

2449

PRELIMINARY GEOLOGICAL REPORT

STARR CREEK PROPERTY

TELKWA MOUNTAIN MINES LTD.

OMINECA MINING DIVISION, B.C.

FOR

TELKWA MOUNTAIN MINES LTD. (N.P.L.)

TORU KIKUCHI

Ph.D., P. Eng.

August 5, 1969.

Vancouver, B.C.

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with 3 illustrations and 2 photos

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*Fig. 1 - Location Map ----- Rear*  
*1" = 4 miles*

*Fig. 2 - Sketch Map ----- "*  
*1" = 2000'*

*Fig. 3 - Claim Relationship ----- "*

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 2449 MAP

PRELIMINARY GEOLOGICAL REPORT  
STARR CREEK PROPERTY  
TELKWA MOUNTAIN MINES LTD.  
OMINECA MINING DIVISION, B.C.

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I. INTRODUCTION AND GENERAL SITUATION

At the request of Mr. Edward Greer, President, Telkwa Mountain Mines Ltd., the writer has been on the property, in the company of Mr. Greer, Mr. Hans Kneteman (one of the Directors of the company) and Mr. Rex Bosson (Mining Engineer), on July 21, 22 and 23, 1969, to make a preliminary investigation as to its further consideration.

The following references are to be used:-

The company's Prospectus (January 29, 1969).

Mineral Resources, Hazelton and Smithers Areas, Cassiar and Coast Districts, British Columbia. G.S.C. Memoir 223, by E.D. Kindle. (1954).

Preliminary Map 44-23, Smithers Coast District, B.C. G.S.C. (1944).

Telkwa District, B.C., G.S.C., by V. Dolmage. (1918).

Telkwa River and Vicinity, G.S.C., by W.W. Leach. (1907).

The showings have been known from the beginning of this century, and some mineral claims were staked intermittently until recent years. Mr. E. Greer, prospector and president of the company, has staked and owned the property from 1967.

The claims owned by the company and investigated are:-

BL 1 - 24 inclusive  
PG 1 - 32 inclusive  
SC 3 - 8 inclusive and 12, 13 and 14  
RB 1 - 18 inclusive  
HK 1 - 5 inclusive  
SR 11 & 13  
TK 1 - 6 inclusive

All these 96 claims are adjacent as shown in Fig. 2.

The property is located at approximately  $54^{\circ} 30'$  N (Latitude) and  $127^{\circ} 30'$  W (Longitude), about 21 air miles southwest of Smithers, between 4,500' and 6000' elevation. The access road has been completed from Telkwa, but the last 20 miles is not yet good enough. (See Fig. 1.).

Relationship to the other properties of the area is shown in Fig. 3 (not up to date).

More detailed information is in the company's prospectus (January 29, 1969) including an engineering report by Mr. F.C. Tomlinson, P. Eng.

## II. GEOLOGY, MINERALIZATION AND ORE DEPOSIT

The so-called "Hazelton Group" of Upper Jurassic as the underlying formation, the granitic intrusion of Upper Cretaceous, and the contact (hybrid) zone of both rocks appear in the area.

Hazelton Group of the area mainly consists of andesite, dacite, rhyolite, tuff and breccia. General strike is EW, gently dipping to north. The intrusive rock consists mainly of granite, diorite and their porphyry. Some parts of them seem to be called syenite, or monzonite.

The contact zone of both above mentioned rocks runs through the property, striking generally  $N 20^{\circ} W$  and dipping  $30^{\circ}$  to  $70^{\circ} W$ , with a width of about 1,500' - 2000'. This seems to be cut and dislocated by a fault of post mineralization (see Fig. 2). The zone, which is the host rock of the copper mineralization of the property, consists of mainly hybridized (physically and/or chemically) materials of both types of rock, that is, some kinds of porphyritic rock with a large

amount of brecciated parts, being altered by the hydrothermal addendas, such as calcite, K-element, and a small amount of quartz.

The copper mineralization occurs in the hybrid zone, and many showings have been found. The modes of occurrence do not resemble each other, but they can be grouped in the following three types;

1. Dissemination in the altered granitic rock.
2. Fissure-filling along the contact of andesitic rock and granitic rock, with dissemination mainly in the granitic rock side.
3. Fissure-filling along cracks of the hybrid rocks with a general strike of N 20° W, the same as the strike of the contact zone.

These three types, genetically considered, seem to be of the same origin in the zone, and they appear, as showings, with different mode of occurrences.

