

INDUCED POLARISATION SURVEY

ON A GROUP OF CLAIMS

912 E / 12
9 V

* COMET - KRAIN MINING CORPORATION LIMITED*

CLAIMS SURVEYED:

DM 5 Fr.	38580
DM 55-57 inc.	18189-18191 inc.
DM 61-62	18195-18196
DM 63-64	18089-18090
DM 71	31070
DM 73	18754
DM 75	18756
DM 77	18758
DM 94-95 Fr.	34945
DM 96	34946
DM 97	34947
DM 120	27070
DM 121	27071
DM 123	27271
DM 124	27272
RO 3-4	47804-5
LORNA 2-3	46388-9
AUDRA 2-3	54087-8
DM 98-99	18779-80

which are located in the Kamloops Mining Division,
Kamloops, British Columbia; Longitude 120° W,
Latitude 50° 30' N.

The survey was conducted during the period
July 16 to October 3, 1966.

The report is written by G. E. White, B.Sc., Geophysicist

SULMAC EXPLORATION SERVICES LIMITED

November 2, 1966



SULMAC EXPLORATION SERVICES LIMITED

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REPORT ON
INDUCED POLARIZATION SURVEY
ON PROPERTY OF

COMET - KRAIN MINING CORPORATION LIMITED
KAMLOOPS MINING DIVISION
KAMLOOPS, B. C.

SULMAC EXPLORATION SERVICES LIMITED
NOVEMBER 2, 1966

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Profile-Anomaly-'B'
LINE NO.-28E

-and-

Profile-Anomaly-'A'
LINE NO.-4W

Horizontal Scale: 1" = 200'

In Pocket:

Map of "Apparent Chargeability" *1*

Map of "Apparent Resistivity" *2*

Scale: 1" = 400'

INTRODUCTION

During the period July 16th to October 3rd, 1966, Sulmac Exploration Services Limited conducted an induced polarization (I.P.) survey over portions of a property of Comet - Krain Mining Corporation Limited located in the Kamloops Mining Division in the Province of British Columbia.

The purpose of the survey was two-fold:

- (I) To detail the area of the diamond drill holes VC-1 to VC-15 inclusive, drilled by Vanco Explorations Limited, and correlate the new results with those obtained by Vanco during previous I.P. and magnetic surveys.
- (II) To survey the area of the DM claims.

SUMMARY AND RECOMMENDATION

A detailed induced polarization survey was conducted over certain claims held by Comet - Krain Mining Corporation Limited, in the Kamloops area of British Columbia.

The I.P. survey located five anomalies and several zones of interest which may contain sulphide mineralization.

(I) Correlation with the Vanco diamond drill results indicates that the sulphide mineralization, which carried significant amounts of chalcopyrite and was encountered in drill holes VC-1, VC-3 and VC-9, possibly extends into the area of major anomaly B. Hole VC-15 which also intersected chalcopyrite failed to test the principle section of minor anomaly -1.

(II) Anomaly A may contain 1-4% sulphides by volume, while B likely contains only 1-2% by volume depending upon the amount of magnetite present.

It is therefore recommended that anomalies A and B, and possibly minor anomaly -1, be investigated by diamond drilling and that testing of the other minor anomalies and zones of possible interest be undertaken if encouraging results are encountered in the initial targets.

PROPERTY LOCATION AND ACCESS

The ground discussed in this report is held by Comet - Krain Mining Corporation Limited, and is located some nine miles west of Kamloops, in the Province of British Columbia.

The surveyed area consists of some 23 contiguous mining claims listed as follows:

A P P E N D I X

List of Personnel Employed on INDUCED POLARIZATION SURVEY, and Dates:

LINECUTTERS

1966

P. Smith	July 16 - August 18
L. Roos	July 16 - July 31
E. Bauman	July 18 - August 18
P. Heroux	July 22 - August 18
L. Albrecht	August 1 - August 18
B. Duthie	August 1 - 18
L. Salutin	August 1 - 18

