

## KENNCO EXPLORATIONS (WESTERN) LIMITED

505 BARRARD STREET, SUITE 730

ONE BENTALL CENTRE  
VANCOUVER, B.C. V7X 1M4

March 17th, 1977

Mr. J.J. Jones,  
for Director of Land Management,  
Land Management Branch,  
Department of Environment,  
Victoria, B.C. V8V 1X5

Dear Sir:

Re: Stikine Copper Limited  
File: 0246255 on Map Reserve  
File: 0267415 on Land Purchase  
Your FileNo. 0267415

REFERRED	TO	DATE	INITIAL
ACCTS			
A. D. M.	✓	3/21	M
A. D. P.			
M. R.			
E. & P.			
A. D.			

REC'D MAR 18 1977  
658  
J.J.F.

FILE ✓ H. Stikine

Order-in-Council No. 2942, approved on September 16, 1969, provided for a reserve from mineral claim staking in the vicinity of the Anuk River on the east bank of the Stikine River pending the eventual development of a townsite and ore treatment plant in that area.

By a letter from the Department of Lands, Forests and Water Resources dated August 15, 1969, we were advised that a map reserve had been placed on Departmental records covering a similar area, with termination effective December 31, 1970. The expiry date of the map reserve has been extended upon annual application to December 31, 1976. (Reference to your letter on behalf of Mr. R.C. Watt dated March 4, 1976).

During 1976, a field program of fill-in drilling was completed around the margins and north end of the proposed main ore zone at the Galore Creek property. This consisted of 17,440' of diamond drilling in 24 holes at a total cost of \$683,000. This will give greater confidence in planning the preliminary open pit design.

Plans for 1977 are still being considered, but it is likely that our attention will be focussed on defining and investigating the problems of access and infrastructure that presently hinder development of the property. Only maintenance work will be done at the Galore Creek camp.

We are still very interested in the property, and are actively seeking ways to overcome the difficulties that presently impede its economic development. The area reserved on the Stikine River is considered to be an essential requirement in the alternatives being evaluated for eventual production from the property. For this reason, we hereby make application for a further extension of the map reserve to December 31, 1977.

Sincerely,



R.W. Stevenson

RWS/fh

c.c. ✓ Mr. J.T. Fyles, Deputy Minister, Dept. of Mines & Petroleum Resources  
R.A. Freberg, Hudson Bay Exploration & Development



Additional work is proposed at the property and within the map reserve in 1974 and application is hereby made for a further extension of the map reserve.

Sincerely,

A handwritten signature in cursive script, appearing to read 'D. A. Barr', written in dark ink.

D. A. Barr

DAB/aam

cc: Mr. J. E. McMynn -Deputy Minister of Mines  
Mr. R. A. Freberg -Hudson Bay Mining & Smelting Co.  
Mr. L. B. Moon  
Mr. R. W. Stevenson

October 24, 1972

Mr. W. G. Schultz,  
Project Engineer for Stikine Copper Ltd.,  
Hudson Bay Mining and Smelting Co., Limited,  
P. O. Box 28,  
Toronto-Dominion Centre,  
Toronto 1, Canada.

Dear Mr. Schultz:

Thank you for your letter of October 2. We enjoyed your visit on October 17, at which Dr. Holland and Bill Peck were present. In our discussion that day we agreed to:

- (1) bring the whole proposal to the attention of Mr. Nimsick, seeking his general approval.
- (2) budget for a road survey along the Iskut River to be carried out in the 1973 field season.
- (3) arrange for an environmental land use appraisal of the area affected by the development of the proposed complex.

We agreed that your plans would be restricted information until you have arranged for land and/or mineral reserves on key areas.

Yours very truly,

James T. Fyles,  
Deputy Minister.

JTF:DB  
c.c. Hon. L. T. Nimsick  
and Mr. W. Peck.



The results of our engineering studies and various other investigations have basically established a preliminary conception of what Stikine when developed should look like, provided our expectations are realized and the engineering program when complete demonstrates the feasibility of the project.

Since there is a complete lack of facilities or services of any type in this area we have started with the premises that the operation would have to justify to a large extent all of the necessary facilities; however it is reasonable to conclude that other operations will develop, such as HECLA MINING (at Schaft Creek) and the timber resources of the area, once Stikine is established. A second major premises which we accept is that; because of the remote location, poor climatic conditions, lack of any community development or shipping facilities the town and plant-complex must be connected to the Canadian Hwy network via B.C. We feel strongly that access for personnel, domestic supplies etc. by intermittent small barg traffic down the Stikine and out through Wrangell Alaska would be unacceptable in the type of community we visualize and would ultimately result in disruptive and possibly disastrous labour turnover problems. The third factor which influences our thinking is the availability of power. Because of the location and resulting high fuel transportation costs, diesel generation does not appear feasible.

