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GEOPHSYICAL REPORT

INDUCED POLARIZATION SURVEY

MOUNT SICKER PROPERTY

VANCOUVER ISLAND, B.C.

on behalf of

CORPORATION FALCONBRIDGE COPPER
6415 - 64th Street
Delta, B.C. V4K 4E2

Report by

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1. INTRODUCTION

Induced polarization and apparent resistivity surveys were conducted over portions of the Mount Sicker Property, Vancouver Island, B.C. on behalf of Corporation Falconbridge Copper, within the periods March 3-21 and March 28-April 2, 1986.

The pole dipole electrode array at an "a" spacing of 25 meters was used on the survey, with readings taken at "n" separations of 1, 2, 3, 4, and 5. The current electrode was to the south of the receiving electrodes on the South Grid and the East Grid, and to the north on the North Grid.

Anomalies detected on the survey are categorized and discussed in this report.

2. SURVEY LOCATION

The Mount Sicker Property is located about 8 kilometers west of the village of Crofton, B.C. Access is via a network of old logging and mining roads from the Mount Sicker Road.

3. SURVEY GRID AND SURVEY COVERAGE

The induced polarization survey was conducted over three separate portions of the property, as defined below:

Grid 1 - South Grid: Lines 5E to 12W (18 lines)

Grid 2 - North Grid: Lines 3E to 20E (18 lines)

Grid 3 - East Grid: Lines 43E to 50E plus repeat L38E (9 lines)

A total of 36.5 line kilometers of induced polarization survey was performed.

4. INSTRUMENTATION

A Scintrex IPR-11 time domain microprocessor based induced polarization receiver was used on the survey. This instrument operates on an alternating square wave transmitted current pulse train, and samples the decay curve at ten semilogarithmically spaced times after cessation of each pulse. A 2 second on/2 second off pulse was used on the survey. The data is continually averaged until the operator is satisfied convergence has occurred, and is filed into solid state memory. The eighth slice (from 690 to 1050 milliseconds after shutoff: midpoint at 870 milliseconds) is the value that has been plotted on the plans and pseudosections.

A Scintrex IPC-7 2.5 kw time domain transmitter was used for the survey on March 3 and from March 27 to April 1. A Huntec LOPO transmitter was used on the survey from March 4 to 21.

The survey data was archived, processed, and plotted using a Corona PPC 400 microcomputer running the Scintrex Soft II software.

5. DISCUSSION OF RESULTS

The results of the survey are presented as a series of stacked pseudosections (figures 1 to 11), and as contour plans of the first separation chargeability and resistivity (figures 12 to 16).

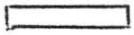
The pseudosections have been coloured at the following intervals:

Chargeability:	yellow	5 to 10 (millivolts/volt)
	orange	10 to 15
	pink	15 to 20
	red	> 20
Resistivity:	purple	< 200 (ohm meters)
	dk. blue	200 to 500
	lt. blue	500 to 1000
	dk. green	1000 to 2000
	lt. green	2000 to 5000
	brown	> 5000

Chargeability (IP) anomalies have been categorized on the pseudosections and contour plans as follows:


strong chargeability high


moderate chargeability high


weak chargeability high

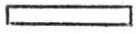
weak chargeabiity high, poorly defined

The axis of IP anomalies has been indicated by a small arrow above the anomaly symbol, and where the anomaly has been defined by a separation other than n=1, this is noted below the anomaly symbol.

Local resistivity lows (conductivity highs) have been categorized as follows:


strong local resistivity low


moderate local resistivity low


weak local resistivity low

weak local resistivity low, poorly defined

Where resistivity lows are directly coincident with a well defined chargeability high, a "C" appears above the anomaly symbol.

The survey results are briefly discussed below for each of the three areas surveyed.

Discussion of Results - South Grid:

The results from the South Grid survey are presented as figures 1 to 6 (pseudosections), figure 12 (chargeability contour plan), and figure 13 (resistivity contour plan).

The South Grid covers the area of the old mine workings at Mount Sicker, including the Tyee, XL, and Key City shafts.

A moderate to strong IP high coincident with locally low resistivity was defined over a strike length of 700 meters (lines 300W to 400E) about 100 meters north of the Tyee shaft. A weak to moderate IP high, coincident with locally low resistivity is coincident with the Tyee shaft on line 0 and merges with the above anomaly on line 300W. The local resistivity low associated with this southern weak zone at Tyee appears to coninue to the east to line 300E. A broad resistivity high lies immediately south of the "Tyee" IP anomalies, and exhibits weakly high chargeability in its highest resistivity portions.

