GEOPHYSICAL REPORT ON THE

PF CLAIMS

VICTORIA MINING DISTRICT, B.C.

NTS SHEET 92B/13

by DELTA GEOSCIENCE LTD.

March 9, 1987.

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Introduction

This brief report describes an Induced Polarization and Resistivity survey conducted on the PF claims. These claims are located in the Victoria Mining Division, close to the town of Crofton, B.C. The claims are held by Falconbridge Ltd., thru an option agreement with local prospectors. The survey, which totalled approximately 7 kms., was done during the period August 12 to 14, 1986.

The claims are located within the Sicker volcanic rocks. Exploration was for volcanogenic massive sulphide deposits. The Sicker volcanic rocks are known to host this type of deposit at other locations on Vancouver Island.

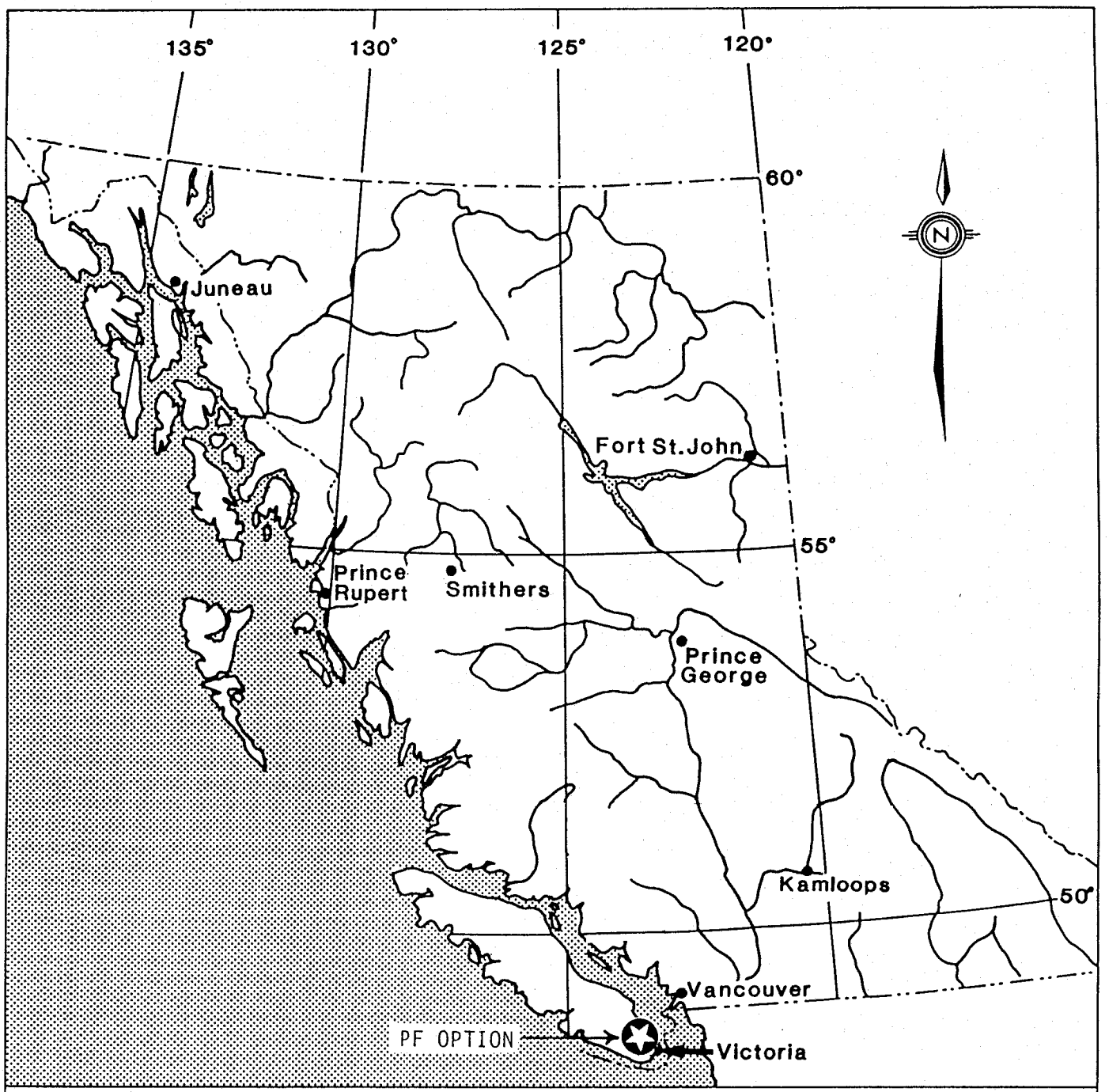
Previous exploration experience within the Sicker volcanics had shown that Induced Polarization and Resistivity were the best geophysical techniques for locating the low total sulphide mineralization that often characterizes the economic deposits within the Sicker.

