R E P O R T

on

THE WEST NOS. 1 to 7, MOT NOS. 1 and 2, KIM NOS. 8 and 10, KIM FR., MIK FR., FIR NO. 1 FR. and FIR NO.2 FR. MINERAL CLAIMS SITUATED ON PROMONTORY HILLS IN THE NICOLA MINING DIVISION, PROVINCE OF BRITISH COLUMBIA.

by: H. Hill & L. Starck & Associates Ltd.

446

July 16, 1962

446

STATEMENT OF QUALIFICATIONS

of

PERSONS EMPLOYED DURING THE INVESTIGATION OF THE WEST GROUP OF CLAIMS ON PROMONTORY HILLS AT MERRITT, B. C.

(1) Supervision by - Henry L. Hill, P.Eng.

(2) Magnetometer Survey, Geological Survey, and Soil Sampling Survey by - T. Lisle, B.Sc. University of B. C.

Seven years intermittently with the firm of H. Hill & L. Starck & Associates Ltd. in mining and exploration.

(3) Assisting during all surveys - L. M. Hill

10 Seasons exploration and development work.

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OFFICE PHONE:
MUTUAL 3-5861

RESIDENTIAL PHONE:
H. L. HILL—WALNUT 2-7996
L. P. STARCK—YUKON 8-5641

H. HILL & L. STARCK & ASSOCIATES LTD.

CONSULTING ENGINEERS
MINING • METALLURGY • GEOLOGY
844 WEST HASTINGS STREET
VANCOUVER 1, B.C.

July 16th, 1962.

R E P O R T

on

THE WEST NOS. 1 to 7, MOT NOS. 1 & 2
KIM NOS. 8 & 10, KIM FR., MIK FR.,
FIR NO. 1 FR. and FIR NO. 2 FR. MINERAL
CLAIMS SITUATED ON PROMONTORY HILL IN
NICOLA MINING DIVISION.

This report covers a geological, geophysical and geochemical survey of the above noted claims.

INTRODUCTION

The West Nos. 1 to 7, the Kim Nos. 8 and 10 and the Kim Fraction Mineral claims were acquired by the Copper Soo Mining Company in 1961. The Mot Nos. 1 and 2, the Mik Fraction, the Fir No. 1 Fraction and the Fir No. 2 Fraction were acquired in 1962.

The detailed investigation of this group of mineral claims is a continuation of the program recently completed on the Kim and Mike groups immediately to the east, and includes geophysical, geochemical and geological surveys.

The West group is situated on the gentle slopes of Promontory Hill, and covers rocks predominantly of the Nicola group.

LOCATION

This group of 15 mineral claims is situated on Promontory Hills, approximately one and a half miles south to southwest of the Craigmont mine, in the Nicola Mining Division.

The charges incurred in the investigation of the property are to be applied as assessment work against the following claims:

Name of Claim	Record No.
West No. 1	15507
West No. 2	15508
West No. 3	15509
West No. 4	15510
West No. 5	15511
West No. 6	15512
West No. 7	15513
Mot No. 1	16383
Mot No. 2	16384
Mik #1 Fr.	15819
Fir No. 1 Fr.	17528
Fir No. 2 Fr.	18004
Kim Fr.	15274
Kim No. 8	15275
Kim No. 10	15276

SURVEYING: GRID PICKETING

A chain and compass survey was conducted over the West group area in early December of 1961, and followed up again in February of 1962, in order to establish claim boundaries of the Copper Soo mineral claims. This survey was in fact an extension of the earlier survey made in the summer of 1961, covering the "East" group (Kim Nos. 1 to 6 and Mike 1 to 4) of mineral claims.

Using the surveyed claim lines as controls, two base lines were run -

1. Varying slightly from east-west and covering the Kim 8 and 10 mineral claims, the Mik Fr. and the Fir No. 1 Fr.

2. A line running due west from the initial posts of the West 1 and 2, extending to the western extremity of the Mot No. 2.

Picket lines, running north and south and having 200 foot centers, were laid out with compass and chain every 300 feet along the base line.

Roads and topographical features were picket up within the gridded area and are shown on the geological map.

