

011815

110-18-M

92K/2E6W

92K-17

VALDEZ ISLAND COPPER COMPANY LIMITED

Gowland Harbour, Quadra Island, B.C.

A number of claims have been staked said to contain a large amount of copper.

Examination by Herbert Carmichael in 1927

Found scattered area mineralized on the surface with chalcocite, but did not appear to contain enough in any one place to warrant work.

Might possibly be worth exploiting with a diamond drill.

92K/
3E, W

Su 92K-7

~~Property No 378K~~
Bluebird

①
file report

SUMMIT EXPLORATIONS AND HOLDINGS LIMITED

SHIREX EXPLORATIONS LIMITED

GEOCHEMICAL-GEOPHYSICAL REPORT

QUADRA-GOWLAND-STEEP ISLANDS

VANCOUVER ISLAND, BRITISH COLUMBIA

ASS RPT 2275

10/77

TABLE OF CONTENTS

PROPERTY, LOCATION, ACCESS..... 1

GEOLOGY AND HISTORY 2

MINERALIZATION & ECONOMIC CONSIDERATIONS 3

GEOCHEMICAL SURVEY

 FIELD PROCEDURE..... 4

 LABORATORY PROCEDURE.....4

 RESULTS OF SURVEY 4

SELF POTENTIAL SURVEY

 FIELD PROCEDURE..... 6

 GEOPHYSICAL INTERPRETATION..... 6

 GEOPHYSICAL RESULTS..... 7

CONCLUSIONS AND RECOMMENDATIONS..... 7

Summit Explorations & Holdings Limited,
Shirex Explorations Limited,
10th Floor,
366 Bay Street,
Toronto 110, Ontario.

Gentlemen:

This report covers results of a combined geochemical-self potential survey recently completed on your property located near the townsite of Campbell River, Vancouver Island, British Columbia.

PROPERTY, LOCATION, ACCESS

The Summit-Shirex Explorations property located on Quadra, Gowland and Steep Islands some 3 miles north of the townsite of Campbell River, Vancouver Island, British Columbia, consists of ¹² claims ^{numbered} *as follows:* in two nearly contiguous blocks separated by a narrow channel of the Pacific Ocean.

An 8 claim block covering Steep Island and a portion of adjacent Gowland Island is known as TANNER ²⁻⁸ 1-8, Tag. Nos. 445006; 992647; 992628; 992629; 992630; 992631; 992631; 992632; and 992633 with respective Records Nos. 17218; 29922, 29902 to 29907 inclusive, while 2,000 feet eastward is a 4 claim block on Quadra Island referred to as TANNER 9-12, Tag. Nos. 992641; 992642; 992639; and 992640 with respective Record Nos. 29908 to 29911 inclusive.

The property is accessible by water from Campbell River.

GEOLOGY AND HISTORY

Basic volcanic rocks of the Karmutsen Formation in the form of essentially thin-bedded horizontal flows characterize the region of the property, and according to government publications are Permian to Upper Triassic in age. The flows are andesitic to basaltic in composition coarsely vesicular to dense in texture.

Records indicate that, with the exception of claim TANNER 1, no work of a serious nature has been performed on the claim groups.

Copper Zone "A", located on the southern portion of Steep Island, shows evidence that minor shipments were made many years ago. Of recent date, a number of assessment trenches have been placed on TANNER 1. —

*apparently not included in
Summits Holdings — KPN*

MINERALIZATION & ECONOMIC CONSIDERATIONS

Major exploration work to outline copper deposits as occur on the subject property is being carried out by Western Mines Ltd. Regionally, a number of copper occurrences have been located and are in the process of being evaluated. Preliminary pilot mill work is being done on one property on Quadra Island within 3 miles of the subject claim groups. In the same region, acid-leaching tests for concentration of copper have been initiated.

Most occurrences of copper in the region are located in the thin bedded volcanic flows and essentially all showings are characterized by chalcocite mineralization in the form of small blebs of irregular shape. The chalcocite appears to be of primary origin and therefore depth potential is enhanced.

Copper Zone "A", claim TANNER 1, and Copper Zone "B", TANNER 2, both located on Steep Island, are each characterized by chalcocite disseminations essentially in bleb form in volcanic rock.

In order to assess the copper potential of subject property a geochemical soil sampling survey and self potential coverage were conducted over the entire property as based upon recommendations in report dated October 22nd, 1969, by J.A. Mitchell, P.Eng. Results of such programs form material of this report.

