

# 3080

93B/8E49E

GEOPHYSICAL

GEOCHEMICAL

SURVEY

CARIBOO M.D.

GR 1-20 Claims

122°-53°-NE :29-7-70 : 7-8-70

Alfred R. Allen, P.Eng.

**Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT**

NO. 3080 MAP.....

For:

VANGUARD EXPLORATIONS LTD.(N.P.L.)  
1010 - 789 West Pender Street  
Vancouver 1, B.C.

By:

ALLEN GEOLOGICAL ENGINEERING LTD.  
507 - 789 West Pender Street  
Vancouver 1, B.C.

May 28th. 1971.



C O N T E N T S

	<u>Page</u>
INTRODUCTION.....	1.
LOCATION AND ACCESSIBILITY.....	2.
TOPOGRAPHY.....	2.
PROPERTY.....	2.
GEOLOGY.....	3.
GEOCHEMICAL SURVEY.....	3.
SURVEY RESULTS.....	5.
SUMMARY AND CONCLUSIONS.....	6.
RECOMMENDATIONS.....	7.

MAPS: Location Map  
 Geochemical Survey

\* \* \* \* \*

GEOCHEMICAL SURVEY

THE GR GROUP

122°-53° NE : 29-7-70:7-8-70

CARIBOO M.D.

INTRODUCTION

In the area of the GR group, although more than 90% of the bedrock surface is covered with overburden, limited outcrops show the presence of granitic rocks as well as Cache Creek sediments.

In order to test the copper content of the soil and glacial till masking bedrock, a surveyed grid was established over the claims area and samples were taken at 100 foot intervals along parallel lines spaced every 400 feet.

The field party included E. Hayes, experienced operator, K. Maldoon, D. Lidicott, T. Thomas, and J. Elliott. The work started July 29th. and was completed August 7th. 1970.

McLeese Lake was the base of operations and a  $\frac{1}{2}$  ton truck and automobile were used for transportation to and from the property.

The purpose of the survey was first, to ascertain in parts per million the copper content in each sample of overburden and second, to outline any areas where higher than normal copper content exists.

LOCATION AND ACCESSIBILITY

The property is located in south central British Columbia, in the McLeese Lake area approximately midway between Williams Lake and Quesnel.

It is 3 miles east of the Gibraltar property now being prepared for production.

Geographic location is  $122^{\circ}-11'$  west longitude and  $52^{\circ}-31'$  north latitude.

Access is by secondary road via the Gunn Mines road  $5\frac{1}{2}$  miles east of Cuisson Lake.

TOPOGRAPHY

The property is located on the southeastern slopes of Granite Mountain. Uniform stands of timber, separated by swampy areas and small creeks flowing southerly in shallow draws, cover over 90% of this plateau area. The hills are low and rounded and there are many small eskers and moraines.

PROPERTY

The following located mineral claims make up the GR group.

GR 1-20

Record Numbers 50974-50993

These were recorded May 9th. 1969.

GEOLOGY

The oldest rocks known to outcrop in the area of the GR group are the Permian and earlier Cache Creek argillite, limestone, chert, phyllite and schist. These have been intruded by Jurassic granite, granodiorite and quartz diorite.

A large area, 12 miles long and 6 to 8 miles wide, of these igneous rocks is known as the Granite Mountain batholith, and smaller exposures, such as on the GR property, appear to be a part of the main intrusive mass. Patchy remnants of Tertiary volcanics overlie these rocks to the west but they have not been observed on the GR property.

The large copper-molybdenum deposits on the Gibraltar occur in the granitic rocks along with appreciable pyrite.

Limited granitic outcrops on the GR claims area contain pyrite and copper, but additional work will be necessary to assess their potential.

GEOCHEMICAL SURVEY

A geochemical survey on a grid pattern was conducted over the GR claims from July 29th. to August 7th. 1970.

An east-west base line was surveyed by chain and compass near the location line of the GR 1-8 claims.

