5775

GEOLOGICAL and GEOCHEMICAL SURVEY

on

THE BUN CLAIMS

VANCOUVER MINING DIVISION

by

P. FOLK, P. Eng.

Claims:	Bun 1, 9, 10, 12, 19, 20
Location:	Saumarez Bluff, Jervis Inlet 49° 54' 123° 54'
Dates:	Oct. 7 1974 - Oct. 15, 1974 Oct. 29 1974 - Nov. 6, 1974

December 1975

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ACCOMPANYING MAPS:

INTRODUCTION

In the latter part of the 1974 season twenty claims were staked at Saumarez Bluff on Jervis Inlet across from Vancouver Bay.

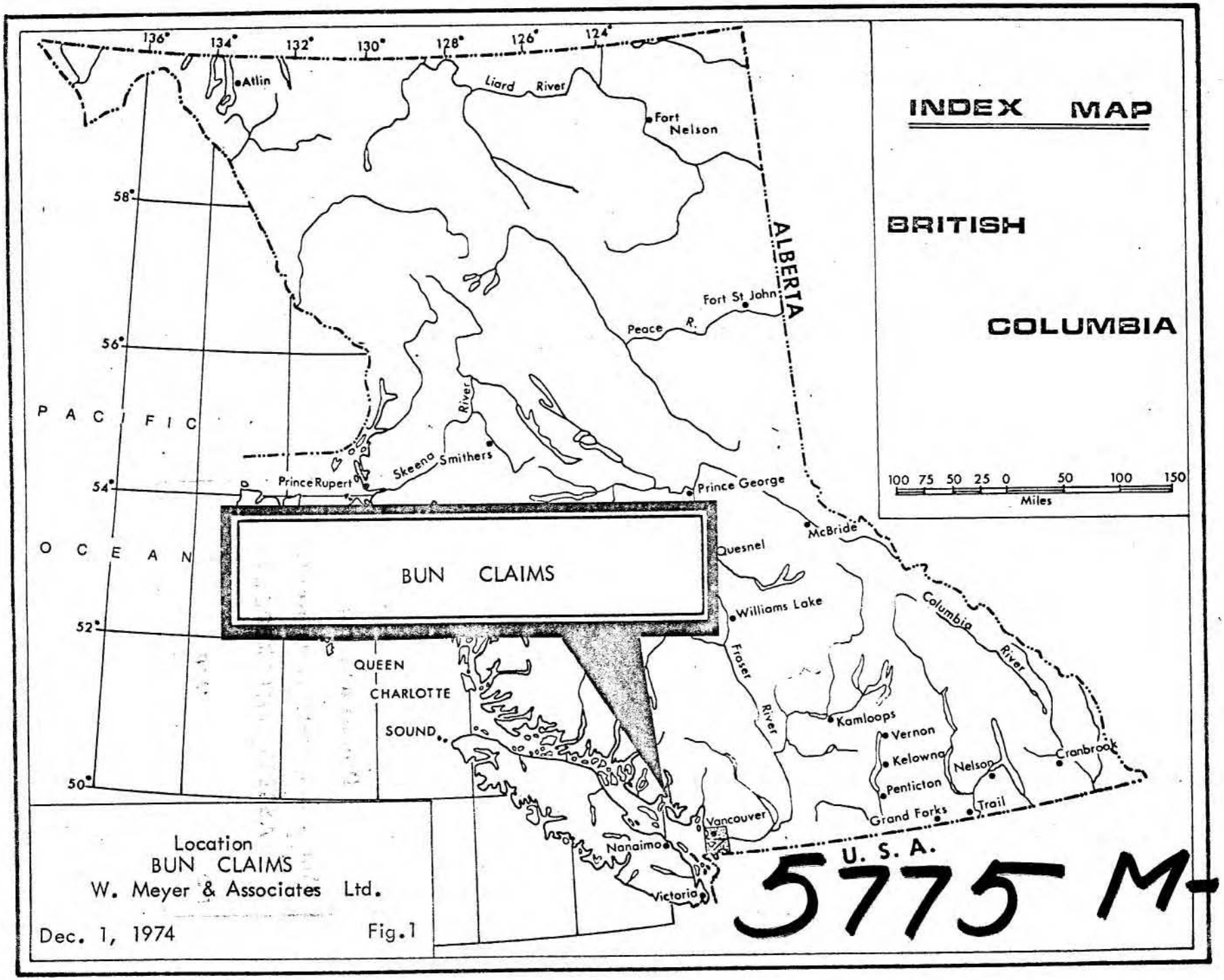
The claims, which are in heavily wooded, very steep terrain, cover a soil anomaly with some good copper and molybdenum values in well pyritized rocks of various kinds. There is no recorded history of staking or prospecting in the immediate vicinity of the claim group.

