surely contravene this treaty.

Is a Mine Promotion Scheme Placing Tatshenshini At Risk?

In looking at the Geddes' proposal, one can only wonder if the world-class Tatshenshini is being put at risk by a mining promotion scheme. Consider what Geddes itself says in its Rights Offering (July 24/92):

"Geddes has no producing properties and, consequently, no positive cash flow or earnings history. A final feasibility study for the commercial development of the Windy

Craggy Project has not been completed and, accordingly, it is not certain that the mine can be developed into a commercially viable operation."

During winter 1991, the heavy alpine snows at Windy Craggy collapsed six of Geddes seven buildings, caved in the mine portal and destroyed the glacier access road. This only heightens the fear that a technical failure of this project by Geddes would lead to disaster.



BRISTOL FOSTER

PROTECT THE TATSHENSHINI...NOW!

The B.C. Government's CORE Commission makes it clear: mining and wilderness can not co-exist at Tatshenshini. The future for the Tatshenshini involves making a choice: world-class wilderness or a potentially devastating open pit mine.

To prolong the already exhaustive review of Windy Craggy will only result in major Canadian and US opposition at the highest levels, and on-going embarrassment internationally for British Columbia and Canada. And likely to no avail.

Windy Craggy, from all the agency reviews, appears to be fatally flawed. The technology simply does not exist to guarantee a safe mine. Major transboundary fisheries and globally critical preservation values would be permanently endangered. Given the complex and costly agency review processes, sooner or later the proposal will surely be killed. The question is not if, but when. The longer it takes, the more cost to the government, the mining industry, the environment, and the taxpayer.

Preserving Tatshenshini now will link together and complete the largest international preservation area - and World Heritage Sites - on the planet, as a "Global Biodiversity Reserve". It will ensure the long-term survival of grizzlies on our continent, safeguard fisheries, protect the rare glacier bear and preserve forever some of the most spectacular scenery on Earth.

Tatshenshini must be preserved! Now...and for all time.



ART WOLFE

"Tatshenshini is an area of tremendous biological diversity and overwhelming natural beauty, which should be protected and preserved for future generations."

Vice President Al Gore,
Dec. 14/1992



RIC CARELESS

The environmental facts must be heard now by government. The message? That mining would devastate this spectacular wilderness and wildlife area, which is recommended by the United Nations for World Heritage Site status. The dangers of Windy Craggy have been repeatedly confirmed over four years of reports by scientists, Canadian and US agencies and now the B.C. CORE Commission. Tell government to act and preserve North America's wildest river.

YOUR SUPPORT WILL MAKE THE DIFFERENCE. PROTECT THE TATSHENSHINI FOREVER.

S U P P O R T

☐ Yes! I want to keep Tatshenshini WILD forever.

Here is my donation to help cover the campaign costs of protecting the Tatshenshini now.

\$25 ☐ \$50 ☐ \$100 ☐ \$250 ☐ \$500 ☐ other _____

Name _____

Address _____

City _____ Prov/State _____ PC/Zip _____

To receive tax credit: **Canadians**, please endorse your cheque to Tatshenshini Wild, **Americans**, please endorse your cheque to Lynn Canal Conservation, Tat Fund

and mail to Tatshenshini Wild,
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Vancouver BC, Canada,
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W R I T E N O W !

Premier Michael Harcourt,
Legislative Buildings,
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Canada

Vice President Al Gore,
The White House,
1600 Pennsylvania Ave.,
Washington DC 20500

Working together we will keep North America's wildest river WILD, forever.



Thank you to Mountain Equipment Coop, whose support has made this publication possible. Thanks also to World Wildlife Fund's Endangered Spaces Campaign 'Local Action Fund' for funding the graphics as well as the generous contributions received from REI and the Outdoor Industry Conservation Alliance (OICA) to fund the campaign.



WWF



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