GEOCHEMICAL

Report on the Mae 1 - 4 Mineral Claims
S.P. 1 - 6
Bill 1 - 4
Kamloops Mining Division
for
UNITED COPPER CORPORATION LTD.

By: Alex Burton, P. Eng.
ALRAE EXPLORATION LTD.

September 28, 1967

92P/9W

1901

1061

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INTRODUCTION

A geochemical soil survey over the Mae, S.P. and Bill claims was completed in September, 1967, by a crew of four men under the supervision of A. Burton, P. Eng.

Base lines and cross lines at 400 foot intervals were established by extending the existing grid on the contiguous Silver mineral claims of United Copper Corporation.

Samples were taken at 200 foot intervals from a selected soil horizon and analysed for copper, molybdenum, lead, and zinc, with results expressed as parts per million (P.P.M.) and plotted on a base map.

LOCATION AND ACCESS

The S.P., Mae and Bill claims are contiguous to and along the northeast side of the Silver claims. The claims are about ten miles northwest of Little Fort, B.C. which is about 50 miles north of Kamloops, B.C.

From a point eleven miles west of Little Fort, on the Little Fort - 70 Mile House road, about ten miles of travel, northerly, on a dirt road, gains access across the northern end of the claims and down their east side. The road deteriorates to a poor, four-wheel drive road in the vicinity of the claims.

Nehalliston Creek traverses the claims and Nehalliston Lake is just west of them. The claims are on National Topographic System sheet 92P/9W.

CLAIMS

The following is a list of the claims covered by the geochemical soil survey.

CLAIM NAME	RECORD NO.	TAG NO.	MINING DIVISION	
Mae 1	61215		Kamloops	
Mae 2	61216		Kamloops	
Mae 3	61217		Kamloops	
Mae 4	61218		Kamloops	
S.P. 1	61209		Kamloops	
S.P. 2	61210		Kamloops	
S.P. 3	61211		Kamloops	
S.P. 4	61212		Kamloops	
S.P. 5	61213		Kamloops	
S.P. 6	61214		Kamloops	
Bill 1		841591	Kamloops)	NOTE:
Bill 2 Fr.		841592	Kamloops)	Record No's.
Bill 3		841593	Kamloops)	not yet
Bill 4		841594	Kamloops)	received.

GEOLOGY

The area has been mapped by the Geological Survey of Canada, Map G.S.C. 3-1966, Bonaparte Sheet.

The claims are underlain by Mesozoic rocks mapped as Lower and (?) Middle Jurassic sequence of volcanic rocks consisting of porphyritic augite, andesite, breccia, conglomerate and flows; minor andesite, arenite and flows.

Field traverses across the claims confirmed the regional mapping. Considerable outcrop is exposed along the central ridge running down the centre line of the claims and in outcrop in the Nehalliston Creek bed.

There is noticeable pyrite in the augite, andesite volcanics and in one outcrop, one grain of chalcopyrite was noted. No showings of economic minerals are known to exist.

SURFICIAL GEOLOGY

There are three main divisions in the surficial geology on the claims, higher ridges with considerable volcanic rock outcrop and

a shallow soil cover, glacial deposits and swamps with a deep cover on the bedrock; and over the larger portion of the property, a well developed soil, of moderate depth, over the bedrock.

Swamp and glacial deposits occur around 20E/80N.

The soil profile over most of the property consists of a well developed organic layer, usually six inches deep, overlying a well developed and uniform one to two inches of ash. On the lower slopes of some hills there is a layer of light tan "A" horizon overlying a thickened ash horizon, obviously the result of rain wash erosion from the higher portions of the hills after the forest fire which developed the ash layer. Occasionally, there is a thin carbon layer at the base of the ash horizon.

Below the ash horizon is a light tan "A" horizon which grades within a few inches into what appears to be a rusty brown, well developed "B" horizon.

SAMPLING TECHNIQUE

Sampling was done with augers at each station so the soil could be taken uniformly at the same horizon regardless of its depth. Care was taken to keep the ash layer out of the sample which was the lower "A", or if the term is preferred, the gradational "A-B" layer. Samples were placed in wet strength paper bags specially designed for geochemical surveys and the bags marked with co-ordinate station locations with a felt pen.

Samples were shipped to Mr. A. Burgoyne, Chief Chemist, of Anaconda American Brass Ltd., Western Explorations Division, Geochemical Laboratory, at Brittania Beach, B.C.

After drying and seiving, the samples were analysed for P.P.M. (parts per million) of copper, molybdenum, lead and zinc.

Weighed one gram samples were digested in a sulphuric-nitric acid solution which took the heavy metals out as sulphates. An aliquot was then digested in one normal hydrochloric acid and brought up to fifty millilitres in a culture tube.

