

4047

ELECTROMAGNETIC SURVEY
AND
GEOCHEMICAL SURVEY

KR&K 212 and 213 92I/7E

120-51 SE

18-8-72:: 30-8-72

<p>Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 4047 MAP _____</p>

For:

NICOLA COPPER MINES LTD. (N.P.L.)
9897 138 A Street
Surrey, B.C.

By:

ALLEN GEOLOGICAL ENGINEERING LTD.
601 - 325 Howe Street
Vancouver, B.C.

November 30, 1972.

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ELECTROMAGNETIC AND GEOCHEMICAL SURVEYS

KR&K 212 - 213

INTRODUCTION

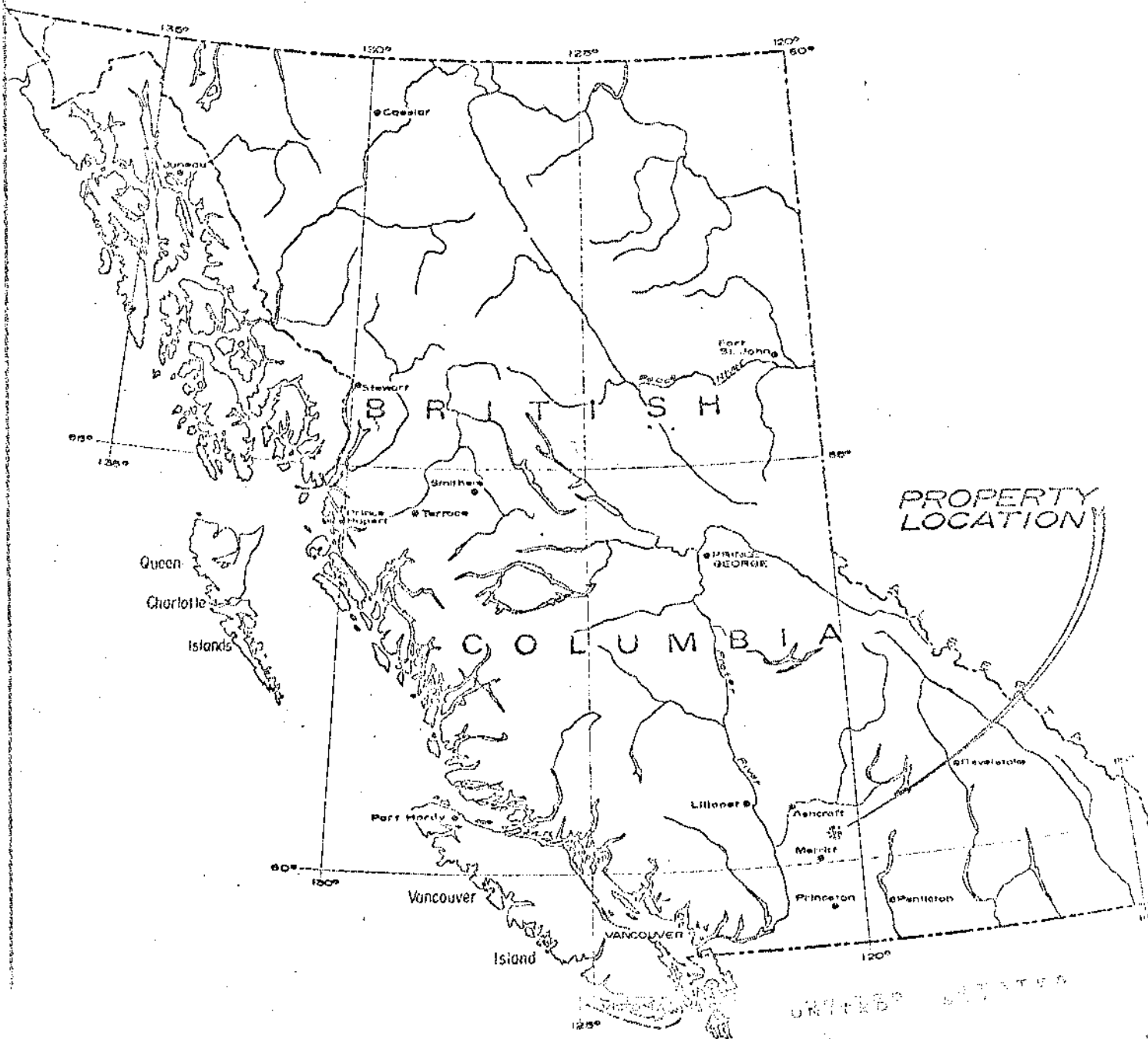
Geochemical and VLF electromagnetic surveys were conducted over the KR&K 212 - 213 claims between July 18 and August 30, 1972.

