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92I/7W

Geochemical Report on the Price 19, 21, 51-54 and Ruby 5 Fr. Mineral Claims,

Roscoe Lake - 50° 23' N, 120° 58' W
(NTS 92 1/SE)

Kamloops Mining Division.

Highmont Mining Corporation Ltd. and
Pathfinder Resources Ltd.

15th July - 19th August, 1974

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By

A. J. Reed, P. Eng.

September 18th, 1974 Ashcroft, B.C.

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INTRODUCTION

This report dexcribes approximately 16 linemiles of geochemical soil sampling performed by Highmont Mining Corporation Ltd. near Roscoe Lake in the Highland Valley area of British Columbia. The survey covered the whole of the Price 53 and 54 mineral claims and the Ruby 5 Fractional mineral claim and parts of the Price 19,21, 51 and 52 mineral claims. The purpose of the survey was to investigate an area in which a previous electromagnetic survey had defined three anomalies. (Reed, 1974).

TABLE 1 - MINERAL CLAIM DATA

Name	Record No.	Anniversary Date
Price 19	49614	27 April
" 21	49616	"
" 51	49628	"
" 52	49629	"
" 53	49630	"
" 54	50071	18 May
Ruby 5 Fr.	51291	20 August

Access to the Roscoe Lake area is by 28 miles of paved highway from Ashcroft to the Highland Valley and then by 12 miles of rough bush road southeastwards over Gnawed Mountain. Four-wheel drive vehicles were used for access and

a temporary camp was established near the south end of Roscoe Lake.

SURVEY PROCEDURE

844 soil samples were collected at intervals of 100 feet along lines spaced 100 feet apart. The survey area is covered by a system of east-west cut lines spaced 400 feet apart which were established several years ago. These cut-lines were used for control and intermediate lines were established by compass and pacing. The samples were taken from the upper part of the B soil horizon at a depth of approximately six inches. Swamp areas were not sampled. The samples were placed into paper envelopes and shipped to Bondar-Clegg and Company Ltd., 1500 Pemberton Ave., North Vancouver for analysis of the copper, silver and molybdenum content. At Bondar-Clegg the samples were :-

1. Dried in infra-red driers
2. Sieved to -80 mesh
3. Weighed on 0.5gm
4. Digested in LeFort aqua regia for three hours
5. Bulked to 20% acid concentration and homogenized.
6. Allowed one hour setting time
7. Analyzed by atomic absorption in constant comparison with both synthetic and matrix standards.
8. Permanently recorded on chart paper.

SURVEY RESULTS AND INTERPRETATION

Figure 1 shows the analytical values for copper, silver and molybdenum in the soil samples on a plan map of the area at 1 inch represents 100 feet.
Figure 2 is a histogram showing the frequency distribution of the copper analyses and Table 2 shows the calculation of the standard deviation , threshold value and anomalous value for the copper analyses. Silver and molybdenum values were consistantly low and did not warrant the tedious statistical calculations.

Considering the copper analyses, only 14 samples exceed the calculated threshold value of 148ppm and only 6 of these exceed the calculated anomalous value of 201 ppm. None of these higher values are adjacent to each other but are scattered over the survey area. Thus we have a small number of scattered anomalous values but no anomalous areas.

The electromagnetic anomalies described by Reed (1974) are shown in Figure 1. The two electromagnetic anomalies which occur on the Price 53 MC have no expression in the geochemical data. The electromagnetic anomaly which occurs on the Price 19 MC has a weak expression in the geochemical data in a crescent-shaped area enclosed by the 100ppm. Cu contour and which is situated approximately 500 feet south-east (i.e. "down-ice") from the Price 19 M.C. electromagnetic anomaly.