I am sure you are aware that hydro electric plants must be large to be economic. For these reasons we are giving serious study to electric smelting and refining in hope that we can provide a large enough base load to justify the development of the hydro electric potential of the Iskut River and More Creek. This policy has the additional benefit of increasing our labour force and therefore the number of families supporting the community as well as being in keeping with the desires of most Canadians that; our natural resources leave Canada with a maximum Canadian content. We would of course have to complete design in such a way as to take advantage of the most efficient process and plant arrangement available as well as design for custom smelting, and refining since it presently appears that the daily tonnage which the Galore Creek ore body can support for a 20-25 year life is very close to what is considered the minimum acceptable capacity for an economic smelting and refining operation. We recognize that; once a plant and community became established other mines could more quickly develop to provide additional smelter-refinery feed since the access, power source and community would already be established. In addition to this the development of the area which is required to bring Stikine on stream would provide easy access of bulk material to our complex from the north and south.

We visualize Stikine when developed in keeping with these parameter could be composed of the following basic elements:-

Mine: At the headwaters of Galore Creek, large open pit plus smaller underground block caving mines and a leach dump. Total production 20,000-30,000 Tpd. Ore will be transported to the mouth of the Porcupine Creek via a 10-12 mile underground haulage tunnel.

Plant: The plant complex located at the mouth of the Porcupine Creek on the Stikine River. The Plant to consist of a concentrator - smelter - refinery which would produce approximately 100,000 Tons

of refined copper per year while consuming 1,000,000 MWH of electrical energy per year.

Town: All personnel working at "Stikine" plus those providing services for employees, government, commercial etc., will make their homes in a townsite located somewhere on the east bank of the Stikine River. I have indicated on the attached sketch map what currently appears to be the most suitable site at the mouth of the Scudd River, however our studies when complete should give a clearer indication of exactly which is the most suitable site. We estimate that the town would have a population of 4,000-5,000 if electric smelting and refining proves possible.

Power: Brinco of Montreal in the past have shown an interest in developing the hydro electric potential of the Iskut River and More Creek. We have appraised them of our current thinking and program with the suggestion that they give consideration to the construction of a hydro electric generating plant. Assuming their economic studies and government discussions are favourable and the plants are built the major one would be on the Iskut River just below the confluence of Forrest Kerr Creek, the other being at the mouth of the More Creek. A small community for the housing of generating plant operating personnel would logically develop in the vicinity of Bob Quinn Lake on the Cassiar Hwy. Should Brinco's work prove satisfactory I am sure that they will be making a proposal to us for the supply of power.

For your consideration I have enclosed a small sketch map illustrating these points showing proposed locations.

Very generally the timing which we are working toward in the engineering portion of our program and the development of the property is as follows:

Summer 1972: Reconnaissance, preliminary studies, field data collection, initiation of pit design program.

Winter 1972: Select required design and estimating consultants, define scope and determine summer field work requirements. Establish governmental liaison and follow-up on possibilities relating to transportation, access, power, community services, communication etc.

Summer 1973: Complete field engineering, soils testing, surveying, data gathering and continue previously initiated engineering programs.

Winter 1973: Layout engineering, costing, process reviews, market and transportation analysis etc.

Summer 1974: Consolidation and assembly of various studies into overall evaluation of property, financial organization and field checks in doubtful areas.

Winter 1974: Presentation to principals for go/no go decision and communication to various government agencies of intent.

Summer 1975-1980: Construction period; assuming a go decision with plant start-up in 1980.

From the preceeding I am sure that several things have immediately become apparent to you. The principal one being the complete interdependance of all these facilities, upon which the success of this development will rest with respect to both time and economics. It is both illogical and impractical to assume one of these major elements which we have described, being developed in advance of the other because of their complete interdependance. For these reasons we have suggested to Brinco that they complete preliminary investigations and if they find they have a continuing interest they persue a program which is focused on the same objective and timing as ours and that we mutually assist each other toward the objective of developing this area if it is economically justifiable. Should you concur with our thinking we would appreciate your department giving serious consideration to our thinking on an Iskut-stikine access road which is as follows:-

Based upon our work this past summer we feel that the best vehicular access to the site, in keeping with current and potential requirements, would be down the Iskut starting from the point where the Stewart Cassiar road crosses the Nigunsaw. The road would run along the south bank of the Nigunsaw and the Iskut crossing to the east bank at the confluence of the Stikine and the Iskut. The road would then run up the Stikine on the east bank past the plant site to reach the townsite located at the Scudd Portage. This road location has several advantages, the principal ones being:-

- a) The shortest road distance to Stewart or Prince Rupert, suitable developed deep water Canadian ports for heavy freight.
- b) The power transmission lines from the damsites to the plant and town would parallel this route making their installation and maintenance practical.
- c) Provide access to the proposed Iskut generating station for construction and operation.
- d) Follow what our reconnaissance indicates is the most convenient route for road construction into the area.