The ore-forming mineral is mainly chalcopyrite, with some bornite and gray-coppers. Pyrite (a large amount) and magnetite (a small amount) are usually associated with them. No molybdenite can be seen, but some zinblend and galena are recognized through a hand lens.

As gangues, calcite, quartz, K-feldspar, chlorite and skarn-minerals are seen besides much of the altered hybrid rock.

Fourteen chip rock samples have been taken by the writer as on page 5 (see Fig. 2 for the locations), and these were assayed with the results shown on the next page.

T  
S  
L

# Laboratories Limited

325 HOWE STREET - VANCOUVER 1, B.C.

TELEPHONE 688-3504

ASSAYERS  
CHEMISTS  
GEOCHEMISTS

## CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM MR. TORU KIKUCHI

REPORT NO.  
V-6196

SAMPLE(S) OF ROCK Submitted on July 25, 1969.

Sample No.	Gold (Au) oz:ton	Silver (Ag) oz:ton	Copper (Cu) %	Molybdenite (MoS <sub>2</sub> ) %
TW-1	trace	trace	0.10	trace
TW-2	trace	trace	trace	trace
TW-3	trace	trace	trace	trace
TW-4	0.01	0.55	0.17	trace
TW-5	trace	trace	trace	trace
TW-6	trace	1.51	1.62	trace
TW-7	trace	0.57	0.64	0.01
TW-8	trace	trace	0.09	0.01
TW-9	trace	0.48	0.25	trace
TW-10	trace	1.05	2.15	trace
TW-11	trace	trace	0.32	trace
TW-12	trace	trace	0.03	trace
TW-13	trace	trace	0.37	trace
TW-14	trace	0.92	0.35	trace

oz:ton - Troy ounces per 2,000 lbs.

DATE July 30, 1969.

SIGNED R. B. Fletcher

<u>Sample No.</u>	<u>Elevation</u>	<u>Direction of cut</u>	<u>Width</u>	<u>Type of Showing</u>
1	5,700'	E-W	6'	1
2	5,700'	E-W	9'	1
3	5,600'	E-W	20'	Average of falls.
4	5,500'	N-S	6'	1
5	2,350'	NW-SE	30'	Average of falls.
6	5,700'	N-S	25'	2
7	2,600'	E-W	10'	3
8	5,100'	E-W	100'	2
9	4,910'	E-W	30'	2, at the entrance of Adit
10	5,800'	E-W	10'	2
11	5,760'	E-W	20'	2
12	5,511	E-W	100'	2
13	5,120'	N-S	150'	1
14	5,400'	E-W	15'	2

### III. CONCLUSION AND RECOMMENDATIONS

Some kind of disseminated copper deposit, that means low grade and huge tonnage, has been found in the property. Many copper showings are known already after the limited work already done. These showings which seem to be located inside a mineralized zone, indicate and suggest a large potentiality for an economic copper deposit. The relationship and combination of these showings should be clarified to find out the copper concentrated parts among them.

The following is recommended for this summer season:-

First Stage Program: (August - middle September)

1. Prepare Topographic Map (1" = 500') using the Government's air-photos (contract in Vancouver) \$1,500.00

2. Contract geological mapping, rock sampling (50), soil sampling (500) by a geologist for 3 weeks	\$2,000.00
3. Assay fees (rock and soil)	1,500.00
4. Ronka EM-16, operated by mine engineer (rental)	500.00
6. Road repairing, camp upkeep, consultant fee, overhead and transportation	<u>5,000.00</u>
TOTAL	9,500.00

Second Stage Program: (Middle September - October)

Diamond Drilling:

5 holes x 300' x @ \$13.00	19,500.00	including all expenses
GRAND TOTAL	<u>\$29,000.00</u>	

The Second Stage Program (Diamond Drilling) should be done after consideration of the results of the First Stage Program.

Respectfully submitted,



Toru Kikuchi, Ph.D., P.Eng.  
Consulting Geological Engineer.

Vancouver, B.C.  
August 5, 1969.