Tied to the base line, north-south lines were surveyed by chain and compass at 400-foot intervals over the property.

Along each line, at 100-foot intervals, stations were established by a lathe stake upon which the grid number was scribed.

All lines were slashed and blazed, and to all stakes a coloured ribbon was attached.

From each station a sample of soil was taken and placed in a bag marked with the station location.

All samples were dried and screened. From the -80 mesh portion sufficient soil was taken for assaying. Assays were reported in parts per million copper by Crest Laboratories of Vancouver, who used the acid extraction and atomic absorption technique.

Sample results are shown on the map accompanying this report. The scale is 400 feet per inch. Sample results with less than 20 parts per million are not recorded on the map. By colours, the copper contents are shown for 20 to 49, 50 to 89, 90 to 299, 300 to 400, and higher than 400 parts per million; as white, gray, green, orange and pink respectively.

SURVEY RESULTSANOMALY #1.

A large, very irregular anomalous zone from line 0 to 34E extends on the GR 1,2,3,4,5,9 and 11 claims. Samples range from 50 to 490 ppm.

The strongest coppers are as follows:

S W	Corner of GR 2	490	ppm
N W	part of GR 2	480	ppm
N W	part of GR 5	400	ppm

ANOMALY #2.

On the GR 10, an area with soil samples ranging up to 136 ppm extends from the centre to the southwest corner and off the property.

ANOMALY#3.

Extending from the GR 17 and 19, and north touching on the GR 12 and 14, is a large, very irregular anomaly with samples that assayed from 48 to 375 ppm. Some of this anomaly is on adjoining claims.

ANOMALY #4.

There is a sizeable anomaly on the GR 8 claim. This extends northeasterly from 42 E to 50 E. Assays range from 58 to 108 ppm.

ANOMALY #5.

There is an irregular area in the northwest corner of GR 6 that ranges from assays of 58 to 90 ppm.

There are 9 smaller areas from which samples assayed 52 to 100 ppm on the GR 12-16 claims.

Preliminary exploratory work was conducted on the GR 1, 2 and 10 claims.

Trenching and 5 percussion drill holes substantiated the presence of copper mineralization, along with pyrite, in granitic rocks at these locations. None of the high anomalous zones listed above was drilled.

SUMMARY AND CONCLUSIONS

The GR 1-20 claims are located east of McLeese Lake and the Gibraltar property, in the Cariboo Mining Division.

Over a surveyed grid with 400 foot spacing, on lines directed north-south, stations were staked every 100 feet and samples of the overburden taken from each. All samples were assayed for copper in parts per million. Anomalous areas, with copper in places as high as 400 ppm are shown on the accompanying map.



Preliminary investigations by trenching and percussion drilling have established the presence of copper in igneous rocks on the GR 2 and 10 claims.

It is concluded that the overburden on the GR 1-20 claims contains, in at least five locations, copper significantly above the amount expected in overburden covering unmineralized bedrock, hence detailed investigation of selected areas of the property is warranted.

#### RECOMMENDATIONS

It is herewith recommended that the GR 1-20 claims area be investigated by first making an outcrop map of the area and noting as much data as possible pertaining to the geology, and that the areas of higher than normal copper content be exposed by stripping where possible.

Respectfully submitted,

ALLEN GEOLOGICAL ENGINEERING LTD.

Per *Alfred R. Allen* P.Eng.

Alfred R. Allen

Vancouver, B.C.  
May 28th. 1971.

ALFRED R. ALLEN

GEOCHEMICAL SURVEY, CARIBOO M.D. July 29 - Aug. 7, 1970

GR #1 GROUP

GR 17 - 20 inclusive

EXPENDITURES

Crew

E. Hayes,	Merritt, B.C.,	Experienced Operator,	July 29 - Aug. 7, 1970
K. Muldoon,	" "	Axeman	" "
D. Lidicott,	" "	"	" "
T. Thomas,	Langley, B.C.	Sampler	" "
J. Elliott,	Richmond, B.C.	"	" "

Engineer

A.R. Allen

July 7, 1970  
Sept. 9, 1970  
May 25, 1971  
May 31, 1971

2.68 line miles @ \$150.00 per mile          \$402.00

Declared before me at the City  
of Vancouver, in the  
Province of British Columbia, this 3  
day of June 1971, A.D.

