

19-# 54 # 7196

Report on the Geological Survey and E.M. Survey

on the

LAKEVIEW GROUP

for

BURLINGTON GOLD MINES LTD.

Nelson B.C.

N.T.S.

F/  
82' 6E  
Z

49°17' 117°10'

December 11, 1978  
Vancouver, B.C.

L. Sookochoff, P. Eng.  
Consulting Geologist

7196

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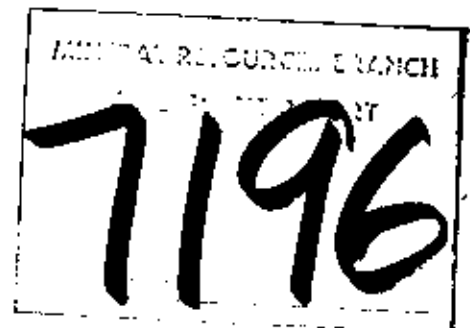
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GEOLOGY

1 : 4000  
1 : 4000



## INTRODUCTION

At the request of officers of Burlington Gold Mines, the writer carried out a preliminary geological survey of a localized area of the Lakeview Group of claims as recommended by George L. Mill, P. Eng. in his report dated March 13, 1978. The purpose of the examination was two fold. The first was to provide geological information to aid in the interpretation of an E.M. survey performed over the same area. Secondly, visual surface indications were noted within known sub surface mineralized areas to locate parallel or cross fault mineral central structures. In addition to the examination, information for the report was obtained from various pertinent available material.

PROPERTY, LOCATION AND HISTORY

The Lakeview Group is comprised of 24 contiguous crown granted mineral claims which include the former workings of the Yankee Girl and Dundee Mine.

The property is located 30 km south of Nelson, B.C. between Wildhorse and Bear Creek westward flowing tributaries of the Salmon River.

Access is via five km of secondary road from Ymer, B.C. which is 54 km from the Trail smelter.

A capsule history of the area is as follows. After gold was discovered in the area in 1896, exploration, development and production ensued from a number of properties. Production from mainly the Yankee Girl utilizing a 150 ton per day flotation-cyanidation plant was carried on from 1935 to 1942. Total production from the Yankee Girl is estimated at 350,000 tons resulting in 33,900 oz. Au and 747,100 oz. Ag. Production from the Dundee is estimated at 50,000 tons resulting in 10,060 oz. Au and 100,150 oz. Ag.

GENERAL GEOLOGY

A general geology of the area and property is herein provided. For a more detailed geologic explanation, reference should be made to reports on the Lakeview Group by George L. Mill, P. Eng. dated March 13, 1973.

Granites and related rocks intrude the older sediments of the Summit Series and the Pend d'Oreille Series which overly the older sediments. The Lakeview Fault - a long narrow remnant of sediments enveloped by granites is a dominant structure and appears to be a controlling factor in localizing mineralization. The main ore bodies however are proximal to the Lakeview fault in subsidiary faults extending from the hanging wall.

Mineralization is of pyrite, pyrrhotite, sphalerite and galena with precious metal values. Although the subsidiary fault localized higher grade mineral zones, the Lakeview vein occurring within the Lakeview fault does contain mineral zones.

E.M. SURVEY

The E.M. survey base line was generally along the strike of the vein with cross lines on the indicated trend of the Lakeview Fault. Readings were taken every 25 meters along the grid lines which were spaced every 100 meters along the base line. The base line extended for 90 meters of which the first half covered the former underground workings. The northern half was along the projected extension of the workings. The survey results indicated the following:

1. A conductor axis projected at approximately  $N 30^{\circ} E$  which correlates with the strike of the Lakeview Fault zone in this area.
2. Cross faults or subsidiary faults indicated along line 5N and 6N however additional readings should be taken to the north for confirmation.

GEOLOGY

Rock exposures in the grid area were limited to the northern part of the grid where a contact zone between a granodiorite and a phyllite occurs.

The granodiorite may occur as a gneiss with only minor alteration or as a quartz sericite schist (as at 10N 1W and 4N 1W) with accompanying quartz veinlets and greater alteration. Quartz veinlets also occur within gneissic granodiorite where the granodiorite exhibits variable secondary biotite growth.

Granodiorite also occurs as a "lit par lit" injection into the host pelitic sediments conforming to northerly trending fracture zones. Variably metamorphosed phyllites are the end result.