Soil sampling, reconnaissance mapping and prospecting were undertaken by P. Folk and a prospector during October. Some rock geochemical samples were also taken. All work was undertaken by W. Meyer & Associates Ltd.

LOCATION AND ACCESS

The claims are located near Saumarez Bluff opposite Vancouver Bay on Jervis Inlet. On a good day the location can be reached in about 45 minutes by boat from Egmont, which is about three hours from Vancouver by car. Docking facilities, accommodation, food, supplies and gasoline are available at Egmont.

At the property there are no anchorages and no sheltered water. With care it is possible to tie small boats to overhanging limbs and to deadfalls jutting out into the water. Otherwise, because of wind and tide it is not advisable to leave boats unattended. The likelihood of affecting a safe docking by float plane is small since cliffs and overhanging trees occupy most of the coastline.


INDEX MAP
BRITISH
COLUMBIA
136°
134°
132°
130°
128°
126°
124°
58°
56°
54°
52°
50°
Atlin
Liard River
Fort Nelson
ALBERTA
Fort St John
Peace R.
PACIFIC
OCEAN
Skeena River
Smithers
Prince Rupert
Prince George
McBride
BUN CLAIMS
Quesnel
Williams Lake
Fraser River
Columbia River
QUEEN CHARLOTTE SOUND
Kamloops
Vernon
Kelowna
Penticton
Nelson
Cranbrook
Grand Forks
Trail
Vancouver
Nanaimo
Victoria
U. S. A.
100 75 50 25 0 50 100 150
Miles
Location
BUN CLAIMS
W. Meyer & Associates Ltd.
Dec. 1, 1974
Fig.1

