PHOENIX GEOPHYSICS LIMITED

REPORT ON THE

PHASE INDUCED POLARIZATION

AND RESISTIVITY SURVEY

ON THE INDIAN RIVER PROJECT

SQUAMISH AREA

VANCOUVER M.D., BRITISH COLUMBIA

FOR

ANACONDA CANADA EXPLORATION LIMITED

TABLE OF CONTENTS

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N.T.S. 92G/10W

Latitude: 49°35'N Longitude: 122°42'W

BY

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September 4, 1981

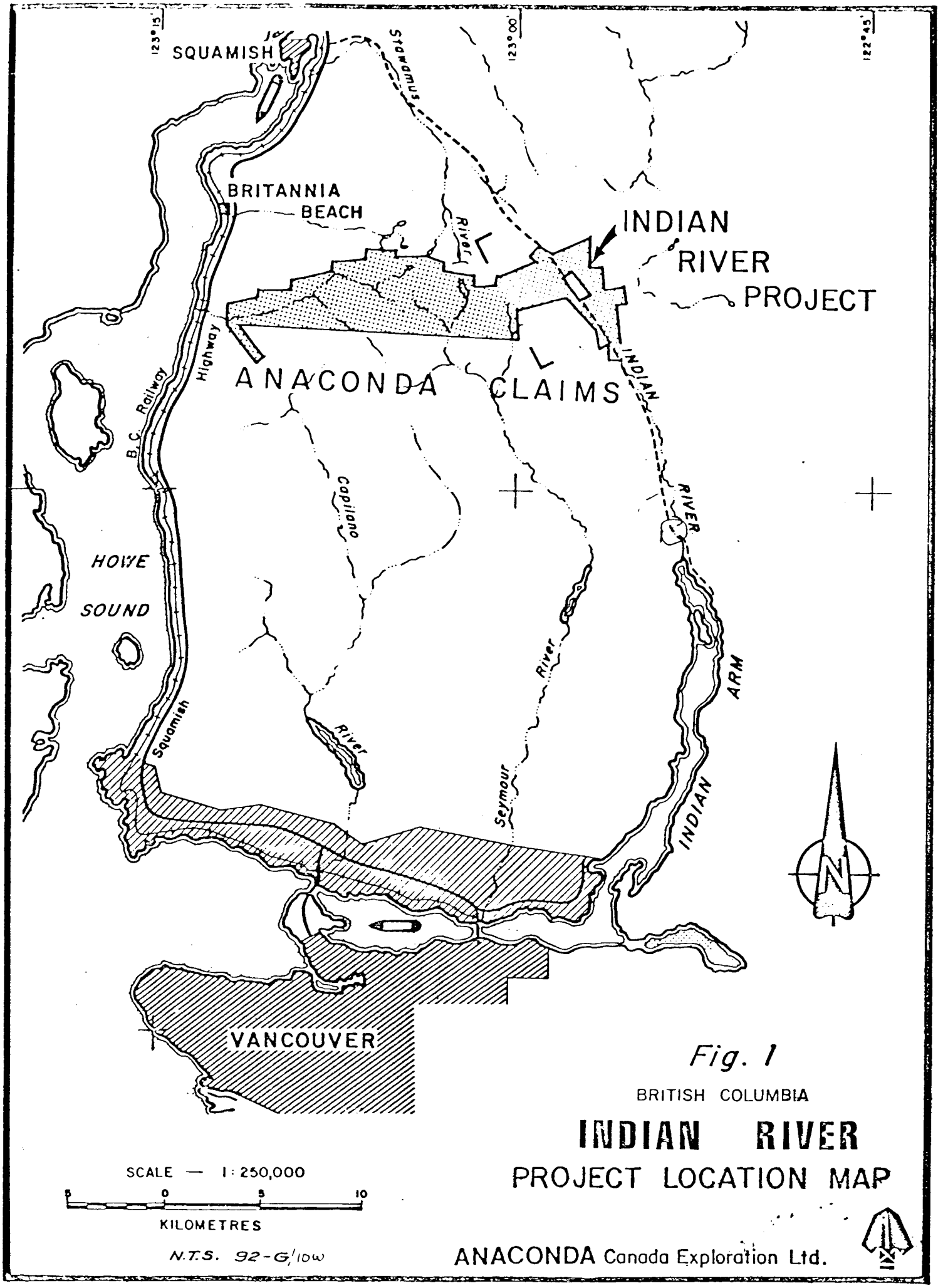

Fig. 1

BRITISH COLUMBIA

INDIAN RIVER

PROJECT LOCATION MAP

ANACONDA Canada Exploration Ltd.

