

1123

51° 120° N.W.

A GEOPHYSICAL REPORT ON
AN INDUCED POLARIZATION
SURVEY

KALA GROUP

Kala GROUP BY

T. A. CONTO B. Sc.

92P/9W

ANACONDA AMERICAN BRASS LTD;

T. A. CONTO, B.Sc.
ANACONDA AMERICAN BRASS LTD.

(P.C.)

A GEOPHYSICAL REPORT ON
AN INDUCED POLARIZATION SURVEY
NEAR DEER LAKE, KAMLOOPS MINING DISTRICT
BRITISH COLUMBIA
(51°, 120°, N.W.)

PROPERTY: KALA GROUP
CLAIMS COVERED: KALA 6 AND 8
OWNER: J. H. MACKINLAY

BY

T. A. CONTO, B.Sc.

ANACONDA AMERICAN BRASS LTD., WESTERN EXPLORATION DIVISION
SEPTEMBER 14 TO SEPTEMBER 17, 1967

October 5, 1967

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Survey Equipment and Field Operation

The geophysical concept of Induced Polarization (I.P.) is thought to be the electro-chemical phenomenon that occurs at a solution - "metallic" mineral interface when the mode of conduction changes from ionic to electronic. When a D.C. current is transmitted through a "grounded" dipole the measured voltage in a nearby dipole will not drop instantly to the J.F. voltage, but will decay with time. This is the measurable I.P. effect which results from various types of polarization or blocking. The most predominant type is the solution - "metallic" mineral interface.

This effect is measured in various ways and is reported as the I.P. parameter. The variation in instrumentation and mathematical treatment of the method results in such terms as "percent frequency effect", "chargeability", phase angle and "metal factor". The parameter used in our equipment is the concept of phase angle. The phase angle is equal to the angle whose tangent is the area under the voltage decay curve of the receiver dipole when the current is off divided by the area when the current is on, assuming the current on and off times are equal. From an alternate point of view a phase angle difference can be measured from a R-C bridge tripole; each leg of the bridge being influenced by different equipotential surfaces.

The equipment used for the survey was manufactured by Anaconda. The transmitter has a cycling rate of 1 cycle per second. The receiver is a simple R-C bridge network which is manipulated to a null position for each movement of the various electrodes. The measurements are made along a surveyed line with a variable spacing between the near current electrode and middle potential electrode. The plotting point is midway between the mid-potential electrode and the current electrode. The phase angle is reported in minutes of phase shift and represents the difference between the two legs of the tripole.


INTRODUCTION

Two I.P. lines were run over the Kala 6 and 8 claims in September 1967. The claims are owned by Mr. J. M. Mackinlay and located in the Kamloops Mining District. The induced polarization survey was made to see if there were any anomalous concentrations of sulfides on the claims. The two traverses failed to indicate favorable anomalous conditions.

Results and Interpretation

A plan map, at one inch to four hundred feet, showing the location of lines 18 and 23 west relative to the Kala 6 and 8 claims is included in the back pocket of this report. The I.F. results for the two lines are shown in profile form. The lines were run from station 69 North to station 77 North as indicated on both the plan and profile maps.

The plotting point for each reading is midway between the near current electrode and the mid tripole electrode. The separation between these two electrodes was varied as indicated by the 200 and 400-foot spread. The results do not indicate anomalous sulfide concentrations. On the basis of the I.F., no further work is recommended on the property.



T. A. Conto

TCA:bs

APPENDIX I

ASSESSMENT DETAILS

Property: Kala 6 and 8 Claims
 Owner: Mr. J. W. Mackinlay
 Location: 9.5 Miles Northwest of
 Little Fort, B.C.