The claims were found to be 1,200 feet wide. Three east-west lines at 500-foot spacing were surveyed over the area and stations picketed at 250-foot intervals along each line. Soil samples were taken from the B zone at each station and VLF electromagnetic observations noted at alternate stations.

The work was under the supervision of the writer who was on the property July 18. G.S. Blacklaws was the operator and assistants were Richard Conte and Edward Kuhn. Field notes and maps were maintained as the work progressed and these were interpreted and finalized into report form by the writer in Vancouver.

The purpose of the surveys was to detect and outline areas where the soil carries more than normal copper, and to attempt to locate zones of shearing and/or mineralization.

The object of this report is to describe the property briefly and to interpret the data acquired by the surveys.



Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 No. **4047** MAP **#1**

NICOLA COPPER MINES LTD. (NPL)		
LOCATION MAP		
SCALE: 1" = 136 MIs.		
Drawn by	Date	<i>Allen</i>
Checked by	Drq no.	ALLEN GEOLOGICAL ENGINEERING LTD.

LOCATION AND ACCESSIBILITY

The KR&K 212 - 213 claims are located on Meadow Creek drainage two miles southeast of Greenstone Creek. This is $6\frac{1}{2}$ miles easterly from Logan Lake and 7 miles west of Le Jeune Lake.

TOPOGRAPHY

The area lies within the Le Jeune-Walloper-Logan Lake-Meadow Creek area. Elevation is close to 4,000 feet above sea level. The hills are low and rounded. Small lakes and sloughs are drained by small intermittent streams.

PROPERTY

The adjoining KR&K 212 and 213 claims have record numbers 99759 and 99760 and are part of the Greenstone group.

The location line is 1,200 feet long resulting in shorter than usual widths for each claim.

The posts and line are located in accordance with the requirements of the British Columbia Mineral Act.

GEOLOGY

The area is almost completely masked by overburden. The claims are believed to be underlain by volcanic rocks of the Upper Triassic Nicola Group. They lie about midway between the Guichon Creek and Nicola batholiths.

ELECTROMAGNETIC SURVEY

Between August 18 and 30, 1972, an electromagnetic survey was conducted over the KR&K 212 and 213 claims area.

A grid was surveyed by chain and Brunton compass with east-west lines spaced at 500 feet and stations picketed at 250-foot intervals. A Geonics VLF 16 instrument was used to detect quadrature and tilt angles at each station. The VLF transmitter station at Jim Creek, Washington, U.S.A., 18.6 K Hz, 250 Kw provided clear reception.

Data was recorded in a field book and on a field map by G.S. Blacklaws, operator, and Richard Conte and Edward Kuhn assistants. The data was re-mapped and interpreted by the writer in Vancouver.

SURVEY RESULTS

One conductor zone is indicated. It trends northerly about 100 feet east of line 4A.

GEOCHEMICAL SURVEY

From stations spaced at 250 feet, soil samples were taken along three grid lines on the KR&K 212 and 213 claims.

Samples were bagged and shipped to Vancouver for assaying. Each bag was marked with the grid location. Crest Laboratories tested each sample for copper by atomic absorption after

drying, screening to -80 mesh and dissolving with hot HNO_3 and HClO_4 .