Pyrite is common however a pattern for its presence could not be determined, although pyrite is known to accompany mineralization in the Lakeview ore zones. Pyrite could be a mineralization indicator but it could also be present as a metamorphic product.

CONCLUSIONS

1. The E.M. survey indicates a continuance of the Lakeview Fault structure to the northeast of the terminus of the underground workings.
2. A cross fault or subsidiary fault on the hanging wall is suggested at the northeast terminus of the workings, however information in this regard is sketchy.
3. Quartz sericite schist in association with pyrite and haloed by quartz veins in structurally favorable areas should be examined in detail and/or tested at depth for mineralization.



RECOMMENDATIONS

From the results of the E.M. survey and geological mapping the general extension of the Lakeview Fault zone has been indicated with other sites of geological interest. A trenching program should be initiated to determine the causative source of the E.M. anomaly to the northeast of the old workings or approximately line 6N. Trenching is thus recommended at the following locations

Line 10N - 2 + 75W	Determine E.M. conductor
Line 10N - Base line	Favorable geology (quartz sericite schist)
Line 7N - 1W	Intersection of two structures

Additional trenching may be required to locate extensions of any favorable zones exposed.

Additional trenching may be required to locate extensions of any favorable zones exposed.

Upon the successful completion of the trenching program, a diamond drill program would follow to test for sub surface mineralization.

Respectfully submitted



Laurence Sookchoff, P.Eng.  
Consulting Geologist

December 11, 1978  
Vancouver, B.C.

CERTIFICATE

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist with the firm of Pan-American Consultants Ltd. of 2602-1055 West Georgia Street, Vancouver, B.C.

I further certify that:

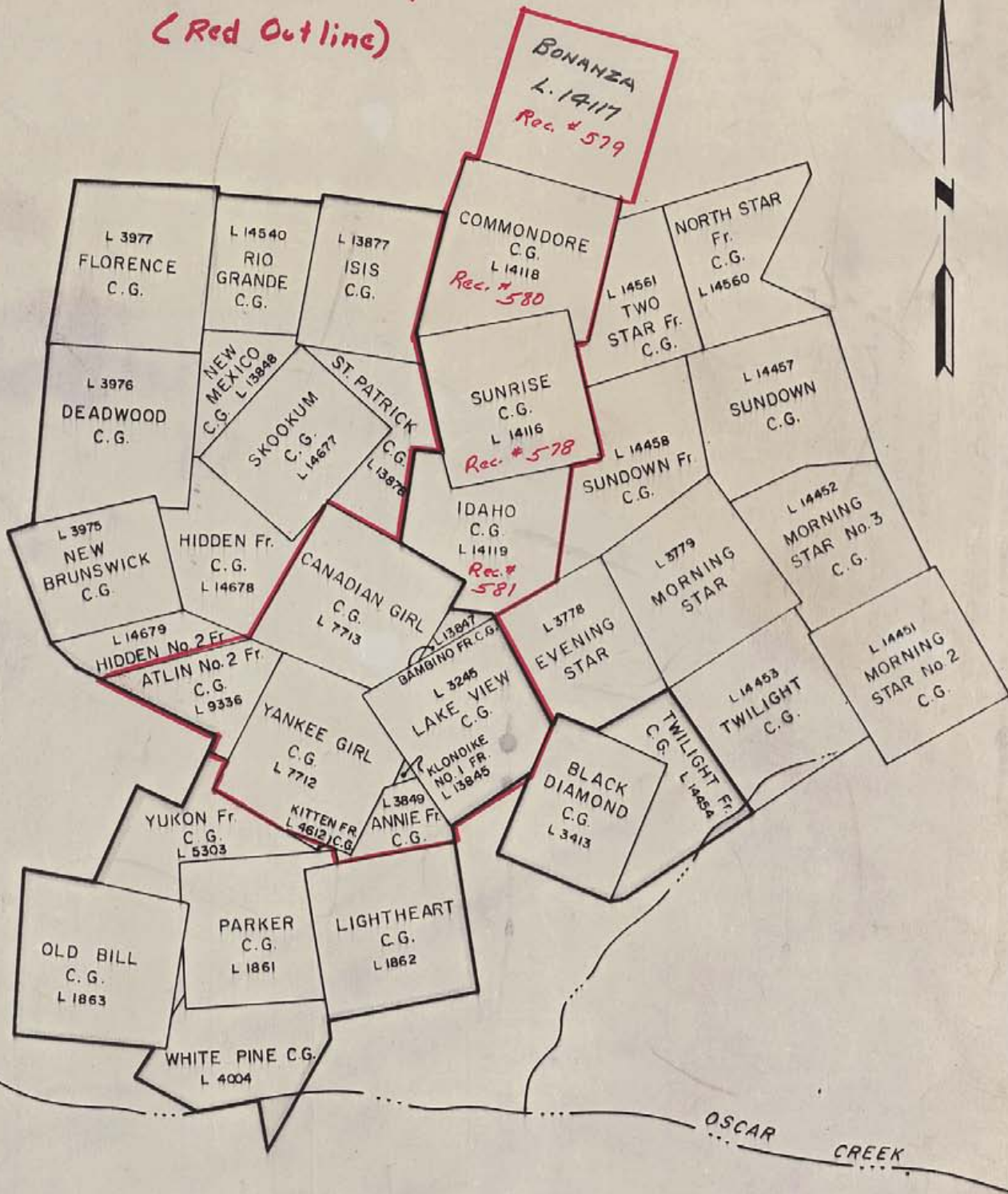
1. I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
2. I have been practising my profession for the past twelve years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. This report is based on mapping of the AK claim on November 8 and 9, 1978.
5. Neither I or Pan-American has direct or indirect interest in the property described herein, or in the securities of Burlington Gold Mines Ltd.

