

3204

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3204 MAP

REPORT ON
AN INDUCED POLARIZATION SURVEY
DEASE LAKE AREA, BRITISH COLUMBIA
ON BEHALF OF
TANZILLA EXPLORATIONS LIMITED

104I/5W

by

Richard O. Crosby, B.Sc., P.Eng.

August 25, 1971

CLAIMS:

<u>Name</u>	
KAY	17 - 22 (inclusive)
KING	1, 3, 5, 72
KING	2 Fr., 3 Fr., 4 Fr.,
KING	5 Fr., 7 Fr.,
KO	1, 2, 4, 6, 8

LOCATION:

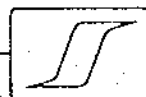
About 14 miles southeast of Dease Lake, B. C.
Liard Mining Division
58° 129° SW

DATES:

August 2 to August 8, 1971

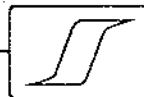
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(in text)	
<i>A</i> Plate 1 - Location Map	1 inch = 4 miles
(in envelope)	
<i>V</i> Plate 2 - Chargeability and Resistivity Profiles and Claim Location	1 inch = 400 feet



SUMMARY

The present induced polarization survey has revealed several zones of increased chargeabilities. Two drill hole locations have been recommended.



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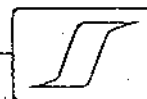
INTRODUCTION

During the period from August 2 to August 8, 1971, a geophysical field party executed an induced polarization survey over some KAY, KING and KO claims in the Dease Lake area, British Columbia on behalf of Tanzilla Explorations Limited. The field work was under the direction of Mr. Chris Zogg, an experienced geophysical operator on the staff of Seigel Associates Limited.

As shown on Plate 1, the survey area lies about 14 miles southeast of Dease Lake, B. C. and is accessible by road. The topography of the grid was rolling and open.

Scintrex Mk VII time domain (pulse-type) induced polarization equipment was employed on this property. The transmitting unit had a rating of 2.5 kilowatts and equal on and off times of 2.0 seconds. The receiving unit was a remote, ground-pulse type triggered by the rising and falling primary voltages set up in the ground by the transmitter. The integration of the transient polarization voltages takes place for 0.65 seconds after a 0.45 second delay time following the termination of the current-on-pulse.

The purpose of an induced polarization survey is to map the subsurface distribution of metallicly conducting mineralization beneath the grids covered. In the present area such mineralization could include chalcopyrite, pyrite and other metallic sulphide minerals. As well, other



minerals such as chlorite, graphite and magnetite can give responses not always distinguishable from sulphide mineralization.

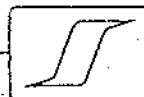
The three electrode array, with electrode spacings of 200 feet and 400 feet was employed for reconnaissance purposes. Station intervals were 200 feet. For additional detail a portion of Line 4 was also covered with the three electrode array and electrode spacings of 50 feet and 100 feet and 50 and 100 foot station intervals respectively.

For the present survey the grid consisted of a 4400 foot north-south base line and tie lines of various lengths perpendicular thereto at 800 foot intervals. The total length of the grid was 5.0 line miles.

GEOLOGY

The regional geological map 29-1962 Cry Lake, British Columbia sheet 1041 indicates the area is underlain by Upper Triassic andesites, basalt, tuffs and breccias. Copper bearing float is observed in an area of scarce outcrops, only a single outcrop of low-grade copper mineralization is known on the KAY 49 claim.

The regional geologic setting of the Tanzilla property is broadly similar to that adjoining Lytton Minerals Limited, Dease Lake property, i.e., both are near the contact of granitic and volcanic rocks. Lytton Minerals Limited, in 1968 outlined two nearby copper deposits, drill indicated to contain an aggregate of 15,000,000 tons of 0.4 percent to 0.5 percent copper. Mineralization consists of dissemination and stockwork of chalcopyrite and some bornite in highly fractured and altered andesite. Locally, strong magnetite concentration occurs with chalcopyrite in the andesite. Argillic and potassic hydrothermal alteration together with feldspar porphyry dykes and sills accompany the mineralization.