A weak IP high, bounded immediately to the north by a weak to moderate local resistivity low, is spatially coincident with the XL shaft. This weak anomaly trends from Line 1000W;775S to Line 400W;800S and may be an extension of the southern zone of the Tyee anomaly.

A moderate to strong IP high coincident with weak to moderate low resistivity lies immediately north of the Key City shaft. Its eastern boundary is at Line 600W;725S and it splits into a northern and southern zone to the west of Line 700W. The weak to moderate northern zone may extend to the anomaly at the northern end of Line 1200W, and the southern zone to Line 1000W;650S. The strong northern zone may be an extension of the northern zone of the Tyee anomaly.

Subject to a detailed correlation of the above responses to information from the old workings, past drilling, and geological mapping, there are several other attractive targets in the South Grid. These include:

north end of Lines 200E to 500E: moderate to strong IP anomalies, partially coincident with local resistivity lows,

weak and moderate IP anomalies at 700S and 775S on Line 500E,

Lines 1100W and 1200W (centered at about 800S): the two moderate to strong IP highs coincident with resistivity lows within the area outlined by the 10 mv/v contour on the chargeability plan,

the weak to moderate IP anomaly from Line 0;1350S to Line 500E;1450S

the weak to strong IP anomaly about 100 meters north of tieline 1500S from Lines 300W to 900W,

the moderate IP anomaly at about 1350S on Lines 1100W and 1200W,

the moderate IP anomaly at Line 700W;1300S,

the moderate IP anomaly at Line 600W;1400S.

Discussion of Results - North Grid:

The results from the North Grid survey are presented as figures 7 to 9 (pseudosections), figure 14 (chargeability contour plan), and figure 15 (resistivity contour plan).

Four distinct trends of weak to moderate IP response were defined on the North Grid, and exhibit marked continuity from line to line (figure 14 - chargeability contour plan):

Line 300E;500N to 800E;430N and continuing at the further separations to Line 1600E;260N: weak to moderate IP anomaly best defined at 600E;400N. This anomaly is bounded immediately to the north by a weak to moderate resistivity low.

Line 500E;650N to Line 2000E;350N: weak to moderate IP anomaly best defined at Line 1100E;510N. A weak IP high parallels this trend about 150 meters to the south along its strongest section from Lines 1000E to 1300E.

Line 600E;725N to Line 1500E;685N: weak to moderate IP anomaly best defined at Line 1200E;625N. Both this anomalous trend and the above anomalous trend continue to the east to Line 300E, but their correlation is unclear on Lines 300E and 400E.

Line 1100E;770N to Line 1500E;685N: weak IP anomaly best defined at Line 1400E;725N.

Discussion of Results - East Grid:

The results from the East Grid survey are presented as figures 10 and 11 (pseudosections) and figure 16 (chargeability and resistivity contour plans).

Line 3800E, which is a repeat of a previous IP survey, does not appear on the contour plans but the pseudosection is at the top of Figure 11.

The highest amplitude anomaly of the three gridded areas was detected on Line 3800E. The zone of strong IP response extends from 400S to 250S and is coincident with low resistivity from 375S to 275S.

Similar, although lower amplitude, very broad IP anomalies were detected on Lines 4300 (600S to 400S) to 4500E (700S to 475S). This broad anomaly continues to Line 4700E over a narrower width and at a lower amplitude. The weak anomalies at Line 4800E;500S (n=2), Line 4900E;800S (n=5), and Line 5000E;875S (n=4,5) may represent an extension of this zone under a substantial thickness of overburden.

A zone of moderate to strong IP response lies immediately to the south of this main IP high at Line 4300E;640S and extends to Line 4800E;960S. This anomaly is best defined at Line 4500E;800S.

The moderate IP anomaly at Line 5000E;600S is coincident with high resistivity.

6. RECOMMENDATIONS

The IPR11 survey at Mount Sicker defined several moderate to strong chargeability anomalies that merit diamond drilling and/or trenching work. Correlation of these anomalies to information from the old mine workings at the South Grid, to past drilling, and to the geological and geochemical data bases is recommended in order to set priorities for such work.