Laurence Sookochoff, P.Eng.  
Consulting Geologist

December 11, 1978  
Vancouver, B.C.



Lakeview Group  
(Red Outline)



**BURLINGTON GOLD MINES LTD.**

NELSON MINING DIVISION, BRITISH COLUMBIA

1 inch = 1500 feet

PAN-AMERICAN CONSULTANTS LTD.  
SUITE 2602 - THE ROYAL CENTRE  
P.O. BOX 11122, VANCOUVER, B.C. V6E 0P1  
PHONE: (604) 685-1251

ACCOUNT NO: 151  
DATE: January 2, 1979

TO: Burlington Gold Mines Ltd.  
Suite 1012-470 Granville  
Vancouver, B.C.

RE: Lakeview Group, Nelson, M.D.

Property examination and geological mapping,  
November 8 - November 9, 1978 and Geological  
Report on the Lakeview Group, Nelson, M.D.  
dated December 11, 1978 \$700.00

*MOCK # 1/4/79  
A134*

EXPENSES

Air Fare - Vancouver - Castlegar	101.50
Drafting, printing, xerox	<u>95.00</u>
	\$896.50
Advance - December 13, 1978	<u>500.00</u>
Balance due	<u><u>\$396.50</u></u>



# Newcastle Explorations Ltd.

837 FRIAR CRESCENT, NORTH VANCOUVER, B.C. V7G 1M5 CANADA  
PHONE (604) 929-6273

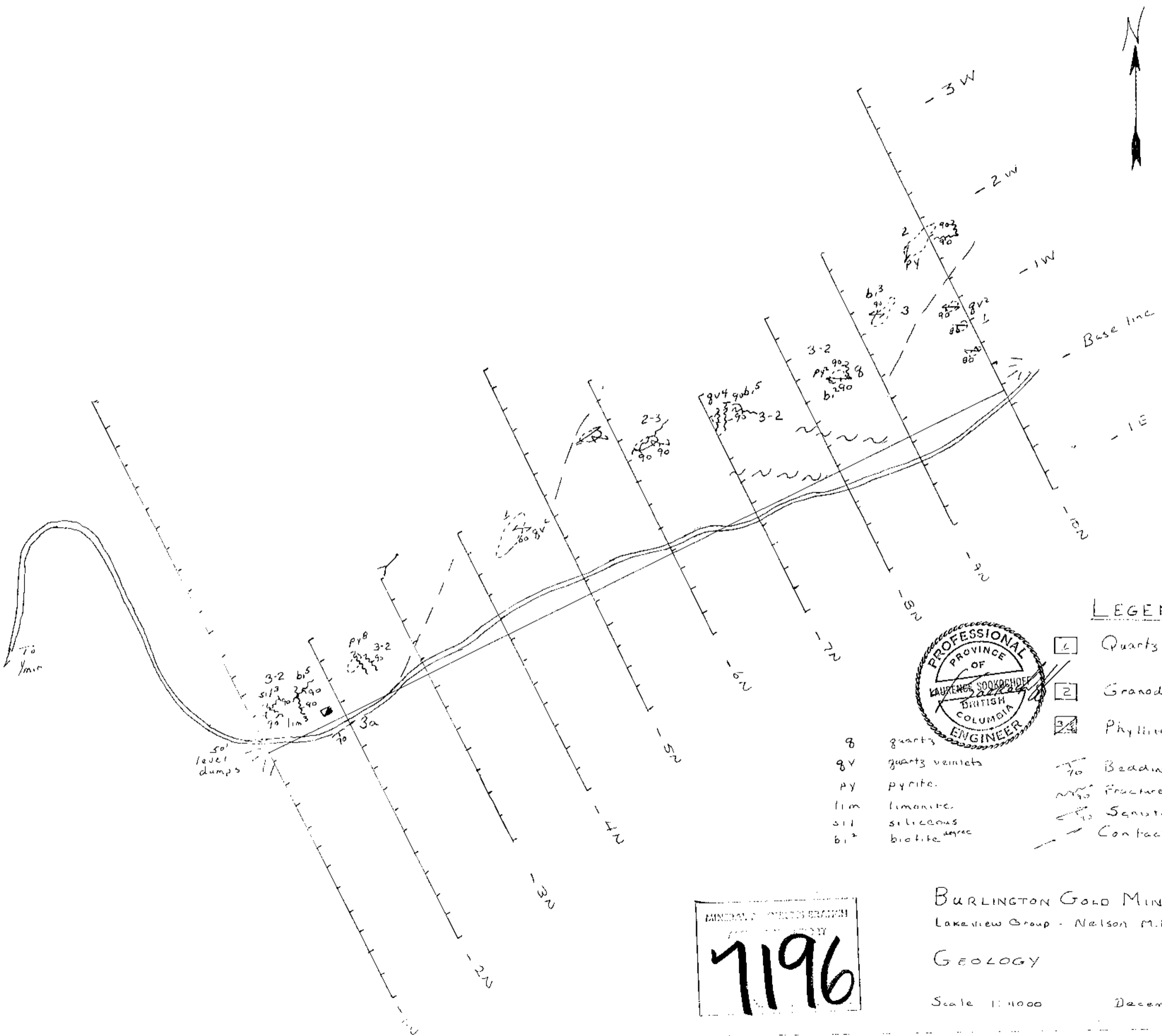
JANUARY 26 1979

INVOICE #79-01

BURLINGTON GOLD MINES LTD.  
SUITE 1012  
470 GRANVILLE STREET  
VANCOUVER B.C. V6C 1V9

RE: LINECUTTING & S.M. SURVEY  
LAKEVIEW CLAIM GROUP  
YMER AREA  
BRITISH COLUMBIA

ESTABLISHING BASELINE & CROSSLINES (4.9K)	\$1100.00
EM SURVEY ON ABOVE (Field Cost)	\$ 650.00
Advance to Pan American Consultants (Dec 78) (Interpretation & Report)	<u>\$ 500.00</u>
TOTAL COST	\$2250.00
LESS ADVANCES	
Cheque#A109 Oct 31/78	\$2000.00
CHEQUES#A146 Jan 25/79	<u>\$ 250.00</u>
	\$2250.00
BALANCE OWING	<u><u>NIL</u></u>



LEGEND

- Quartz veins, quartz
  - Granodiorite gneiss
  - Phyllite, schistose
  - Bedding
  - Fracture - Fault
  - Serration
  - Contact
- q quartz  
 qv quartz veins  
 py pyrite  
 lim limonite  
 sil siliceous  
 bi<sup>+</sup> biotite