STATEMENT OF QUALIFICATIONS

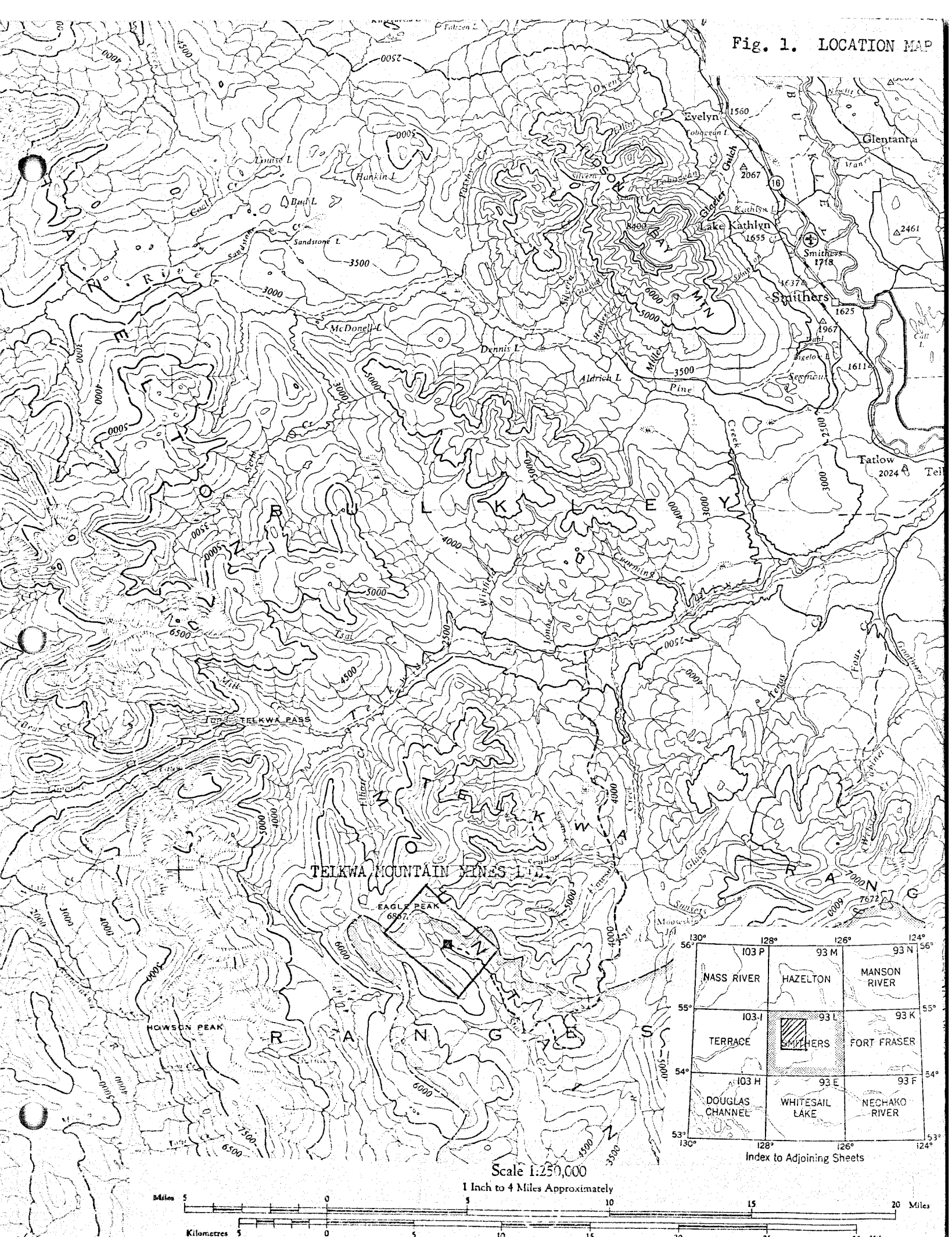
- I, Toru Kikuchi of the City of Vancouver, B.C., hereby certify that:-
1. I am a graduate of the Hokkaido University, Japan (B. Sc., Geology and Mineralogy, 1946) and of the Tohoku University, Japan (Ph.D., Economic Geology, 1963).
  2. I am a "GIJUTSUSHI" (a qualification for a consulting engineer authorized by the Japanese Government) and a member in good standing of the Association of Professional Engineers of the Province of British Columbia and of the Yukon Territory.
  3. I am a member of The Society of Mining Geologists of Japan, and of the Canadian Institute of Mining and Metallurgy and of the Engineering Institute of Canada.
  4. I have been practising my profession continuously for the past twenty-three years, and am an independent Consulting Geological Engineer with my office at Room 702 - 402 West Pender Street, Vancouver, B.C.
  5. I have no direct or indirect interest in the property, nor do I anticipate receiving any such interest.
  6. This report is based on my personal study and work at the property on July 21, 22 and 23, 1969.