DISCUSSION OF RESULTS

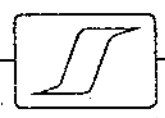
Plate 2, on the scale of 1 inch = 400 feet shows the chargeability and resistivity results in profile form. The vertical scales are 1 inch = 20.0 milliseconds for the chargeability and 1 inch = 1 logarithmic cycle with line trace taken as 1000 ohm-meters. The claim locations are shown on this plate superimposed upon the resistivity profiles.

The induced polarization profiles reveal that the observed range in chargeability is from 2.0 milliseconds to a maximum of 42.0 milliseconds. A uniform subsurface distribution of 1 percent by volume of metallicly conducting minerals such as sulphides or graphite is expected to contribute about 10.0 milliseconds to the observed chargeabilities. Greater percentages by volume of minerals such as magnetite, chlorite or sericite could give rise to responses similar to those due to sulphides.

Detail surveying with 50 foot and 100 foot electrode spacings was completed over the eastern portion of L 4 N. The amplitude of the responses indicates a concentration of about 3 to 4 percent by volume of electronic conductors. The resistivity responses indicate a generally low area, however there is no apparent correlation between the chargeability responses and the resistivities except on the 50 foot and 100 foot electrode spacings, where chargeability increases are coincident with resistivity increase, suggesting the possibility of some narrow chargeable zones possibly silicious.

Increased chargeabilities recorded on L 20 N, L 28 N and L 36 N coincide with resistivity depressions suggesting that these areas are both chargeable and conductive, due possibly to intense fracturing.

The resistivity profiles also exhibit an intense gradient on



the eastern ends of L 4 N through L 36 N indicating a change in bedrock.

CONCLUSIONS AND RECOMMENDATIONS

The present induced polarization survey has revealed areas of increased chargeability responses which warrant additional investigation.

It is recommended that the following drill holes be completed in order to test the source of anomalous responses.

<u>COLLAR</u>	<u>DIP</u>	<u>DIRECTION</u>	<u>MINIMUM DEPTH</u>
L 4 N, 2 + 50 E	-45°	West	300 Ft.
L 20 N, 8 W	-45°	West	350 Ft.

Further drilling can be recommended based upon the present induced polarization results if the results of the first two drill holes should warrant.

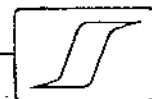
Respectfully submitted,

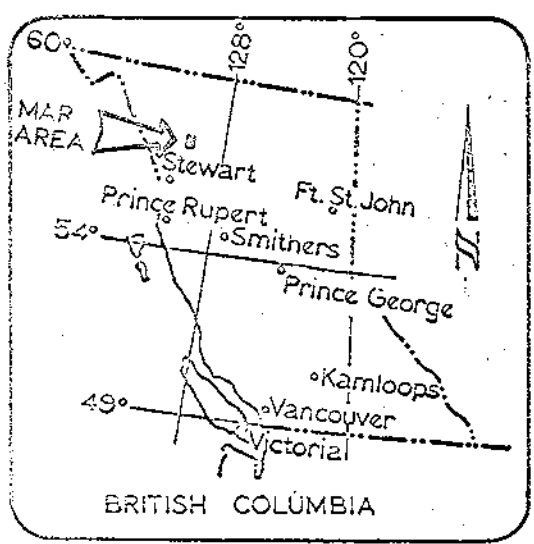
SEIGEL ASSOCIATES LIMITED

Richard O. Crosby

Richard O. Crosby, B.Sc., P.Eng.
Geophysicist

Vancouver, B. C.
August 25, 1971





TANZILLA EXPLORATIONS LIMITED (N.P.L.)