I. P. OPERATORS

E. Bauman	August 19 - 27
T. Guernier	August 23 - 31, September 1 - 3, 5, 14 - 30 and October 1 - 3

I. P. ASSISTANTS

F. Heroux	August 19 - 27
L. Albrecht	August 19 - September 6, 14, 15, 16 - 30 and October 1 - 3
B. Duthie	August 27 - 31, and September 3 - 5, 14, 15
R. Dunphy	September 1 - 6, 14 - 30, and October 1 - 3
W. Salo	September 19 - 30, and October 1 - 3

ADDITIONAL LABOUR

D. Cass	September 1 - 5
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GEOPHYSICIST

G.E. White	August 29, 30, October 28, 31, and November 1
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DRAFTSMAN

D.A. Grant	October 13, 14, 24, and November 10
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TYPIST

J.A. Henry	November 2, 1966
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STATEMENT OF COST

to *COMET - KRAIN MINING CORPORATION LIMITED*

RE: Property in Kamloops Mining Division
KAMLOOPS, B. C.

<u>Linecutting Crew:</u>	2-man crew - period July 16-31 (26-man days @ \$25/day)	\$ 700.00
	5-man crew - 11 days (@ 55 man days @ \$15/day)	\$ 825.00
<u>I.P. Crew And Equipment:</u>	August 1-15 4 days @ \$250/day	\$ 1000.00
	August 16-31 6 days @ \$250/day	\$ 1500.00
	Sept. 1-15 (5 productive days)	\$ 1250.00
	Sept. 16-30	\$ 1750.00
	October 1-3	\$ 750.00
<u>Supervision:</u>	14 days @ \$75/day	\$ 1050.00
	4 days @ \$50/day	\$ 200.00
<u>Miscellaneous: (Expenses)</u>	Travelling and transportation, telephone and telegraph, supplies, board and miscellaneous expenses.	\$ 7055.54
		<hr/>
		<u>\$18,080.54</u>

The above was invoiced to and paid by

* COMET - KRAIN MINING CORPORATION LIMITED *



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AUDRA 2-3	54087-8
DM 98-99	18779-80

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

METHOD OF SURVEY AND INSTRUMENT DATA

I. P. ELECTRODE ARRAY

The data were obtained using the "three electrode" array. This array consists of one current (C_1) and two potential electrodes (P_1 & P_2), which are moved together along the survey line. The second current electrode (C_2) is fixed at "infinity". A basic electrode spacing of 200 feet was used for the survey.

I. P. INSTRUMENT

The instrument used was of the pulse-type and is similar in design and operation to that described by R. W. Baldwin in "A Decade of Development in Overvoltage Survey", A.I.M.E. Transactions, Vol. 214, 1959. Power for

the unit is obtained from a Briggs and Stratton 4 H.P. motor coupled to a 400 c.p.s. generator which provides a maximum of 1,200 watts d.c. to the ground. The cycling rate is 1.5 seconds current on and 0.5 seconds current off, the pulses reversing continuously in polarity. The data collected consist of measurements of the current (I) flowing through C_1 and C_2 and of the primary voltage (V_p) between P_1 and P_2 during the "current on" period. During the "current off" period the overvoltage appearing between P_1 and P_2 is measured. This gives a measurement of the polarization (V_g) in milliseconds. The "apparent chargeability" in milliseconds is calculated by dividing the polarization (V_g) by the primary voltage (V_p). The "apparent resistivity" in ohm-meters is obtained by dividing the primary voltage V_p by the current I , and multiplying by a proportionality factor which depends on the geometry of the array used. The chargeability and resistivity values obtained are called "apparent", as they are values which that portion of the earth sampled by the array would have if it were homogeneous. As the earth sampled is usually inhomogeneous, the calculated apparent chargeability and apparent resistivity are functions of the actual chargeabilities and resistivities of the rocks sampled and of the geometry of these rocks.

I.P. DATA

The Vanco I.P. survey lines of 1965 were spaced 800 feet apart and were turned off N 50° E from a N 40° W baseline. Readings were taken every 200 feet with a 400 foot electrode spacing.

The present grid system was established over the property by the geophysical crew prior to the commencement of the I.P. survey. The lines were laid out in a north south direction and were placed 400 feet apart. Pickets were placed at 100 foot intervals along these lines. Readings were taken every 100 feet with a 200 foot electrode spacing. In all a total of 19 line miles of I.P. survey was conducted.

