

**GEOCHEMICAL SURVEY**

on Property of *the DM claims*  
*owned by RO + Loren*  
**\*COMET-KRAIN MINING CORPORATION LIMITED\***

Kamloops Mining Division ~~Subdivision~~  
Province of British Columbia *50 120 NE*

**Claims Surveyed:**

DM 55-57 inclusive; 61; 73; 75; 77;  
94; 96-99 inclusive; DM 120; 121; 123; 124; POT 6-  
9 inclusive; 27162, and 48508; which are located  
in the KAMLOOPS MINING DIVISION of the PROVINCE of  
BRITISH COLUMBIA, Longitude  $120^{\circ}15'W$ , Latitude  
 $50^{\circ}30'N$ , *50° 120° N.E.*

The survey was conducted during the  
period MARCH 28th, 1967 to APRIL 12th, 1967.

The report is written by G.E. WHITE,  
B. Sc., Geologist-Geophysicist.

**SULMAC EXPLORATION SERVICES LTD.,**

APRIL 26, 1967

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**REPORT ON**

**GEOCHEMICAL SOIL SURVEY**

**ON PROPERTY OF**

**COMET-KBAIN MINING CORPORATION LIMITED**

**KANLOOPS MINING DIVISION**

**PROVINCE OF BRITISH COLUMBIA**

**SULMAC EXPLORATION SERVICES LIMITED**

**APRIL 26th, 1967**

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## Certification

*I.P. P.P.P. 5*

## In Pocket:

Map of Geochemical Survey # 1

Scale: 1" = 400'

## INTRODUCTION

During the period March 28, 1967 to April 12, 1967, Sulmac Exploration Services Limited conducted a geochemical survey over an area covering twenty-two claims held by Comet-Krain Mining Corporation Limited, located in the Kamloops Mining Division in the Province of British Columbia.

## PURPOSE

The purpose of this survey was to check by geochemical methods three induced polarization anomalies for evidence of copper, molybdenum and silver mineralization at surface. The I.P. anomalies were obtained during a geophysical survey by Sulmac Exploration Services Limited during the field season of 1966, and are numbered Major Anomaly 1, Minor Anomaly 2, and Minor Anomaly 3.

## PROPERTY LOCATION AND ACCESS

The property of Comet-Krain Mining Corporation Limited, discussed in this report is located some nine miles west of Kamloops, British Columbia.

The surveyed area consists of some twenty-two contiguous unpatented mining claims listed as follows:

DM 55 - 57 inclusive; 61; 73; 75; 77; 94;  
96 - 99 inclusive; DM 120; 121; 123; 124; POT 6 - 9 inclu-  
sive; 27162, and 48508.

The ten claims listed as follows: DM 5 Fr;  
71; 95; 54087; 54088; 38218; LORNA 3; NO 3; 4; and POT 7;  
together with the aforementioned claims discussed in this  
report comprise the initial claim group, upon which the  
induced polarisation survey had been conducted. These  
ten claims were not covered by the present geochemical  
survey as they were part of an earlier one.

Accessibility to the claim group is excellent,  
as the Trans-Canada Highway passes along the northern  
boundary of the property.

#### GENERAL GEOLOGY

The general geology of the area is shown  
on Map No. 886A, accompanying Memoir 249, Geology and  
Mineral deposits of Nicola Map Area, British Columbia,  
by W.E. Cockfield, published by the Department of Mines  
and Technical Surveys.

The property discussed in this report lies  
within the area underlain by the Iron Mask Batholith.  
This is a discordant igneous complex some twelve miles

by three miles in an area varying in composition from syenite to ultrabasic rock types, all of which are deficient in quartz. To the north the batholith is bounded by the Kamloops group of volcanics of tertiary age and to the south by the Nicola volcanics of Triassic age, both of which contain sedimentary beds. Magnetite and apatite are present in most rocks. The batholith has been subjected to considerable movement and shows extensive fracturing, shearing and hydrothermal alteration. Sulphide mineralization could then be associated with shear zones or zones of metasomatism between the various rock types.

#### METHOD OF SURVEY

The geochemical soil survey was conducted over the 1966 geophysical survey grid, which consisted of north-south lines turned off every 400 feet from an east-west baseline. The lines were chained and picketed at 100 foot intervals.

Soil samples taken at an approximate depth of one foot were obtained every 100 feet along these lines. A total of 747 soil samples was obtained.