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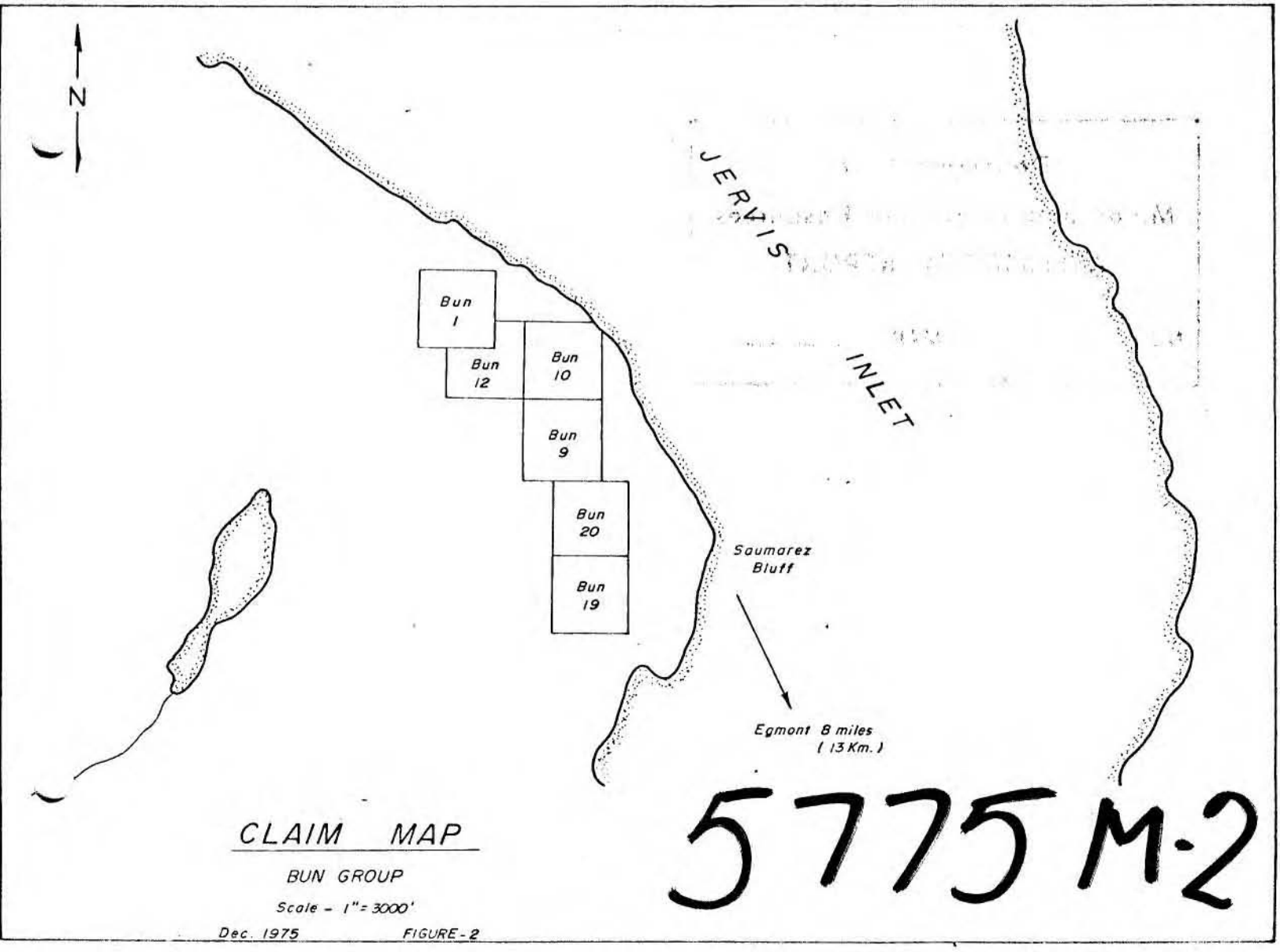
CLAIMS

The Bun group consists of 6 mineral claims:

Claim	Record No.	Title	Expiry Date
Bun 1	26335	L. G. White	Oct. 21, 1977
9	26343	L. G. White	Oct. 21, 1977
10	26344	L. G. White	Oct. 21, 1977
12	26346	L. G. White	Oct. 21, 1977
19	26372	L. G. White	Nov. 8, 1977
20	26373	L. G. White	Nov. 8, 1977



CLAIM MAP

BUN GROUP

Scale - 1" = 3000'

Dec. 1975 FIGURE - 2

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TOPOGRAPHY, CLIMATE, VEGETATION

The topography is exceedingly steep. Slopes range from about 30^{o} to 55^{o} [not counting cliffs] and average between 35^{o} and 40^{o}. There is a location at the bottom of the southernmost claim line where there is enough flat ground for a tent, and there are some bluffs in the middle of the property on which a helicopter could land if the trees were cleared away. Otherwise there are no flat spaces on the property.

Most of the claim group is covered by a mature fir-cedar forest with some trees in excess of seven feet in diameter and well over 100 feet high. There is relatively little underbrush except the usual thick salal in the more poorly forested areas.

Climate is typically West Coast Marine with abundant rain in the fall, winter and spring. The area of interest on the claims is likely snow free most of the year.