The results of the survey are shown in contour form of "chargeability" and "resistivity" on the accompanying maps at a scale of 400 feet to one inch. Profiles of chargeability and resistivity of the major anomalies are also included.

The correlation between the two grid systems is shown on both the chargeability and resistivity maps.

DISCUSSION OF RESULTS

The interpretation of the survey data consisted of a careful analysis of the individual

profiles and contour maps and their correlation with the Vanco data of 1965. These data are presented on magnetic and chargeability contour maps and drill logs of holes VC-1 to VC-15 inclusive.

The present survey indicated two major and three minor anomalies as well as several other zones of possible interest. The major anomalies are designated A and B in order of their significance. While the minor anomalies are numbered 1, 2, and 3 in sequence of preference.

(I) Correlation with the drilling results shows that anomaly B may be on strike with the chalcopyrite located in test holes VC-1, VC-3 and VC-9. It is thought that VC-15, (which located some chalcopyrite) and VC-8 did not adequately test their respective anomalies. The anomaly in the vicinity of VC-11 to VC-14 inclusive, coincides with the respective drill results. Pyrite and magnetite being the principle causative constituents.

(II) Several anomalies were found on the newly surveyed DM claims. It would appear that anomaly A contains 1-4% sulphides by volume to at least a depth of 200 feet. Anomaly B coincides with a magnetic high located by the Vanco magnetic survey and likely contains only 1-2% sulphides by volume. Both anomalies are located along a favourable geologic structure - the contact of the Iron Mask Batholith with the Pre-Tertiary - Cretaceous series.

RECOMMENDATIONS

Holes VC-15 and VC-8 did not adequately test their respective anomalies. VC-8 should have tested major anomaly B and VC-15 minor anomaly -1. Thus major anomalies A and B, and possibly minor anomaly -1 should be tested by diamond drilling. Investigation of the other minor anomalies and zones of possible interest should then be undertaken if encouraging results are encountered in the initial drill targets.

Respectfully submitted,

SULMAC EXPLORATION SERVICES LIMITED



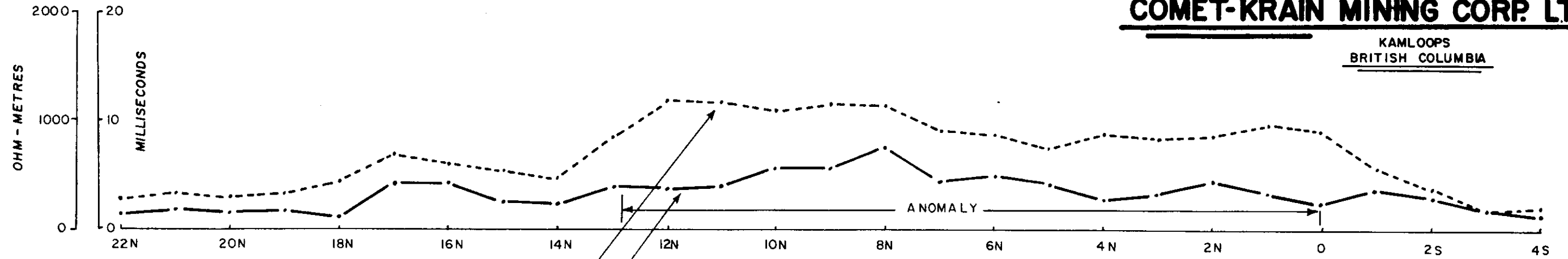
G.E. White, B. Sc.,
Geophysicist.

TORONTO, Ontario,

November 2, 1966.

I.P. SURVEY
COMET-KRAIN MINING CORP. LTD.