Mining Division: Kamloops
 Province: British Columbia
 Date Started: 14 September 1967
 Date Finished: 17 September 1967

Type of Survey:	Geophysical (Induced Polarization)	Number of Stations:	10
Operating Man Days:	6	Number of Readings:	20
Supervisory Man Days:	1	Line Feet Surveyed:	1600 Feet
Drafting & Typing Man Days:	1		
Total Man Days:	8		

Personnel Employed on Survey

Supervision:
 Thomas A. Conto

Drafting and Typing:
 Thomas A. Conto
 Betty Saunders

Field Technicians:

<u>NAME</u>	<u>CATEGORY</u>	<u>RATE</u>	<u>DAYS WORKED</u>	<u>PERIOD</u>	<u>WAGE</u>
Hans Classen	Crew Chief	425/mo	1	Sept 16 ($\frac{1}{2}$ day) Sept 17 ($\frac{1}{2}$ day)	\$17.00
Dale Little	Helper & Line Cutter	375/mo	1 $\frac{1}{2}$	Sept 14 ($\frac{1}{2}$ day) Sept 16 ($\frac{1}{2}$ day) Sept 17 ($\frac{1}{2}$ day)	\$22.50
Ron Sanderson	Helper & Line Cutter	400/mo	1 $\frac{1}{2}$	Sept 16 (1 day) Sept 17 ($\frac{1}{2}$ day)	\$24.00
George Davis	Line Cutter	425/mo	$\frac{1}{2}$	Sept 14 ($\frac{1}{2}$ day)	\$ 8.50
Dave Payne	Helper & Line Cutter	400/mo	1 $\frac{1}{2}$	Sept 16 (1 day) Sept 17 ($\frac{1}{2}$ day)	\$24.00
					\$96.00


 T. A. Conto

APPENDIX II

STATEMENT OF COSTS

Salaries	\$ 96.00
Room & Board @ \$7.00/ Man Day	42.00
Drafting & Typing	25.00
Supervising	25.00
Transportation	<u>15.00</u>
TOTAL	\$203.00

T. A. Conto
T. A. Conto

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this " "
day of *October 1967*, A.D. *P. S. Hirst*

Jill Turner
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia
Sub-mining Recorder

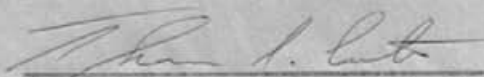
C E R T I F I C A T E

I, Thomas A. Conto, of the town of Britannia Beach, Province of British Columbia, do hereby certify that:

- 1) I am a geophysicist residing at Britannia Beach, British Columbia.
- 2) I am a graduate of the University of Utah with a B.Sc. Degree (1960) in Geophysics.
- 3) I am an associate member of the Society of Exploration Geophysicists.
- 4) I have been practising my profession for five years.
- 5) I have no direct or indirect interest, nor do I expect to receive any interest, direct or indirect, in the property of Mr. J. K. MacKinlay.
- 6) The statements made in this report are based on a study of published literature and unpublished private reports and geophysical data.

Dated at Britannia Beach

this day of October 1967


Thomas A. Conto, B.Sc. Geophysics

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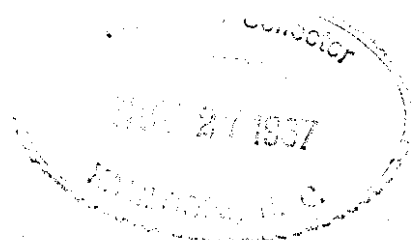
ANACONDA AMERICAN BRASS LIMITED

WESTERN EXPLORATION DIVISION

BRITANNIA BEACH, B.C.

PHONE AREA CODE 604
896-2242

November 23, 1967



Mr. Frank J. Sell
Mining Recorder
Court House
Kamloops, B.C.

Re: Kala 6 & 8 Claims

Dear Sir:

In answer to your letter of November 20, 1967 regarding the Kala 6 and 8 claims, I wish to advise you that the geophysical work described in the assessment report was supervised and interpreted by Mr. Conto. The actual field work was done by our equipment operator, Mr. Hans Classen, who is listed as crew chief in Appendix 1.

Mr. Classen would be classed as a technician. He is a 3rd year U.B.C. student studying for his B.Sc. in Chemistry. Mr. Classen was trained by Mr. Conto, our geophysicist, as an equipment operator during the summer of 1967.