Toru Kikuchi

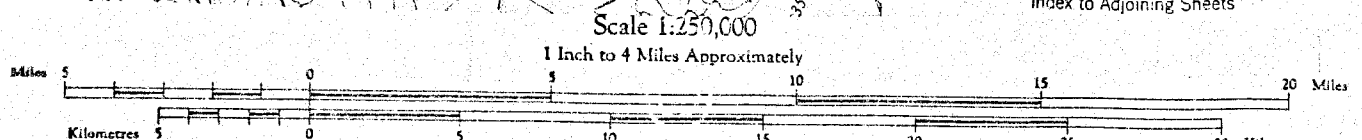
Vancouver, B.C.  
August 5th, 1969.

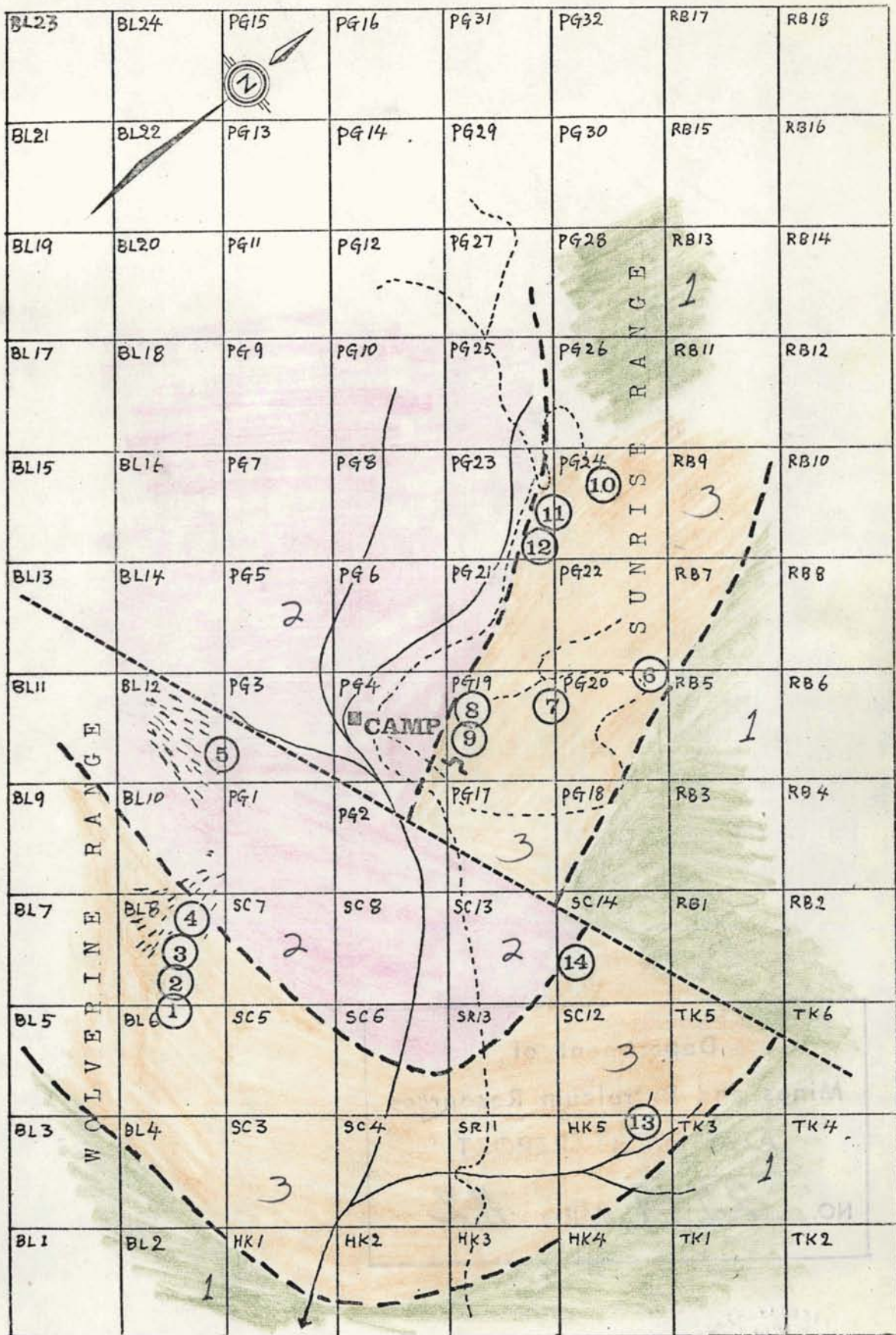
Fig. 1. LOCATION MAP



56°	130°	128°	126°	124°	56°
	103 P	93 M		93 N	
	MASS RIVER	HAZELTON		MANSON RIVER	
55°	103 J	93 L		93 K	55°
	TERRACE	SMITHERS		FORT FRASER	
54°	103 H	93 E		93 F	54°
	DOUGLAS CHANNEE	WHITESAIL LAKE		NECHAKO RIVER	
53°	130°	128°	126°	124°	53°