Copper content was reported in parts per million.

SURVEY RESULTS

Survey results are shown on the map accompanying this report.

The southeast portion of KR&K 212 and part of the south side of KR&K 213 sampled in the 20 to 39 range. The remaining area produced samples which assayed in the 40 to 69 range.

The samples from the following three areas contain copper higher than 70 parts per million:

- A. West central part of KR&K 212, 86 and 102 ppm copper
- B. North boundary of KR&K 212, 70, 102, 117 ppm copper
- C. Central part of KR&K 213, 78, 82, 84 ppm copper

An electromagnetic VLF conductor zone passes through this area.

Bedrock should be exposed by trenching in the vicinity of 4A on line 1.

SUMMARY AND CONCLUSIONS

Geochemical and VLF electromagnetic surveys were conducted over the KR&K 212 and 213 claims. Higher than normal copper content was detected in the soil at three locations.

One conductor zone is indicated on the eastern part of KR&K 213, and this passes through geochemical anomaly "C".

It is concluded that the area should be checked for copper mineralization by additional field work. Also, the adjoining claims to the north should be surveyed by electromagnetic VLF and geochemical techniques.

RECOMMENDATIONS

It is herewith recommended that selected areas of the KR&K 212 and 213 claims be investigated by stripping and trenching to expose bedrock, particularly in the area of anomaly "C". If favourable structures and/or copper mineralization are exposed, these may be tested by percussion and core drilling.

Respectfully submitted,

ALLEN GEOLOGICAL ENGINEERING LTD.

Per Alfred R. Allen P.Eng.

Alfred R. Allen

ALFRED R. ALLEN

VLF ELECTROMAGNETIC AND GEOCHEMICAL SURVEYS

KAMLOOPS M.D.