Yours very truly,

P. E. Hirst

PEH:bs
cc G. C. Waterman

SILVER 34

SILVER 33

SILVER 32

51° 32' N

KALA 8

KALA 6

SILVER 31

TC 215

TC 216

NORA LAKE

ANACONDA AMERICAN BRASS LTD.
WESTERN EXPLORATION DIVISION

KALA GROUP
KAMLOOPS M.D., B.C.

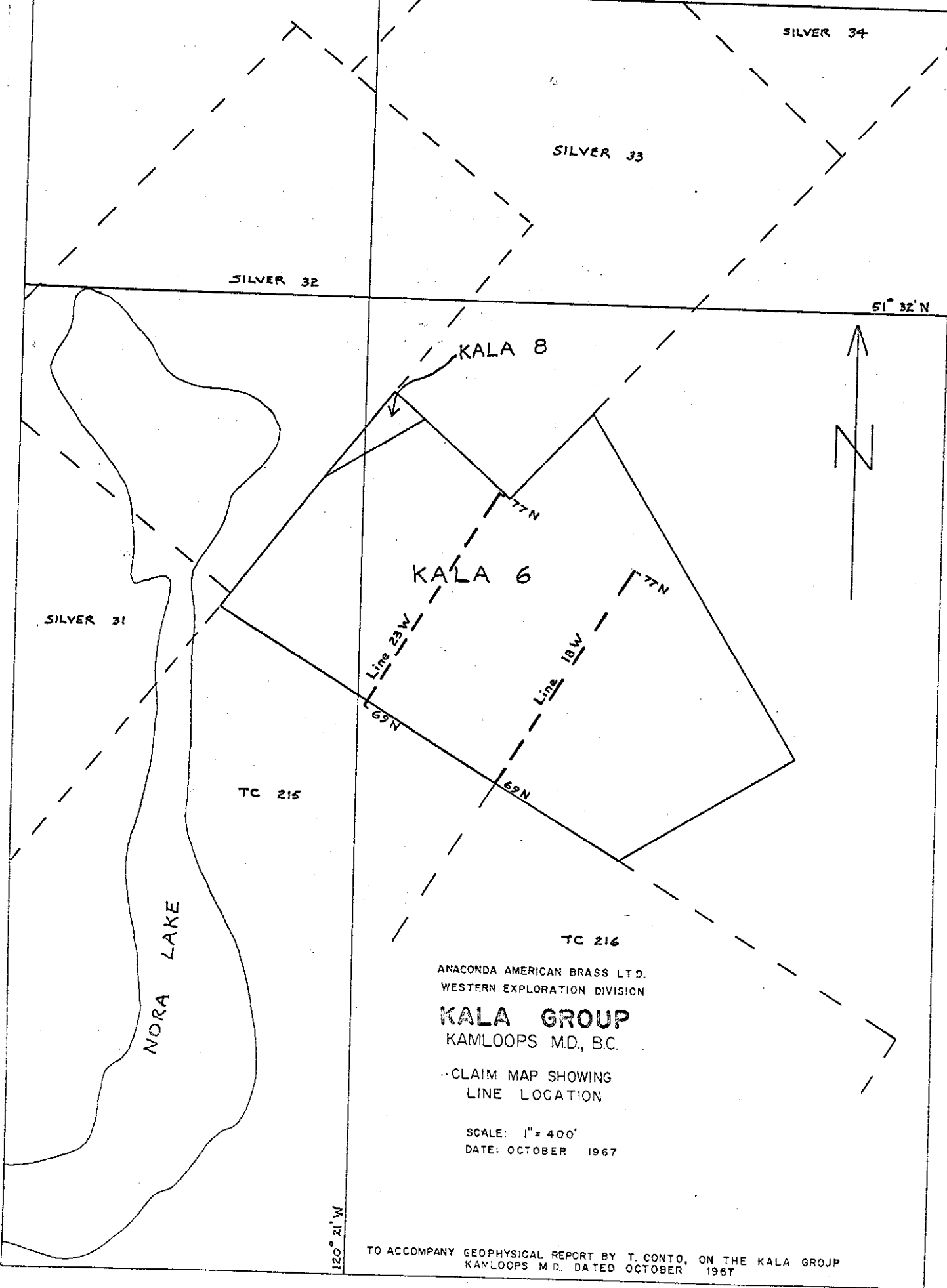
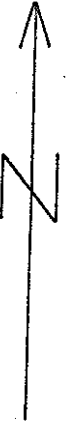
CLAIM MAP SHOWING
LINE LOCATION