REGIONAL GEOLOGY

Saumarez Bluff is in an area where old sediments and volcanics were intruded, metamorphosed and assimilated by the diorites, quartz diorites and granodiorite of the Coast Crystalline Complex. The resulting pendant of metamorphosed sediments and volcanics occupies a large area on both sides of Jervis Inlet. Most of these pendant rocks are pyritized and some have been found to contain small deposits of copper, gold, silver and magnetite.

GEOLOGY - BUN CLAIMS

Geologically the property contains a complex assemblage of quartz diorites, diorite, porphyries, metasediments and volcanic pendant rocks. The accompanying map is a reconnaissance map at a scale of 1" = 400'. Most of it was constructed from information noted while the soil sampling grid was being run.

ROCK UNITS

Seven different rock units were mapped on the basis of rock type and alteration. Pyritization can be found in all rocks except unaltered quartz diorite, quartz feldspar porphyry and some of the porphyritic and felsitic rocks. Pyrite is present but not abundant in most of the metasedimentary rocks.

1. Quartz Porphyry:

A 30 foot wide distinctive quartz porphyry dyke and smaller dykes similar in nature intrude the pendant rocks in the vicinity of the soil anomaly. The quartz porphyry is massive, fresh and unaltered with no trace of pyrite or quartz veining. It is composed of the following:

- 30% quartz, as large round phenocrysts up to 1.5 cm. in diameter
- 30% feldspar, as smaller euhedral crystals up to 0.75 cm. in diameter
- 5% amphibole as large crystals
- 30% matrix - fine grained, grey, feldspathic

Other similar but smaller and less quartz rich dykes are found on the shoreline cutting the quartz diorite.

2. Feldspar Porphyry, Aplite, Felsite:

This classification encompasses a variety of porphyritic and aplitic dykes common throughout the claim group. Also there are outcrops of very hard, fine grained felsite material [rhyolite ?] with an unknown relationship to the surrounding rock. Some of the porphyries are dykes or flows in the original pendant strata while others intrude the quartz diorite and are possibly the same age as the quartz porphyry described above.

3. Quartz Diorite:

These rocks are typical coast range quartz diorites. They are medium grained and contain more than 10% quartz with varying percentages up to about 15% of biotite and hornblende combined. The rest of the rock is medium grained white feldspar with magnetite as an accessory. Outcrops mapped as unaltered quartz diorite are massive and contain no pyrite, epidote or chlorite.

4. Altered Quartz Diorite:

The altered quartz diorites are like the above but contain pyrite and/or epidote-chlorite alteration. Pyritization in these rocks is largely confined to zones of fracturing commonly along creek beds. The more massive rocks contain some pyrite with fine epidote stringers and chloritization of the mafic minerals.

5. Fine Grained or Porphyritic Diorite:

The age relationship of these heterogeneous diorites with the surrounding rocks is not clear. They may represent a small but complex intrusion which has been subsequently altered. The rocks themselves are fine grained, pyritized hornblende diorites which grade rapidly to feldspar porphyritic diorites. Chloritic alteration of the hornblendes and intense very fine pyritization disseminated throughout are the only easily visible alteration products. Although dioritic dykes do cut the quartz diorite there is no evidence linking the dykes to the main body of diorite.

6 & 7. Metasediments and Metavolcanics:

These pendant rocks represent the oldest strata in the area and have been extensively altered by the intrusion of the surrounding granitic rocks. The two units have been separated rather arbitrarily where the occurrence of dark grey, argillaceous, thinly banded rocks predominates over the greenish banded fine grained rocks thought to be originally volcanic. The "greenstones" are generally pyritized and contain thin bands of chloritic material with parallel epidote, magnetite and hematite stringers. Light grey silicified and pyritic material as well as fine grained highly altered rock are also included in this unit.

Apart from the shaley, banded rocks there are also occurrences of sub-angular conglomerate in the metasedimentary facies. Generally speaking the metasediments are less pyritized than the unit thought to be originally volcanic.

