

889012

*IMS → DVL → Tom
& return for filing*

EMD 970353 208
RECEIVED → Tulsequah Chief
APR 29 1997 -



INTERGOVERNMENTAL RELATIONS SECRETARIAT
PROVINCE OF BRITISH COLUMBIA

ENERGY & MINERALS DIVISION
ASSISTANT DEPUTY MINISTER'S OFFICE

*Log book → To: Potts / File
(send copy to Smith)*

MEMORANDUM

cc: Suzanne Christians

TO: Doug McArthur
Deputy Minister

Date: April 24, 1997

cc: GSB / MTL / return

FROM: Robin Ciceri

File: *to ADM Tulsequah File.*

Re: Taku River: Tulsequah Chief Mine Proposal

On April 24, 1997, we chaired an interministerial meeting to discuss the preparation of material to respond to concerns raised by U.S. and Canadian environmental non-governmental organizations (ENGOS) concerning the possible environmental impact of the Tulsequah Chief mine proposal on the Taku River and its tributaries. This meeting was prompted by the attached reports from the Canadian Embassy in Washington, D.C. On April 16, the American Rivers organization named the Taku "one of the nation's most threatened rivers".

The inter-ministerial meeting focussed on the Embassy's request for explanatory material related to the Tulsequah Chief proposal. It was agreed that an integrated briefing package would be prepared which would include -

- a description of the B.C. regulatory process governing this proposal;
- an outline of the proposal itself;
- an account of the B.C. land use planning process as it relates to the project;
- a response to the various issues raised by the ENGOS (e.g. issues related to due process, transparency, acid rock drainage);
- comments on First Nations-related aspects;
- a description of the involvement of Canadian federal agencies and of the ways in which transboundary considerations are being taken into account (i.e. views from Alaska).

Generally, the material provided to the Embassy (and to federal Departments in Ottawa and other Canadian posts in the U.S.) will focus on the openness, transparency and credibility of the B.C. regulatory process. This will not necessarily change the minds of U.S. ENGOS, but should be useful information for key audiences in the U.S. government and media.

-2-

Finally, it should be noted that this issue is only one of several recent developments (e.g. the ENGO campaign against logging the mid-Coast, the Sierra Legal Defense NACEC case related to B.C. Hydro's operations, reaction to a possible Jobs and Timber accord, reaction to B.C.'s recent mining initiatives, reaction to an enhanced B.C. role in fisheries management) which suggest that in the months to come, the Government will be called upon to explain and justify to international audiences its approach to sustainable economic development. In the weeks ahead, we will work with other Ministries to ensure that the rationale for B.C.'s policies and programs is communicated consistently and effectively in the international arena.

Robin Ciceri

Robin Ciceri
Assistant Deputy Minister
Intergovernmental Relations Secretariat

Attachments

Department of Foreign Affairs and International Trade / Ministère des Affaires étrangères et du Commerce international

FILE COPY

12880-20106/ALAS

Canadian Embassy
501 Pennsylvania Ave., N.W.
Washington, D.C. 20001
EXT 1807 (12/93)

Date: April 15, 1997

FACSIMILE / TÉLÉCOPIÉ

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BCGOVT/Botte 604-387-1920
City/Ville: see above
Fax No./ No de télécopie: see above Fax No./ No de télécopie: 202-682-7792

Number of pages including this page/Nombre de pages avec cette feuille: 4
TAKU RIVER: TULSEQUAH CHIEF MINE PROPOSAL

Some time ago we met with conservation community representatives, at their request, and learned of their concerns regarding the proposed re-opening and expansion of the Tulsequah Chief mine on the Taku River in northern British Columbia, a boundary river which rises in northern B.C. and reaches the ocean through the Alaska Panhandle. Our interlocutors informed us that there would likely be additional concerns, expressed by the State Department, and that there was further information forthcoming. We therefore prepared a note to file (see attached) until a more substantive message could be prepared.

2. We have not, as yet, received a call from the State Department, or any further information on conservation community concerns. However, as American Rivers traditionally releases its endangered and threatened rivers list around this time of year, usually, attracting a fair amount of media attention, please consider the attached as advance notice that the Taku River will possibly be included.

3. FOR BC/Botte: Please provide by fax some clarification of the mine proposal, the process underway in B.C., and any background information, media lines, etc. that you may have available. Also grateful for contact names and numbers we might pass on in the event there is some interest here.

Lalitha Colaco/Ext. 7412
Environment and Fisheries Intern

Report on Meeting with river conservation organizations re: The Tulsequah Chief Mine Project

Summary

On January 9, Sheila Tooze, Environmental Affairs Officer, and Lalitha Colaco, Environment and Fisheries Intern met with Tom Cassidy, American Rivers and Ian Kean, Rivers Canada and owner of The River League (B.C.), at the request of the conservation organizations, regarding their concerns about a proposal to re-open the Tulsequah Chief Mine in B.C. They believe that if this underground copper mine is allowed to re-open there will be severe environmental impacts, not only in British Columbia, but also in Alaska. In particular, they are concerned about water quality issues under the 1909 Boundary Waters Treaty and potential serious damage to the Taku River's important salmon stocks. In their view, the proposed Tulsequah Chief mining project has the potential to become a serious transboundary issue, and that B.C.'s fast-track legislative process will not adequately address transboundary issues or environmental concerns.

Background

The Tulsequah River, a major tributary to the Taku River, flows into the Taku about 8 km above the international border between B.C. and Alaska. The Taku flows from Canada through the Alaskan Panhandle to the Pacific Ocean and is a transboundary river.

According to our "Rivers" interlocutors, in the 1950's the Tulsequah Chief Mine was operated by Cominco Ltd. Travel to and from the mine was by way of barge through the lower part of the Taku. The mine was abandoned by Cominco by the 1960's. At present, this abandoned mine is leaching acid mine drainage into the Taku Watershed. Not only is this having a negative impact on wildlife in the area, but section 36.3 of the B.C. Fisheries Act is being contravened.

Apparently, the mine was recently acquired by Redfern Resources Ltd. Redfern has promised to clean up the acid mine drainage problem upon reactivating the mine. However, both American and Canadian river conservation organizations are sceptical as to Redfern's ability to prevent the mine from continuing to leach acid mine drainage into the Taku River. It is their contention that Redfern's proposed clean up method for the acid mine drainage problem has not proven effective in the past, especially as a long-term solution. They also contend that Redfern's proposal to expand the mine, which would make it the biggest project in the area, would open up the area to increased development, with the potential for further, serious environmental impacts.

They informed us that on November 27, 1996, Redfern filed a project report with the B.C.

government in support of its application for a Project Approval Certificate. One of the key issues that Redfern will have addressed is access to the mine. There are a number of possible routes: either Redfern could continue access solely by barge as did its predecessor, Cominco; or it could build a road. Possible routes for the road run from the mine to either Swede Point, Alaska, or to Atlin, B.C. Redfern would prefer the Swede Point road. Both methods of access raise considerable environmental issues, according to our visitors. Road building would have a significant environmental impact and would open up this area of untouched wilderness - considered to be the last significant unroaded Pacific watershed in the province - to exploitation, and especially to logging interests. However, if the barging option is chosen, the shallowness of the Taku River would require that portions of the shipping channel be dredged on a regular basis. Environment Canada and the Alaskan government have expressed concerns that a barge operation and regular dredging of the river could lead to three environmental problems. First, barge operations may result in increased bank erosion due to wave action which would have a marked effect on the fish and wildlife habitat. Second, dredging would decrease the amount of wet area at certain tides which would reduce the overall productivity of the area. Finally, there are also concerns that using the river for barging would require the removal of snag, root wad, and other large woody debris which would also reduce the amount and quality of the fish habitat and contribute to channel instability.

Process

As stated above, we were informed that Redfern filed its "Tulsequah Chief Project report" with provincial and federal government agencies in support of its application for a "Project Approval Certificate" on November 27. The filing marks the beginning of the final stages in the approval process which is governed by the B.C. Environmental Assessment Act. Under the Act, the project report has to proceed through a 25 day screening process to verify that all specifications have been met. Next, the report has to undergo a 60 day public consultation period and then a 115 day government review process. Redfern's project report is at the 25 day screening stage and it is expected that the B.C. Environmental Assessment Team will decide shortly whether all the environmental specifications have been met. The Canadian and American river conservation organizations contend that at this stage, the B.C. government will likely ask Redfern to provide additional information regarding the environmental impact of both transportation options. They note that Redfern has taken advantage of British Columbia's fast track approval process. However, they feel that Redfern has not submitted sufficient information about the project even to satisfy the requirements of the fast track process, and that they expect that project approval will be delayed until the required additional information is supplied. P/10

Concerns over the Project

Because of the transboundary nature of the Taku, the conservationists are concerned about transboundary water quality issues and fish and game conservation. Also, because transboundary concerns are at issue, they believe that major federal interests are at stake, and that such issues can not be left solely to the B.C. government to decide. In particular,

they argue that the Tulsequah Chief Mine project should be reviewed in light of the 1909 Boundary Waters Treaty, and the U.S./Canada Pacific Salmon Treaty. Additionally, they express concern that there are no long term plans for the land use and conservation of the area. Frequent mention was made to the Tatsheshini issue, in which Vice President Gore took a personal interest, as an example of how a similar transboundary issue was resolved in the past.