MAGNETOMETER SURVEY

Rock outcroppings are generally more abundant on the West group than on the Kim and Mike claims to the east. Favorable bands of limestone, similar to that found at the Craigmont mine, pass northeasterly through the property.

Using a "Sharpe" Model A-2 Vertical Force Magnetometer the magnetometer survey was conducted over the entire grid area with stations at 200 foot intervals on the north-south lines.

Readings were corrected for diurnal and day to day variations by morning and evening observations at Station F-0.

One anomalous area, centered on line G, 1000 feet south, gave a high of 60,770 gammas and a low of 58,190 gammas, 885 gammas and 1,355 gammas above and below background respectively. Otherwise variations in the map area were confined to the range of 59,460 gammas low and 60,065 gammas high.

GEOCHEMICAL SURVEY

Using the same grid spacings as used in the magnetometer survey, small pits were dug and geochemical samples collected. Care was taken to extract all samples from the A_1 horizon, and only in a few cases outcropping and talus prevented this.

Samples were tested for copper with the Rubeanic Acid Field Testing Kit, and the same procedure as outlined by H.V. Warren and R.E. Delacault (Western Miner & Oil Review, January 1959) was followed. While testing the samples blank runs were made periodically to test for contamination. With the absence of distilled water, a filter for purification was used.

The results of the soil sampling indicated variations between one and four parts per million of copper, the concentration occurring at S 600 ft. N, S 800 ft. N and S 1,000 ft. N.

Background for the area sampled ranged from 0 to 0.5 parts per million, and erratic readings of one to two parts per million were encountered in the mapped area west of line Q.

GEOLOGY

All outcrops were picked up and located on the map with reference to the previously outlined grid. The majority of the outcrops form a northeasterly trending ridge, passing from the southeast corner of Mot No. 1 mineral claim to a broad area in the West Nos. 2 and 4 mineral claims.

Geology (Continued)

The terrain to the west of the ridge rises gently in a northwest direction and picks up quite sharply by comparison on the northern flanks of West Nos. 6 and 7 mineral claims. Drainage is generally to the southeast or, locally, to a small swamp located at R-0 feet on the map, and to a low-lying, dried out swamp area located around V 1,000 ft. south and W 1,000 ft. south.

The terrain to the east of the main ridge slopes gently to the southeast. It is interrupted on the south of the Fir No. 1 Fr. by a dominant east-west trending ridge of volcanics, and, on the north, by the steeply cut gulley of Winney Creek, the direction of which shows the drainage pattern of the general area. One large hillock is centered about E-0 on the base line, and two southerly trending gulleys are evident at G 1,000 ft. south and 50 ft. east and C 1,000 ft. south and 100 ft. east.

All outcroppings found on the West Group, except one, were of the Nicola group, limy and non-limy rocks. The small outcrop in the southeast corner of Mot No. 1 mineral claim is of igneous origin, and is probably associated with the diorites and quartz diorites of the Coyle stock to the south.

Attitudes taken in the limestones showed a marked consistency of strike and dip within a narrow range, while the strikes in the non-limy rocks were more variable in a north-east lineation.

Jointing is evident in several outcrops, and direction is especially consistent in the fine grained, foliated limestones, N 10° W to N 15° W, and dipping vertically or steeply to the west. Contacts in the area are generally obscure. In the large trench, east of E 200 ft. S, a good contact between the limestone and non-limy tuffs was found. Here the fine grained, foliated limestone grades into a five foot band of thin bedded, gritty and quite brittle limestone before contacting with the tuffs to the east.

Classification of rock types has followed that given by Dr. J. M. Carr in the Annual Report of the Minister of Mines and Petroleum Resources, 1960, pages 29 - 33.

Classification of Rock Types .....

Limy

(1) Limestone Foliated

Predominantly a black to dard-grey, fine grained rock exhibiting varying degrees of foliation. Minor calcite veins are evident sometimes as great as one half inch, but are commonly much finer and threadlike. Occasionally, calcite inclusions and what appear to be very fine and very sparse disseminations of pyrite are detectable.

The foliated limestones are the dominant rock type in the main north-easterly ridge previously described.