GEOCHEMICAL SURVEY

Field Procedure - From each of three areas covered, control was established by east-west directed cross-lines which were cut, picketed, and flagged each 100 feet. Lines are 200 feet apart.

Employing normal soil auger equipment, samples of soil were taken from the "B" horizon located immediately below the top or humus horizon. Samples were taken each 50 feet.

No impervious clay horizons were noted in the area covered. Depth of samples ranged from 1 inch to 10 inches below surface, averaging 2 inches. In many areas, soil cover is extremely thin resulting in a lack of a mature soil profile.

Laboratory Procedure - All samples were dried then passed through an 80 mesh nylon screen to eliminate possible humus contamination. Half-gram samples were then analyzed by hot nitric and hydrochloric acid extraction then subject to atomic absorption methods at the Bondar-Clegg Laboratory, Vancouver, for copper content expressed in PPM.

Results of Survey - General base level of copper throughout the soil in the area surveyed is from 45 to 55 PPM.

Five distinctive zones of copper build-up were indicated by the geochemical survey, and designated "A"- "E" inclusive.

Anomaly "A", Steep Island, covers nearly the entire island being 2400 feet long north-south by an average 400 feet wide. Greatest response is in the southeast portion of the zone, lines 2N, and 4N, where a cluster of soil assays contribute values ranging from 2775 PPM to 53700 PPM in copper. For purposes of evaluation, very high values have been cut off at 2000 PPM. "A" anomaly has an average response of 535 PPM from 72 soil assays or over ten times normal background in copper.

Anomaly "B", Gowland Island, 2000 feet long north-south by an average of 200 feet in width, is open in a northward direction into the Pacific Ocean. Maximum response is 2250 PPM copper along a bluff at the north end of the zone where two old adits have been driven into the bluff face. These adits have not been examined internally. Based upon 40 soil assays, "B" anomaly has an average response of over 268 PPM copper or over five times normal background.

Anomaly "C", Gowland Island, located some 500-800 feet due west of "B" zone and paralleling the latter, is 1500 feet long north-south, an average 500 feet wide and is open at both ends into the Pacific Ocean. Peak value is 1700 PPM copper. Based upon 57 soil assays, average response of this zone is 206 PPM copper or over four times normal copper background.

Geochemical response on Quadra Island is essentially negative. Two small zones, "D" and "E" anomalies, occur in the central portion of this area covered and both may be due to erratic response. Both zones are about 400 feet long and each is confined to a single line thus width is unknown. "D" zone has an average response 201 PPM copper from 8 soil assays or four times background, while "E" zone has an average response of 165 PPM copper from 6 soil assays, or about three times normal background.

Spurious effects from normal soil making procedures results in occasional erratically high response outside of anomalous zones.

SELF POTENTIAL SURVEY

Field Procedure - Using established grid, a Sharpe VP-6 Potentiometer was employed using the continuous line technique where difference in potential is established at 50 foot stations along cross-lines from a stationary base station to a moving exploratory probe up to 1000 feet distance. Recordings are in millivolts and have been phased into the primary portion of the appropriate base-line. All recordings have been moisture adjusted.

Geophysical Interpretation - A difference of 50 millivolts represents the anomalous threshold. Low intensity anomalies have

a relative difference of 50-100 M.V., medium intensity zones are between 100-200 M.V., while high intensity anomalous conditions exist where the relative difference exceeds 200 M.V.,

Natural electromotive forces are generated by sulphide occurrences in an oxidizing-reducing environment which are theoretically directly proportional to concentration of sulphide material. Masking effects, as well as displacement, may be produced by a relatively thin layer of clay, by heavy overburden, and by swamp conditions and false recordings may be introduced by induction through leakage effects of D.C. generators up to 10 miles distance as well as nearby A.C. lines. Contribution to galvanic response may be attributable to a moderate degree by iron oxide material.

Geophysical Results - No strong anomalous conditions were recorded on Steep Island as galvanic response is comparative and the entire island appears to be copper enriched.

Response to this type of prospecting shows a rather negative overall result in the region, however, a high intensity anomaly was recorded over the south half of "B" anomaly and superimposes this zone correctly. No other response was indicated.

CONCLUSIONS AND RECOMMENDATIONS

Five anomalous copper zones have been indicated on the Summit.

Explorations and Holdings Limited-Shirex Explorations Limited property on Steep, Gowland, and Quadra Islands, Vancouver Island Area, British Columbia, through a recently completed geochemical soil sampling program in conjunction with a self potential survey.

