

2695

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2695 MAP.....

REPORT ON INDUCED POLARIZATION SURVEY
GILBERTSON OPTION
CRACROFT ISLAND, B.C.

92L/10E

by

Jon G. Baird, B.Sc., P. Eng.

October 14, 1970

CLAIMS:

Name

G 1, 2 and 3

LOCATION:

West Cracroft Island, 80 miles NE of
Campbell River, B.C.

Vancouver Mining Division

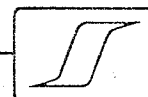
126° 50' NW

DATES OF FIELD SURVEY:

March 28 to April 6, 1970

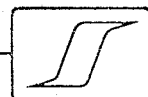
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| (in text) | |
| #1 DWG L - 6023 - Location Map | 1" = 120 miles 1" = 1 mile |
| (in envelope) | |
| #2 DWG IP - 8073 - Chargeability and Resistivity Profile Plan | 1" = 200' |



SUMMARY

An induced polarization survey on this property has revealed no significant abnormal responses. We may conclude that there is little possibility that a large tonnage, low grade deposit of sulphide mineralization of economic significance may lie within about 300' of the ground surface near the two profiles covered by this survey.



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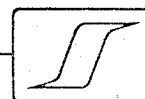
INTRODUCTION

During the period March 28 to April 6, 1970, a geophysical field party on the staff of Rio Tinto Canadian Exploration Limited under the direction of Mr. D. N. Sexsmith executed an induced polarization survey on claims known as the Gilbertson Option on Cracroft Island, British Columbia. The results of the survey, incorporated in a report by H. Beckmann dated June 1970, have been submitted to Seigel Associates for reporting.

As shown on DWG L-6023, the survey area straddles a tidewater bay on Cracroft Island approximately 80 miles northeast of Campbell River. Access is by boat or float plane from Campbell River or Kelsey Bay. The surface of the claims is covered by scrub timber and overburden.

The claims covered, in whole or part, by this survey are listed on the title page of this report and are shown on DWG L-6023 and DWG IP-8073. These claims are held by W. Gilbertson and were under option to Rio Tinto Canadian Exploration Limited at the time of the survey.

Scintrex Mk VI time-domain (pulse-type) induced polarization equipment has been employed on this property. The transmitting unit had a rating of 2.5 kw. 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.

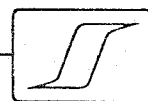
The purpose of an induced polarization survey is to map the subsurface distribution of metallicly conducting mineralization beneath the grids covered. In the present area such mineralization could include pyrite, chalcopyrite, bornite and other metallic sulphide minerals. As well, metallic conductors such as graphite and artificial installations such as pipelines, fences etc., can give responses not always distinguishable from sulphide mineralization. These latter anomalous sources are not expected to occur on this property.

The three electrode array was employed for the survey. For this electrode array, one current electrode and two potential electrodes traverse the profiles with an interelectrode spacing called "a". The second or "infinite" current electrode is placed a distance greater than 5a from the measuring point which is defined as the midpoint between the moving current electrode and the near potential electrode. For the reconnaissance survey observations were taken for a = 200' and a = 400', the distance between observations being 200'.

Two profiles, each approximately 2500' in length and oriented north-south were covered. The location of the profiles is shown on DWG IP-8073.

GEOLOGY

The geology of the property has been studied by geologists on the staff of Rio Tinto Canadian Exploration Limited and a geological report by G. Boggaram dated May, 1970 has been made available to the writer.



The survey area is underlain by Triassic volcanic flows of the Karmutsen Group possibly cut by a fault expressed by the tidewater bay. In places the rocks are sheared and occasionally carry chalcopyrite, pyrite and bornite.

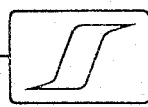
The survey was undertaken to attempt to locate concentrations of copper sulphide mineralization which would be mineable by large tonnage methods.

DISCUSSION OF RESULTS

DWG IP-8073 shows the chargeability and resistivity results in profile form. The vertical scales are 1" = 10.0 milliseconds and 1" = 5000 ohm-metres while the plan scale is 1" = 200'. Symbols explained in the legend are used to distinguish observations taken with 200' and 400' electrode spacings.

The chargeability profiles indicate that the observed chargeability values average about 2.0 milliseconds and are everywhere less than 5.5 milliseconds. This is well within the non-metallic chargeability range for the volcanic rocks believed to underlie the survey area. With this background a uniform distribution of 1% by volume of metallicly conducting mineralization in the subsurface would be expected to add approximately 10.0 milliseconds to the background level. Chargeabilities in excess of about 10.0 milliseconds could be considered worthy of further investigation since deposits of very low concentrations of copper and molybdenum of sufficient dimensions may have economic significance.