KAMLOOPS
 BRITISH COLUMBIA



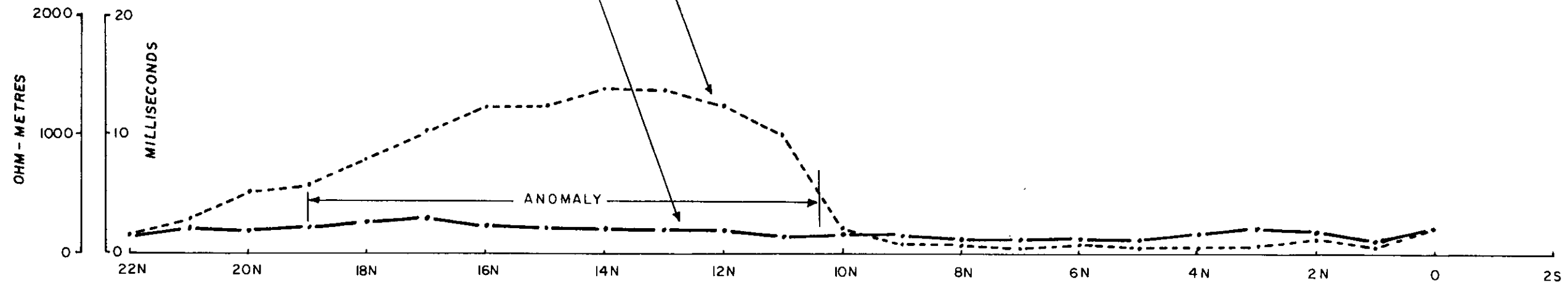
PROFILE - ANOMALY - 'B'

$\alpha = 200'$

LINE NO.-28E

APPARENT **CHARGEABILITY** 1" = 10 MILLISECONDS

APPARENT **RESISTIVITY** 1" = 1000 OHM-METRES



PROFILE - ANOMALY - 'A'