A 2400 foot long, 400 foot wide geochemical anomaly covering Steep Island has average response of over ten times normal background in copper. Two copper anomalies occur on Gowland Island, one zone with dimensions 2000 feet by 200 feet and response of over five times background, the other zone measuring 1500 feet by 500 feet and having response of over four times copper background. Two small zones occur on Quadra Island.

In assessing geochemical response, consideration is given to light overburden and comparatively highly oxidized soils which would normally generate above normal response.

Little galvanic response to self potential coverage was observed on Steep Island as reaction is comparative and the entire island appears to be copper enriched. A high intensity zone superimposes the south half of "B" anomaly, Gowland Island, and thus helps to confirm sulphide enrichment at this location.

Results of this survey are quite positive and expenditures are warranted to further assess both anomalous conditions and known copper occurrences.

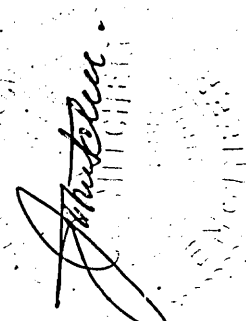
It is recommended that 18 vertical drill holes, AXT core, to depth each 50 feet on a grid of 100 feet assess copper zones on Steep Island in the area of lines 2N and 4N, eastern portions. It is further recommended that a minimum of 200 feet of trenching and sampling be done on "B" AND "C" zones to assess copper potential. A number of small trenches should be placed at strategic locations over the anomalies. The estimated cost of 900 feet of diamond drilling inclusive of engineering at \$12.00 per foot is \$10,800.00. The estimated all-inclusive cost of trenching, sampling, and assaying is \$6,000.00. A contingency of \$2,000.00 should be provided. Total estimated cost for recommended work is \$18,800.

Further work is contingent upon results of the program outlined.

Respectfully Submitted,

G. L. Kirwan, B.Sc.

March 23, 1970.

A handwritten signature in dark ink, appearing to read 'G. L. Kirwan', is written over a circular stamp. The stamp contains some illegible text, possibly a company name or title, and a date. The signature is written in a cursive style.

CERTIFICATE

I, Gerald L. Kirwan of the cities of Toronto and Vancouver, certify as follows:

1. THAT I am a Geologist with offices at Ste. 205-160 Bay St., Toronto, and Ste. 214-475 Howe St., Vancouver, B.C.
2. THAT I have been graduated from Carleton University, B.Sc., 1957, and that I have practised my profession continuously.
3. THAT I am a Fellow of the Geological Association of Canada and a Member of the Canadian Institute of Mining and Metallurgy.
4. THAT I have no interest direct or indirect in the property of Summit Explorations and Holdings Limited and Shirex Explorations Limited nor do I beneficially own directly or indirectly any security of the Company or affiliate thereof.
5. THAT the accompanying report has been prepared by myself and is based upon visits to the area of the property, supervision of field programs herein noted, study of engineering documents pertaining to the subject area, reports and files of government bodies.
6. THIS Report herein may be used in the prospectus of the Company and amendments thereto.

Dated at Vancouver, British Columbia this 23rd day of
March 1970.