The analysis for molybdenum was made by using the standard potassium thiocyanate technique with iso-amyl alcohol and values read off colormetrically, using a Spectronic 20 Colormeter-Spectrophotometer.

The copper, lead and zinc was analysed for in an atomic absorption spectrophotometer, Techtron type AA-3. Values for the copper, molybdenum, lead and zinc were given as parts per million which were then plotted on a base map at a scale of one inch to four hundred feet.

DISCUSSION OF RESULTS

There is a good range of values from low to high but generally, their distribution pattern is well scattered and appears to represent rock types rather than mineralization.

Lead values have the smallest range with only four scattered samples more than twice the background. Values between 20 and 40 P.P.M. are in accordance with the augite-andesite volcanic bedrock.

Zinc values are higher than the lead values and have a wider range, but like the lead, only a half dozen scattered samples are more than twice background value. The majority of the values are in the 100 to 200 P.P.M. range, and no pattern of value distribution can be seen.

Copper in the soils is moderately high, reflecting the andesitic bedrock with a reasonably grouped portion of the samples northeast of 100N containing the majority of the above background

samples. For copper, the property may be discussed in two sections, one northeast of 100N and the other southwest of 100N. Southwest of 100N, the samples above background are few, widely scattered, and need not be considered further with the exception of a few samples on Lines 20E and 24E, which appear to be an extension of the northeast section.

In the section northeast of 100N, the samples above background can be grouped into two main and three smaller groups. Those groups are above background, but below threshold, so they can not really be classed as significant anomalies. They do, however, group well and probably represent bedrock of higher copper content rather than mineralization.

Most of the molybdenum values in the soil are low (around 1 P.P.M.) with three areas where samples are high enough above background to reach threshold values. In a general way, the molybdenum and the copper pattern co-incide very well. However, higher molybdenum values are less widely scattered and group better than the copper values.

Molybdenum values in the soil probably reflect molybdenum content of the bedrock rather than mineralization.

CONCLUSIONS

Copper, molybdenum, lead and zinc values in the soil are what might be expected from soils over an andesitic volcanic bedrock in this area. Outlined groupings of samples on the map represent higher than background samples, but not strongly anomalous ones, and appear to reflect bedrock types rather than mineralization.

Respectfully submitted:

A.D.K. Burton, P. Eng.

APPENDIX I

Personnel record:

The following employees conducted field work on the Silver claims:

Employee	Occupation	Dates Employed
J. Hudson	Soil Chemist	Sept. 1 - 15, 1967
A. McElhinney	Sampler	Sept. 1 - 10, 1967
T. Morrison	Sampler	Sept. 1 - 12, 1967
H. Harding	Sampler	Sept. 1 - 14, 1967
A. Burton	Geological Engineer Supervision	Sept. 1, 6 - 8, Aug. 31/67
M. Lee	Draftsman	Sept. 25, 26, 1967

The contract price of the above employees in soil sampling work was $2,800.00.

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 29 day of **September, 1967**, A.D.

A. Burton

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

★o

120° 20'

51° 35'

SILVER 47

SILVER 46

SILVER 45

SILVER 43

SILVER 44

SILVER 42

SILVER 22

SILVER 24

SILVER 41

SILVER 39

SILVER 23

SILVER 25

SILVER 40

SILVER 26

SILVER 28

SILVER 27

SILVER 29

SILVER 30

SILVER 31

SILVER 32

SILVER 33

SILVER 34

SILVER 35

SILVER 36

SILVER 37

SILVER 38

SILVER 21

SILVER 20

SILVER 19

SILVER 18

SILVER 17

SILVER 16

SILVER 15

SILVER 14

SILVER 13

SILVER 12

SILVER 11

SILVER 10

SILVER 9

SILVER 8

SILVER 7

SILVER 6

SILVER 5

SILVER 4

SILVER 3

SILVER 2

SILVER 1

LYNN

MAE 1

MAE 2

MAE 3

MAE 4

BILL 1

BILL 2 Ff.

BILL 3

BILL 4

SP 1

SP 2

SP 3

SP 4

SP 5

SP 6

NEHALLISTON LAKE

Nehalliston Creek

ROAD

TED 1

TED 2

118 N

110 N

100 N

90 N

80 N

8 W

4 W

4 E

8 E

12 E

16 E

20 E

24 E

28 E

32 E

36 E

40 E

44 E

48 E

52 E

56 E

TRUE

LITTLE FORT
11 Miles

LEGEND

Cu | Mo
Pb | Zn — Values Denote Total Metal Content of Soil in PPM (parts per million)