$\alpha = 200'$

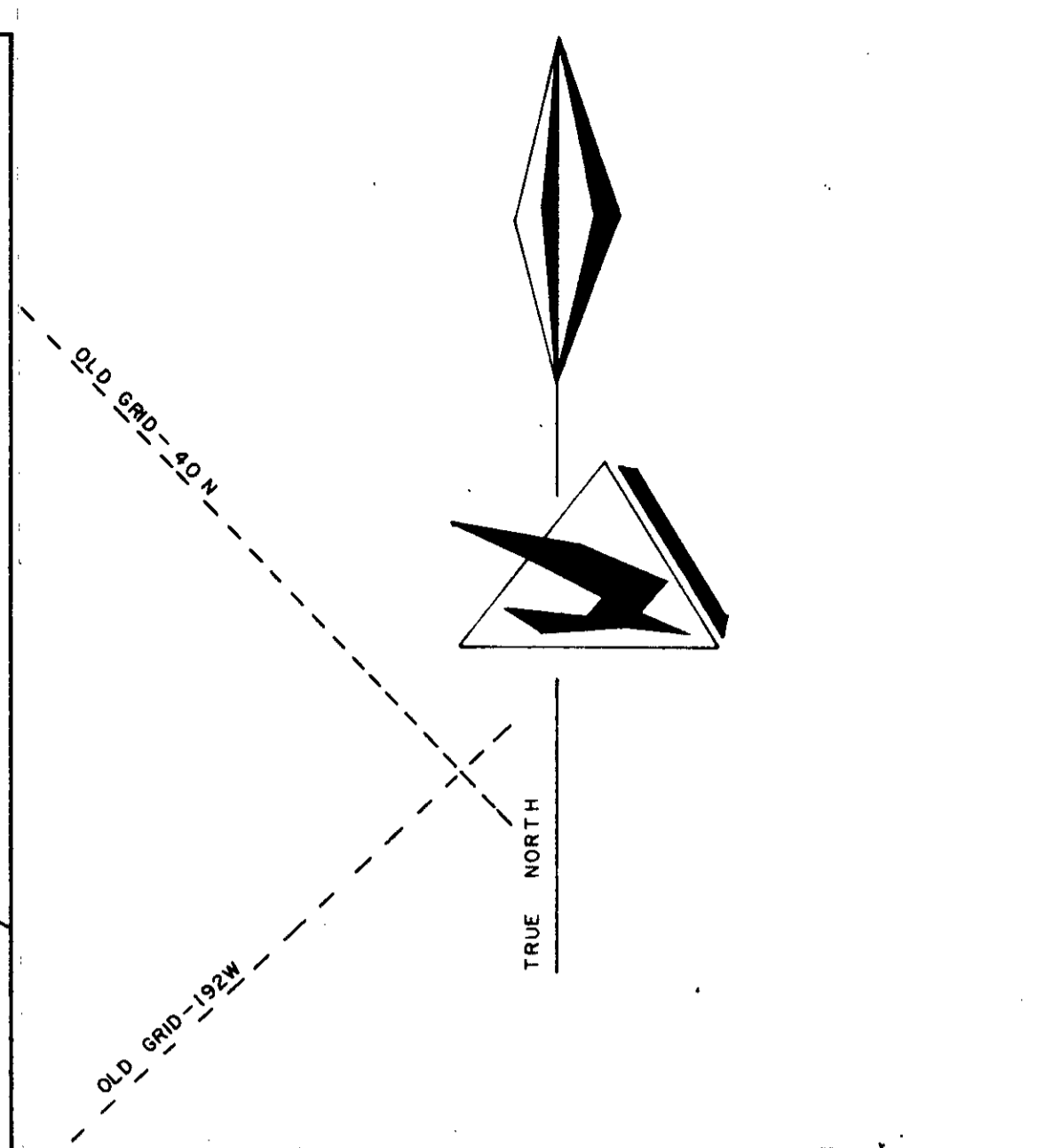
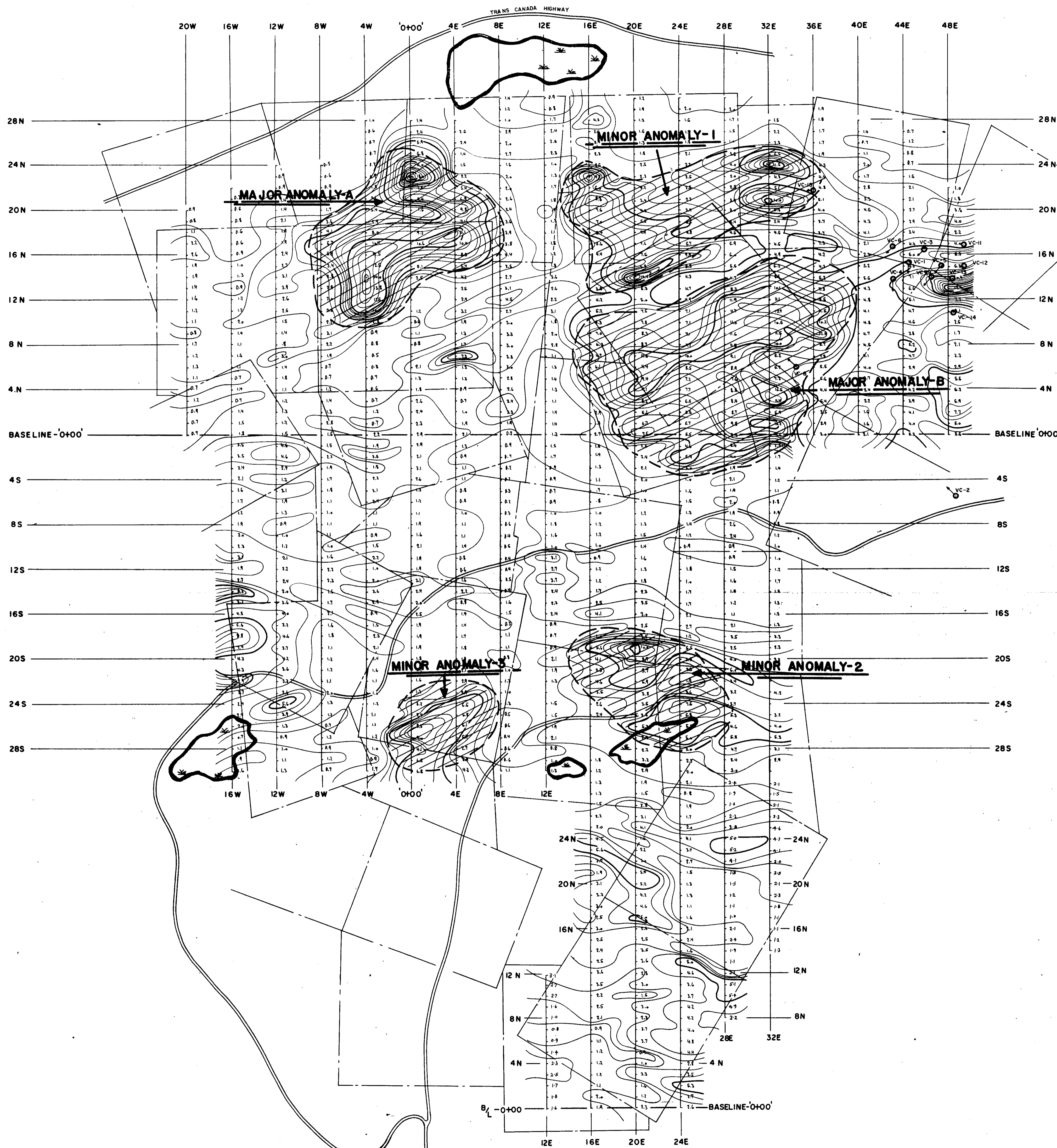
LINE NO.-4W