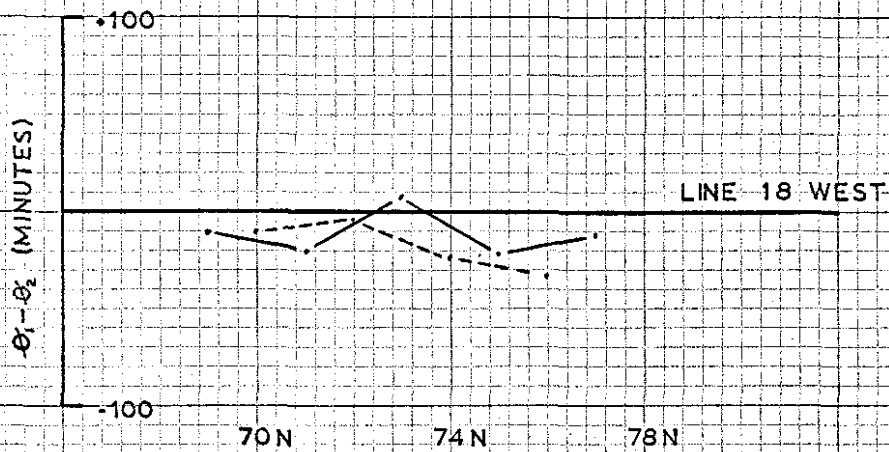
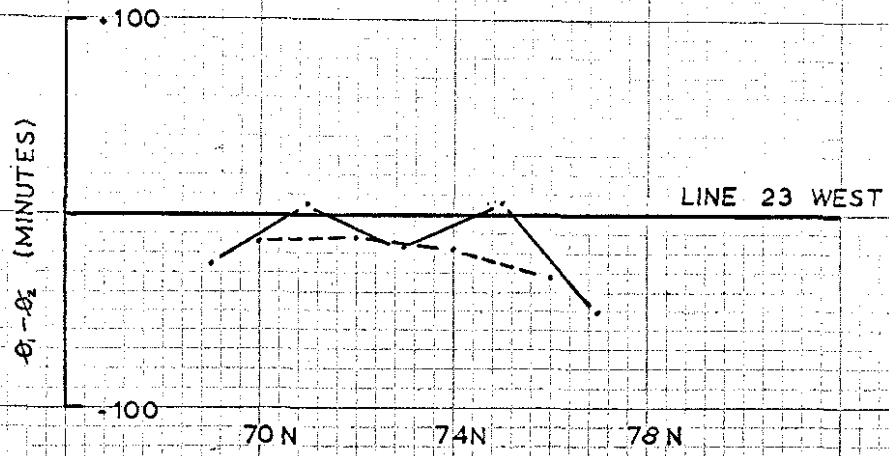
SCALE: 1" = 400'

DATE: OCTOBER 1967

TO ACCOMPANY GEOPHYSICAL REPORT BY T. CONTO, ON THE KALA GROUP
KAMLOOPS M.D. DATED OCTOBER 1967

120° 21' W





ANACONDA AMERICAN BRASS LTD.
WESTERN EXPLORATION DIVISION

KALA GROUP

KAMLOOPS M.D., B.C.

INDUCED POLARIZATION
P.D.R. - H.

SCALE: 1" = 400'
DATE: SEPT. 1967
DATA BY: H. C.

————— 200' SPREAD

----- 400' SPREAD

TO ACCOMPANY GEOPHYSICAL REPORT BY T. CONTO, ON THE KALA GROUP,
KAMLOOPS M.D., DATED OCTOBER, 1967