*Windy
Craggy*

We were also informed that there are considerable First Nations issues involved, and that the Taku River Tlingit First Nation will raise their concerns at the appropriate time in the British Columbia review process. As the Taku River Tlingit have already initiated their own strategic plan for the Taku Watershed and have entered into treaty talks with the B.C. government, it is almost certain that the Taku River Tlingit will strongly oppose any proposals to build a road until these negotiations have been completed.

The State of Alaska has also raised concerns regarding the Tulsequah Chief Mine project. Fisheries concerns are of particular interest. In addition, the state is concerned with the issue of mine access. If the Alaska road option is pursued, a bilateral agreement would be required. If the barging option is pursued, not only would possible landing sites in Alaska have to be assessed, but also parts of the Taku River that flow through Alaska would have to be dredged, requiring environmental assessments and permits from the B.C., Alaska and U.S. federal governments

Finally, Kean and Cassidy mentioned that they would be meeting with senior officials at the State Department and the President's Council on Environmental Quality to discuss the Tulsequah Chief Mining project and related transboundary issues. They expected that these departments will shortly be in correspondence with the Canadian Embassy in Washington regarding this matter.

Department of Foreign Affairs and International Trade / Ministère des Affaires étrangères et du Commerce international

6 FILE COPY

4/16/97
3:10 pm

Canadian Embassy
501 Pennsylvania Ave., N.W.
Washington, D.C. 20001
EXT 1507 (12/93)

Date: April 16, 1997

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TAKU RIVER: AMERICAN RIVERS PRESS CONFERENCE

Further to our background fax, attached please find a press release issued today by American Rivers, one of the leading U.S. conservation organizations, which designates the Taku River as "threatened". The press release cites the proposed reopening of the Tulsequah Chief mine upstream in northern British Columbia as the reason for concern. 2. As noted in our earlier fax, the Taku runs through the Alaska Panhandle from B.C. Grateful for any background and proposal status information ASAP.

Embargoed until 9:30 a.m. (EDT)

April 16, 1997

Contact: Tom Cassidy

Carrie Collins (202) 547-6900

For Complete Report: www.amrivers.org/amrivers/



American Rivers

TAKU RIVER NAMED ONE OF NATION'S MOST THREATENED RIVERS

American Rivers Releases Annual Report on Most Endangered and Threatened Rivers

(Washington, D.C.) — The Taku River was named today one of the twenty most threatened rivers in the country by American Rivers, the nation's leading river conservation group.

The proposed reopening of a 40-year old copper/gold mine could destroy one of the last intact and undisturbed watersheds in North America.

"The Taku River has outstanding natural values, the likes of which we rarely see anymore," said Tom Cassidy, General Counsel for American Rivers. "The Taku is a vitally significant transboundary resource, important to both Canadians and Americans. It is the largest unprotected wilderness river system on the western shore of North America. And it is one of the largest salmon producing streams in southeast Alaska, supporting all five species of Pacific salmon and steelhead. Its salmon fishery is worth millions of dollars. It would be nothing short of a crime to permit this mine to go forward without iron clad environmental protections of internationally protected resources in place."

The Tulsequah Chief Mine was first operated by Cominco, Ltd. in the 1950's, but closed after only six years of operation due to depressed copper prices. The properties have subsequently been acquired by Redfern Resources Ltd., which wants to reopen the mine.

Acid mine pollution from the abandoned mine continues to leach toxic sulfuric acid into salmon bearing streams. Draft reviews of Redfern's proposal by the British Columbia government state that "reactivation of the [mine] could result in chronic discharge of effluent contaminated with acids, heavy metals, petroleum products, and/or toxic reagents."

The threat to the Taku River system is compounded by Redfern's proposal to build a 160-kilometer road with 69 stream crossings from Atlin, British Columbia, to the mine site. This road would open up the as yet undisturbed wilderness to increased development, including timber harvest and additional operations.

-more-

The announcement on the Taku River came as part of the release of American Rivers' twelfth annual report, "Most Endangered and Threatened Rivers of North America." The report examines rivers that are facing the most serious and immediate environmental abuse and provides an overview of the state of rivers today.

The rivers selected for the list are representative of the environmental problems placing rivers throughout the nation at risk. This year, the problems are varied and complex.

"We've made notable progress in cleaning up our waterways over the last 20 years, thanks to the Clean Water Act and other major legislative initiatives," stated Rebecca Wodder, president of American Rivers. "Rivers like the Cuyahoga no longer catch fire, and they no longer run red with untreated industrial waste. But now, our rivers face new threats which are often less visible and more insidious than in years past, and may actually reverse the successes we've had."

For example, diffuse polluted run-off from farms, city streets, and yards is degrading water quality; explosive population growth in arid areas is depleting scarce water resources; urban sprawl is chewing up floodplains and riparian areas; and dams are drying up river beds and destroying habitat.

"Because these problems are the result of our collective actions, as opposed to any one single action, they threaten our rivers with death by a thousand cuts," added Wodder. "Today, more than ever, we need ambitious, comprehensive solutions if we are to achieve long-term river health."

The purpose of the endangered and threatened rivers report is to alert the public to impending threats to rivers in order to mobilize community action around protecting and restoring locally and nationally significant waterways.

"Despite its discouraging picture, the list is meant to convey an underlying message of hope," said Wodder. "If we continue to draw attention to the impact that our actions as individuals and as a society have on the river environment, we stand a chance of saving, protecting, and restoring one of this country's greatest assets."

This year's most endangered river is the Missouri River, threatened by dams and channelization which support commercial navigation. Other endangered rivers include the Hudson River (NY), the White Salmon River (WA), the San Joaquin River (CA), Mill Creek (OH), and the Wolf River (WI).

This year's twenty most threatened rivers include the Animas River (CO, NM), the Blackfoot River (MT), the Red River of the North (SD, ND, MN, Canada), the Neuse River (NC), the New River (CA, Mexico), and the Russian River (CA).

###

Summary of Threat

The Taku River forms the heart of a 7,000-square mile watershed in both Alaska and British Columbia and is one of the last intact and undisturbed large watersheds in North America. While currently there is no commercial logging, significant mining, or settlement activity within the entire region of the Taku River watershed, a proposal to reopen a 40-year old copper/gold mine in this ecologically fragile area threatens this wild river.

The River

The Taku River is the largest unprotected wilderness river system on the western shore of North America and the largest watershed south of the Alsek-Tambeshint river system and north of the Sukine River. It is one of the largest salmon producing streams in southeast Alaska, supporting all five species of Pacific salmon and steelhead and a salmon fishery worth millions of dollars.

The source of the Taku is approximately 105 miles south and east of Juneau, Alaska. The lower 25 miles of the river flow through Alaska's Tongass National Forest and have been found eligible for inclusion in the National Wild and Scenic Rivers System due to their outstanding fish and wildlife and scenic, geologic, and ecologic values. The Taku River in British Columbia has been nominated for inclusion in the Canadian Heritage Rivers system based upon its natural and cultural values.

The Risk

The Tulsequah Chief Mine was first operated by Cominco, Ltd. in the 1950's but closed after only six years of operation due to depressed copper prices. The properties have subsequently been acquired by Redfern Resources Ltd., a Canadian mining firm which wants to reopen the mine.

Acid mine pollution from the abandoned mine continues to leach toxic sulfuric acid into salmon bearing streams. Draft reviews of Redfern's proposal by the British Columbia government state that reactivation of the mine could result in chronic discharge of effluent contaminated with acids, heavy metals, petroleum products,

and/or toxic reagents. In addition, failure of the proposed tailings impoundment would have devastating effects on downstream fisheries which are protected by several international treaties.

The threat to the Taku River system is increased by Redfern's proposal to build a 160-kilometer road with 69 stream crossings from Altn, B.C. to the mine site. This road would open up the as yet undisturbed wilderness to increased development, including timber harvest and additional mining operations.

What Can Be Done

In November 1996, Redfern completed and filed the "Tulsequah Chief Project Report" with Provincial and federal government agencies in support of its application for a "Project Approval Certificate." In January, the British Columbia government found the report deficient and requested additional information.

The Taku River Tlingit First Nation has stated that the mine should not be considered until the conclusion of land claim treaty negotiations and the completion of a land protection plan. In addition, conservationists on both sides of the border have called for greater environmental review and protection of fishery resources currently protected by international treaties.