HORIZONTAL SCALE - 1" = 200'

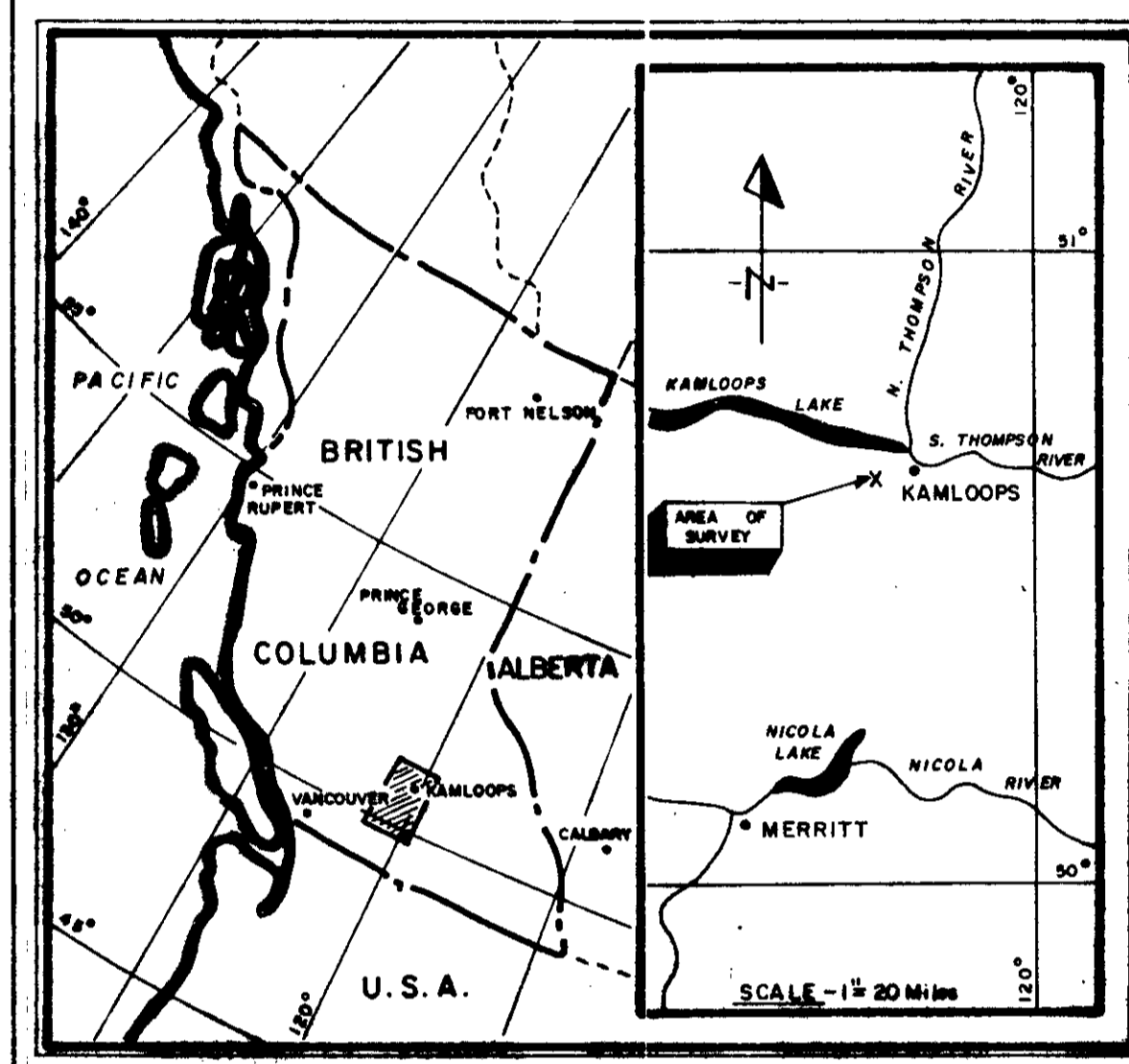
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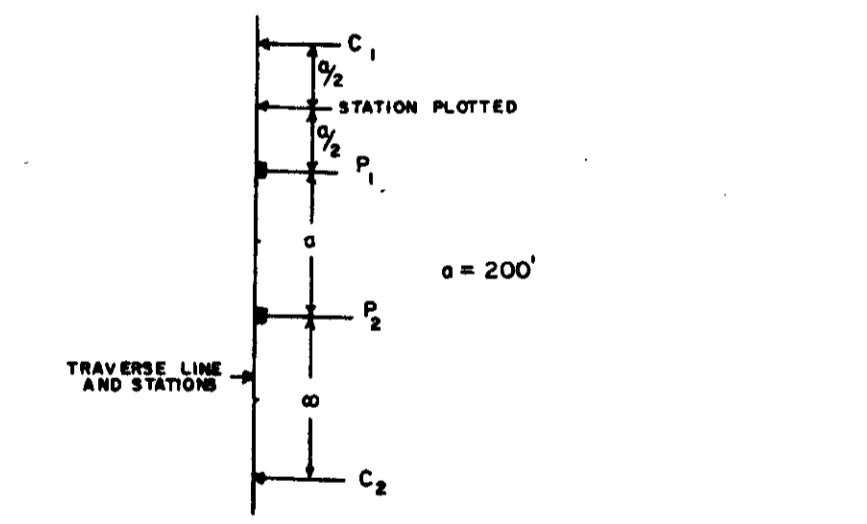