◉ Claim Post

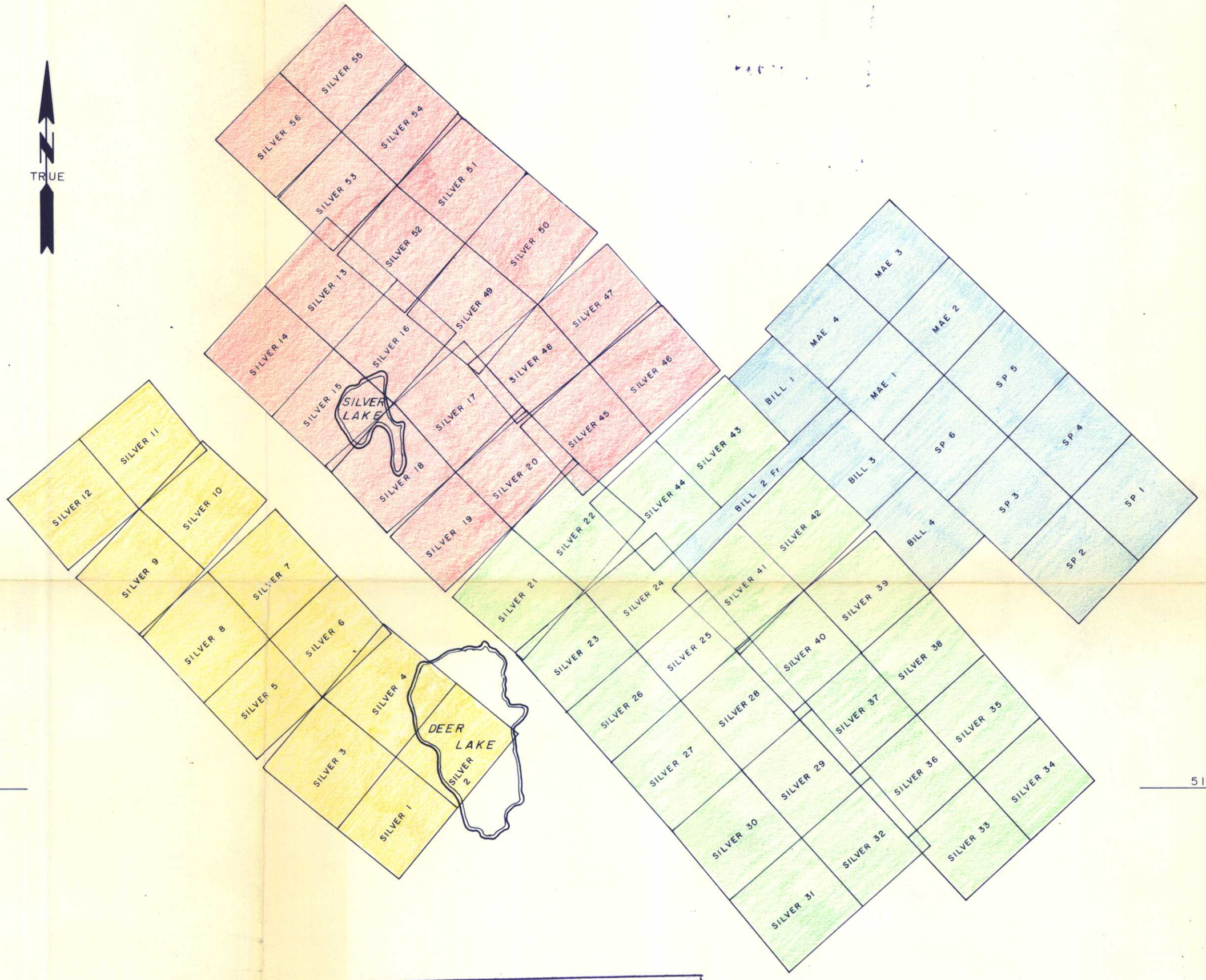
To accompany report of September 28, 1967
by A.D. BURTON on MAE 1-4, SP 1-6, and
BILL 1-4 Claims for UNITED COPPER CORP. LTD.

1061

UNITED COPPER CORPORATION LTD.	
SILVER LAKE PROPERTY Geochemical Soil Survey	
ALRAE EXPLORATION LTD. GEOLOGISTS AND ENGINEERS VANCOUVER, B.C.	
DESIGNED H.H. & J.H. DRAWN M.R.L. CHECKED A.D.B. DATE SEPTEMBER 1967	SCALE: HOR. 1" = 400' VERT. DWG. No.

120°23'

TRUE N



51°32'

51°32'

LEGEND

- SILVER GROUP No. 1 (Filed April 7/'67)
- SILVER GROUP No. 2
- SILVER GROUP No. 3
- CLAIMS ADDED to SILVER GROUP No. 3

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120°23'

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ALRAE EXPLORATION LTD.

UNITED COPPER CORPORATION LTD.

SILVER GROUP
Claim Map

DRAWN: M.R.L.	SCALE: 1" = 1600'
CHECKED: A.D.B.	DATE: SEPTEMBER 1967