Respectfully Submitted,

Alan Scott,
Geophysicist

South Grid
Lenora - Tyee

Legend

Chargeability Anomalies (to right of) line

- strong IP high
- moderate " "
- weak " "
- -- weak, poorly defined
- ↓ axis of IP high

n=2,3 separation if other than n=1

KEY CITY

XL SHAFT

COUNTRY

TYEE

TIELINE 15+00S

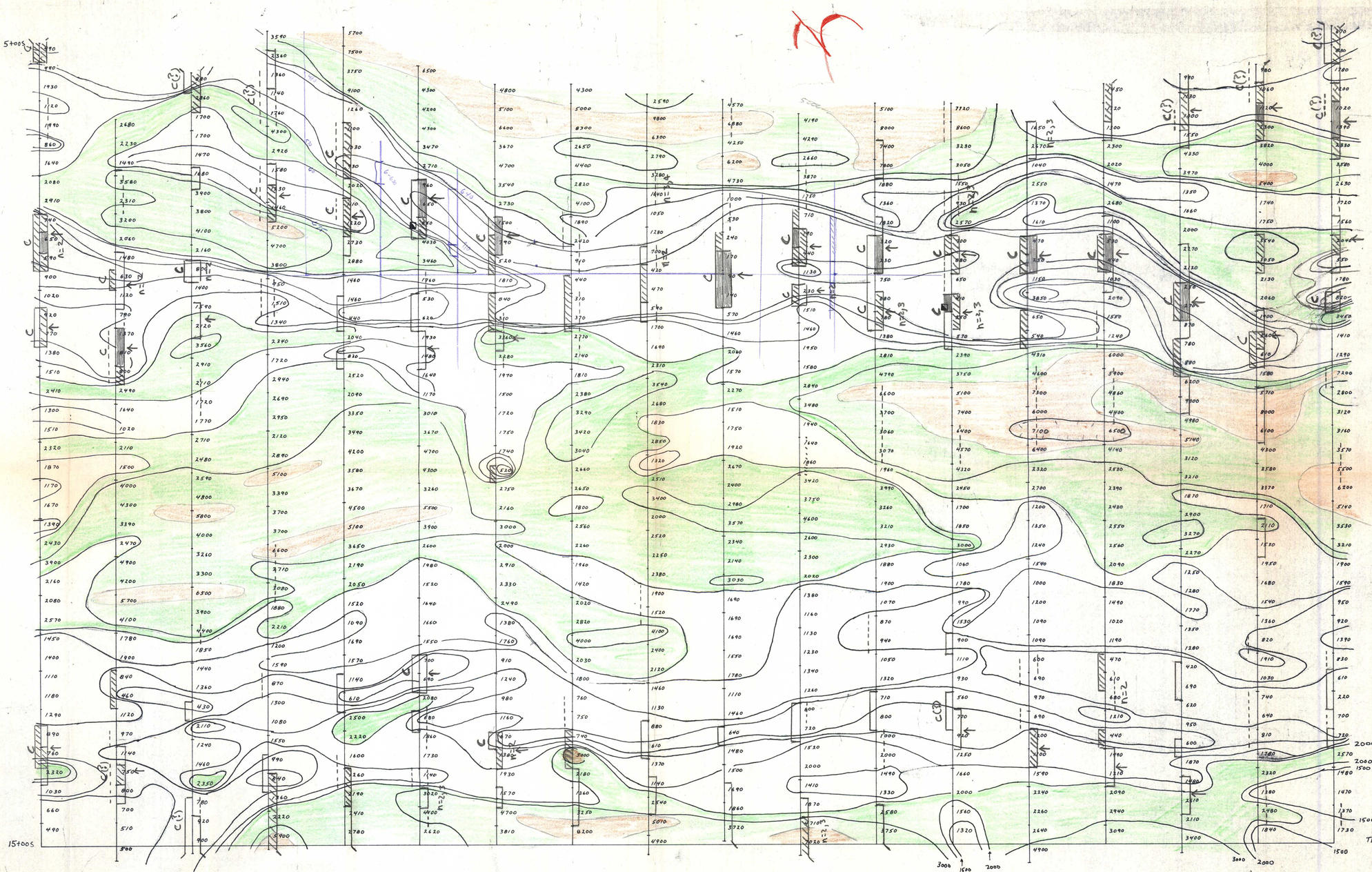
12W 11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E

IDR 11 Survey
Pole dipole array a=25m
(M_y) CHARGEABILITY N=1
MT, SICKER PROJECT MARCH, 1986
Current Electrode ⊗ Potential Electrodes

>20 mV/V
15-20
10-15

FIGURE 12

SOUTH Grid



LEGEND

- > 5000 ohm metres
- 2000-5000 ohm metres

contours at 500, 1000, 1500, 2000, 3000, 5000 ohm metres

Resistivity Anomalies (to left of line)

- strong local low
- moderate " "
- weak " "
- weak local low, poorly defined
- C coincident res. low with IP high

Chargeability Anomalies (to right of line)

- strong IP high
- moderate " "
- weak " "
- weak IP high, poorly defined
- axis of IP high

n=2,3 separation if other than n=1

IPR 11 Survey
pole dipole array a=25 m
RESISTIVITY N=1 1:2500
MT. SICKER PROJECT MARCH 1986
South Grid

FIGURE 13

Current Electrode S & Potential Electrode