Since mine access roads fall within your jurisdiction and this route appears to us to be a logical feeder to, and means of our utilizing the Stewart-Cassiar road which your department is currently finishing we feel that a survey and cost analysis by your department would be both timely and justifiable. Should your department chose




to undertake the field portion of this survey in the coming summer, sometime in the late winter after cost analysis, scheduling and layout work is complete; Stikine and your department would then be in a position to intelligently discuss this road.

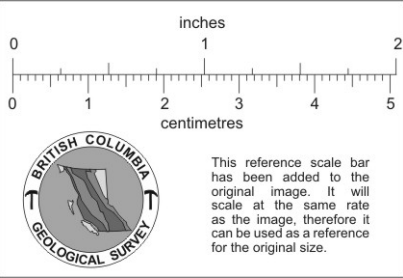
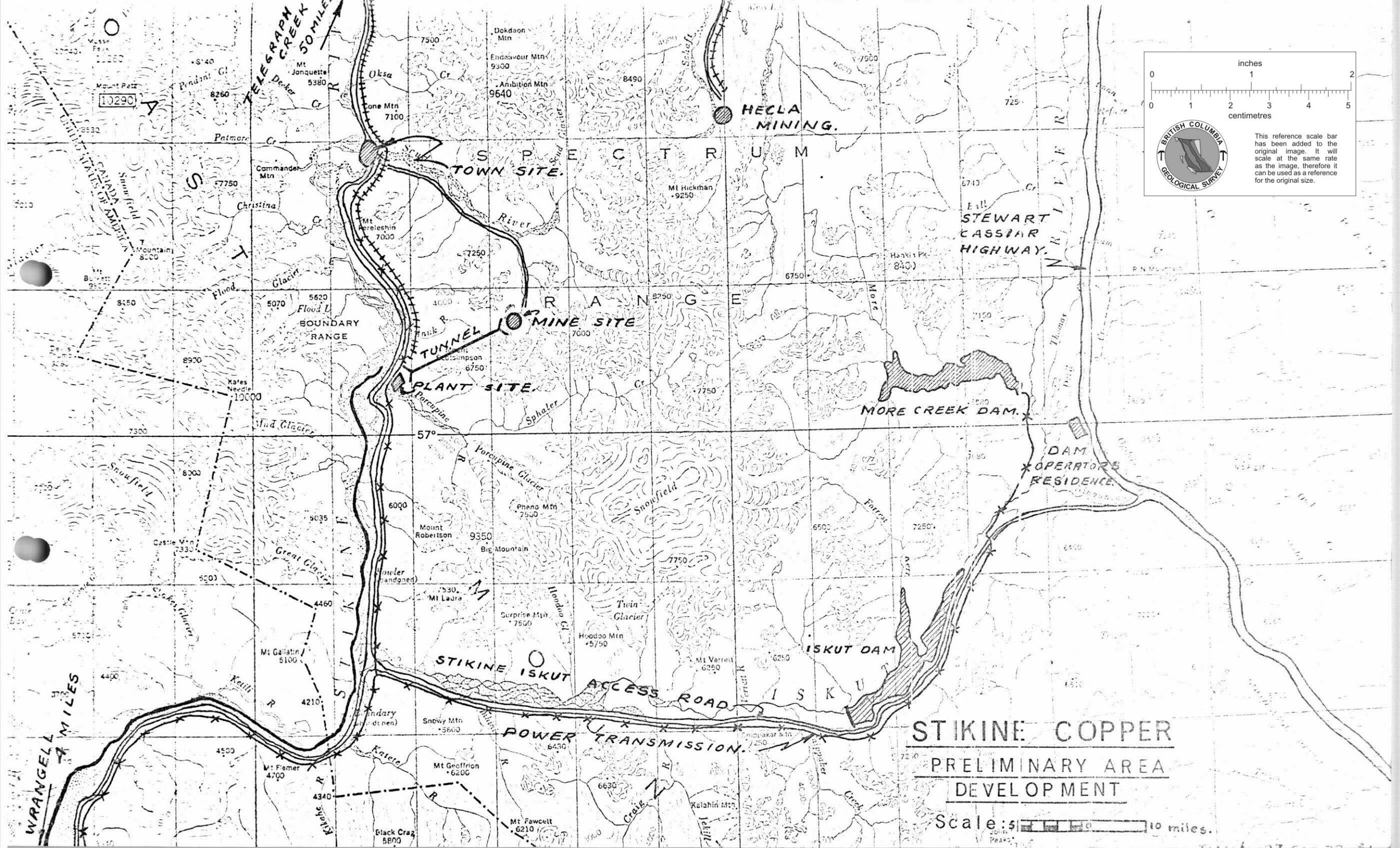
Assuming such a road were built the next logical step would be for the Alaska Government to complete a road from Wrangell up to the international boundary at the junction of the Iskut and Stikine which would have the effect of developing a second access to the coast. We also feel that it is logical and will be ultimately practical for a branch of the rail line at Dease Lake to be extended down the Stikine to our site and eventually Wrangell. This line when developed would provide the route for development of properties such as HECLA and the movement of concentrates to our complex.