The resistivity results show great variation and range from below 100 to in excess of 5000 ohm-metres. The areas nearest the seawater are seen to have the lowest resistivity as would be expected for faulted



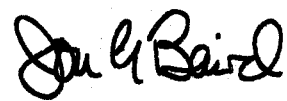
and sheared rocks impregnated by conductive salt water.

At locations where the resistivity was extremely low it was often not possible to take chargeability observations. To cover these areas it would be necessary to use shorter electrode spacings and therefore sacrifice depth penetration or use a higher power transmitting unit not available at the time of the survey.

Since there are no significant abnormal chargeability responses, we may conclude that there is little possibility that a large tonnage, low grade deposit of sulphide mineralization of economic significance may lie within 300' of the ground surface near the parts of the profiles where chargeability observations have been taken.

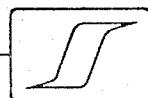
Respectfully submitted,

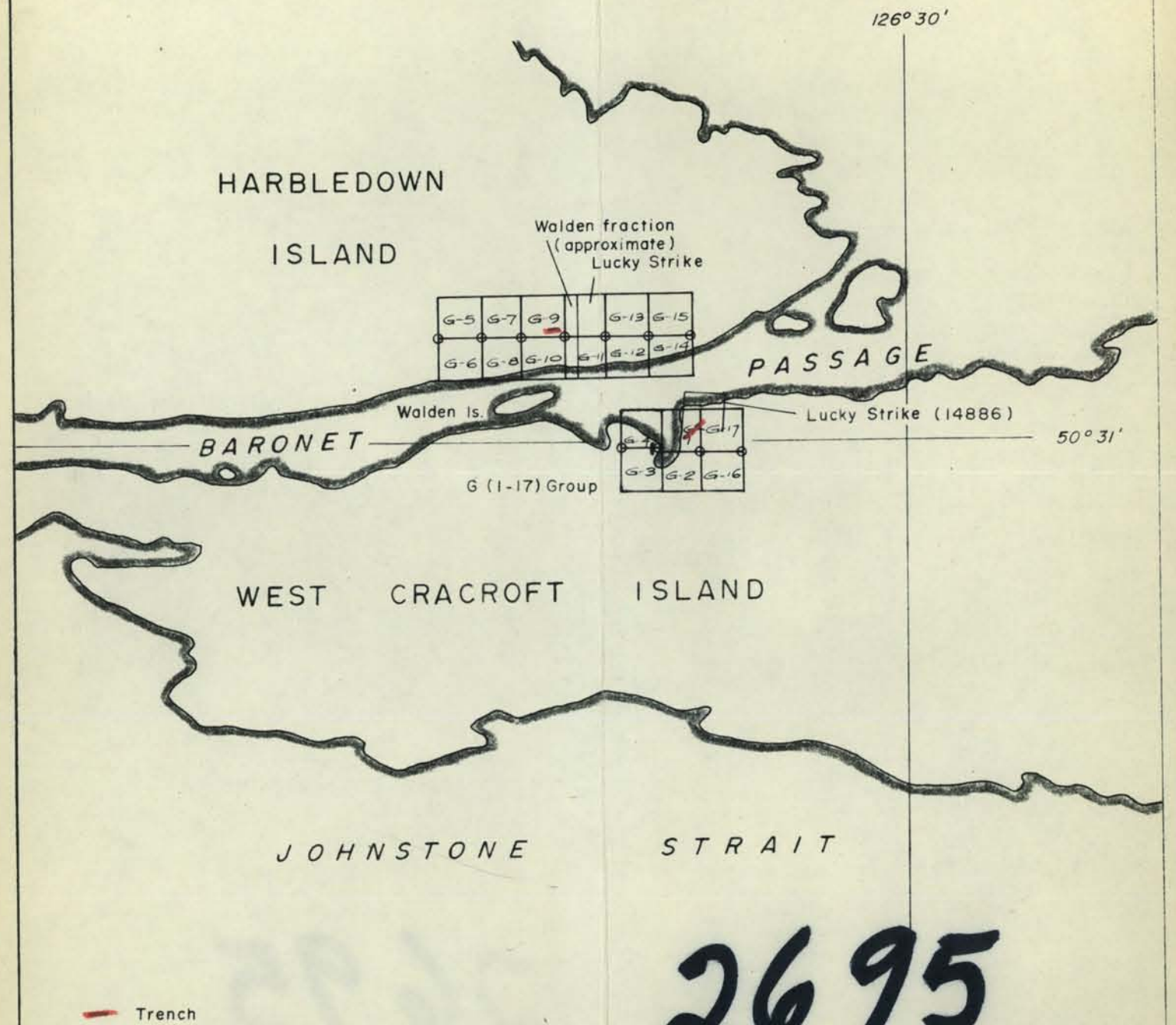
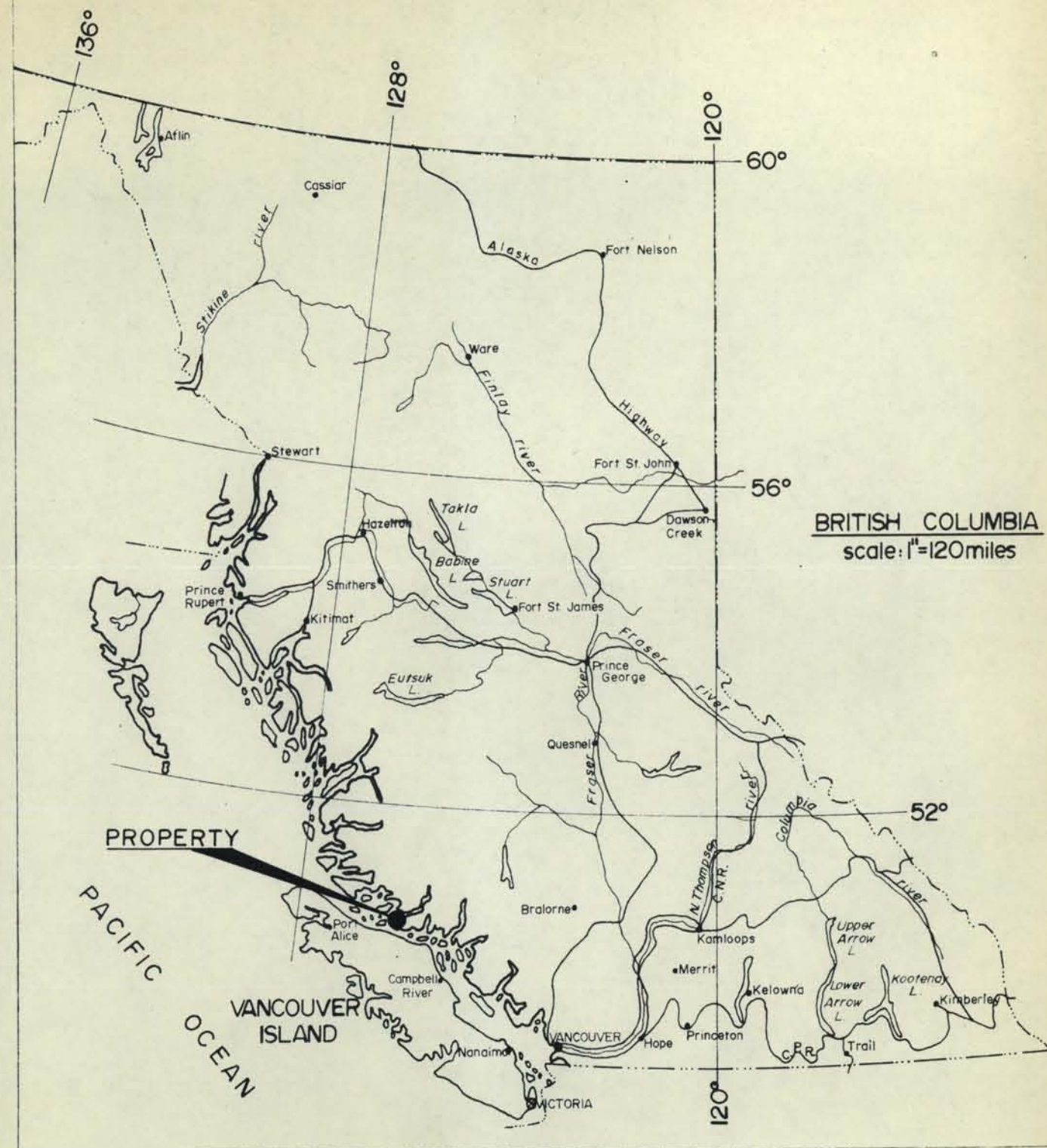
SEIGEL ASSOCIATES LIMITED