*Alfred R. Allen*

*John Turner*  
A Commissioner for taking Affidavits within British Columbia or  
A Notary Public in and for the Province of British Columbia.  
**Notary Public**

FIELD CREW

GEOCHEMICAL SURVEY

GR #1 GROUP

GR 17-20 inclusive

E. Hayes, Merritt, B.C.	Operator
K. Mildoon, " "	Axeman
D. Lidicott, " "	Axeman
T. Thomas, Langley, B.C.	Sampler
J. Elliott, Richmond, B.C.	Sampler

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

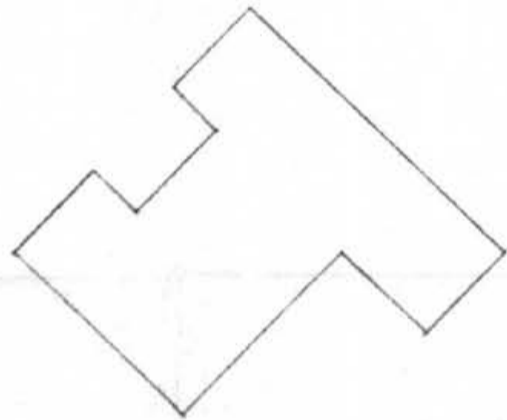
NO. 3080 MAP #1

Stelton L.



GR  
GROUPS

52°-30'