V.L.F. and magnetic surveying techniques would also have helped, however interference from the major powerline in the centre of the grid precluded these techniques.

Delta Geoscience Ltd. conducted the field work on behalf of Falconbridge Ltd.

Client representative was Steve Enns, the senior project geologist for Falconbridge Ltd. G. Hendrickson, the author of this report, discussed the survey with S. Enns prior to its' commencement, but did not participate in the field work.

Accommodation for the Delta Geoscience Ltd. crew was provided in the house Falconbridge rented in the town of Chemainus. Access to the grid area was by four wheel drive vehicles.



0 100 200 300 400 500

kilometres

Falconbridge Limited

LOCATION MAP

PF OPTION

Victoria Mining Division
British Columbia
NTS: 92B/13

Personnel - Delta Geoscience Ltd.

Grant Hendrickson	- Senior Geophysicist/Supervisor
Tim Huttemann	- Junior Geophysicist/Crew Chief
Eric Hards	- Junior Geophysicist
Geoff Heminsley	- Junior Geophysicist

Equipment

1 - Scintrex I.P.R. 10 Induced Polarization Receiver
1 - Scintrex 250 watt Induced Polarization Transmitter
3 - Portable V.H.F. radios

Data Presentation

The Chargeability and Resistivity data is presented in contoured plan format at a scale of 1:2500. This format facilitates viewing of the spatial position of anomalies.

The Chargeability data is contoured at 10 millisecond intervals. The Resistivity data is contoured at the 500, 1000, 2000 and 5000 ohm-m intervals. These contour intervals were chosen since they point out the most salient features.

The contoured plans can be found in the pockets at the back of this report.

Survey Procedure

Falconbridge ensured that lines 0 to 13W were cut and accurately chained, prior to the arrival of the Delta Geoscience crew. Station interval was set at 20 metre horizontal, thus the chaining crew had to apply corrections for the topography. Lines were spaced 100 metres apart and orientated to cross the apparent strike of the rocks at right angles.

The Schlumberger electrode configuration was used for this survey. Current electrode separation, AB, was set at 240 metres. Potential electrode separation, MN, was set at 40 metres. This array gives excellent horizontal resolution, with the prime depth of investigation at the 30 to 50 metre depth range. The array also gives better signal to noise response, when compared to other arrays for the same depth of investigation - an important consideration when using a 250 watt battery powered transmitter. Some information on dip is also obtained by using the Schlumberger array.

Porous ceramic pots filled with copper sulphide were used as potential electrodes. Stainless steel rods were used for the current electrodes. Water was used to improve the electrical contact with the ground.

The moderate resistivity of the volcanic rock helped to keep the signal to noise response adequate. However, the dry conditions encountered in this area during August, made it difficult to establish proper electrical contact with the ground. The numerous areas of outcropping rock were particularly dry. You will notice on the accompanying maps several stations marked NR, no reading, where electrical contacts were insufficient. In addition, the survey area has a lot of cultural features such as fences and powerlines that can affect the data. The data has been re-examined for cultural correlation and I believe the data clearly reflects the bedrock conditions.

Discussion of the Data

The Chargeability data suggests the sulphide content of rocks within the grid is generally high, ranging from 3 to 5%.