I thank you very much for receiving me, and look forward to meeting and discussing this project with your staff. I will be calling your office in early October to inquire when such a visit would be most convenient and suitable.

Yours truly,

  
W. G. Schultz  
Project Engineer for  
Stikine Copper Ltd.

WGS/mw  
c.c. H. A. McKenzie



**STIKINE COPPER  
PRELIMINARY AREA  
DEVELOPMENT**

Scale: 1 inch = 10 miles.

WRANGELL 4 MILES

TELEGRAPH CREEK 50 MILES

CANADA  
UNITED STATES OF AMERICA

10290



The results of our engineering studies and various other investigations have basically established a preliminary conception of what Stikine when developed should look like, provided our expectations are realized and the engineering program when complete demonstrates the feasibility of the project.

Since there is a complete lack of facilities or services of any type in this area we have started with the premises that the operation would have to justify to a large extent all of the necessary facilities; however it is reasonable to conclude that other operations will develop, such as HECLA MINING (at Schaft Creek) and the timber resources of the area, once Stikine is established. A second major premises which we accept is that; because of the remote location, poor climatic conditions, lack of any community development or shipping facilities the town and plant-complex must be connected to the Canadian Hwy network via B.C. We feel strongly that access for personnel, domestic supplies etc. by intermittent small barg traffic down the Stikine and out through Wrangell Alaska would be unacceptable in the type of community we visualize and would ultimately result in disruptive and possibly disasterous labour turnover problems. The third factor which influences our thinking is the availability of power. Because of the location and resulting high fuel transportation costs, diesel generation does not appear feasible.

I am sure you are aware that hydro electric plants must be large to be economic. For these reasons we are giving serious study to electric smelting and refining in hope that we can provide a large enough base load to justify the development of the hydro electric potential of the Iskut River and More Creek. This policy has the additional benefit of increasing our labour force and therefore the number of families supporting the community as well as being in keeping with the desires of most Canadians that; our natural resources leave Canada with a maximum Canadian content. We would of course have to complete design in such a way as to take advantage of the most efficient process and plant arrangement available as well as design for custom smelting, and refining since it presently appears that the daily tonnage which the Galore Creek ore body can support for a 20-25 year life is very close to what is considered the minimum acceptable capacity for an economic smelting and refining operation. We recognize that; once a plant and community became established other mines could more quickly develop to provide additional smelter-refinery feed since the access, power source and community would already be established. In addition to this the development of the area which is required to bring Stikine on stream would provide easy access of bulk material to our complex from the north and south.

We visualize Stikine when developed in keeping with these parameter could be composed of the following basic elements:-

**Mine:** At the headwaters of Galore Creek, large open pit plus smaller underground block caving mines and a leach dump. Total production 20,000-30,000 Tpd. Ore will be transported to the mouth of the Porcupine Creek via a 10-12 mile underground haulage tunnel.

**Plant:** The plant complex located at the mouth of the Porcupine Creek on the Stikine River. The Plant to consist of a concentrator - smelter - refinery which would produce approximately 100,000 Tons

of refined copper per year while consuming 1,000,000 MWH of electrical energy per year.

**Town:** All personnel working at "Stikine" plus those providing services for employees, government, commercial etc., will make their homes in a townsite located somewhere on the east bank of the Stikine River. I have indicated on the attached sketch map what currently appears to be the most suitable site at the mouth of the Scudd River, however our studies when complete should give a clearer indication of exactly which is the most suitable site. We estimate that the town would have a population of 4,000-5,000 if electric smelting and refining proves possible.