LOCATION MAP
SCALE - 1:250 MILES



LEGEND

INDUCED POLARIZATION SURVEY



CONTOUR INTERVAL 1.0 MILLISECOND
5.0, 10.0 MILLISECOND CONTOUR
2.0, 3.0, 4.0 etc. MILLISECOND CONTOUR
ANOMALOUS ZONE

MAP SYMBOLS

- CLAIM BOUNDARY
- ROAD
- POND, LAKE OUTLINE
- SWAMPY
- BORE HOLE

TO ACCOMPANY REPORT BY GLEN WHITE, DATED NOV. 2, 1966

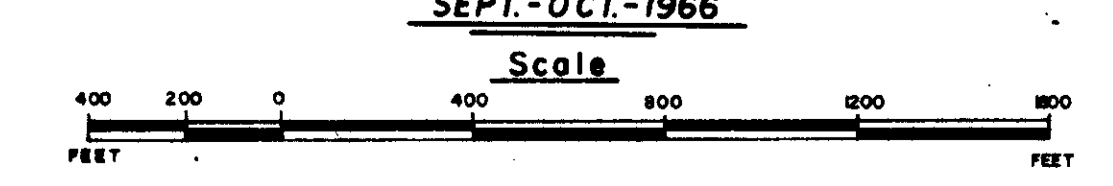
COMET-KRAIN MINING CORP. LTD.

KAMLOOPS - BRITISH COLUMBIA
KAMLOOPS - MINING DIVISION

#891

**APPARENT CHARGEABILITY
INDUCED POLARIZATION
SURVEY**

SULMAC EXPLORATION SERVICES LIMITED
SEPT.-OCT.-1966



GEOMYSICIST GLEN WHITE *Glen White* DRAWN BY S.A. GRANT

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