The resistivity data generally agrees with the geologic mapping in that the rocks within the grid are predominantly tuffaceous. Tuffaceous rocks generally have a resistivity between 500 and 2000 ohm-m. The lowest resistivities are generally from the ash tuff. The lapilli-tuffs and feldspar crystal tuffs are generally more resistive, between 1500 and 2500 ohm-m. Areas where the resistivities have increased to over 2500 ohm-m, likely indicate rock that is more felsic in nature.

A strong chargeability response correlates with the Mafic dykes/sills which occur along the baseline. There is also weaker chargeability correlation with rocks mapped as Quartz Porphry in the southwest corner of the grid.

The strongest and most interesting chargeability response, >70 milliseconds, lies in the southeast corner of the grid, just past the apparent eastern extent of the Mafic dykes/sills. There appears to be sufficient sulphides here to have reduced the resistivity to less than 500 ohm-m.

The resistivity data suggests a large amplitude drag fold may be centred around 3+50W and 1+50S, in the area of the strongest chargeability response. Rocks containing sulphides, up to 10%, have been mapped in this area. The chargeability data indicates that this type of sulphide content is more widespread than indicated by the geologic mapping.

The data indicates several north-northeast trending faults that have caused some offsetting of the stratigraphy. These apparent faults are shown on the accompanying plans. There is some evidence for an east-west trending fault at 1+00S, parallel to the baseline.

Conclusion and Recommendations

The apparent sulphide concentrations in the southeast corner of the grid should be investigated further, either thru a trenching or drilling program. The 70 millisecond contour defines the spatial position of the strongest apparent sulphide horizons. These apparent sulphide horizons are likely related to the structures evident in the area and are open to the east.

The Mafic dyke/sill likely has sulphides associated with it, however does not appear to be a very interesting target at this time. Work on the stronger anomaly southeast of the dyke will help understand the significance of this dyke.

The apparent chargeability response at approx. 1+00S on line 11W also deserves attention, since there is appears to be a correlation with the Quartz Porphyry mapped in this area.

J. Hendrickson

Statement of Qualification

Grant A. Hendrickson

- B.Science, U.B.C. 1971, Geophysics option.
- For the past 16 years, I have been actively involved in mineral exploration projects throughout Canada and the United States.
- I am a registered Professional Geophysicist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
- I am an active member of the S.E.G., E.A.E.G., and C.I.M.

G. Hendrickson

Grant A. Hendrickson.

MAP REF. NO.:
N.T.S.:

CONTOUR INTERVAL : 20, 30, 40, 50, 60, 70 msec

SCHLUMBERGER ARRAY AB 240m MN 40m

50 0 50 100 150

SCALE: 1 : 2500

FALCONBRIDGE LTD.

PROPERTY:

PF OPTION

LOCATION:

VANCOUVER ISLAND

TYPE OF MAP:

CHARGEABILITY PLAN

WORKING PLACE:

BASED ON: WORK BY DELTA GEOSCIENCE LTD

DATE OF WORK: AUG. 1986

DRAWN BY: ER

DATE: OCT. 22, 1986

MAP REF. NO.:

PROJECT NO. 117

N.T.S. NO.: 92B/13E

FIG. NO.:

1

MAP REF. NO.:
N.T.S.:

CONTOUR INTERVAL : 500, 1000, 2000, 4000 Ω

SCHLUMBERGER ARRAY AB 240 m Mn 40 m

50 0 50 100 150

SCALE: 1 : 2500

FALCONBRIDGE LTD.

PROPERTY: PF OPTION

LOCATION: VANCOUVER ISLAND

TYPE OF MAP: RESISTIVITY PLAN

WORKING PLACE:

BASED ON: WORK BY DELTA GEOSCIENCE LTD

DATE OF WORK: AUG. 1986 | MAP REF. NO.: PROJECT NO. 117 | FIG. NO.: 2

DRAWN BY: ER

DATE: APRIL, 1987 | N.T.S. NO.: 92B/13E