Index to Adjoining Sheets





- 2  Granitic Rocks
- 1  Andesitic Rocks
- 3  Hybrid Zone
- 1 - 14 Assayed Rock Samples

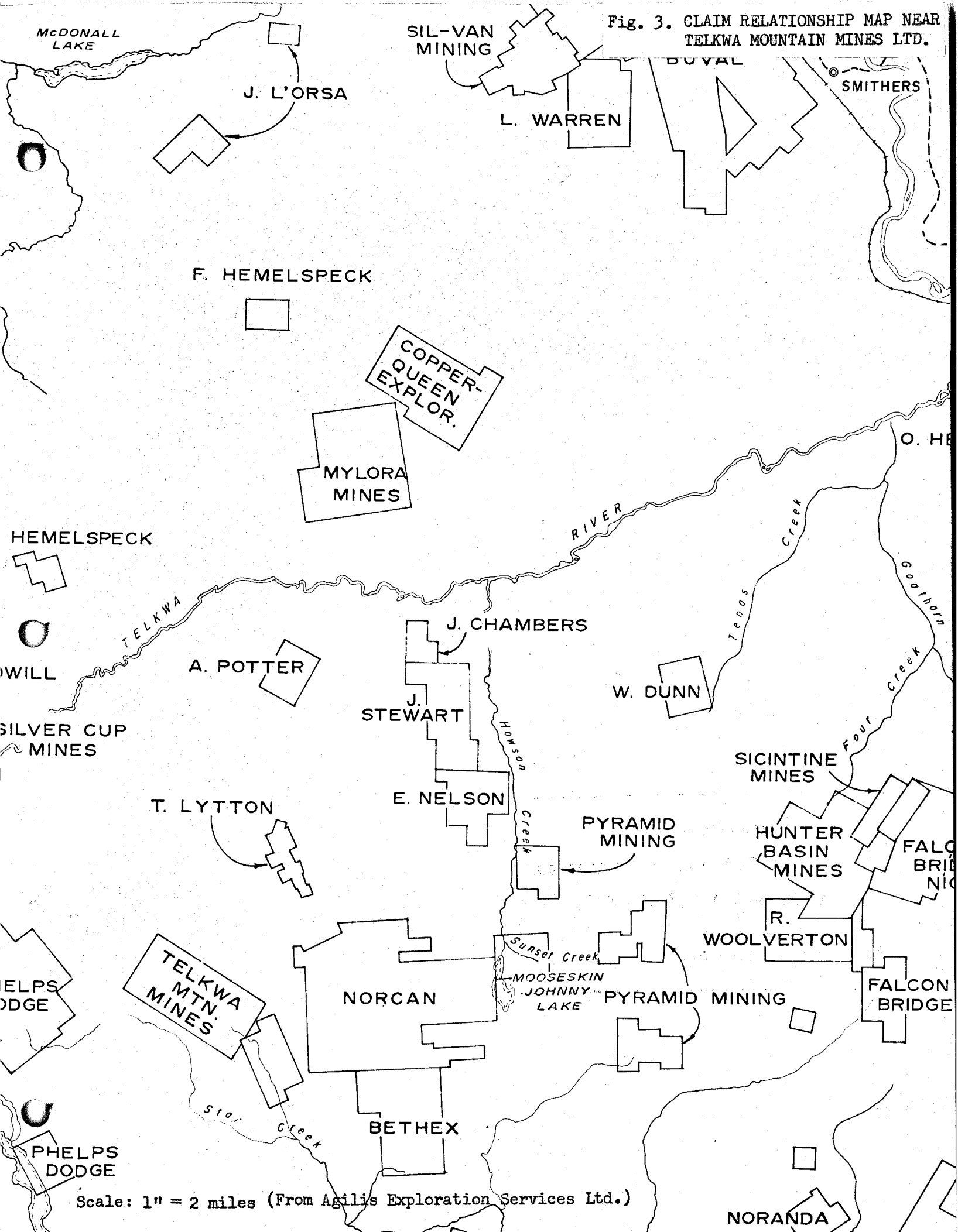
Scale 1" = 2,000'

*Toru Kikuchi*

Fig.2 SKETCH MAP of TELKWA MOUNTAIN MINES

TORU KIKUCHI  
702 - 402 WEST PENDER ST.  
VANCOUVER 3, B.C., CANADA

Fig. 3. CLAIM RELATIONSHIP MAP NEAR TELKWA MOUNTAIN MINES LTD.