FOR MORE INFORMATION, CONTACT:

Tom Cassidy, American Rivers
(202) 547-6900

Ian Kean, Taku Protection Coalition, British Columbia
(604) 687-3417

Peggy Wilson, Southeast Alaska Conservation Council
(907) 566-6942

Gertson Cohen, Alaska Clean Water Alliance
(907) 766-2296

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-2-

Sheila Wynn
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Victoria, British Columbia
V8V 1X4

Norm Ringstad
Environmental Assessment Office
Yates Centre, 2nd Fl., 836 Yates Street
Victoria, British Columbia
V8V 1X4

VOS → Tulsequah Chief

I N T E R O F F I C E M E M O R A N D U M

Date: 24-Aug-1993 11:03am PDT
From: Brian Parrott
BPARROTT
Dept: Energy, Mines & Petroleum Res.
Tel No: 952 0504

TO: Ron Smyth - Min. of EMPR (RSMYTH)
Subject: Telkwa TULSEQUAH!

I didn't want to spoil the good news you were passing on at Directors yesterday, but last week Nick Agnew and I were speaking about Tulsequah. You may know all this but for what its worth the problem is as follows.

They are really depressed about the possibility of developing the property in ths climate. As you know they have great geology, but the Minister of transport has written a letter to the State of ALaska saying that B.C. would not support a road in the corridor because the environmental impacts would be far too great. He wrote it in such a way as to state it as government policy for any development. The Tlingit band has a copyu of the letter and has posted it all over the place according to Nick. Alaska for its part was so pissed off they cancelled a meeting with B.C. and the Yukon saying that they really had nothing to talk about. I have also heard they disinvited the Premier to a joint meeting of heads of the three jurisdictions (I'm not sure of the validity of this though).

Redfern needs a road to make the property work and now do not know if this missive is final. Their concern is that Alsaska may give them a bad time and they end up the meat in the sandwich. They are seeking our help but I am not sure if our Minister is going to be willing to take on her colleague.

Nick is thinking they might just have to put the project on the shelf until the climate improves. And hope the area isn't turned into another frigging park.

They are really concerned about entering into a mine development provccess in the face of this.

I have mentioned this to Bruce but it seems we have little power to do much. I think what we need to do is get a good briefing to the Minister on this project and outline the issues and try to pavethe way for the company but it will be a real challenge in the face of aboriginal opposition, environmental opposition. If you agree I'll ask Paul Wojak to give it a start.

Any comments/ thoughts?

Brian

I N T E R O F F I C E M E M O R A N D U M

Date: 24-Aug-1993 11:35am PDT
From: Ron Smyth - Min. of EMPR
RSMYTH
Dept: Energy, Mines & Petroleum Res.
Tel No: 387-0687

TO: Tom Schroeter
Subject: RE: Telkwa

(TSCHROETER)

Tom,

Keep Agnews comments to yourself.

Ron

I N T E R O F F I C E M E M O R A N D U M

Date: 24-Aug-1993 11:23am PDT
From: Ron Smyth - Min. of EMPR
RSMYTH
Dept: Energy, Mines & Petroleum Res.
Tel No: 387-0687

TO: Brian Parrott
Subject: RE: Telkwa

(BPARROTT)

The letter from Charbeneu to Alaska was posted in the Redfern Camp. It referred only to the Juneau to Atlin road. This was a low priority option with the Alaskans as they have a more favoured all Alaska route option to Skagway.

Redfern will need a road down the Tulsequah river to tide water to barge access. I see no reasons why this would not be looked at favourably by BC. In fact there is an old overgrown road from Tuslequah to the Big Bull property.

I agree we should put together a package for Minister. Paul is visiting the property in the next week or so with Tom Schroeter. I suggest you give Paul an outline of what you require in the note before his visit so he can gather the necessary info. Tom can help if required.

Ron



Province of
British Columbia

Ministry of
Energy, Mines and
Petroleum Resources
GEOLOGICAL SURVEY BRANCH

MEMORANDUM

Suite 301, 865 Hornby Street, Vancouver, B.C. V6Z 2G3

Telephone: (604) 660-2708

Fax: (604) 660-2653

COPY

TO: Norm Ringstad
Manager, MDAP
Mine Review and Permitting Branch

April 19, 1995
FILE: Tulsequah Chief

RE: **"Tulsequah Chief Project - Pre-Application For MDC-Addendum"**

I have received a copy of the above-noted report from Rescan and have read the document. The only peripheral comment I have does not directly pertain to this project scenario; rather, just a comment that other properties with mineral potential (especially, Polaris Taku) could/would benefit significantly from development associated with the Tulsequah Chief project.

Good luck with the process. If I can be of any assistance please do not hesitate to contact me.

Tom G. Schroeter, P. Eng.
Senior Regional Geologist

TS/mch
cc: G. McArthur

Yes → Region
Manager
- Smithers

I N T E R O F F I C E M E M O R A N D U M

Created: 11-Oct-1996 09:25am PDT
Sent: 11-Oct-1996 11:18am PDT
From: Doug Flynn of EI
DFLYNN
Title. District Inspector
Dept: Employment & Investment
Tel No: 847-7386

TO: See Below

Subject: Northwest region weekly update

Issues:

The Huckleberry Mine Aboriginal Liason Committee had a successful meeting on Tuesday of this week. The Wet'suwet'en were on hand but the other native reps failed to show although they were in the apparently in the building in the PM. A number of items were discussed and a mine site field trip is planned for October 23. The next meeting will be held in Houston on Nov. 12 at the Forestry office [site to be confirmed].

Iskut Road: The NWMDRC will set up a meeting with interested parties to try to resolve Prime Resources Group Inc's application for a Forestry SUP to extend the existing road to the Snip Mine site.

Redfern Resources: Tulsequah Chief project report is expected within the next two weeks.

Tulsequah
Chief

Golden Angus Mines: This company is a wholly owned subsidiary of Canarc Resources which are the owners of the Polaris-Taku gold mine. They are gearing up for an over the winter underground exploration program. Approvals expected to be issued next week.

Polaris-Taku

Admin:

D. Hanson, L. Sale' and the writer returned to Smithers late last Friday from a 10 day inspection trip to points north as far as Atlin.

B. Good is at Myra Falls next week.

Thats all Folks

DWF

Tom
Kovs / GSP / Bruce
just and m
Tulsequah
Brian P
return
to Peter O

I N T E R O F F I C E M E M O R A N D U M

Created: 12-Dec-1996 10:21am PST
Sent: 12-Dec-1996 10:37am PST
From: Peter Ostergaard of EI
POSTERGAARD
Title. Assistant Deputy Minister
Dept: Employment & Investment
Tel No: 952-0132

TO: See Below

Subject: Redfern/Tulsequah

Ministers Miller and Boone met this morning with 3 Redfern representatives to be apprised of the Tulsequah proposal. I'll circulate the handouts. Most of the time was spent describing the project and the issues (e.g. access, First Nations, ARD).

Minister Miller agreed to consider sending a letter to help the company with its financing efforts, to the effect that the gov't will support the project if it meets the EA tests; this is meant to mollify eastern financiers' skittishness about BC investment climate. (They need \$5 million /yr in interim financing). According to Mr Dushinsky, Redfern has a similar letter from Glen Clark when he was MEI minister. I'll follow up on this with him then discuss with Brian P.

Redfern supports the EA process but seems to be getting signals that timelines may slip. Our Minister asked to kept apprised of progress. Ms Boone agreed to have Highways staff meet with them in early '97.

Distribution:

TO: Bruce McRae of EI	(BMCRAE)
TO: Brian Parrott of EI	(BPARROTT)
TO: Mike Kent of EAO	(MKENT)
TO: Fred Hermann of EI	(FHERMANN)
TO: Doug Flynn of EI	(DFLYNN)
TO: Ron Smyth of EI	(RSMYTH)
CC: Terri Starkes of EI	(TSTARKES)



→ DM

December 10, 1996

To: Honourable Dan Miller
Minister of Employment and Investment

Re: Briefing Note - Meeting with Redfern Resources Ltd.

Enclosed please find an information Briefing Note for your upcoming meeting with Redfern Resources Ltd., on December 12, 1996 at 9:00 a.m., regarding the Tulsequah Chief Mine Project.

The Briefing Note was written by staff of the Environmental Assessment Office, and approved by their Deputy Minister, Dr. Sheila Wynn.

This note has been reviewed by Ministry of Employment and Investment staff and represents the issues well.

- since '87: spent \$20 mm on Tulsequah.
- Project Report filed with govt - Nov 25 - screening
- barge work creek - river silted up.
- roads the one option.

Blair Redlin

Acting Deputy Minister

- analogous to Westmin - 941 mine held but optimistic re metals longer

Enclosure

- 160 km road; 115 km is new, rest is pleaser roads

- SUA - special access, gated, stalled poaching.