### SOIL ANALYSIS

All samples were tested at the Jens Ancher Mogensen Laboratory in Toronto, Ontario, for the presence of copper. Those samples which yielded 75 p.p.m. or greater were then tested for the presence of molybdenum and silver.

The soil samples were analysed for secondary copper using the hot acid extraction technique and colorimetric trace metal measurement. Molybdenum was tested for by the standard Toluene Dithiol method as quoted by Marshall in the Economic Geology Series, January 1965. This method measures the soluble molybdenum present in the samples.

The mineral content of all assayed soil samples was reported in parts per million. The copper values were then plotted on a grid map of the property, and a contour map of the mineral concentration was prepared at a scale of 400 feet to one inch. Positive values of molybdenum and silver were also plotted.

A correlation profile showing the geochemical results in p.p.m., the geophysical results of chargeability in milliseconds, and the interpolated topography in feet at a scale of 400 feet to one inch has also been included.

### DISCUSSION OF RESULTS

The geochemical results have been carefully correlated with geophysical, geological and interpolated topographic data of the surveyed area.

The geologic and geophysical data were obtained during previous surveys conducted over the claim group, while the topographic information was interpolated from a topographic map of the Kamloops area compiled by Spartan Air Services Limited at a scale of five hundred feet to one inch, during 1965.

The background value of secondary copper in the soil is approximately five p.p.m. Several small geochemical highs were located. These could be caused by small copper occurrences near surface, or by mineralized detrital material, which has contaminated the soil.

The area surrounding Major Anomaly A and possibly extending over to Minor Anomaly 1 and Major Anomaly B is slightly anomalous.

Minor Anomaly 3, as a result of the geochemical survey has increased in significance. A substantial geochemical anomaly occurs downslope of the geophysical anomaly in what would appear to be an alkaline swamp. The basic condition of the soil would precipitate all ion migration from the induced polarization anomaly thus causing a displaced geochemical anomaly.



The south-east section of the surveyed area is slightly anomalous. These values may be caused by small local mineral occurrences or reflect an anomaly to the south-east of the property boundary.

Minor Anomaly 2 has no associated geochemical highs. However, the lack of encouraging geochemical values does not preclude the possibility of mineralization at depth.

No anomalous geochemical results were obtained from the molybdenum and silver assays.

In conclusion then, the geochemical survey indicates that copper bearing mineralization may be associated with induced polarization anomalies Major Anomaly A and Minor Anomaly 3.

#### RECOMMENDATIONS

On the basis of the geochemical and geophysical data provided by Sulmac Exploration Services Limited, it is suggested that Major Anomaly A, which is most significant geophysically, and Minor Anomaly 3, which is most significant geochemically, be tested by diamond drilling with continuance of the programme depending on results obtained in the initial targets.

TORONTO, ONTARIO,  
April 26th, 1967.

G.E. WHITE, B. Sc.,  
Geologist-Geophysicist.

SUNAC EXPLORATION SERVICES LIMITED

Respectfully submitted,

estimated to require a maximum expenditure of \$15,000.00.

The above diamond drilling programs is

vertical depth of 250 feet.

to intersect the probable source of the anomaly at a

at an angle of 55° to a depth of approximately 700 feet

To be collared at 0+00 258, drilled 840'±

BORE HOLE # 2

vertical depth of 300 feet.

to intersect the probable source of the anomaly at a

at an angle of 45° to a depth of approximately 600 feet

To be collared at 4W 12N, drilled 840'±

BORE HOLE # 1

is recommended as follows:

A minimum of 1,300 feet of diamond drilling

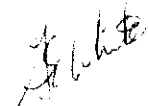
## CERTIFICATION

TO WHOM IT MAY CONCERN:

I GLEN ELMO WHITE, of the City of TORONTO, in the Province of Ontario, hereby certify:

1. THAT I am a Geologist and Geophysicist and reside at #1108 - 500 Dawes Road, TORONTO 16, Ontario.
2. THAT I studied Geology and Geophysics and graduated from the University of British Columbia in 1966, with the degree of Bachelor of Science.
3. THAT I have been engaged in Mining Exploration for five years.
4. THAT I do not have, nor do I expect to receive either directly or indirectly, any interest in the property, or in the securities of COMET-KRAIN MINING CORPORATION LIMITED.
5. THAT this report is based on geochemical, geophysical, and geological information provided by Sulnac Exploration Services Limited, geologic publications by the Department of Mines and Technical Surveys, and a personal knowledge of the property and the general area.

Dated this twenty-sixth day of April, 1967.