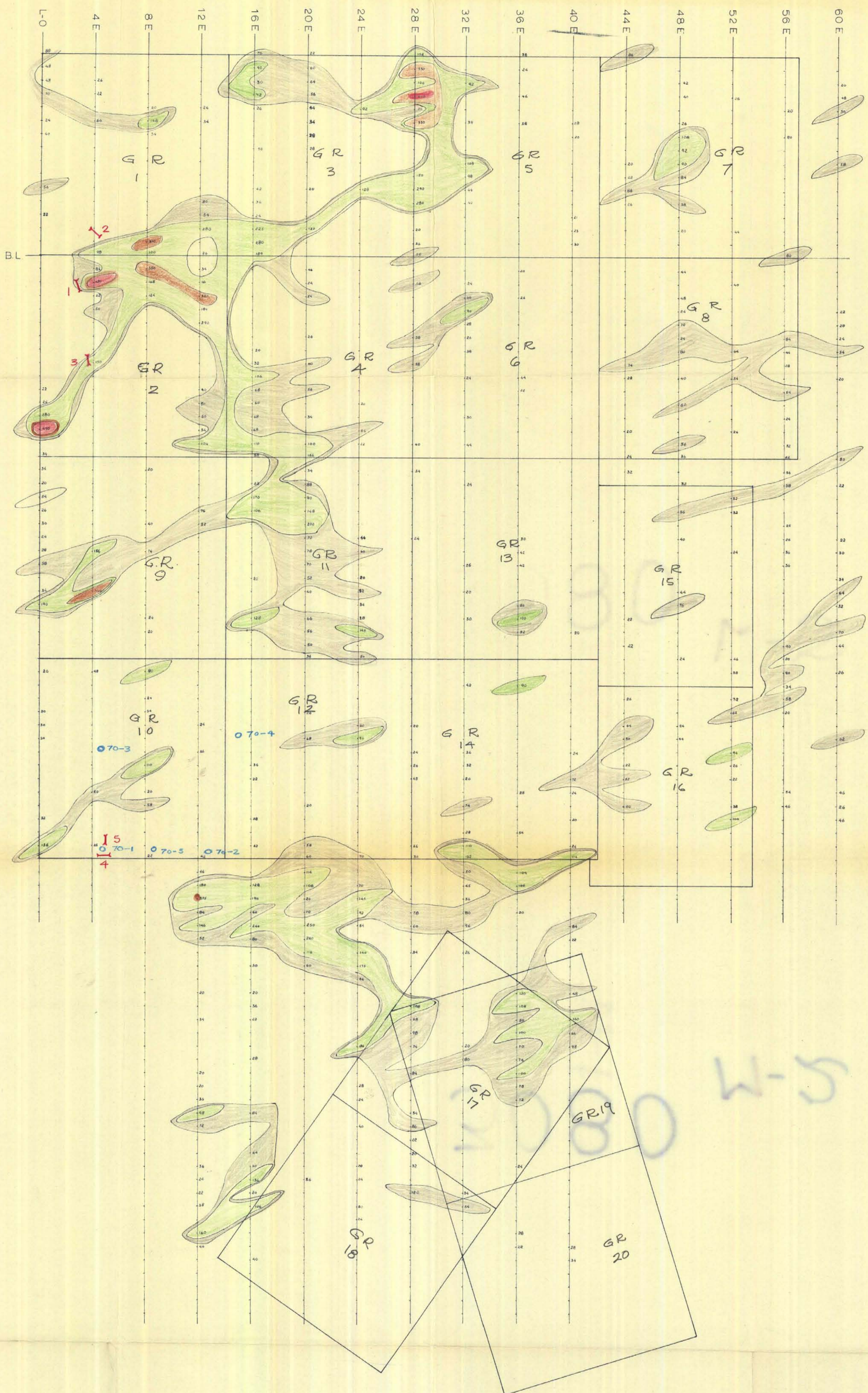
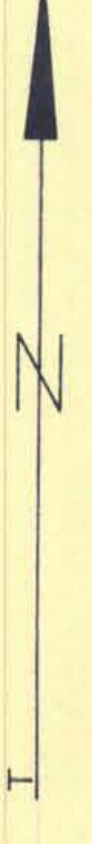
M-1

To Whicase Lake

3080

GR GROUPS  
VANGUARD EXPLORATIONS LTD (INC)  
INDEX MAP  
Scale 1"=2,500'  
May 29, 1971  
*Arthur R. Allen*





LEGEND:

Copper in ppm.

20 - 49	[White box]
50 - 89	[Light grey box]
90 - 299	[Light green box]
300 - 400	[Orange box]
400	[Pink box]