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October 14, 1970





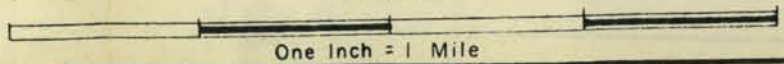
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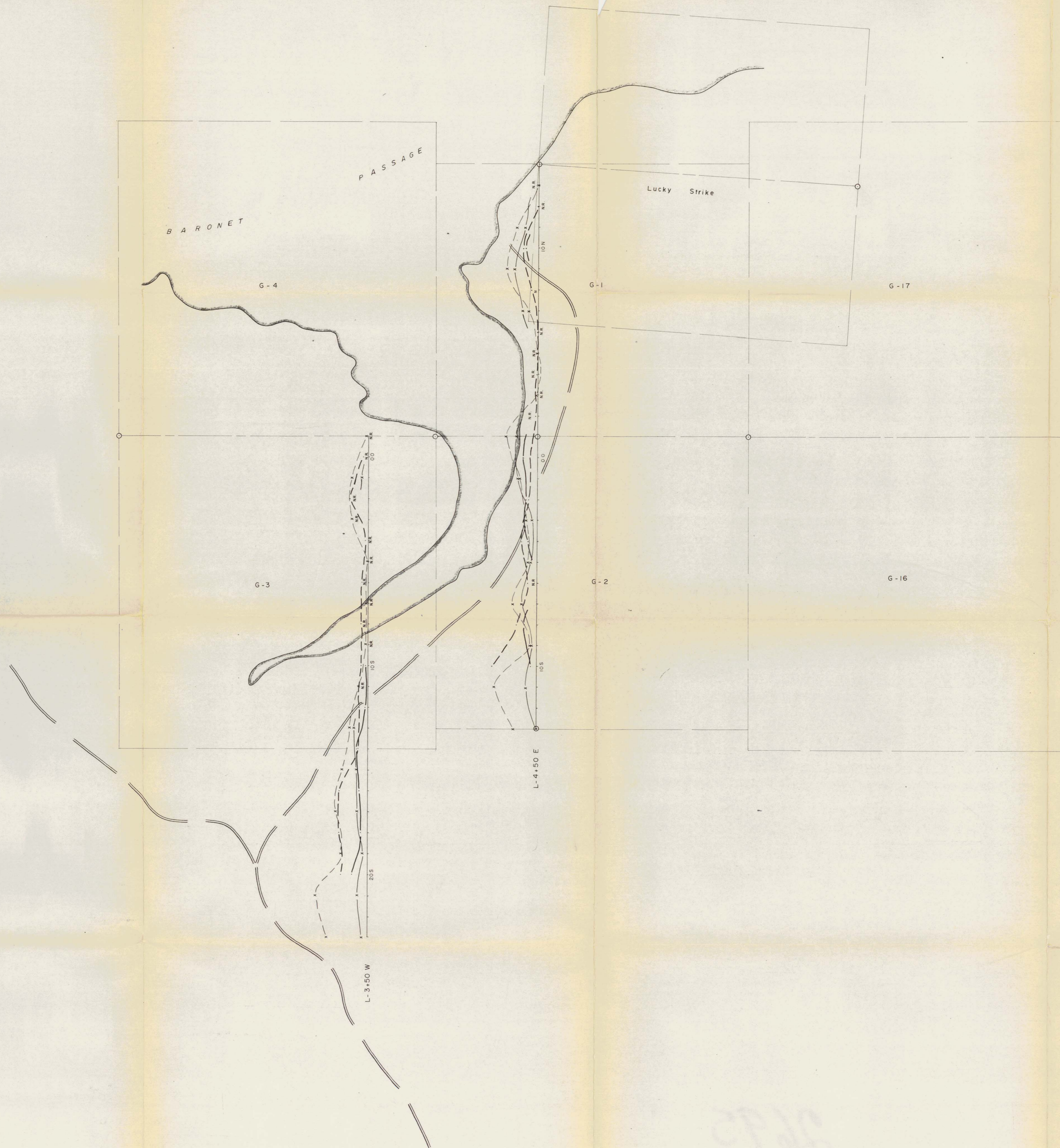
RIO TINTO CANADIAN EXPLORATION LTD.
CRACROFT & HARBLEDOWN ISLS.

LOCATION MAP *J. Baird*

SCALE



JAN., 70 EWJ / dc DWG L-6023



Legend

Chargeability profile scale 1" = 10 Milliseconds
 Electrode spacing a = 400' ———— x
 a = 200' x ———— x

Resistivity profile scale 1" = 5000 Ohm-meters
 Electrode spacing a = 400' ———— x
 a = 200' x ———— x

NOTE: Three electrode array
 Current electrode North
 N.R. - no chargeability reading

Department of
 Mines and Petroleum Resources
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 NO. 2695 MAP #2

2695 *ABind*

M.T.S.
 92-L-10

SCALE
 One inch = 200 Feet

RIO TINTO CANADIAN EXPLORATION LIMITED
 CRACROFT ISLAND B.C.
 GILBERTSON OPTION
 CHARGEABILITY & RESISTIVITY
 PROFILE PLAN
 MAY 70 D.S./rwr DWG. IP-8073