  
G.E. White, B. Sc.,  
Geologist - Geophysicist.

A P P E N D I X

COMET-KRAIN MINING CORPORATION LIMITED

List of Personnel Employed on Geochemical Survey and Dates:

Soil Samplers

L. Perreault                      March 28th to April 12th, 1967  
B.H. Maag                              March 28th to April 12th, 1967

Consulting Geologist

G.E. White, B. Sc.              April 21st, 24th, and 25th, 1967

Draftsman

D.A. Grant                              April 21st, 24th, 25th, and  
April 26th, 1967

Typist

J.A. Henry                              April 26th, 1967

ADDRESS

c/o SULMAC EXPLORATION SERVICES LTD.,  
Suite 614 - 101 Richmond St., W.,  
TORONTO 1., Ontario.

Declared before me at the *City*  
of *Vancouver*, in the  
Province of British Columbia, this *5*  
day of *May* *1967*, A.D.

*Colman J. Pascoe*

*Neil Turner*  
A Commissioner for taking Affidavits within British Columbia  
Sub-mining Recorder

## **A P P E N D I X**

**FOR**

**COMET-KRAIN MINING CORPORATION LIMITED, (N.P.L.)**

**DM MINERAL CLAIMS GEOCHEMICAL REPORT**

- (1) The soil samples were taken with a ½ inch diameter polished steel auger.**
- (2) All samples were taken at the "C" horizon just below the humus layer and were devoid of organic material. The sample depth varied from one to three feet.**
- (3) Polyethylene-lined paper envelopes were used to preserve the samples.**
- (4) All samples were shipped to the Jens Mogenssen Laboratory in TORONTO where they were placed in small aluminum holders, dried under heat lamps for two to three hours, screened through an 80 mesh nylon screen, and then one half a gram of each sample was weighed and tested.**

DOMINION OF CANADA:  
PROVINCE OF BRITISH COLUMBIA.  
To Wit:

In the Matter of COMET KRAIN MINING CORPORATION  
LIMITED -  
STATEMENT OF EXPENDITURE

SUB - MINING RECORDER  
RECEIVED

MAY 8 1967

M.R. #4960E \$210.00

VANCOUVER, B. C.

I, CLEMENS T. PASIEKA

of #824 - 602 West Hastings Street, Vancouver 2,


in the Province of British Columbia, do solemnly declare that the following costs were incurred by, invoiced to and paid by COMET KRAIN MINING CORPORATION LIMITED with regard to a Geochemical Survey carried out by Sulmac Exploration Services Limited on their Kamloops property i.e. DM5 fr. DM 55-57, 6, -62, 63-64, 71, 73, 75, 77, "94-95 fr", 96-97, 98-99, 120-121, 123-24 - record numbers 38580, 18189-91, 18195-96, 18089-90, 31070, 18754, 18756, 18758, 34945, 34946-47, 18779-80, 27070-71, 27271-72

Local transport and shipping charges (samples to laboratory)	\$ 540.00
Services of personnel (Sulmac Exploration Services Ltd.)	1242.15
Board and Lodging	583.44
Geochemical Equipment	235.00
Assays (Jens A. Mogensen Laboratory)	1287.00
Report and drafting	350.00
	<hr/>
	\$ 4237.59
	<hr/>

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City  
of VANCOUVER, in the  
Province of British Columbia, this 8th  
day of May, 1967, A.D.