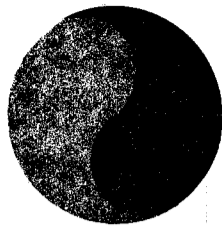
Scale: 1" = 2 miles (From Agilis Exploration Services Ltd.)



Photo 1. The southern hill, called WOLVERINE RANGE, facing south from the northern hill. Samples No. 1 - 4 were taken from above the snow patch, and No. 5 was taken from the right hand side of them.



Photo 2. At the northern hill called SUNRISE RANGE. Sample No. 6 was taken from here. Mr. E. Greer and Mr. R. Bosson.



# TELKWA MOUNTAIN MINES LTD.(NPL)

5 - 1045 W. PENDER STREET  
 VANCOUVER 1, B. C.

## REPORT PRESENTATION

DAYS DATES AND FEES SBLARIES ETC <sup>JUNE 5th 1970</sup>

Edward Thornton - 709 540 470 Prospector helper & swamper	\$325 per month June- Sept.	\$895.16
Rex Bosson P. Eng. - 436-474-647	\$500.00 per month June/Oct	\$1670.00
C. A. Cherrington - 424-306-397 (prospector)	\$450.00 per Month Aug/Oct	\$763.40
Edward Greer - 705-109-981 (Field Mgr and powderman)	\$400.00 per month June/Oct.	\$1200.00
H. Kneteman - 701-884-785 (camp foreman)	\$400.00 per month May/Sept	\$1528.95
Louis Joseph - (Prospector helper)	\$12.00 per day May/June	\$120.00
T. D. Connochie - 752-258-096 (Road construction)	\$400 per month June	\$150.00

David Froese - Cat contractor - CONTRACT-  
 (D. Froese Logging-Telkwa) \$18.00 per hour Bulldozer \$6004.00  
 \$ 12.00 per hour Skidder

DR TORU KIKUCHI PH,D P.ENG  
 (Consulting Geological Engineer) }  
 SEE REPORTS.....and maps } \$6,500.00  
 Dr. Motumō Kikokawa }  
 (Partner geologist) } Geochemical survey  
 Mr Tetsuo Nishiuchi }  
 (Asst Geologist) }

LOCKWOOD SURVEY CORP. MAPPING AND ENGINEER SERVICES \$1,301.07  
 (per enclosed) 2800

PROSPECTING REPORT R. BOSSON P. ENG. (seeabove)

Declared before me at the City  
 of Vancouver, in the  
 Province of British Columbia, this 4  
 day of June 1970, A.D.

*T. D. Connochie*

*Jill Jensen*  
 A Commissioner for taking Affidavits within British Columbia or  
 A Notary Public in and for the Province of British Columbia.  
 Sub-mining Recorder  
 TELKWA MOUNTAIN MINES LTD. N.P.L.  
 STE. 5-1045 W. PENDER ST.  
 VANCOUVER, B.C.

THIS TO BE CLAIMED-ONLY

COPY

August 5, 1969.

STATEMENT (6907-1)

Mr. Edward Greer, President,  
Telkwa Mountain Mines Ltd. (N.P.L.),  
#5 - 1045 West Pender Street,  
Vancouver, B.C.

Professional Services Re Your Starr Creek Property,

with presentation of a report (August 5, 1969) \$ 800.00

Assay fee 217.00

Air fare 100.00

Out-of-Pocket (Taxis and other) 15.00

\$1,132.00

*Handwritten notes:*  
The report is  
attached to this

September 4, 1969.

STATEMENT 6907-2

COPY

Mr. Edward Greer, President  
Talkwa Mountain Mines Ltd.  
#5 - 1045 West Pender Street,  
Vancouver, B.C.