(2) Gritty Limestones

These rocks are found in five outcrops along the main ridge, and generally lie northwest of the main band of foliated limestone. The rocks are a medium grained, light to medium grey colored variety. Small inclusions of rock fragments are quite abundant, and are colored black, grey, and, more often, a reddish brown. The rocks are generally well foliated, and it is quite common to find small rugs of iron oxide, or the oxide running with the lines of lineation.

(3) Limy Argillites

This rock type was found in a small outcrop located on the map at X 1200 ft. north. It is a soft, black, fine grained rock with almost a slaty appearance. Small calcite veinlets are in evidence, and iron stain is quite abundant on weathered edges.

(4) Tuffaceous Limy Greywacke

A hard, medium grained rock, colored light to medium grey. The hand lens shows it to be approximately 50% quartz and 10% to 15% feldspar. The interstitial matrix is quite soft and reacts for lime when tested with Hydrochloric acid.

These rocks were found in two outcrops located on the map at L 400 ft. N and L 700 ft. N.

Non-Limy Rocks

(1) Lithic Tuffs

These are hard, fine to medium grained, compact rocks generally with abundant rock fragments and occasionally crystal fragments. The rocks are typically greenish-grey in color, but vary to purple and black.

The rock fragments commonly comprise approximately one third of the rock, and are colored black, brown-red, or slight modifications of these colors. Small veinlets of quartz with minor amounts of calcite are quite common, and, in the outcroppings south of the Fir No. 1 Fr., fine disseminations of pyrite were found.

These rocks were found in the five main outcroppings:

L 600 ft. - 800 ft. S; Baseline between M and O; Between T & K - 400 ft. south; On the ridge between Fir No.1 Fr. and the E.R.N. No. 4; East of the main trench on Mik Fr.

(2) Greywackes

A distinctive grey crystalline rock consisting of approximately 50% quartz and 15% feldspar. The remaining 35% consists of a few lithic fragments and the matrix. From the outcrops on the baseline at F.0 the specimens are quite highly chloritized and show minor amounts of iron oxide on the weathered surfaces. Outcroppings were also found on M 400 ft. south.

(3) Non-Limy Argillites

A dense,fine grained, black and grey banded rock, exhibiting finely disseminated pyrite. Found only in one small outcrop between M and N 800 ft. North of the baseline.

Coyle Stock - Quartz Diorite Breccia

A yellowish-buff colored crystalline rock consisting of approximately 30% pink, fine grained igneous fragments up to one half inch in size. Euhedral to subhedral.... Plagioclase feldspar crystals comprise approximately 15% to 20% of the unfragmented areas. The remainder appears as a fused mixture of quartz and highly altered mafic minerals. The outcrops appear to be from a contact zone between the small igneous body and the Nicola group.

SUMMARY and CONCLUSIONS

The West Group of mineral claims covers a section of Promontory Hills area which is underlain by strata predominantly of the Nicola group. A small igneous body intrudes the Nicola group near the southeast corner of Mot No. 1 mineral claim.

One anomalous area was located by the magnetometer, and is located on the southwest boundary of the Mik Fr. and the E.R.N. mineral claims. This anomaly has been previously drilled by some other company; attempts are being made to get information on the drill results.

The geochemical survey indicated a small anomalous area on the West No. 5 mineral claim, which gave variations of between 0.5 p.p.m. and 4 p.p.m. of copper in the soil.

Mineralization in the outcrops is very sparse. Where it does exist, it is predominantly a fine dissemination of pyrite with associated iron stain.

The Copper Soo property lies in a geologically favorable area, with Craigmont Mine to the north and Hurley River Mining Co. to the south.

H. HILL & L. STARCK & ASSOCIATES LTD.

Henry L. Hill

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
TO WIT:

In the Matter of The regulations to the "Mineral Act" R.S.B.C. 1960, Chapter 244 and in the matter of a geological, geophysical, geochemical report and survey of certain mineral claims held by Copper Soo Mining Company Ltd. (N.P.L.), dated May 28th, 1962.

I, HENRY L. HILL, Professional Engineer

of 844 West Hastings Street, in the City of Vancouver

in the Province of British Columbia, do solemnly declare that

I am a partner of H. Hill & L. Starck & Associates Ltd., the consulting engineers of Copper Soo Mining Company Ltd. (N.P.L.), Hereinafter referred to as "THE COMPANY", and as such have knowledge of the matters deposed to herein.