FIGURE 2

HIGHMONT MINING CORP. LTD.
PATHFINDER PROJECT

FREQUENCY DISTRIBUTION OF COPPER VALUES IN SOIL SAMPLES

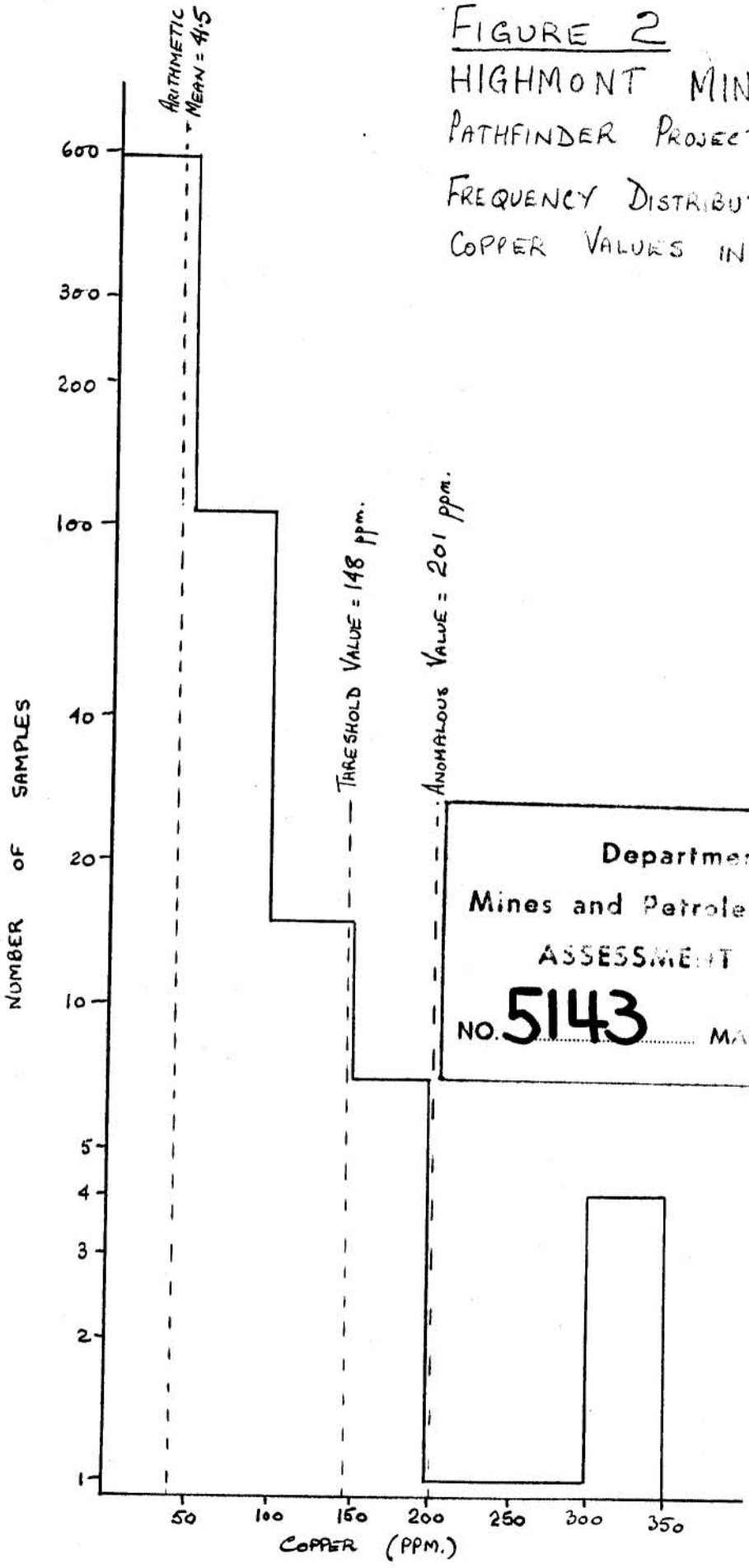


TABLE 2

Calculation of Standard Deviation - Cu values.

$$S = \sqrt{\frac{\Sigma (X_1)^2 - N(\bar{X})^2}{N-1}}$$

where S = standard deviation, N is the total number of samples, X_1 represents the individual sample values and $\bar{X}$ is the mean or average value

$$\bar{X} = \frac{\Sigma X_1}{N} = \frac{35002}{844} = 41.5$$

$$\Sigma (X_1)^2 = 3840709$$

$$S = \sqrt{\frac{\Sigma (X_1)^2 - N(\bar{X})^2}{N-1}} = \sqrt{\frac{3840709 - (844 \times 1724)}{843}}$$

$$S = 53.25$$

THRESHOLD VALUE = $\bar{X} + 2S = 41.5 + 2 \times 53.25 = 148$

ANOMALOUS VALUE = $\bar{X} + 3S = 41.5 + 3 \times 53.25 = 201$

CONCLUSIONS

A detailed geochemical soil survey has been carried out on the Price 19, 21, 51-54 and Ruby 5 Fr. mineral claims and it is concluded that the electromagnetic anomalies defined on the Price 19 and Price 54 mineral claims are produced by phenomena other than occurrences of copper, silver and molybdenum minerals in concentrations of economic significance.

Allan J. Reed

A. J. Reed, P.Eng.

September 18, 1974

REFERENCES

1. Reed, A.J. (1974)

" Geophysical Report on the Price, Ruby and Pen Claims", Kamloops Mining Division, dated 15 March - 15 April, 1974.
(Assessment Report) .