KR&K 212 and 213 CLAIMS

18-8-72 : 30-8-72

EXPENDITURES

Crew

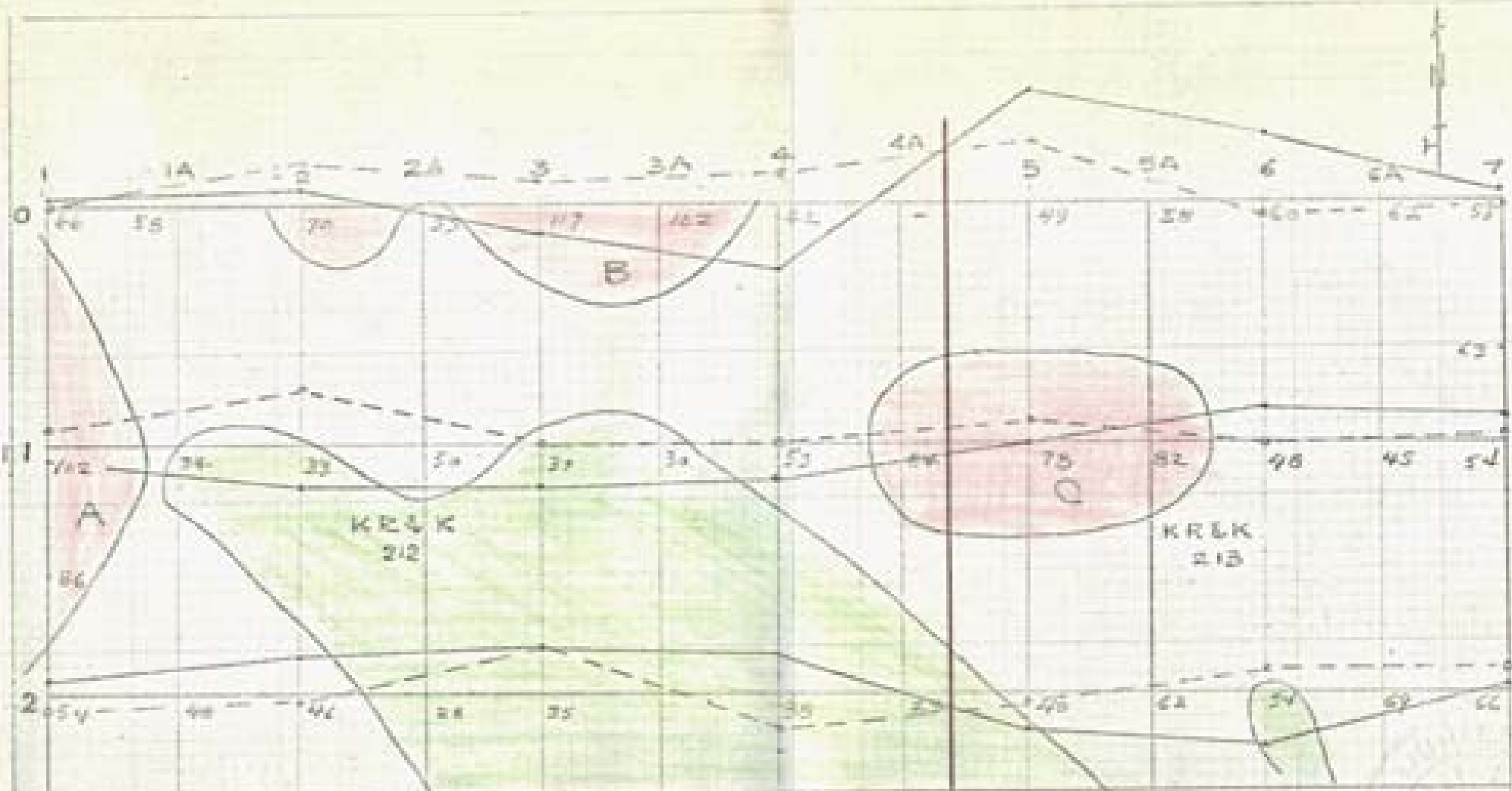
Alfred R. Allen, Vancouver, B.C. Operator, July 18,	\$ 50.00
Gordon S. Blacklaws, Surrey, B.C. Operator,	
Aug. 21-29	140.75
Richard Conte, " " Aug. 21-30	120.00
Edward Kuhn, " " Aug. 21-30	121.00
	<u>\$431.75</u>

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this *18*
day of *December*, *1972*, A.D.

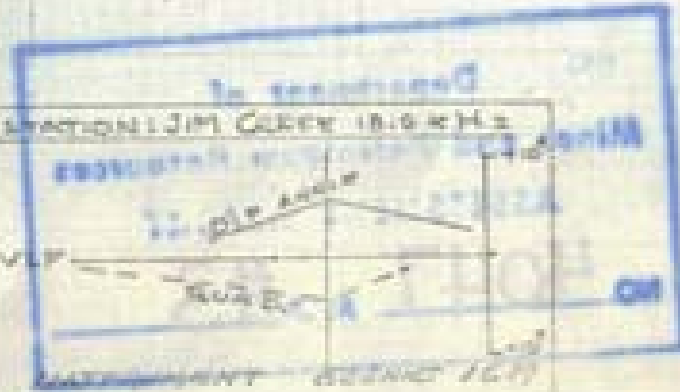
Alfred R. Allen

S. Jeanette
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

Sub-mining Recorder



4047 M-3



LEGEND

0-39 ppm Cu	<input type="checkbox"/>
40-69 " "	<input type="checkbox"/>
70 + " "	<input checked="" type="checkbox"/>

MINERAL COPPER MINISTRAL
 KREK 212 & 213
 ELECTROMAGNETIC VLF AND
 GEOCHEMICAL SURVEYS
 KANLOOPS M.D.
 0 100 200
 METERS
 SCALE 1:5000
 DATE 1972

W-2 7404

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4047 AMP #3

Department of
Mines and Petroleum Resources

ASSESSMENT REPORT

NO. 4047 MAP #2