**Power:** Brinco of Montreal in the past have shown an interest in developing the hydro electric potential of the Iskut River and More Creek. We have appraised them of our current thinking and program with the suggestion that they give consideration to the construction of a hydro electric generating plant. Assuming their economic studies and government discussions are favourable and the plants are built the major one would be on the Iskut River just below the confluence of Forrest Kerr Creek, the other being at the mouth of the More Creek. A small community for the housing of generating plant operating personnel would logically develop in the vicinity of Bob Quinn Lake on the Cassiar Hwy. Should Brinco's work prove satisfactory I am sure that they will be making a proposal to us for the supply of power.

For your consideration I have enclosed a small sketch map illustrating these points showing proposed locations.

Very generally the timing which we are working toward in the engineering portion of our program and the development of the property is as follows:

**Summer 1972:** Reconnaissance, preliminary studies, field data collection, initiation of pit design program.

**Winter 1972:** Select required design and estimating consultants, define scope and determine summer field work requirements. Establish governmental liaison and follow-up on possibilities relating to transportation, access, power, community services, communication etc.

**Summer 1973:** Complete field engineering, soils testing, surveying, data gathering and continue previously initiated engineering programs.



Winter 1973: Layout engineering, costing, process reviews, market and transportation analysis etc.

Summer 1974: Consolidation and assembly of various studies into overall evaluation of property, financial organization and field checks in doubtful areas.

Winter 1974: Presentation to principals for go/no go decision and communication to various government agencies of intent.

Summer 1975-1980: Construction period; assuming a go decision with plant start-up in 1980.

From the preceeding I am sure that several things have immediately become apparent to you. The principal one being the complete interdependance of all these facilities, upon which the success of this development will rest with respect to both time and economics. It is both illogical and impractical to assume one of these major elements which we have described, being developed in advance of the other because of their complete interdependance. For these reasons we have suggested to Brinco that they complete preliminary investigations and if they find they have a continuing interest they persue a program which is focused on the same objective and timing as ours and that we mutually assist each other toward the objective of developing this area if it is economically justifiable. Should you concur with our thinking we would appreciate your department giving serious consideration to our thinking on an Iskut-stikine access road which is as follows:-

Based upon our work this past summer we feel that the best vehicular access to the site, in keeping with current and potential requirements, would be down the Iskut starting from the point where the Stewart Cassiar road crosses the Nigunsaw. The road would run along the south bank of the Nigunsaw and the Iskut crossing to the east bank at the confluence of the Stikine and the Iskut. The road would then run up the Stikine on the east bank past the plant site to reach the townsite located at the Scudd Portage. This road location has several advantages, the principal ones being:-

- a) The shortest road distance to Stewart or Prince Rupert, suitable developed deep watar Canadian ports for heavy freight.
- b) The power transmission lines from the damsites to the plant and town would parallel this route making their installation and maintenance practical.
- c) Provide access to the proposed Iskut generating station for construction and operation.
- d) Follow what our reconnaissance indicates is the most convenient route for road construction into the area.

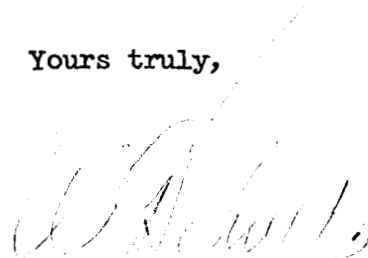
Since mine access roads fall within your jurisdiction and this route appears to us to be a logical feeder to, and means of our utilizing the Stewart-Cassiar road which your department is currently finishing we feel that a survey and cost analysis by your department would be both timely and justifiable. Should your department chose

to undertake the field portion of this survey in the coming summer, sometime in the late winter after cost analysis, scheduling and layout work is complete; Stikine and your department would then be in a position to intelligently discuss this road.

Assuming such a road were built the next logical step would be for the Alaska Government to complete a road from Wrangell up to the international boundry at the junction of the Iskut and Stikine which would have the effect of developing a second access to the coast. We also feel that it is logical and will be ultimately practical for a branch of the rail line at Dease Lake to be extended down the Stikine to our site and eventually Wrangell. This line when developed would provide the route for development of properties such as HECLA and the movement of concentrates to our complex.

I thank you very much for receiving me, and look forward to meeting and discussing this project with your staff. I will be calling your office in early October to inquire when such a visit would be most convenient and suitable.

Yours truly,



W. G. Schultz  
Project Engineer for  
Stikine Copper Ltd.

WGS/mw  
c.c. H. A. McKenzie