PO, ADMEM

Regional Operations,
Health & Safety Br.
Br. File # 280-20

DM. - like mines, except to case where add'l dev can happen

Log #EMD960422

- interim financing, then project name
financing given project meets → Gov't of BC will support it

projects: M09607848

**ENVIRONMENTAL ASSESSMENT OFFICE
BRIEFING NOTE**

TULSEQUAH CHIEF COPPER/LEAD/ZINC/GOLD/SILVER PROJECT (MINE PROJECT)

Redfern Resources Limited (Redfern) proposes to reopen the former producing Tulsequah Chief mine located on the east bank of the Tulsequah River 14 km north of its junction with the Taku River. The project is 100 km due south of Atlin, British Columbia and 64 km northeast of Juneau, Alaska. The proposal is to develop an approximately 2500 tonnes per day underground base/precious metal mine and mill, and transport the ore concentrate to Skagway, Alaska.

BACKGROUND:

Redfern is a publicly traded company based in Vancouver and sole owner and operator of the Tulsequah Chief Project. Redfern's involvement in the Tulsequah Project area commenced in 1981. The project site was a former producing mine operated by Cominco Ltd. in the 1950s, with initial discovery and development dating back to the early 1920s. Redfern staked claims surrounding the mine and later secured an option agreement with Cominco to renew exploration of the deposit. Major exploration programs commenced in 1987 and continued each succeeding year through 1994. During this period Redfern negotiated and exercised an option to purchase Cominco's interest and become the sole owner of the property.

In June 1994 Redfern submitted an application under the former Mine Development Assessment Process to reopen the mine. Redfern was provided with draft terms of reference for further studies based on the review of the application and the results of multi-stakeholder group workshops. Upon proclamation of the *Environmental Assessment Act* on June 30, 1995, the project was transferred to the environmental assessment process at the step known as "Draft Project Report Specifications". Final project report specifications were provided to the proponent in February 1996.

CURRENT STATUS AND EMERGING ISSUES:

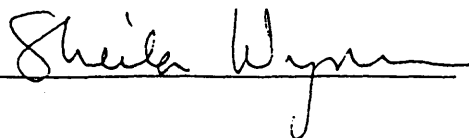
- Redfern has submitted their Project Report and is currently involved in the 25 day screening stage of the EA review process. If the project committee accepts the project report, it will then enter into the project review period.
- Mine life of ten years is planned with an operational workforce of 199 people on site and 60 positions contract trucking. A two year construction program will involve 700,000 person hours with 337 people employed at peak construction. During the two year construction period approximately \$40 million will be spent in labour costs. The operational period will see approximately \$15 million spent on labour. Mine operating costs will average \$32 million with supplies at \$25 million and road maintenance of \$1 million. The project is expected to pay out \$191 million to governments.

- The issue of access is the major concern for First Nations, review agencies and the public. The original proposal was to ship mine concentrate by use of shallow-draft barges down the Taku River to Juneau. Based on economic feasibility, Redfern has rejected this mode of transportation in favour of constructing a 160 kilometer new private industrial gravel road, through the upper Taku River Valley, to the public road system at Atlin. There is increasing public pressure to object in principle to the road based on potential wilderness and tourism impacts.
- Concerns have also focused on the type and level of wildlife information, in particular for grizzly bears, moose, and other important wildlife resources required to satisfy key review agencies, the public and First Nations with regard to assessing impacts of the road option on wildlife.
- The Taku River Valley and the proposed road corridor to Atlin is deemed to be available for integrated resource management, as it was not included as a proposed Area of Interest (AOI), during the Protected Area Strategy process, and has not been subject to a Land Resource Management Planning Process (LRMP).
- First Nations (Taku River Tlingit) are particularly concerned that the proposed road may adversely alter traditional cultural sustenance uses.
- Acid rock drainage (ARD) exists at the project created during the Cominco mining period. Redfern proposes to eliminate this problem and ensure that no additional ARD occurs as a result of its project by placing high sulphide tailing back underground and by ensuring that tailings deposited on the surface are not acid generating.

CONFIDENTIAL

The road access issue is extremely controversial. First Nations are expected to reject this mode of transportation as they believe it will adversely affect their traditional use and cultural and sustenance sources. Allied with the First Nation is the Taku Wilderness Association and a number of environmental activist groups who oppose access to "the last unroaded wilderness area in B.C." This issue is very similar to the Windy Craggy access issue. Media support for rejecting the road will be encouraged by these groups, which have already begun soliciting provincial and national support. Ministry of Environmental, Lands and Parks will be under duress to defend or reject the road on the basis of impacts to grizzly bear, moose and other important wildlife resources. An extension to the 25 day screening period may be required in order for First Nations, U.S. federal governments and other agencies to fully determine if the project report has met the project report specifications and is acceptable for full review.

Deputy Minister Sign-Off



Contact: Mike Kent
Telephone: 356-0312
Date: December 4, 1996

**TULSEQUAH CHIEF MINE
NORTHWEST BRITISH COLUMBIA**

REDFERN RESOURCES LTD

Project Summary

Presented to

Hon. Dan Miller

Deputy Premier and Minister of Employment and Investment

December 12, 1996

TULSEQUAH CHIEF MINE

EMPLOYMENT

- 700,000 person-hours of employment, up to 397 positions during two year construction period
- 260 full-time highly paid positions during operation over minimum 9 year mine life

ECONOMICS AND REVENUE

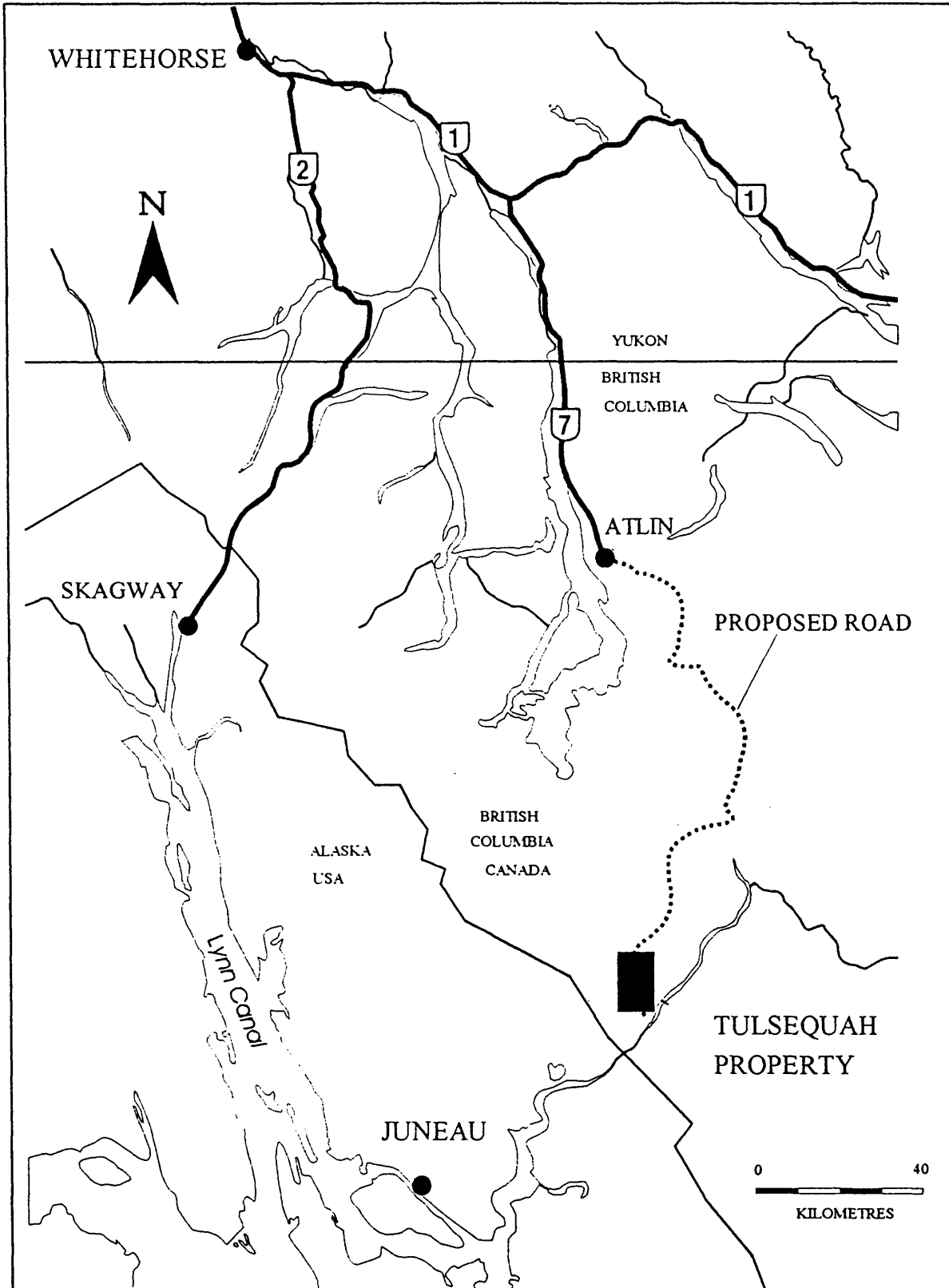
- \$250 million in revenue to governments over mine life
- Project payback in 3.2 years
- Rate of return before tax of 24.6%