Under my supervision a geophysical survey was carried out on the property in the Fall of 1961, and a geological and geochemical examination in the Spring of 1962, on the following described mineral claims held by the Company, all in the Nicola Mining Division:

KIM No. 1 to No. 4 — Record Nos. 14564, 14565, 14566, 14567 ~~Record Nos. 425893, 425894, 425895, 425896~~

MIKE No. 2 to No. 5 — Record Nos. 15277, 15278, 15279, 15280 ~~Record Nos. 436974, 436975, 436976, 436977~~

In connection with such surveys and report thereon, dated May 28th, 1962, a total of $926.41 was expended, as shown below:

Labor	$535.00
Supervision	75.00
Transportation	145.20
Room and meals	69.96
Supplies	26.25
Magnetometer rental - 3 days	75.00
	$926.41

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the VANCOUVER, B.C. of , in the Province of British Columbia, this MAY 30 1962 day of , A.D.

Sub-Mining Recorder

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

★o

DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

TO WIT:

In the Matter of The regulations to the "Mineral Act" R.S.B.C. 1960, Chapter 244 and in the matter of a geological, geophysical, geochemical report and survey of certain mineral claims held by Copper Soo Mining Company Ltd. (N.P.L.), dated July 16th, 1962.

SUB-MINING RECORDER
RECEIVED
SEP 12 1962
M.R. # 55166 $ 38.50
VANCOUVER, B.C.

I, HENRY L. HILL, Professional Engineer

of 844 West Hastings Street, in the City of Vancouver

in the Province of British Columbia, do solemnly declare that

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WEST No. 1 to No. 7, Record Nos. 15507, 15508, 15509, 15510, 15511, 15512, 15513.
MOT No. 1 and No. 2, Record Nos. 16383 and 16384.
MIK #1 Fr., Record No. 15819
FIR No 1 Fr. and FIR No. 2 Fr. Record Nos. 17528 and ~~18804~~ 18004
KIM Fr. Record No. 15274
KIM No. 8 and No. 10 Record Nos. 15275 and 15276

In connection with such surveys and report thereon, dated July 16th, 1962, a total of $1,636.82 was expended, as shown below:

Labor	$ 916.51
Supervision	150.00
Transportation	210.00
Rooms and meals	239.93
Supplies	20.38
Magnetometer rental (4 days)	100.00
	$1,636.82

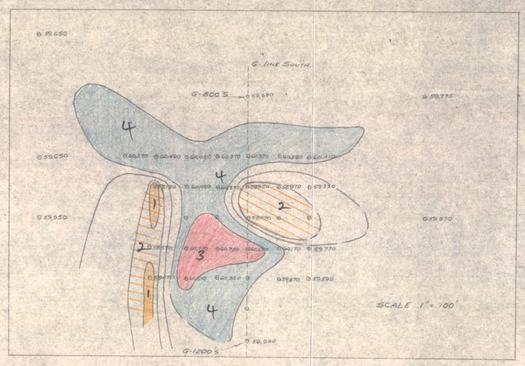
And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City of Vancouver, in the Province of British Columbia, this 12 day of Sept. 1962., A.D.

Henry L. Hill

Jill Turner
Sub-Mining Recorder
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

★o



H.A.R. No 6
H.A.R. No 4
H.A.R. No 8
H.A.R. No 2
RETAN No 1
H.A.R. No 7
H.A.R. No 5
H.A.R. No 3
H.A.R. No 1
RETAN No 2
RETAN No 3
RETAN No 5
RETAN No 4
RETAN No 7
RETAN No 6
RETAN No 8
WEST No 7
WEST No 6
WEST No 5
WEST No 4
WEST No 3
WEST No 2
WEST No 1
MAIN VEIN
FIRNLEY
MOT No 2
MOT No 1
KIRKNESS
KIRK No 10
KIRK No 8
KIRK No 6
KIRK No 4
KIRK No 2
KIRK No 1
HANS No 2
HANS No 1
F.R.N. No 1
F.R.N. No 2
F.R.N. No 3
F.R.N. No 4
F.R.N. No 5
A.R.H. No 23
A.R.H. No 21
A.R.H. No 19
A.R.H. No 17
A.R.H. No 15
A.R.H. No 13
A.R.H. No 11
KINNEY CREEK
TO KINNEY CREEK
OLD SAWMILL
BLOCKED AREA IN TOP RIGHT HAND CORNER OF MAP