LOCATION MAP

DEASE LAKE AREA · BRITISH COLUMBIA

SCALE 1 : 250,000

4 miles 0 4 miles

Survey by SEIGEL ASSOCIATES LIMITED
AUGUST 1971

PLATE 1



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

In the Matter of a geophysical survey on behalf of
Tansilla Explorations Limited

I, L. A. Merrifield for Seigel Associates Limited

of 750 - 890 West Pender Street, Vancouver

in the Province of British Columbia, do solemnly declare that an induced polarization survey has been executed on some KAY, KING, and KO claims, Dease Lake area, British Columbia between August 2 and August 8, 1971. The following expenses were incurred:

(1) Wages;			
C. Logg	6 days @ \$35.00/day	\$210.00	
B. Paradis	6 days @ \$27.50/day	<u>165.00</u>	
		\$375.00	\$375.00
(2) Transportation & shipping to the job			728.40
(3) Food & Living Expenses			162.09
(4) Use of geophysical equipment			
3 days @ \$30.00/day			90.00
(5) Paid to Seigel Associates Limited			
to cover geophysicist's supervision,			
calculating, plotting and fairdrawing			
data and preparation of final reports			<u>1,064.27</u>
			\$2,419.76

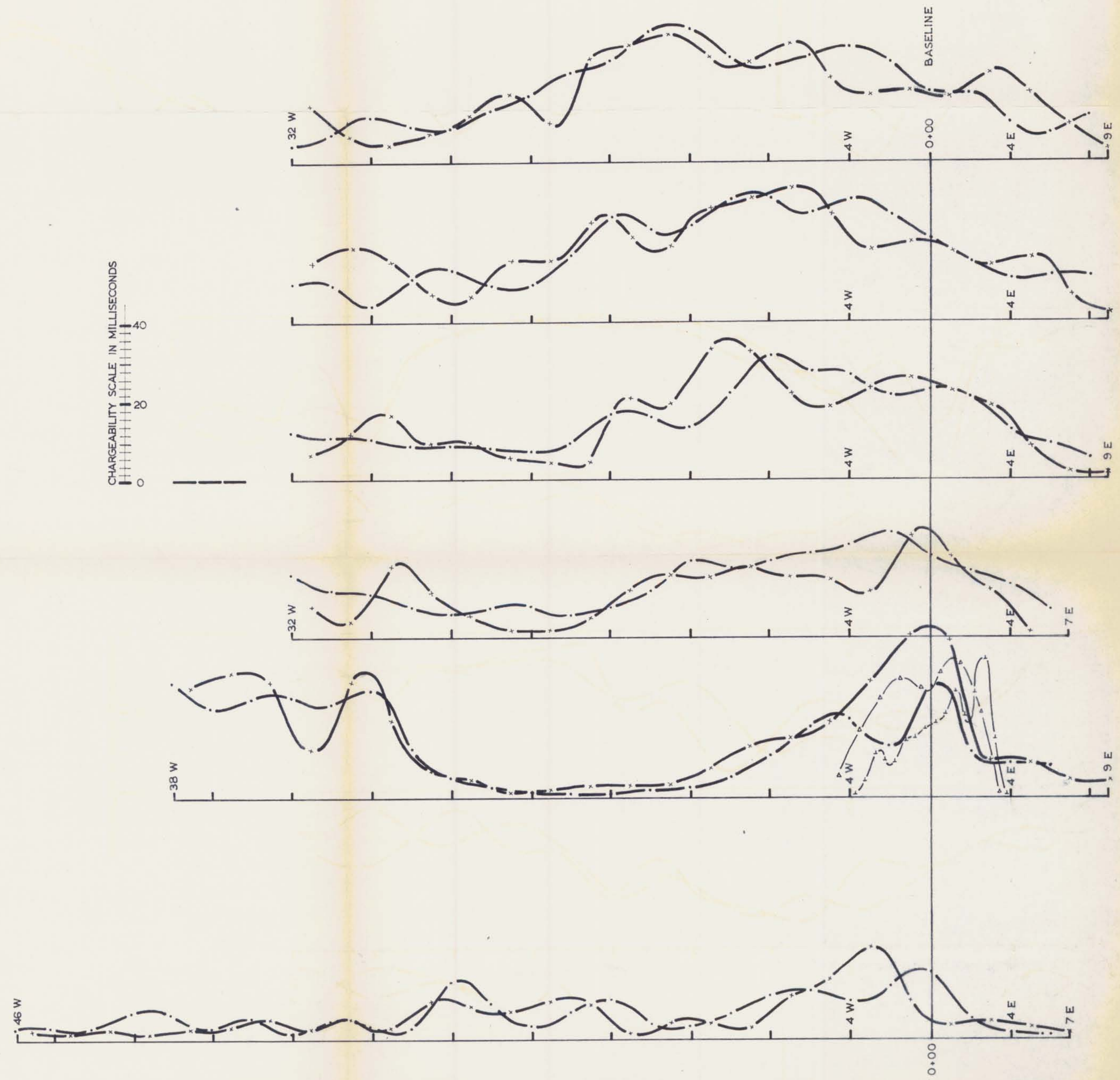
And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 13th
day of September, 1971, A.D.