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

Sub-mining Recorder

# COMET-KRAIN MINING CORP. LTD.

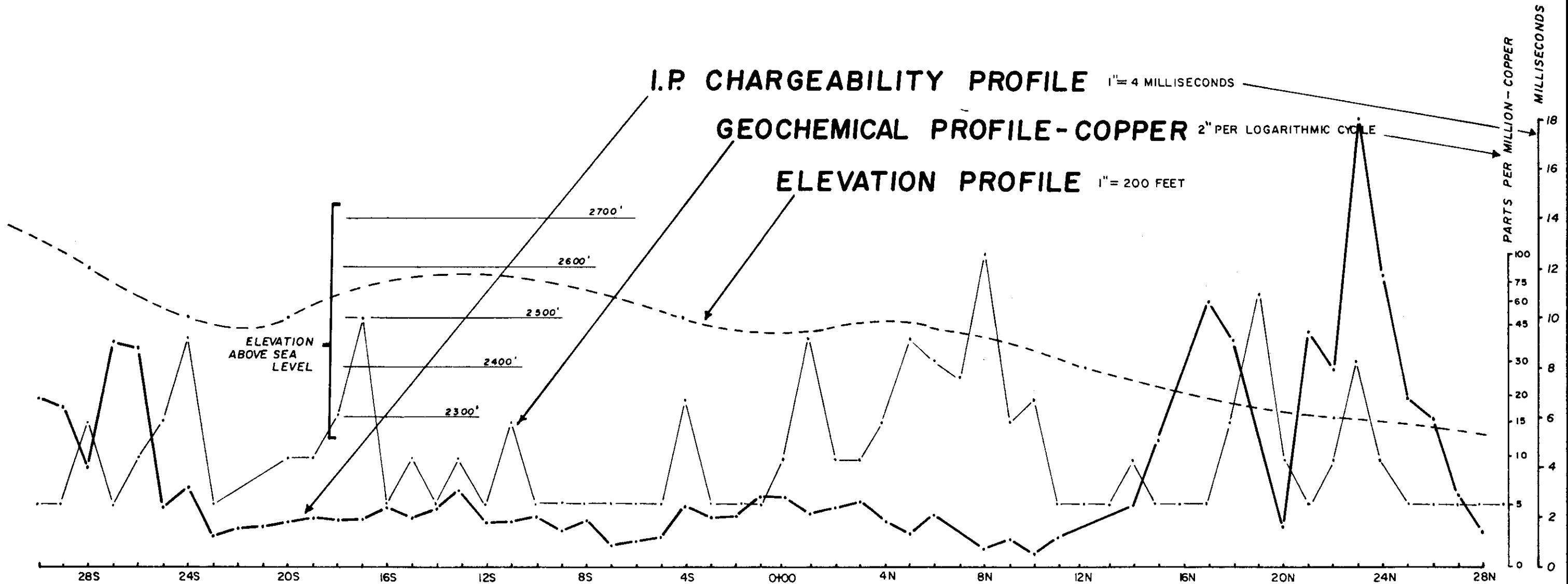
KAMLOOPS BRITISH COLUMBIA  
KAMLOOPS MINING DIV.