ENVIRONMENT

- Re-open and clean-up old mine site
- Underground mine - low surface impact
- All potential acid generating waste returned to mine for safe disposal
- Neutral waste products designed for permanent surface storage and closure

FIRST NATIONS

- Project lies entirely within Taku River Tlingit First Nation territory
- Phase 1 Agreement in place, contemplates future comprehensive Impacts and Benefits Agreement
- Consultation is comprehensive and ongoing
- Taku River Tlingits are at Stage 4 in land claims process



General Site Location Map - Tulsequah Chief Project

Reserves

Tonnes	Zinc%	Copper%	Lead%	Silver (g/t)	Gold (g/t)
7.91 million	6.35	1.27	1.18	100.91	2.42

Forecast Average Annual Production of Metals

Metal	Zinc (tonnes)	Copper (tonnes)	Lead (tonnes)	Silver (ounces)	Gold (ounces)
Annual	53,200	10,090	9,350	2.42 million	56,000
Total	489,400	92,800	86,000	22.2 million	516,000

Construction and Operating Expenditures

Construction: \$142 million capital over two years

Operating: \$50 million operating costs annually, \$436 million in total
\$29 million capital over 9.2 year mine life

main revenue is zinc. Increase in Zn prices in late 1960s

Direct Employment

During construction: 700,000 direct person-hours over two years, up to 397 positions and \$40 million in labour wages.

During operation: 260 employees and contract positions, \$15.5 million in wages and benefits, average \$74,000 per position annually.

Revenue

9 year mine life, open to increase
3.2 year payback, 24.6% pre-tax IRR

Mine life total revenue:	\$935 million
Shareholder return (after taxes, capital recovery)	\$184 million
Mine life direct Government revenues	\$191 million
plus employee income taxes, estimate	\$ 30 million
plus spin-off employment income tax, est.	\$ 30 million
<u>Total government revenue, estimated</u>	<u>\$251 million</u>

Environmental Protection Measures

- New mine will effect complete clean-up of old mine site and existing river contamination
- Underground mine with low surface area disturbance
- Underground mill and rock crushers for minimal surface noise
- Mine design avoidance of potential acid-generating rocks
- Maximum return of waste products to the underground mine
- Safe neutral tailing disposal on surface for permanent reclamation and re-vegetation on mine closure
- Treatment plant for all minewater discharge to ensure water quality compliance
- Restricted access road management to preserve wildlife values

Access and Infrastructure

- Construction of a 160 kilometer single lane mine access road from Atlin south to the mine site; 115 kilometers of new construction. Total cost of \$30.4 million.
- Public highway 7 from Atlin, B.C. to the Alaska highway requires base strengthening and upgrading
- Surface plant and facilities, 9 megawatt diesel power plant, underground mill
- Airstrip, tailings impoundment site and limestone quarry

First Nations

- Located within Taku River Tlingit First Nation (TRTFN) traditional territory. There are no other overlapping First Nation land claims
- Redfern and TRTFN have signed a Phase 1 agreement covering protocols for information exchange and environmental assessment assistance. This agreement contemplates negotiation of a future Impacts and Benefits Agreement.
- Redfern and TRTFN are maintaining frequent meetings and consultation.

Summary Features of the Tulsequah Chief Mine Proposal

December 12, 1996

Ownership

- Property was formerly owned and operated in the 1950's by Cominco, shutdown in 1957.
- Major exploration programs since 1987 with expenditure by Redfern of \$20 million.
- Redfern has consistently employed local people and used Atlin/Whitehorse based services to the utmost possible.
- Redfern purchased Cominco's interest in 1992 and posted an escrow cash account to cover remediation of historical mining effects. This account stands at \$1.37 million.
- Redfern currently owns 100% of the project.**
- Redfern has an excellent record of compliance with government regulation and has demonstrated responsible corporate citizenship in the environmental arena.

Production

- Proposed underground mine, 7.9 million tonne minable reserve (open)
- 6.35% Zinc, 1.27% copper, 1.18% lead, 2.42 g/t gold and 100.91 g/t silver
- At full production, 2466 metric tonnes/day - 900,000 tonnes per annum
- 9 year mine life with current reserves, open to increase.
- Approx. 151,000 tonnes/year of concentrate to be shipped
- Approx. 35,000 tonnes/year of inbound supplies (fuel, lime, cement)

Economics

- \$142.3 million up front capital requirement
- \$29 million sustaining capital requirement (shaft, equipment replacement)
- Average operating cost of \$56/tonne, NSR of \$118/tonne, revenue margin of \$62/tonne
- 3.2 year payback, 17.6% after-tax IRR
- 199 employees (130 on-site at any one time) + 60 contract trucking/transport
- Average annual compensation of \$74,000 per year
- \$191 million payments to government (taxes, royalties)

Pro-active Environmental Protection Measures

- Underground mine development concentrated in non-acid generating hanging wall rocks.
- Operational segregation of potential acid-generating rocks for return to vacant stopes.
- Tailings treatment:
 - Flotation and segregation of waste sulphide (pyrite concentrate) for return to mine as backfill.
 - Cleaned tailings (~1% S) mixed with cement as paste backfill to seal historical mine workings
 - Tailings used with pyrite con and cement to form paste backfill for sub-water table

- mine backfill.
- Remaining cleaned tailings (30% of tonnage) mixed with finely ground limestone to ensure acid neutrality and stored in tailings pond.
- Historical waste rock to be incorporated in backfill program for sub-water table in-mine stopes.
- Closed system capture of mine water and process water with temporary storage in tailings pond.
- Water treatment plant for effluent discharge - reduces metal loads to government criteria levels. Treated effluent water has passed bio-assay tests with 100% fish survival rate.

Access:

- Redfern proposes construction of a 160 kilometer road from Atlin south to the project.
- Extensive fisheries, wildlife and geotechnical studies are incorporated in the road design for environmental mitigation.
- Redfern proposes stringent access management to restrict non-Company use to other legitimate permitted tenure holders for the purpose of their tenure use only.
- Management will be by manned gate, patrol by company vehicles, mandated radio use.
- Redfern will seek imposition of a no hunting corridor along the road and a ban on fire-arms.
- Redfern expects to post a bond and carry out road de-activation on mine closure.

TULSEQUAH CHIEF PROJECT OVERVIEW

The Tulsequah Chief mine development proposal presents an opportunity to re-activate a historic mining district of B.C. under present day stringent environmental standards and expectations. The project is economically robust with a high grade, polymetallic deposit open to expansion. Revenues are forecast from 4 contained metals: zinc, copper, gold and silver. This provides a "built-in" resilience for weathering cyclic periods of depressed metal prices as it is unusual for all of these metals to be in a low cycle at the same time. The excellent precious metal content gives this deposit an extra edge over typical base metal producers.

After eight years of intensive exploration in the period 1987 to 1994, the Tulsequah Chief project was advanced into final feasibility studies and entered the Mine Development Assessment Process in the fall of 1994. Environmental baseline studies were initiated in detail in May of 1994. Public consultation and government agency review and meetings were held in 1995 leading up to the acceptance of the project into the Environmental Assessment Process in July of 1995. Draft Project Report Specifications were issued by the Environmental Assessment Office on November 24, 1995. After review and incorporation of additional items, final Project Report Specifications were issued on February 15, 1996. Redfern has conducted additional studies to meet the final specifications and recently submitted the Project Report to the Project Assessment Committee for 25 day screening. If accepted, the Project Report will be filed for formal review in support of Redfern's Project Approval Certificate application. Under normal guidelines, a decision on the application could be made by mid year, 1997.

In response to the necessary remediation of past mining effects and in recognition of the sensitive wildlife and salmon habitat in the vicinity and downstream of the proposed mine, Redfern sought to achieve a very high standard of environmental mitigation and compliance in the project development and operation. The feasibility study incorporates these plans in the mine costs. The development will utilize and meld a number of proven recent technologies into a very effective, model mining operation. These techniques include the separation of waste pyrite; pastefill ground control to maximize ore extraction and return of waste material back to the mine; identification, avoidance and treatment of acid-generation; remediation of historic mine workings; and mine design which plans for effective and permanent safe closure.

Economic and environmentally sound access is vital for the mine proposal. Due to the relative remoteness of the site and the high tonnage of metal concentrates produced, access is a critical cost component for the feasibility of the mine. A number of access alternatives were examined at an early stage and ultimately all but one were discarded as infeasible. The exception is the overland option involving construction of a 160 km. road from Atlin to the site, thereby allowing year round trucking to Skagway.