LEGEND

Base line
Magnetometer station
Magnetic Contours
Contour Interval — 500 gammas
Background Reading — 59,855 gammas
0 - 645 gammas above background — 4
Greater than 645 gammas above background — 3
0 - 885 gammas below background — 2
885 - 1355 gammas below background — 1

To all magnetometer readings except blow-up section - add 60,000 gammas

Report 446

HILL, STARCK & ASSOCIATES
CONSULTING ENGINEERS
VANCOUVER, CANADA

COPPER 500 MINING CO. LTD.
MAGNETOMETER SURVEY OF WEST GROUP

DATE: JUNE 21, 1962 — SCALE: 1" = 200'
DRAWN BY: T.L.-L.H. — CHECKED BY:
CHECKED: T.L.-L.H. — APPROVED:
DRAWN: T.L.

446

HAR No 5

HAR No 4

HAR No 6

HAR No 8

RETAN No 1

HAR No 7

HAR No 3

HAR No 1

RETAN No 2

RETAN No 3

RETAN No 5

RETAN No 4

RETAN No 6

RETAN No 7

RETAN No 8

NORTH

WEST No 5

WEST No 4

WEST No 3

WEST No 2

WEST No 1

FAULT

OLD SAWMILL

TO MERRITT

MMM No 1

FAULT No 1

FAULT No 2

FAULT No 3

FAULT No 4

FAULT No 5

FAULT No 6

HANE No 2

HANE No 1

ARH No 23

ARH No 21

ARH No 19

ARH No 17

ARH No 15

ARH No 13

ARH No 11

0 to 0.5 parts per million - background.

1 p.p.m.

2 p.p.m.

3 p.p.m.

4 p.p.m.

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 446 MAP 2

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Report 446

INELL, STRAIN & ASSOCIATES

COPPER 500 MINING CO. LTD.

GEOCHEMICAL SURVEY OF WEST GROUP

JUNE 21, 1968 — SCALE 1" = 200'

DRAWN BY: T.L.-L.H. — CHECKED BY:

TRACED BY: T.L.-L.H. — APPROVED BY:

T.L. — Jon Lobb

HAR No 6
HAR No 4
HAR No 8
HAR No 7
HAR No 5
HAR No 3
HAR No 1
RETAN No 1
RETAN No 3
RETAN No 2
RETAN No 5
RETAN No 4
RETAN No 6
RETAN No 8
RETAN No 7
WEST No 7
WEST No 6
WEST No 4
WEST No 2
WEST No 5
WEST No 3
WEST No 1
KIM No 10
KIM No 9
KIM No 8
KIM No 6
KIM No 7
KIM No 5
MOT No 2
MOT No 1
HANS No 2
HANS No 1
ERN No 3
ERN No 2
ERN No 4
ERN No 5
MMM No 1
ARH No 23
ARH No 21
ARH No 19
ARH No 17
ARH No 15
ARH No 13
ARH No 11
NINEMILE CREEK
OLD SAWMILL
TRENCH
few dried out swamps

LEGEND

NICOLA Group

limy & non-limy rocks

1. limestone - foliated
2. limy argillites
3. limestone - gritty
4. tuffaceous limy greywackes

Undifferentiated Non-limy

5. Lithic tuffs
6. Witric tuffs
7. greywackes
8. non-limy argillites
9. Coryell stock diorites & qtz diorites, quartz-diorite breccia

- Outcrop
- Magnetometer & geochemical station
- Road
- Topographic draw or gulley
- Attitude
- Indicates grain of limestone
- Jointing - dip as indicated
- Trench

Report 446

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HILL, STARCK & ASSOCIATES
CONSULTING ENGINEERS
VANCOUVER, B.C.

COPPER SOO MINING CO. LTD.
GEOLOGY OF WEST GROUP

DATE JUNE 21 1962 | SCALE 1" = 200'
DRAWN TL-LH | CHKD
TRACED TL-LH | APPD

Jim Link