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3080 MAP #2

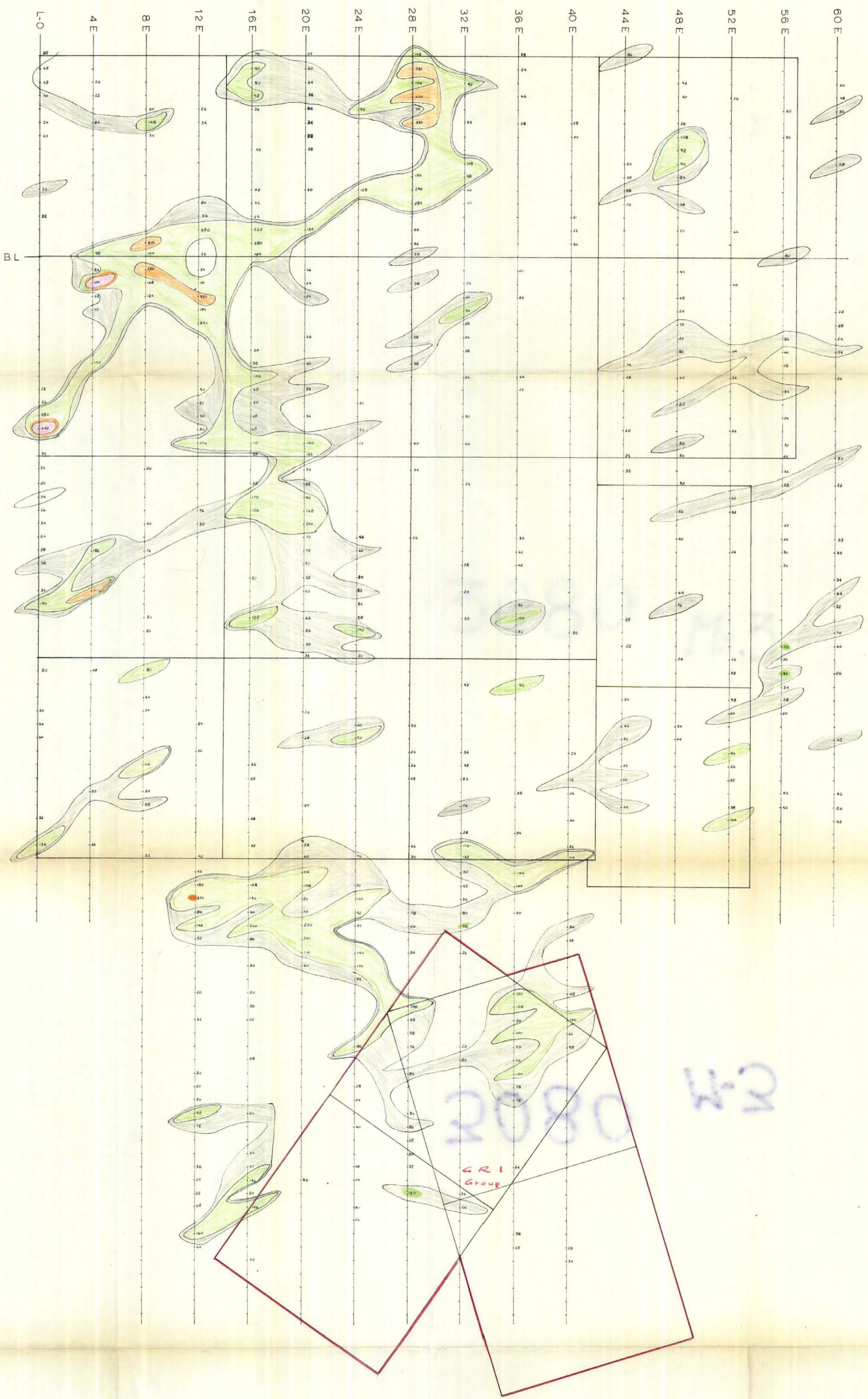
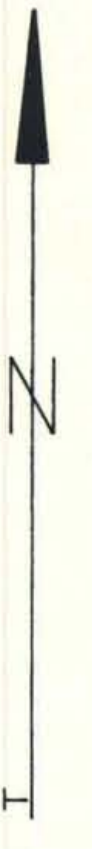
3080

M-2

VANGUARD EXPLORATION LTD. (N.P.L.)	
THE "GR" GROUP McLEESE LAKE B.C.	
GEOCHEMICAL SURVEY	
August 31, 1970	ALLEN GEOLOGICAL ENGINEERING LTD.
Drawn by: L. Miskovic	Scale in feet

PERCUSSION DRILL HOLES 70-1 to 70-5  
TRENCHES #1 to #3





LEGEND:

Copper in p.p.m.

20 - 49	White
50 - 89	Light Grey
90 - 299	Light Green
300 - 400	Orange
400	Pink

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3080 MAP #5

3080 M-3

VANGUARD EXPLORATION LTD. (N.P.L.)	
THE "GR" GROUP MCLEESE LAKE B.C.	
GEOCHEMICAL SURVEY	
August 31, 1970	ALLEN GEOLOGICAL ENGINEERING LTD.
Drawn by: L. Miskovic	Scale in feet  Allen G. Allen P. Eng.