The proposed mine will provide over 250 direct and contract transportation jobs and have a beneficial economic impact for the local communities and the Province. Independent surveys undertaken by the

Atlin community leadership indicate a decided majority in favour of the project. An even higher percentage are in favour if the potential for logging development is controlled. This has emerged as the issue which concerns most locals. This anti-logging sentiment of the Atlin area has been communicated to the Ministry of Forests and may have influenced the recent decision to maintain Atlin's annual harvest levels at the current rate despite the large increase in Annual Allowable Cut levels elsewhere in the Cassiar Forest District.

Redfern's liaison and consultation with the Taku River Tlingit First Nation (TRTFN) has been ongoing since Redfern took over ownership of the project in 1992. Meetings commenced in earnest in early 1993 and have accelerated through the mine development review process. Redfern and TRTFN negotiated a preliminary agreement in 1996 covering information requirements for the environmental assessment process. This agreement allows for further negotiation of an Impacts and Benefits Agreement if the environmental assessment is acceptable to the TRTFN.

The characteristics of the Tulsequah Chief deposit and development proposal make it a microcosm of the challenges facing the B.C. mining industry in the 90's. Mines face unrelenting environmental scrutiny, a complex and overlapping maze of regulatory agencies and permitting requirements, the uncertainties of the ongoing native land claims process and the natural technical challenges of economic operation in a competitive global marketplace. Within this framework Tulsequah Chief emerges as a worthy and responsible mine development proposal.

PRO-ACTIVE ENVIRONMENTAL PROTECTION MEASURES

- Underground mine development concentrated in non-acid generating hanging wall rocks.
- Operational segregation of potential acid-generating rocks for return to vacant stopes.
- Tailings treatment:
 - Flotation and segregation of waste sulphide (pyrite concentrate) for return to mine as backfill. Pyrite stored in lined site pending backfill.
 - Cleaned tailings (~1% S) mixed with cement as paste backfill to seal historical mine workings
 - Tailings used with pyrite con and cement to form paste backfill for sub-water table mine backfill.
 - Remaining cleaned tailings (30% of tonnage) mixed with finely ground limestone to ensure acid neutrality and stored in tailings pond.
- Historical waste rock to be incorporated in backfill program for sub-water table in-mine stopes.
- Closed system capture of in-mine water and process water with temporary storage in tailings pond.
- Water treatment plant for effluent discharge - reduces metal loads to government criteria levels. Treated effluent water has passed bio-assay tests with 100% fish survival rate.
- Former mine workings sealed for mine closure. New mine flooded and sealed. Clean-up of existing acid mine water discharge.
- Site infrastructure to be removed and surface reclaimed on closure.
- On closure, tailings impoundment water to be drained and treated. Tailings will be covered with original substrate material and re-vegetated. Test plots will be evaluated during mine-life.
- On completion of site reclamation, mine access road will be de-activated and reclaimed.

ROAD ACCESS - OPERATING PARAMETERS

- Preferred alignment (see map) runs for 160 kilometers north from site, up Shazah Creek valley, on east and south sides of Nakonake River, across Sloko River, northeast to Atlin plateau and across Silver Salmon Creek, east of Kuthai lake, across Silver Salmon again, east of Dixie lake, across O'Donnel River, up Wilson Creek, on south side of Spruce creek, across Spruce creek and along existing placer roads to Pine Creek road and then cuts across to Como Lake, bypassing Atlin.
- Capital cost is \$30.4 million, operating cost approx. \$9.5 million including maintenance and haulage on existing roads to Skagway.
- Haulage based on 155,000 tonnes/year out-bound, 35,000 tonnes per year in-bound, 330 operating days, and 60 day window for restricted loads. *Terrain Elevation Mapping*
- Road construction will be overseen by an environmental supervisor acceptable to government who will monitor and ensure appropriate construction practice. Site specific criteria will be followed for safe and environmentally acceptable stream crossings. Some crossings may be amenable to habitat enhancement at minimal cost.
- Maintenance costs \$1.1 million/year. Road is a single lane, gravel haul road built under Forest Practices Code guidelines.
- Traffic will consist of up to 13 trucks per day on average haul basis of 982 kilometers round trip to Skagway. This implies 26 road transits or about one every 55 minutes. Concentrate trucks will bring most of the inbound supplies in on backhaul. Specialized supplies such as explosives, refrigerated food etc. will amount to about 3 additional trucks per week. One bus per week will rotate supervisory personnel.
- Traffic will be radio-controlled with pullouts for traffic passage spaced every 250 m. on average. Access will be controlled by a manned gate established at a suitable point - probably south of the O'Donnel river. Access will be restricted to permitted users only for the purpose of their permit.
- Mine personnel will be on 2 -4 week rotation. Hunting will not be permitted on mine property or road route.
- Redfern expects to be required to post a bond for road de-activation and reclamation on mine closure.

TOS → Reg. Mgr
Smithers

I N T E R O F F I C E M E M O R A N D U M

Created: 23-Jan-1998 11:03am PST
Sent: 23-Jan-1998 11:46am PST
From: Wallace Bergen of EI
WBERGEN
Title: Regional Manager
Dept: Employment & Investment
Tel No: 847-7385

TO: See Below

Subject: NW Region Weekly Report to January 23, 1998

MINES

Tulsequah Chief EA Project subcommittees continue to resolve outstanding issues. Bill Price has indicated that ARD items have been resolved from a certification level. Tim Eaton indicates that progress is being made in relation to road issues and that discussions have been scheduled with MOF. Certification should be able to proceed with road issues being resolved at permitting level. Waiting for direction from EAO regarding next steps and meeting of the Project Committee.

Golden Bear

On January 20, 1998, Golden Bear Mine representatives met with the NWMDRC to present their plans for underground mining of the Kodiak B deposit. This is a small deposit with 1 season of preparation work scheduled and 1 year of mining. Agencies to have referral responses back by February 28. Tahltan consultant, Glenda Ferris, was in attendance.

Myra Falls - As a result of on site inspection Bryan reports The following:

1. Water build up in a raise that is being used as a drain between levels was reported. The company is monitoring the situation and alternate drainage routes may be required.
2. Myra Falls had accrued 105 lost time accident free days as of Wednesday. The best previous record was reported to have been 65 days.
3. Apparently Boliden's bid for takeover of Westmin was successful. No word on the implications of this change of owner.

GEOLOGY

Paul has been preparing various material to take to Pathways 98 for displays. Paul has also been preparing for his role as a guide to mine sites for delegates to the conference. Look forward to informative, high quality displays.

LAND USE PLANNING

Graeme McLaren, Mary Lou and Wally will be working to identify procedures for responding to LRMP tables in the NW, especially those in the Cassiar. The NW has large areas of high mineral potential and we need to ensure that our interests are recognized and considered at the tables to identify areas where exploration and development can occur.

TGS → RG
- Smithers

I N T E R O F F I C E M E M O R A N D U M

Created: 26-May-1998 08:06am PDT
Sent: 29-May-1998 03:03pm PDT
From: Paul Wojdak of EI
PWOJDAK
Title. Regional Geologist
Dept: Ministry of Energy & Mines
Tel No: 847-7391

TO: See Below

Subject: Weekly report, May 29

Homestake has moved to acquired the 49.4% of Prime Resources shares that it does not already own, by means of a share swap worth \$450 million. This could lead to wrap up of Prime as a separate operating company.

*Cassiar
Asbestos*
B.C. Chrysotile has an operating budget of \$2 million. Objective at the Cassiar tailings project is to produce 1000 tonnes of fibre per month for three months. This would demonstrate viability of wet milling to investors and lead to investment of \$20 million to enlarge the pilot plant to a 50,000 tonne/yr production mill. The schedule calls for final equipment installation in June and mill startup July 1, and gradual run-up to full production. Grade of the tailings pile is reported to range from 5.9% long fibre chrysotile at the west end (worth \$32/tonne) to 2.8% (\$20/tonne) at the east end. In Quebec, Johns-Manville mines this grade underground.

Gold production to re-commence at Golden Bear about June 1.

Bruce Graff, Jill Pardoe, Jim Hutter (consultant) and myself led about 100 Grade 5-6 children on a tour of Silver Queen mine on May 26-27. Kudos to Bruce for instigating the trip. Kids learned about geology, mining, milling and reclamation and included a short trip underground, and then went on to Equity mine.

*Tul.
Chief*
Exploration financing woes continue:
Redfern is still trying to raise \$2.5 million for its definition drilling program. Despite Mine Certificate, political risk with respect to Alaska still concerns investors and attracting a major company.

Other projects where financing is not yet in place includes Sino Pacific and the CR property south of Houston, Booker Gold and Morrison/Hearne Hill, Alliance Mining and the Ascot VMS prospect, and Kenrich on the Corey, near Eskay Creek.