1) INTRODUCTION

A Phase Induced Polarization and Resistivity Survey has been completed on a portion of the Indian River Project for Anaconda Canada Exploration Limited.

The IP and Resistivity survey grid is located in the Indian River Valley, approximately 35 kilometers north of the City of Vancouver, B.C. Access is via logging roads from the town of Squamish, situated approximately 20 kilometers to the northwest of the property.

Objective of the present survey was to delineate any possibly economic copper mineralization as well as to outline non-economic material, such as pyrite, which could be associated with non-polarizable molybdenum.

A Phoenix Model IPV-2 Phase IP and Resistivity Receiver was used to make all of the field measurements in conjunction with a Phoenix Model IPT-1 IP and Resistivity Transmitter. This system utilizes precision crystal oscillators to maintain very accurate phase integrity between the receiver and transmitter units. Induced Polarization effects are recorded in units of milliradians of arc of phase angle between the transmitted and received waveforms, while the received signal amplitude is used to calculate apparent resistivity values normalized in ohm-meters.

Dipole-dipole array was employed for all of the work using a basic inter-electrode distance of 40 meters and reading to 6 separations. Phase and amplitude measurements were made at 1.0 Hz. on all grid lines except for the Baseline, where frequencies were 3.0 Hz and 0.33 Hz.

Field work was carried out under the supervision of Mr. Z. Pozniak, geophysical crew-leader, during the period May 7, 1981 to May 31, 1981.

2) PRESENTATION OF DATA

The IP and Resistivity data are plotted in the psuedo section format and are shown on the following data plots:

LINE	ELECTRODE INTERVAL
Baseline	40 meters
7 + 00 W	40 meters
5 + 20 W	40 meters
2 + 80 W	40 meters
2 + 00 W	40 meters
1 + 00 W	40 meters
3 + 20 E	40 meters
5 + 40 E	40 meters
8 + 00 E	40 meters
C1	40 meters

Also included with this report is Dwg. No. I.P.P.-B-5015, a plan map of the Indian River grid at a scale of 1:2,000. The definite, probable and possible Induced Polarization anomalies are indicated by bars,in the manner shown on the legend, on this plan map as well as on the data plots. These bars represent the surface projection of the anomalous zones as interpreted from the location of the transmitter and receiver electrodes when the anomalous values were measured.

The n= 1 Phase angle values are also plotted and contoured on this plan.

Since the induced polarization measurement is essentially an averaging process, as are all potential methods, it is frequently difficult to exactly pinpoint the source of an anomaly. Certainly, no anomaly can be located with more accuracy than the electrode interval length; i.e., when using 40 meter electrode intervals the position of a narrow sulphide body can only be determined to lie between two stations 40 meters apart. In order to definitely locate, and fully evaluate, a narrow, shallow source, it is necessary to use shorter electrode intervals. In order to locate sources at some depth, larger electrode intervals must be used, with a corresponding increase in the uncertainties of location. Therefore, while the center of the

indicated anomaly probably corresponds fairly well with source, the length of the indicated anomaly along the line should not be taken to represent the exact edges of the anomalous material.

The topographic and grid information shown on Dwg. I.P.P.-B-5015 has been taken from maps made available by the staff of Anaconda Canada Exploration Limited.

3) DISCUSSION OF RESULTS

In general, apparent resistivity values recorded on the Indian River Project grid are quite high in magnitude, with almost all readings being greater than 1000 ohm-meters. There is no evidence in the resistivity data of any areas of substantial overburden thickness within the grid area.

Four anomalous IP and Resistivity zones have been interpreted in the data. Each trend is discussed separately below:

Zone A

One area of very anomalous polarizability values is evident in the data recorded in the vicinity of the western corner of the grid. This zone trends diagonally across the grid lines between approximately Line 5 + 20W, Station 1 + 40S, and approximately Line 1 + 00 W, Station 1 + 20 N, at which point the zone is essentially undefined, as the next line measured, Line 3 + 20 E, is approximately 400 meters further to the east. Phase angle measurements within the zone are very high, while apparent resistivity values are only moderately low, which suggests the presence of substantial amounts of highly disseminated mineralization.