To Professional Services to September 4, 1969:

T. Kikuchi's visiting the Starr Creek Property  
August 22, 23 and 24

Presentation Kiyokawa and Nishiuchi August 15 - 25  
with conclusion and preparation for next stage

exploration \$2,800.00

Assay fee:

Geochemi Soil Assay, 498 samples @ \$1.20 597.60

Rock Samples, 8 samples @ \$3.50 28.00

Rent-A-Car (Smithers - Prince George) 69.06

Air fares:

Kiyokawa and Nishiuchi, Vancouver - Smithers 100.00  
and Prince George - Vancouver 78.00

Out of pocket expense 30.00

TOTAL \$3,702.66

✓ Mar 19/69 Paid 500 -  
✓ Mar 25/69 Paid 500 -  
✓ Apr 1/69 Paid 500 -  
✓ Dec 10/69 Paid 500 -  
✓ Dec 19/69 Paid 500 -  
✓ Jan 14/70 Paid 500 -  
Bal 1700 -  
1200 -  
700 -



COPY

19  
November 19, 1969.

Statement No. 6907-3.

Mr. Edward Greer, President  
Telkwa Mountain Mines Ltd. (N.P.L.)  
#5 - 1045 West Pender Street  
Vancouver, B.C.

To professional services:

Preparation of report (dated Nov. 18, 1969)	\$ 970.00
Balance of previous account (Statement No. 6907-2 dated Sept. 4, 1969 - payment Nov. 19, 1969)	3,202.66
TOTAL	<u>\$4,172.66</u>

COPY

December 3rd, 1969.

Statement No. 6907-4.

Mr. Edward Greer, President,  
Telkwa Mountain Mines Ltd. (N.P.L.)  
#5 - 1045 West Pender Street  
Vancouver, B.C.

To professional services:

Preparation one additional copy each of Fig. 3 and Fig. 4 (colored) of my report dated Nov. 18, 1969, for Mr. S.D. Anfield	\$ 20.00
Previous account (Statement 6907-3) Nov. 19, 1969	970.00
Balance of Statement 6907-2 (Sept. 4)	
\$3,702.66 - \$500.00 payment (Nov. 19)	
\$500.00 payment (No. 25 )	<u>3,692.66</u>
Total	<u>\$3,692.66</u>

COPY

December 9th, 1969.

Statement No. 6907 - 5.

Telkwa Mountain Mines Ltd. (N.P.L.)  
Suite 5 - 1045 West Pender Street  
Vancouver, B.C.

To professional services:

Preparation one additional copy each of  
Fig. 3 and Fig. 4 (colored) of my report  
dated Nov. 18, 1969, as requested by Mr.  
Connochie

\$ 20.00

Statement No. 6907-4, December 3rd

20.00

Statement No. 6907-3, November 19th

970.00

Balance of Statement 6907-2, September 4th

\$3,702.66 - \$500.00 payment Nov. 19.

- \$500.00 payment Nov. 25.

- \$500.00 payment Dec. 4.

2,202.66

Total

\$3,212.66

TORU KIKUCHI, Ph.D., P.Eng.  
CONSULTING GEOLOGICAL ENGINEER

702, 402 WEST PENDER ST., VANCOUVER 3, B.C., CANADA

May 21st, 1970.

Statement 6907-6

Telkwa Mountain Mines Ltd. (N.P.L.)  
#5 - 1045 West Pender Street  
Vancouver, B.C.

To professional services:

Preparation of one additional copy each  
of Fig. 3 and Fig. 4 (colored), as  
requested by Mr. Connochie

\$20.00

Re Report dated November 18, 1969.

BRITISH COLUMBIA SECURITIES COMMISSION

Dr. Toru Kikuchi, P. Eng.,  
Consulting Geological Engineer,  
702, 402 West Pender Street,  
Vancouver 3, B. C.

Dear Dr. Kikuchi:

Subject: Telkwa Mountain Mines Ltd. Geological, Geochemical Report,  
Starr Creek property, Omineca Mining Division, dated November  
18, 1969.

The above-named company has submitted a copy of your report in support of a prospectus under the provisions of Regulation 17 of the Securities Act.

I note that in your report you recommend an electro-magnetic geophysical survey programme. On January 29, 1969, this company issued a previous prospectus in which they proposed to raise \$112,500.00 by sale of shares to the public. The programme which the company intended to carry out on the Starr Group was based on the recommendations of Mr. F. C. Tomlinson, P. Eng. One of these recommendations was for 20 line-miles of electro-magnetic and induced potential survey.

I would assume that the previously recommended geophysical survey was in fact never carried out due to the fact that the full amount of money was not raised by sale of shares. I would appreciate it, however, if you could kindly confirm that no unnecessary repetition of ground geophysical work is proposed.

Yours very truly,



A. R. C. James, P. Eng.,  
Mining Advisor,  
B. C. Securities Commission.

ARCJ:sl

cc. Mr. J. E. Graf, B.Sc.