Paul Wojdak

Distribution:

RG → RG
- Smithers

I N T E R O F F I C E M E M O R A N D U M

Created: 18-Jun-1998 04:24pm PDT
Sent: 26-Jun-1998 09:29am PDT
From: Paul Wojdak of EI
PWOJDAK
Title: Regional Geologist
Dept: Ministry of Energy & Mines
Tel No: 847-7391

TO: See Below

Subject: Weekly report, June 25

Tulsequah Chief update: Still no money for Redfern's underground definition drilling. Looks doubtful that program (and others in the region) will be done. Revised Northwest exploration spending estimate to \$9.5 million, lowest figure this office has ever recorded.

Bren-Mar Resources released the balance of drill results from their Turnagain nickel program (more intercepts averaging 0.25% Ni over 130-200 metres) and announced plans to conduct 50 km of surface and bore-hole IP, and determine metallurgical recovery. The metallurgical program, based on drill core, will utilize Cominco's patented technology and will consist of concentrate production, pressure leaching, solvent extraction and electrowinning of Ni, with by-product Co and Cu. Average Co content is less than 100 ppm! Cu is reported to range from 100-3500 ppm! (I guess the average to be close to the lower end of the range.) The IP and metallurgical work are to be done in July so that, pending results, a 10,000 m drilling program could begin in August. [continuing credibility gap on this project]

RGS release for 93M, 93N, 94C: facilitated Smithers pick-up for Royal Oak, Gary Thompson and Dan Ethier.

Examined/evaluated Gary Thompson's ROX claims in the appropriately named Mosquito Hills near Tahtsa Reach south of Houston. Narrow fracture/gouge zones contain fine pyrite and are strongly anomalous in Pb, Au, As. Host rocks are unaltered Cretaceous Skeena Group(?) sandstones and nearby pyritic Hazelton volcanics, none of which appear very prospective. Gary Thompson is an inexperienced but very keen new prospector. Gave Gary suggestions on how to proceed with his property.

Morice Mtn

Examine Crow-Raven porphyry Cu-(Mo-Ag) prospect on Morice Mountain with prospector Wes Moll. Property has been optioned by Sino Pacific Development who are still having trouble raising any money for IP and drilling. I was impressed by extensive copper mineralization disseminated in Bulkley granodiorite stock and in country rock, fractured rhyolite? Early work circa 1966 was conducted by Amex who obtained a drill intercept of 0.3% Cu over



Province of British Columbia

GEOLOGICAL SURVEY BRANCH

Ministry of Energy, Mines and Petroleum Resources

MEMORANDUM

Mailing address: Parliament Buildings, Victoria, British Columbia V8V 1X4 Telephone: (604) 952-0402 Fax: (604) 952-0381

To: Project Geologists, Managers

Date: Dec. 21, 1994

From: Dani Alldrick, Kim Bellefontaine, Dave Lefebure

Re: Highlights from MDRU VMS Update - Dec. 9, 1994 at UBC

Food for thought: The three GSB participants decided to write down the 6-8 "high points" of information that had the most significance and impact for them out of all the data presented at this day-long meeting. Here are the 21 highlights. Note that each geologist selected different "most important" points.

- MDRU is subdividing VMS deposits into two groups: mafic volcanic/sediment hosted and felsic volcanic hosted. First group includes Windy Craggy, Anyox and Granduc and is preferred to "Cyprus-Type" and "Besshi-Type" because there are always sediments in the sequence. Second group includes some deposits that are not "Kuroko-Type" such as Kutcho Creek.
- Granduc 223 Ma (U-Pb), Anyox are Triassic-age VMS deposits.
- Trondjhemite body located in the centre of the Anyox pendant has yielded a 364 Ma zircon date (!) This pendant MUST be mapped - it holds 160 Ma of uncorrelated stratigraphy -- and hosts a major VMS camp -- What else does it host???
- Granby Point Quartz veins (and similar veins throughout the Anyox camp) are Tertiary, high temperature veins (>300°C)
- Kutcho Creek is constrained to 249 Ma by U-Pb dates - so lies on the Permo-Triassic boundary. Not Triassic as previously thought.
- The "primitiveness" of the Kutcho Creek deposit is intriguing. Pb isotopes suggest formation in an oceanic environment. However, large amounts of felsic volcanics are anomalous for this type of tectonic setting. So, OIB?
- The geochemistry of the Kutcho formation volcanics show they are tholeiitic, sodic, and have very low concentrations of incompatible elements. Geochemistry supports an oceanic environment but rock types are typical of island arcs. This raises interesting questions about the relationships between rocks of the King Salmon allochthon and Cache Creek terrane.
- Almost all volcanic rocks and associated intrusives at Kutcho Creek are tholeiitic with low values of incompatible elements (Nb, Y, Zn) which are not consistent with a calc-alkaline Kuroko-deposit setting.
- Tulsequah is hosted by proximal felsic volcanics while Big Bull is at roughly the same stratigraphic horizon in distal bedded felsic volcanics with manganese exhalative

Granduc.

Anyox

Kutcho Creek.

(à la Tulsequah chert / Myra Falls !)

Analogies ?) e) saw here...

Tulsequah Chert



TO: Dr. Bruce McRae
Assistant Deputy Minister
Ministry of Energy, Mines and
Petroleum Resources
Victoria, B.C.

February 7, 1994

~~Ellen Tulsequin~~

COPY

Dear Bruce:

RE: TAKU RIVER CORRIDOR MEETING

DATE: Friday, January 28, 1994

TIME: 7:00 to 8:30 a.m.

PLACE: Hotel Vancouver, Vancouver, B.C.

PARTICIPANTS:

- 1. Hon. John Devries - Minister, Government Services, Economic Development: Mines and Small Business (Whitehorse, Yukon).**
- 2. W.J. (Bill) Weigand - Mayor (Whitehorse, Yukon).**
- 3. Steven C. Borell - Executive Director, Alaska Miners Association, Inc. (Anchorage, Alaska)**
- 4. Al Clough - State of Alaska, Department of Commerce and Economic Development (Juneau, Alaska).**
- 5. Ken Semaniuk - Mining Association of B.C. (Vancouver)**
- 6. Tom Schroeter - B.C. Geological Survey Branch (Vancouver).**
- 7. Paul Wojdak - B.C. Land Management and Policy Branch (Smithers).**
- 8. Bob Hewton - Rembrandt Mines Ltd. (Vancouver) - Polaris Taku.**
- 9. John Ostashek - Yukon**

On January 27th I was asked to attend the above noted meeting, as a result of past involvements both in the field and at meetings. I took the liberty of bringing along Paul Wojdak and Bob Hewton, both of whom contributed very nicely to the meeting in their respective capacities.

As you are aware, the Alaskans, Yukoners, and the mining industry are keen on seeing development(s) in the historic Tulsequah mining camp. The Alaskans are particularly keen on assisting infrastructure requirements by proposing to build an access (road) corridor up Taku Inlet to the US/British Columbia border. The two key projects, both in advanced stages, are Tulsequah Chief/Big Bull (Redfern Resources) and Polaris Taku (Rembrandt Mines).

Last year a letter from the then B.C. Minister of Highways, the Honourable Art Charbonneau, concerning potential access/development scenarios for Tulsequah was considered to be 'negative' by the members of the mining industry and proponents of the Taku Corridor project. Apparently this letter is still "on the public record" and is of concern. At the January 28th meeting, it was proposed/requested that I investigate the possibility of requesting an official "update" from the Honourable Anne Edwards regarding ongoing negotiations and future directions concerning this project.

Other aspects of these discussions involved Tourism and First Nations. Apparently the cruise lines are very interested/supportive in potential day trips from Juneau up the Taku corridor to Tulsequah. Has/is the B.C. Ministry of Tourism involved in intergovernmental meetings regarding the Taku corridor? (see attachment). The involvement of First Nations people (e.g. Taku Tlingits) is considered very important. Have the First Nations from the Atlin area been involved in past deliberations?

The next meeting regarding the Taku Corridor is scheduled for Whitehorse, Yukon around February 25. With an election call for Alaska later this year, I sense a heating up of this issue. As a 'facilitator', based in Vancouver, I would be pleased to offer any assistance I might be able to provide in future negotiations.

I look forward to your response at your earliest convenience.



Tom G. Schroeter, P. Eng.
Senior Regional Geologist

TGS:mch

cc: ~~Ron Smyth~~
~~Brian Bennett~~
~~Paul Weidick~~

Attachments: Fax received from Steve Borell

DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

OFFICE OF THE COMMISSIONER

WALTER J. HICKEL, GOVERNOR

3132 MIANEL DRIVE
JUNEAU, AK 99801-7898
PHONE: (907) 465-3900
FAX: (907) 586-8365
TEXT: (907) 465-3652

January 12, 1994

Honorable Jackie Pement
Minister of Transportation and Highways
Parliament Building, Room 028
Victoria, British Columbia
V8V 1X4
CANADA

Dear Minister Pement:

Congratulations on your appointment as Minister of Transportation and Highways by Premier Harcourt.