STATEMENT OF PERSONNEL AND COSTS

Name	Position	No. of Days Employed	Cost
A.J. Reed Box 158 Ashcroft, B.C.	Geologist	12-19 August, 1974	$500
M.J. Porter Box 44, Savona, B.C.	Fieldman	15 July-19 August, 1974	$1125
Sample Preparation & Assaying			$1900
Sample Envelopes & Shipping			40
1 4X4 Pickup at $400 per month			500
Camp supplies and groceries			200
Preparation of Report			300
		Total Cost	$4565

Allan J. Reed

A.J. Reed, P.Eng.
September 18, 1974

CERTIFICATE

I, Alan James Reed of Ashcroft, British Columbia, do hereby certify that :

1. I am a geologist employed by Highmont Mining Corporation Ltd. of 700 - 1177 West Hastings Street, Vancouver, B.C.

2. I am a Professional Engineer registered in the Province of British Columbia and the Province of Ontario.

3. I am a graduate of the University of Leeds with a B.Sc. (Hons. 1963) in Geology.

4. I have practised my profession since 1963 while employed by the Geological Survey of Jamaica, Siscoe Metals of Ontario Ltd., and Highmont Mining Corporation Ltd.

5. This report deals with work performed on the Price 19,21, 51-54 and Ruby 5 Fr. mineral claims under my supervision during the period July 15th to August 19th, 1974.

Alan J. Reed

A.J. Reed, P.Eng.
September 18th, 1974
Ashcroft, B.C.

HIGHMONT MINING CORPORATION LTD.

FIGURE 1

INDEX MAP, CLAIM MAP AND ASSAY VALUES OF GEOCHEMICAL SOIL SURVEY OF PRICE 19, 21, 51-54 AND RUBY 5 FR. MINERAL CLAIMS, KAMLOOPS M.D.
TO ACCOMPANY REPORT BY A.J. REED, P.ENG., 18th SEPT., 1974.

KEY

SILVER CONTENT (ppm)
COPPER CONTENT (ppm) — 100 / 1.0 — MOLYBDENUM CONTENT (ppm)
SAMPLE LOCATION.
100 — 100 ppm COPPER ISOGEND.
ND = NOT DETECTED.
POSITION OF ELECTROMAGNETIC ANOMALY (REED, 1974).

PRICE #21 M.C.

PRICE 19 M.C.

PRICE 54 M.C.

PRICE 52 M.C.

RUBY 15 FR. M.C.

RUBY 5 FR. M.C.

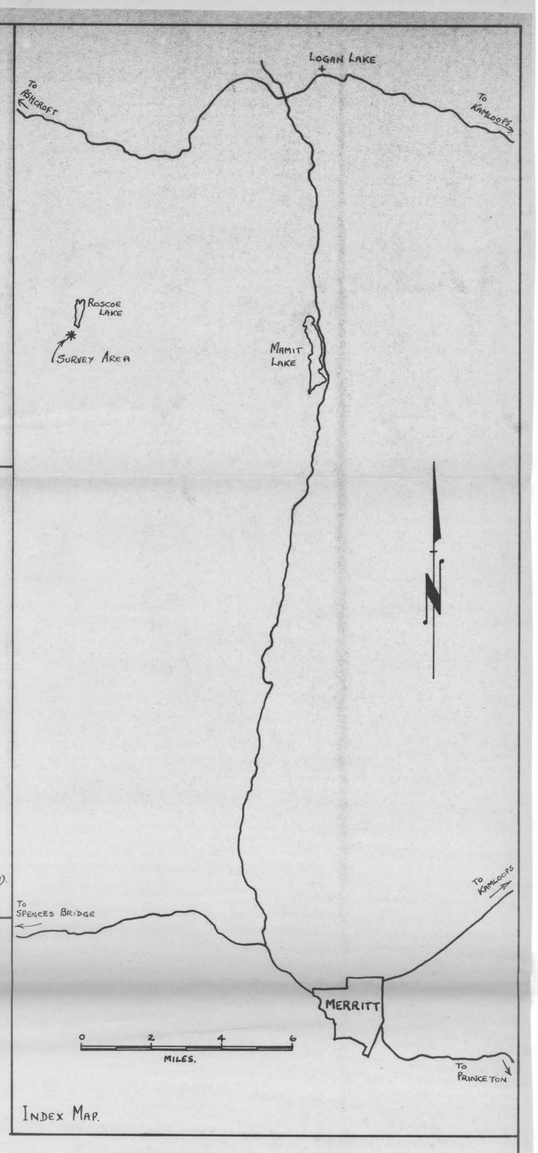
PRICE 53 M.C.

PRICE 51 M.C.

8N 4N 0+00 4S 8S 12S 16S 20S 24S 28S

30W 20W 10W 0+00

0 200 400 600 800 1000
FEET.



INDEX MAP.

Alan J. Reed
18th Sept., 1974.

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map 1