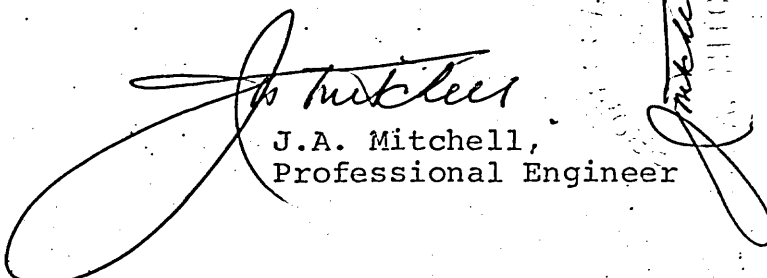
G. L. Kirwan

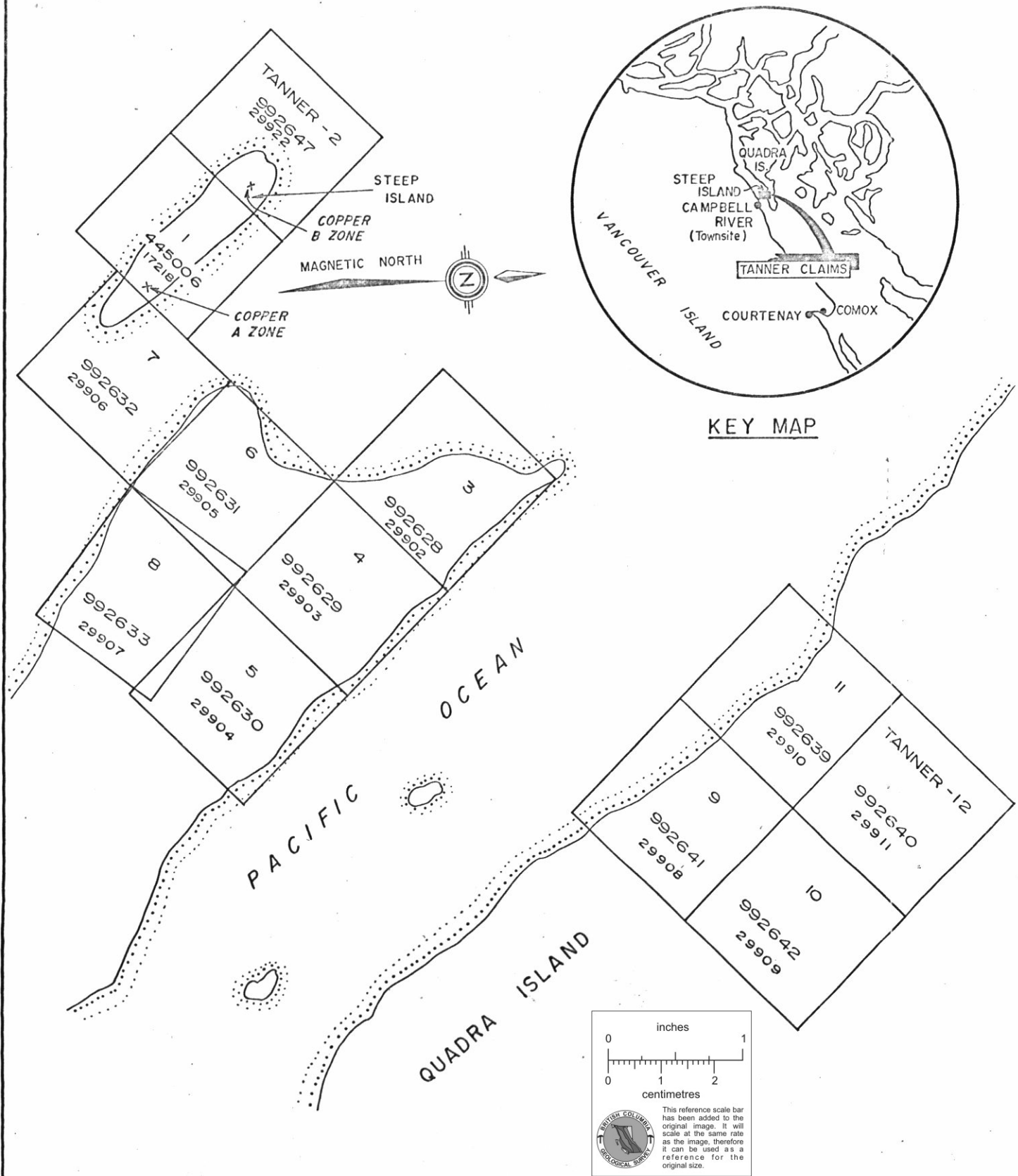
CERTIFICATION

I, J.A. Mitchell of 2991 Mathers Avenue, West Vancouver,
certify that:

1. I am a graduate of the University of British Columbia in Applied Science (Mining) 1932.
2. I am a Professional Mining Engineer and have practised my profession in various capacities since graduation.
3. I am a Member in good standing of the Association of Professional Engineers of British Columbia.
4. I have no interest, directly or indirectly in either Summit Explorations and Holdings Limited and Shirex Explorations Limited, nor do I intend to acquire any such interest.
5. THAT the accompanying report has been prepared by myself and is based upon visits to the area of the property, supervision of field programs herein noted, study of engineering documents pertaining to the subject area, reports and files of government bodies.
6. This report may be used in the prospectus of both Summit Explorations and Holdings Limited and Shirex Explorations Limited.

Dated this 23rd day of March 1970.


J.A. Mitchell,
Professional Engineer



LEGEND

TR I - Permian to Upper Triassic:
Karmutsen formation,
basic volcanic rocks.

SHIREX EXPLORATIONS LTD.
SUMMIT EXPLORATIONS & HOLDINGS LTD.
GEOLOGY & CLAIM LOCATION MAP
TANNER CLAIM GROUP
SCALE 1" = 1500'