As I'm sure you are aware, we Alaskans in many respects have a closer kinship with British Columbia and the Yukon than we do with our southern sister states.

The common border between British Columbia and Alaska is approximately 750 miles long which makes it substantially longer than any other Provincial-State boundary. (Alaska/Yukon Territory is slightly longer).

The importance of trade and commerce corridors between British Columbia and Alaska has been recognized for over 150 years. The need for mutual access across this common boundary was first officially recognized in the treaty of 1825 between Great Britain and Russia.

Since that time only four land transportation facilities have inter connected our lands:

- 1) Haines Highway (Haines - Haines Junction)
- 2) Klondike Highway (Skagway - Whitehorse)
- 3) White Pass and Yukon R/R (Skagway - Whitehorse)
- 4) Hyder - Stewart Road (Hyder - Stewart)

The first three of these routes primarily serve the Yukon Territory although all three do penetrate portions of British Columbia and could afford ready access to ocean ports to serve B.C. commerce and trade needs and desires.

Minister Pement

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January 12, 1994

All three are located close together in the extreme northern area of B.C. and Alaska's panhandle. The latter connection between Hyder and Stewart is of little consequence since both are ports at the North end of the Portland Canal and essentially adjoin.

Alaska's ferry system connects Prince Rupert with Southeast Alaska and forms yet another, although very limited, surface connection.

A quick look at a map will disclose that except for the extreme Northern portion of the common boundary no meaningful trade and commerce corridors exist.

Over the years, use has been made of river routes, primarily the Stikine, Taku and Unuk but in recent years these traditional routes, with the exception of the Stikine, have seen somewhat diminished use.

The commerce and trade of Southeast Alaska depends to a large degree on the Alaska Marine Highway System and its six ocean type ferries. This system is of limited capacity and demand has now exceeded the limit of this system during several months of the year. It is apparent that additional surface transportation systems are needed to expand the capacity of the basic transportation system.

As our cities in Southeast grow the need for land connections to the existing North American Highway and Rail systems was never greater. Our only exit is through corridors into British Columbia. While there has been conversations about such connection in past years no real determined efforts have resulted.

Tourism is increasing at an unheard of rate of about 30% per year in Alaska and the transportation links are either saturated or fast becoming so. Whether we like it or not the Pacific coast areas of B.C. and Alaska are prized tourist destinations.

It is our desire to open meaningful and continuing dialog with B.C. to jointly investigate, plan and to hopefully realize additional surface transportation connections across our common boundary for our mutual benefit.

Alaska needs several surface connections including one to Juneau, our capital city and the only state, provincial or territorial capital on mainland North America not connected to the continental surface transportation system.

Minister Pement

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January 12, 1994

Southeast's second most populous municipality, Ketchikan, is a major industrial center and tourism hub. A road link from the Iskut via the Craig and Bradfield rivers would serve Prince Rupert, Terrace, Smithers and other communities along the Northcoast and Northwestern B.C. by providing a transportation link that would serve B.C. and the Ketchikan/Wrangell areas of Alaska.

Basically three surface route systems are of prime interest to Alaska.

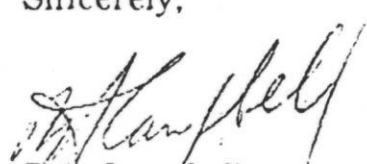
- 1) A connection serving Ketchikan and Wrangell via the Bradfield Canal.
- 2) A connection serving Juneau (our capital city) through the Taku River Valley.
- 3) A connection serving Wrangell and Petersburg through the Stikine Valley.

Alaska DOT&PF would like very much to meet with you and your staff either in Victoria or Juneau to explore common needs for coastal corridors through Alaska's panhandle.

Such a meeting should in our opinion be unrestricted as to discussion topic regarding surface transportation issues and be exploratory as to all modes of transportation.

We look forward to your early response.

Sincerely,



B.A. Campbell
Commissioner

PHASE I PHASES II to ?

TAKU ROAD - Juneau to B.C. to Atlin

CONTACTS:

ALASKA

B.C. A-T

GOVT:

Comm Dept of Trans APF, Bruce Campbell 465-3900
 Comm Commerce & Econ Dev, Paul Fuhs 465-2500
 Al Clough (June) 465-5463 Dick Swainbank (Ftks) 452-7464
 Donna Logan (ANCH) - Ak/CDW Trade

Minister of Trans:

Tom Schroeter, Ming Mirz (604) 660-2708

Tourism:

Mary Pignalberg (Tourism) ^{June}
 (Greg Line)
 Holland-Am Tours - C.J. Zane (Anch)
 Princess Tours
 AVA
 AK Visitors Assn - Karen Cowart (ANCH)

Westairs

B.C.: Bill Weigand, Whitehorse Mayor (403) 668-8626

Y.T.:

Independent:

561-1011
 Dennis Nottingham/PND (Anch)
 Hwy Users Fed of AK (HUFA)

John Austin (604) 929-6553

↳ Anch, Mon, Jan 31.

Chamber of Commerce
 Smithers

Mining Assns:

Steve Borell, AMA Ex Dir (Anch) 276-0347
 Mary Nordale, AMA Pres (June) 586-3340
 Frank Dillon, AK Truckers

Jack Patterson BCYT Com (604) 681-5328

Ken Sumarik BCMA (604) 681-4321

Rob McIntyre YT Com (403) 667-2090

Other:

Chuck Achberger 789-1871
 Joe Poor, June Ch of Comm

Jamie Parsons - Mayor (Juneau) 789-7201
 Alaska Truckers' Assn

EVENTS/IDEAS:

① HUFA/AMA/ATA - Legislative Reception: Tue, Mar 1, in JUE
 Dennis Nottingham - Westmark, Juneau

② June CoC - Canadians speak here? while in June? + Legislators
 [FEB 25 in Whitehorse?]

③ Cdn Minister of Trans - Meet with Ak Comm - Bruce Campbell?

Feb. 25th
 Whitehorse

Election
- ~~Jan Nov.~~

TGS
Letter - 'Positive'
- in Alaska press

ballot
- move capital from
Juneau

Taku Ting lit
(All in)
- First Nations
- get "on side"
Whitehorse meeting
Feb. 25th

Tom - ENPR
Paul - Hays
(Pement)

Tourism
(Bill Barlee)

1. Al Cough
2. Bill - Mayor (Whitehorse)
3. John - Min. (Tukson)
4. Ken Swannick
5. Bob Stewart (B.C.)
6. TGS
7. Paul White
8. Steve Barrell
- Alaska Miner
9. 'Lody'

State of Alaska
- part families on Taku

John Devries - Min. of Mines (ukon) 403-667-3769

Feb. 8/94

George Holman - Pres. Board of Trade

(Atlin)

651-7717

~~Thingit - 4 lobbyists~~



COPY

TO: Norm Ringstad, Manager
Mine Development Assessment Process

FILE: **Tulsequah Chief**
-Pre-Application

RE: **"TULSEQUAH CHIEF COPPER/GOLD/SILVER/LEAD ZINC PROJECT-PROSPECTUS REVIEW"**

As requested, on behalf of the **B.C. Geological Survey Branch** I offer the following comments:

- 1) **Past operating history, productions records etc. should be a positive asset in proponent submitting further detailed information.**
- 2) **Current (last '80s, early-mid '90s) exploration programs have been well planned and managed.**
- 3) **Further submission(s) should include geological cross-sections with assays, with "ore" grade outlines. Ore reserve blocks should show net smelter return/tonne values with commodity prices listed.**
- 4) **Should cadmium be added to the "minerals" or "metals" list (recoverable or not)?**
- 5) **Hovercraft scenario may be important eg. Snip mine operation.**
- 6) **Details on jokulhlaup (outburst flood) studies.**
- 7) **Condemnation drilling required in proposed mine/mill site/storage locations.**
- 8) **Transportation of persons and materials from Tulsequah airstrip across Tulsequah River to site area, before construction of bridge (Feb. '97) ?**
- 9) **Potential impact(s) of additional developments (resource and tourist) in Tulsequah-Taku valley? eg. Polaris-Taku, Big Bull projects.**
- 10) **References not specific to text i.e. include where appropriate.**

I wonder if the northern (Atlin) access route would be economically/socially/environmentally feasible. I suspect the Taku Arm route would be "more favourable".

In recognition that any development in the Tulsequah area would impact on British Columbia, Alaska, and Yukon, I look forward to working closely with respective representatives in dealing with this application in a responsible, efficient manner.

Your sincerely,

Tom Schroeter, P. Eng.
Senior Regional Geologist

TS/mch

cc: R. Smyth, Chief Geologist