Anomaly patterns evident in the data from Line 2 + 80 W suggest the source of the anomalous polarizability extends from very near surface to less than 40 meters deep, whereas the data from the other lines show the source material extending from very close to the surface to beyond the detection limit of the array; possibly in excess of 100 meters sub-surface. The width of the zone may be as great as 200 meters in places.

Zone B

Another much less anomalous zone is interpreted to lie immediately to the south of the trend discussed previously. This feature is outlined on the southern parts of Line 2 + 00 W and Line 1 + 00 W, and possibly on the Baseline, in the vicinity of Station 0 + 00 to Station 1 + 00 E. The most interesting results are indicated on Line 1 + 00 W between Station 2 + 00 S and Station 80 S, where two very near surface, narrow sources are outlined. Additional survey coverage, however, is required to further delineate the eastern extension of this zone.

Zone C

This trend is only marginally anomalous, being outlined primarily by single lower than background apparent resistivity values, together with slightly higher than normal phase angle readings. A signature such as this would point to a very narrow, well connected source, such as veinlet metallic mineralization. Depth to the top would certainly be less than 20 meters, while the width would not exceed 40 meters, and is probably much less.

Unfortunately, the zone is marked only on Line 2 + 80 W and Line 2 + 00 W.

Zone D

The IP and Resistivity data recorded on Line 8 + 00 W and Line C1 outline a well defined zone of anomalous polarizability, together with lower than background resistivities. The response is open to the north on Line 8 + 00 W, and to the east of Line C1. It is uncertain if the weakly anomalous values noted on the northern ends of Line 5 + 40 E and Line 3 + 20 E, as well as the more anomalous results indicated on the northern ends of Line 1 + 00 W,

Line 2 + 00 W and Line 5 + 20 W form a westward extension of Zone D, due to the large interval between some of the lines. Geological mapping suggests that Zone D is an eastern extension of Zone A.

The mineralization outlined on Line 8 + 00 E and Line C1 appears to be buried less than 20 meters sub-surface, and forms a generally homogeneous mass at least 250 meters in width. One exception is the extreme northern end of Line 8 + 00 E, where lower apparent resistivity values suggest the presence of more massive mineralization.

Baseline

The Indian River property Baseline was surveyed using two frequencies, 3.0 Hz and 0.33 Hz, in order to better evaluate any anomalies which were recorded. Research by Dr. W. Pelton of Phoenix Geophysics Ltd. indicates that various mineral textures can be discerned from one another by the use of multiple frequency phase measurements. Generally, polarizable materials of small grain size, such as disseminated metallic mineralization, will display a phase curve which increases with increasing frequency of measurement. The opposite is true for larger grain size material, like veinlet metallic sulphides.

Most of the anomalous areas outlined by the data from the Baseline exhibit 3.0 Hz/0.33 Hz phase angle ratios of between 1.1 and 1.2, which is characteristic of disseminated sulphides. However, in the region between Station 4 + 00 W and Station 2 + 80 W, ratios as high as 3.5 are noted, coincident with an area of very high apparent resistivity values. Large ratios are also recorded in the interval between Station 0 and 1 + 20 E. These results would point to the presence of even more highly disseminated mineralization in these areas.

4) SUMMARY AND RECOMMENDATIONS

A Phase Induced Polarization and Resistivity Survey has been completed on part of the Indian River Project grid. Four anomalous IP zones have been outlined, and are marked on Dwg. I.P.P.-B-5015.

Zone A displays very high magnitude IP effects and moderately low apparent resistivity values. The source of this zone would be best evaluated by a diamond drill hole passing approximately 40 meters below Station 4 + 20 W on the Baseline.

Weakly anomalous to moderately anomalous IP effects characterize Zone B, which, ideally, should be better defined by completing additional IP coverage further to the east on Line 0 and Line 1 + 00 E, before drill testing is considered.

Zone C is only weakly anomalous at best and should therefore receive very low drilling priority unless geology or geochemistry is favourable.

Additional IP survey coverage is required to fully define the limits of IP Zone D towards the north, west and east. However, initially, a diamond drill hole spotted so as to pass 40 meters beneath Station 2 + 00 S on Line C1 would almost certainly encounter the source of the IP effect.

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