STRUCTURE

Dominant structures including fracturing, banding, veining and dykes trend in a NW-SE direction. Shearing roughly perpendicular to this direction was noted in a creek bed near the top of the bluff west of the claims. No folds were seen.

ALTERATION AND MINERALIZATION

Most of the area has been subjected to propylitic alteration resulting in the formation of chlorite, epidote and pyrite. Superimposed on this are bleaching and silicification with minor sericite and more intense pyritization. Highly bleached and pyritized cliffs are prominent along the shore at the claim group. Magnetite and hematite have also been formed; at least some of the hematite is pseudomorphic after pyrite. A weak quartz stockwork with pyrite and traces of molybdenite outcrops on both sides of the quartz porphyry dyke.

The proximity of the quartz stockwork and soil anomaly to the quartz porphyry dyke indicates partial control of the alteration and mineralization by the dyke. The anomaly, however, extends far beyond the limits of the quartz porphyry and so there may be other controlling factors which are not readily apparent.

Some biotite thought to be secondary was found in one outcrop of metavolcanics.

Apart from disseminated and fractured pyrite, magnetite, and hematite, little mineralization has been found. Traces of chalcopyrite and sooty chalcocite occur in frac-

tures at one location and traces of molybdenite were seen in the quartz stockwork mentioned above.

Specks of chalcopyrite intermixed with pyrite were eventually located in samples of metavolcanics and diorite taken at the rock geochemistry sample locations and brought back to the office. Poor lighting conditions produced by the dense canopy of the evergreen forest on the shady side of the steep bluff makes the distinction between disseminations of pyrite and chalcopyrite exceedingly difficult in the field. Since the rock chip samples were taken at random it is likely that similar occurrences of fine chalcopyrite with pyrite are common and have so far been overlooked.

GEOCHEMISTRY

Soil Geochemistry:

190 soil samples were taken at 200 foot intervals on grid lines 800 feet apart. They were placed in kraft paper envelopes and taken to Acme Analytical Laboratories in Burnaby where the -80 mesh fraction was assayed by atomic absorption methods. Assays for Cu, Mo, Zn and Ag were requested and are plotted on the accompanying maps.

The soil samples were of poor quality since there is only a thin layer of soil over some of the very steep bedrock. Some of the samples are actually talus fines.

Copper values range up to 1,320 ppm with anomalous values over an area 3,000 feet long and up to 1,100 feet wide. There are also coincident molybdenum and silver anomalies. The 100 ppm copper contour which is weakly anomalous encloses all molybdenum anomalies and covers the diorite rock unit.

There is a sharp uphill limit to the anomalous values [the slope is generally perpendicular to the shoreline] which likely pinpoints the upward limit of mineralization. On the downhill side some downslope movement of the anomalies undoubtedly occurs. Anomalous values do not appear to follow any drainage pattern. In fact, there is a distinct across-slope trend which indicates mineralization in a NW-SE direction.

A few PH measurements were taken in the laboratory. They are quite low ranging from 4.1 to 5.6 indicating an acidic environment in which copper minerals can dissolve and be mobilized. Confirming this mobilization, some preliminary work, not shown, indicated that the cold-extractable copper to total copper ratio in soils decreased uphill from the shore. This is interpreted as meaning that the percentage of copper transported in particulate form rather than dissolved in water increases uphill in the direction of bedrock mineralization.

ROCK GEOCHEMISTRY

As an orientation survey twenty rock chip samples were taken at various locations and assayed by atomic absorption for the same elements as the soil samples. Two samples were anomalous in copper [355 and 220 ppm] and one in molybdenum [12 ppm].

This small orientation survey shows that the soil anomaly definitely results from bedrock mineralization and that rock geochemical methods do provide useful results on the property. Since there are abundant rock exposures and rock chip anomalies do not creep downhill as soil anomalies

do the rock geochemical method is better suited for this property than soil sampling.