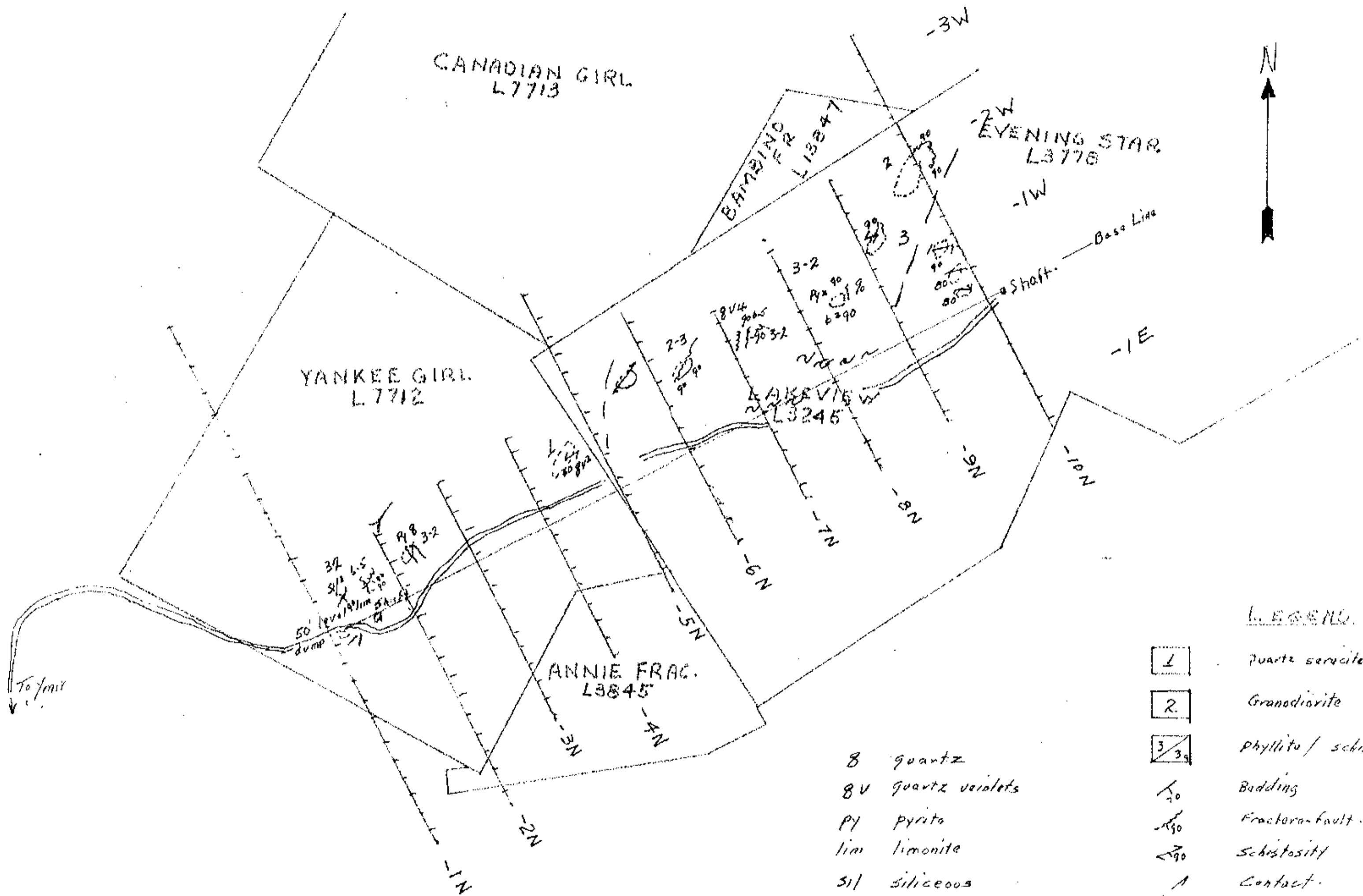


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BURLINGTON GOLD MINES LTD  
 Lakeview Group - Nelson M.D.

GEOLOGY

Scale 1:1000 December 1978



LEGEND

- 1 quartz sericite schist
- 2 Granodiorite gneiss
- 3 phyllite / schistose
- 1/20 Bedding
- 1/50 Fracture-fault
- 1/90 Schistosity
- 1 Contact

- Q quartz
- QU quartz veins
- PY pyrite
- lim limonite
- Sil siliceous
- bi<sup>2</sup> biotite <sup>day<sup>res</sup></sup>

7196

BURLINGTON GOLD MINES LTD  
 Lakeview Group - Nelson M.D.  
 GEOLOGY  
 Scale 1 inch = 300 feet (old survey)  
 From map by L. Sockachoff, P.Eng. Dec. 1978  
 R.S. Apr 4/79