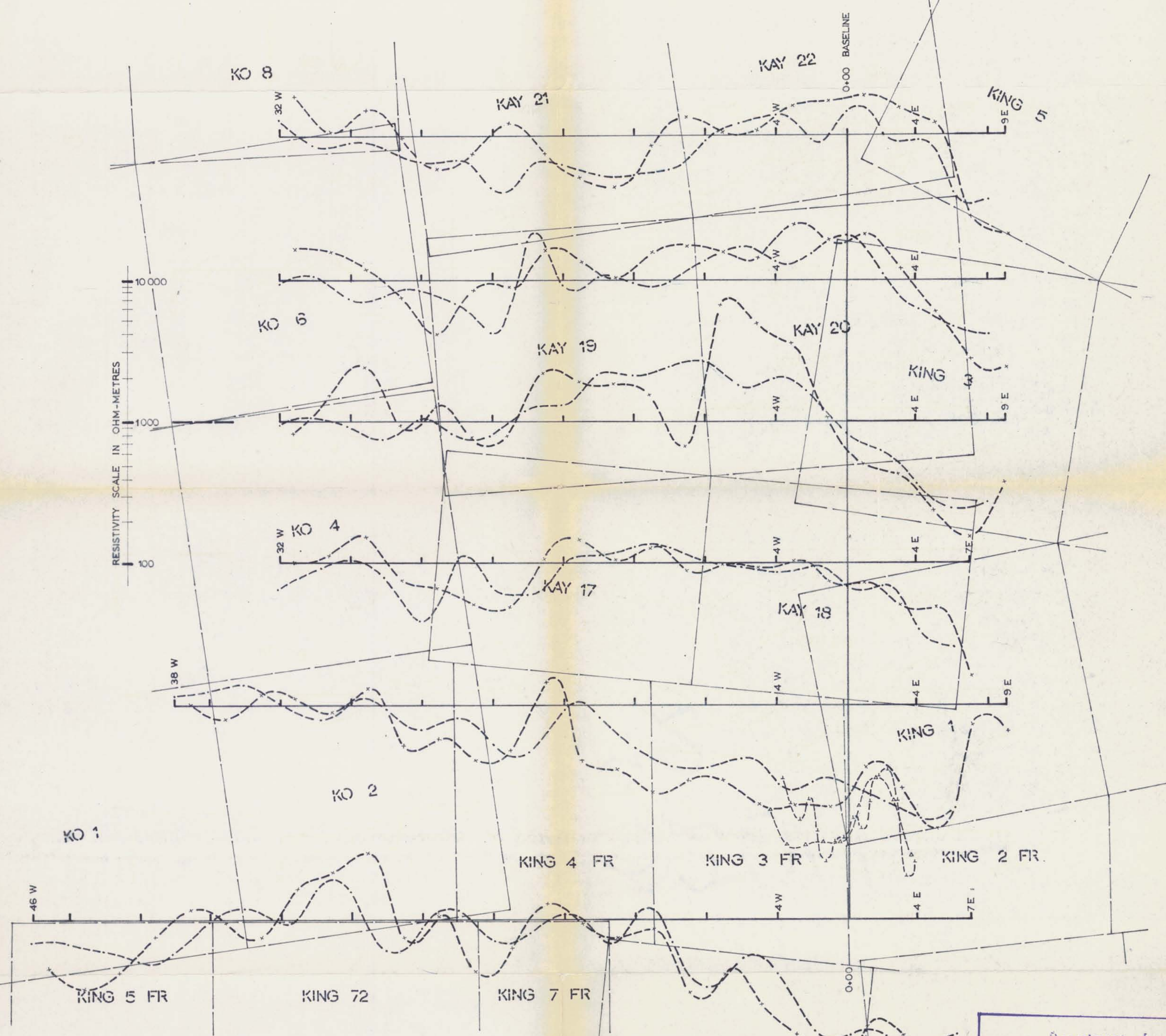
L.A. Merrifield

Jean Turner

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



L 36 N
L 28 N
L 20 N
L 12 N
L 4 N



L 8 S

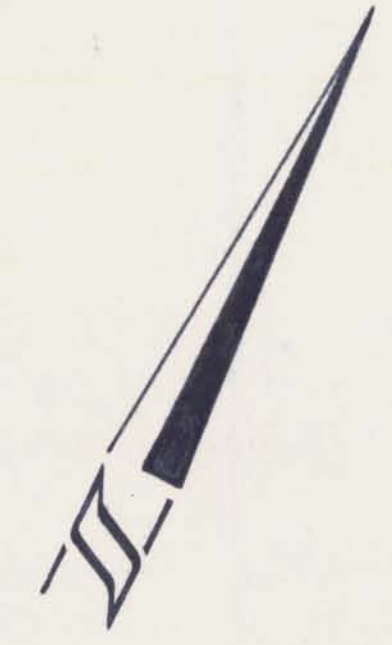
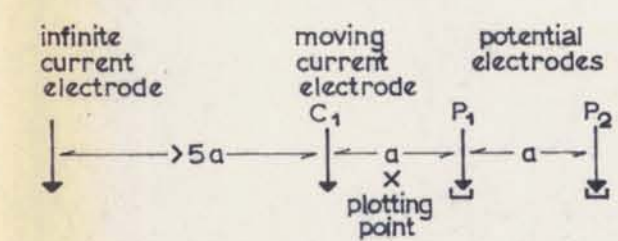
LEGEND

CHARGEABILITY SCALE : 1 inch = 20 MILLISECONDS
ELECTRODE SPACING :
a = 400' - - - - -
a = 200' - - - - -
a = 100' - - - - -
a = 50' - - - - -

RESISTIVITY SCALE : 1 inch = 1 LOGARITHMIC CYCLE WITH LINE TRACE TAKEN AS 1000 OHM METRES
ELECTRODE SPACING a = 400' - - - - -
a = 200' - - - - -
a = 100' - - - - -
a = 50' - - - - -

NOTES

SCINTREX MK VII INDUCED POLARIZATION INSTRUMENTATION
THREE ELECTRODE ARRAY



TO ACCOMPANY A GEOPHYSICAL REPORT
BY R. O. CROSBY DATED AUG. 25, 1971

3204

M-2

Department of
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PLATE 2
TANZILLA EXPLORATIONS LTD. (N.P.L.)
DEASE LAKE AREA - BRITISH COLUMBIA

INDUCED POLARIZATION SURVEY
CHARGEABILITY AND RESISTIVITY PROFILES
CLAIM LOCATION

SCALE : 1 inch = 400 feet
400 feet 0 400 feet

SURVEY BY SEIGEL ASSOCIATES LIMITED AUGUST 1971

Richard Crosby