TORU KIKUCHI, Ph.D., P.Eng.  
CONSULTING GEOLOGICAL ENGINEER

702, 402 WEST PENDER ST., VANCOUVER 3, B.C., CANADA

COPY

March 6th, 1970.

Our file No. 7.

Mr. A.R.C. James, P. Eng.  
Mining Advisor  
B.C. Securities Commission  
756 Fort Street  
VICTORIA, B.C.

Dear Mr. James:

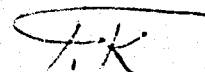
Re Telkwa Mountain Mines Ltd. Geological, Geo-  
chemical Report, dated November 18, 1969.

In reply to your letter dated March 4th concerning my report on the above company, as I had no connection with this company before I worked for them as a consulting geological engineer from August of 1969, I do not know why they did not carry out the E-M, I.P. Ground Survey which had been recommended by Mr. F.C. Tomlinson.

However, as you may understand from my report dated November 18, 1969, I carried on geological and geophysical work on the property in the summer of 1969, which I thought to be necessary before any kind of geophysical survey. I recommended then in my said report to carry on E-M survey and some diamond drilling for the next season.


I am sure that they did not do any ground geophysical survey on the property, and I would recommend they should carry out E-M ground survey, as in my said report, in the 1970's season, as the property seems to me to be worth enough to carry on further exploration.

Sincerely yours,



Toru Kikuchi, P. Eng.

TK/dc  
CC Mr. Edward Greer, President,  
Telkwa Mountain Mines Ltd.



TORU KIKUCHI, Ph.D., P.Eng.  
CONSULTING GEOLOGICAL ENGINEER

702, 402 WEST PENDER ST., VANCOUVER 3, B.C., CANADA

COPY

March 10th, 1970.

Our file No. 7.

Mr. A.R.C. James, P. Eng.  
Mining Advisor  
B.C. Securities Commission  
756 Fort Street  
VICTORIA, B.C.

Dear Mr. James:

Re Telkwa Mountain Mines Ltd. Geological,  
Geochemical Report, dated November 18, 1969.

Further to my letter of March 6th in connection with my report on the above company, would you please change line 2 of paragraph 2 of this letter to read "I carried on geological and geochemical work" instead of "I carried on geological and geophysical work".

I regret this error in my letter, which I did not notice until I was re-reading it today.

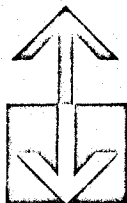
Yours very truly,



Toru Kikuchi, P. Eng.

TK/dc  
CC Mr. Edward Greer, President,  
Telkwa Mountain Mines Ltd.

Lockwood



Survey Corporation Limited

INVOICE

West Coast Division

1409 West Pender Street, Vancouver 5, B.C., Canada, Telephone 683-6501,

Cables: Canlock

Tellara Mountain Mines Limited,  
#5 - 1045 West Pender Street,  
Vancouver, B. C.

INVOICE No. 5699  
DATE 30 September 1960  
YOUR ORDER No.  
JOB No. 69-201  
PACKING SLIP No.  
SHIPPED VIA

Authority: Dr. T. Kikuchi, P. Eng., Consulting Geologist.

QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
	<p>To:</p> <p>Completion, Engineering Services:</p> <p>1. 1-inch equals 500 feet feather-edged mosaic, in two sheets, of your area of interest being approximately 16 square miles at the headwaters of Starr and Scallon Creeks. Completed and delivered, our Packing Slip No. 3687.</p> <p>Lump sum</p> <p>2. 1-inch equals 1000 feet reconnaissance type mapping with a 50 foot contour interval enlarged to 1-inch equals 500 feet of the Starr and Scallon Creek areas, being 16 square miles.</p> <p>16 square miles at \$70.00 per square mile</p> <p>3% Federal Sales Tax on \$155.00 1.2% Federal Sales Tax on \$1120.00 5% Provincial Sales Tax on \$159.65</p> <p><i>Handwritten:</i> F 214 May 14</p>	<p>\$155.00</p> <p><u>\$1120.00</u> \$1275.00 \$4.65 \$13.44 <u>\$7.93</u></p> <p><i>Handwritten:</i> New 28/69 K. C. ... N.P. 18/ Nov 58 F. 75 Jan 11 Bal due 700.00</p>	<p>\$155.00</p> <p><u>\$1,502.07</u></p> <p>1000.00 301.07 800.00 due 700.00 300 400</p>
<p>TERMS: NET CASH. INTEREST CHARGED ON OVERDUE ACCOUNTS</p>			

*Handwritten:* May 14/70  
F 214  
F 214