## COMPOSITE SECTION

I.P. CHARGEABILITY PROFILE 1" = 4 MILLISECONDS

GEOCHEMICAL PROFILE - COPPER 2" PER LOGARITHMIC CYCLE

ELEVATION PROFILE 1" = 200 FEET



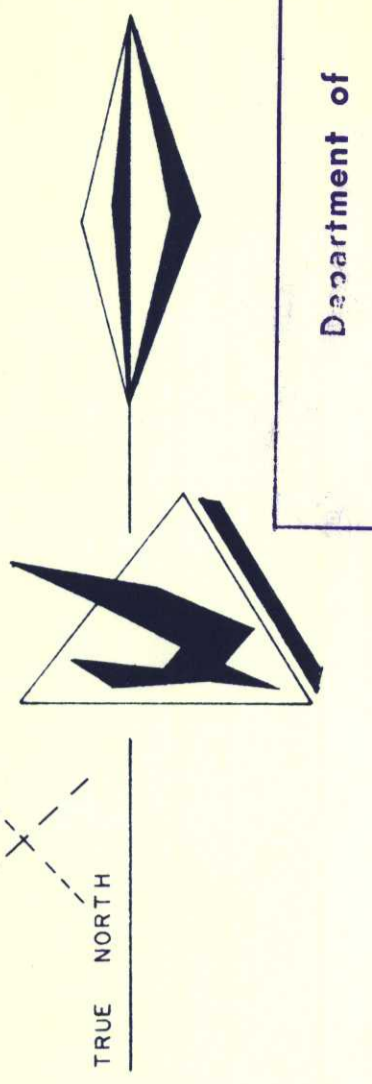
MINOR I.P. ANOMALY-3

MAJOR I.P. ANOMALY-A

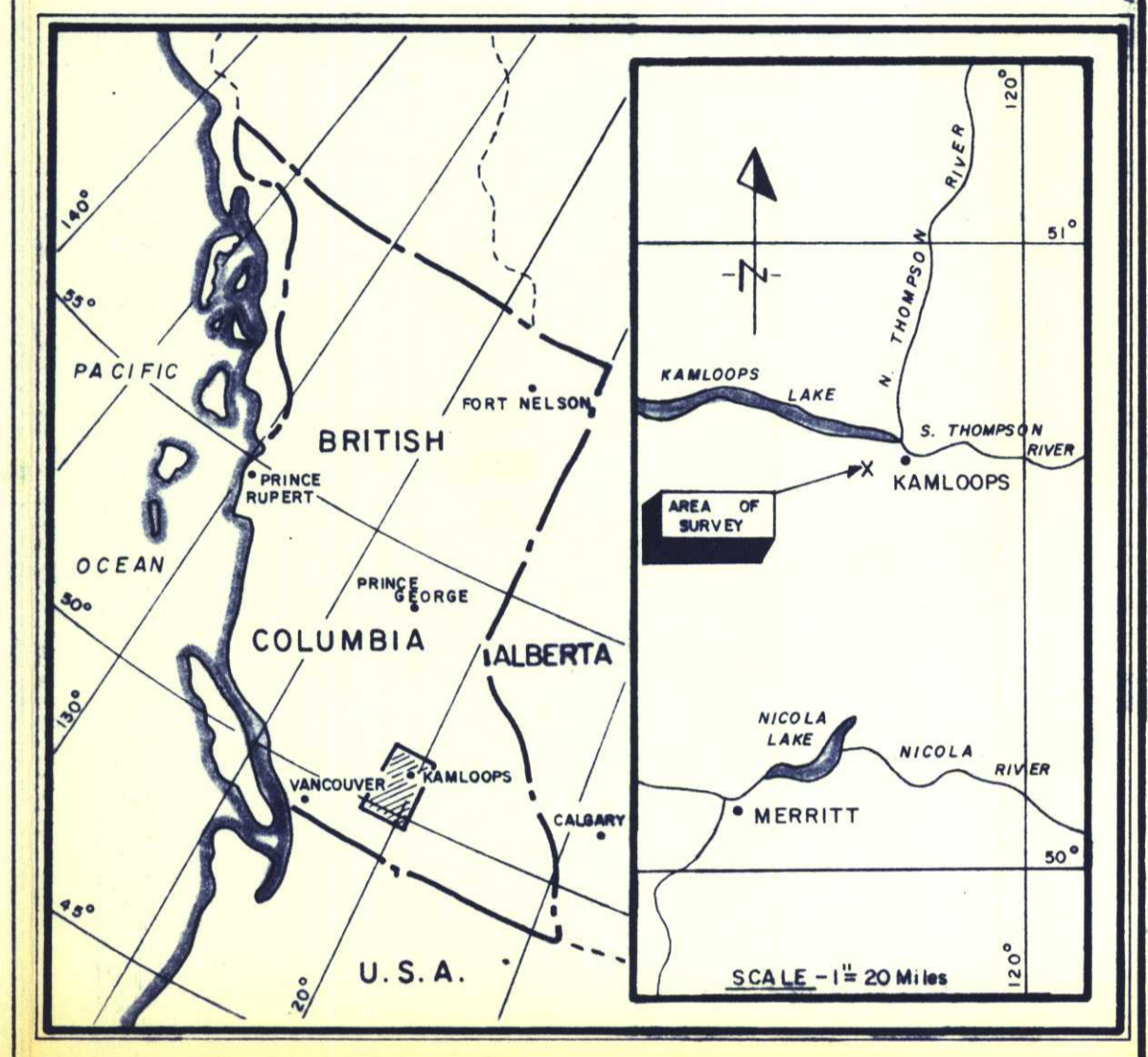
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SCALE - 1" = 400' HORIZONTAL

LINE NO. - '0+00'



LOCATION MAP  
SCALE - 1/250 MILES



LEGEND

- GEOCHEMICAL SURVEY**
- 25 PARTS PER MILLION COPPER
  - 40-100 PARTS PER MILLION SILVER
  - 10-15 PARTS PER MILLION MOLYBDENUM
- CONTOUR INTERVAL - 15 PARTS PER MILLION COPPER
- 75 TO 100 PARTS PER MILLION COPPER
  - 45 TO 75 PARTS PER MILLION COPPER
  - 30 TO 45 PARTS PER MILLION COPPER
- MAP SYMBOLS**
- ANOMALOUS I.P. ZONE
  - CLAIM BOUNDARY
  - ROAD
  - POND, LAKE OUTLINE
  - SWAMP
  - PROPOSED BORE HOLE

TO ACCOMPANY REPORT BY G.E. WHITE B.Sc., DATED APR. 26, 1967

COMET-KRAIN MINING CORP. LTD.

KAMLOOPS - BRITISH COLUMBIA  
KAMLOOPS-MINING DIVISION

GEOCHEMICAL SURVEY

1011

SULMAC EXPLORATION SERVICES LIMITED  
MAR-APR - 1967