DISCUSSION

The property contains a substantial geochemical anomaly over an area in which little mineralization except pyrite, magnetite and hematite have been found. Certainly the grade of copper mineralization seen in the field is insufficient to explain numerous soil samples over 500 ppm Cu [about .05% Cu in the soil] unless the copper permeates a large portion of the anomalous area. The specks of chalcopyrite finally detected in the office in two random rock samples are associated with well disseminated pyrite which does in fact permeate a substantial portion of the claim group. Such occurrences of chalcopyrite are impossible to see in the field.

The anomaly is linear in nature being parallel to the banding, veining and fracturing in the metavolcanics. There is a possibility that high grade material will eventually be found in recessively weathered and as yet unseen material underlying the upper parts of the anomaly.

In the middle of the anomaly the distinctive quartz porphyry dyke is spatially associated with:

1. A weak quartz stockwork
2. Intense pyritization
3. Anomalous soil samples

Unfortunately for the interpretation all of these effects do not follow the dyke along its entire length. Part of the

anomaly is close to the quartz diorite contact which may be another controlling agent.

Although little mineralization has been found as yet, the indirect evidence provided by the geochemical anomaly and the complex geological setting indicate that further work should be undertaken on the claims.

SUMMARY AND CONCLUSIONS

1. A substantial Mo, Cu, Ag geochemical anomaly was found in the very steep terrain covered by the Bun Claims.

2. Mineralization has not yet been found to account for the anomaly.

3. Pyrite is well disseminated over a large part of the claims. A weak quartz stockwork and hematite, chlorite, epidote, magnetite, secondary biotite, fracturing, bleaching and silicification are visible at various locations on the property.

4. Some fine very low grade chalcopyrite [invisible in the field] has been found intermixed with pyrite disseminations in two random rock samples. More mineralization of this kind is likely in the anomalous area.

5. The possibility of a high grade deposit paralleling the anomaly has not yet been ruled out.

Respectfully submitted,

Peter Folk

P. Folk, P. Eng.

Jan 16/76

APPENDIX 1

PERSONNEL and DATES

Name	Position	Dates of Work	Days
P. Folk	Geologist	Oct. 7 - Oct. 15 Oct. 29 - Oct. 31 Nov. 5 - Nov. 6	14
R. Schneider	Prospector	Oct. 7 - Oct. 15	9
P. Dunsford	Technician	Oct. 29 - Oct. 31	3

APPENDIX 2

AFFIDAVIT re COST of SURVEY

I, Peter Dunsford, do solemnly declare that the geological and geochemical survey on the Bun Claims was carried out during October 1974, and is described in this report. The data was obtained by W. Meyer & Associates staff for L. G. White at a total property related cost of at least $2,500.00

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 20
day of Jan., A.D. 1976.

Peter Dunsford

Sub-mining Recorder

APPENDIX 3

CERTIFICATE

I, Peter Folk, do hereby certify that:

1. I am a geologist with residence at 5970 173rd Street, Surrey, B.C.

2. I am a graduate of the University of British Columbia (B.A., Sc. 1971)

3. I am a registered member of the Association of Professional Engineers of the Province of British Columbia.

4. I have worked as an exploration geologist for five years for the following companies: Western Geological Services Ltd.; West Coast Mining & Exploration, and W. Meyer & Associates Ltd.

5. The programme described in this report was carried out by a W. Meyer & Associates crew under my direction.

Peter Folk

P. Folk, P. Eng.

Peter Folk

Jan 16/76

LEGEND

A	Quartz – Feldspar Porphyry	Py	Pyrite
B	Feldspar Porphyry, Aplite, Felsite	Hem	Hematite
C	Quartz Diorite	Mag	Magnetite
D	Altered Quartz Diorite	Qtz	Quartz
E	Fine Grained Diorite, Porphyritic Diorite	Mo	Molybdenite
F	Meta-Sediments, Slates, Conglamerates	Cp	Chalcopyrite
G	Meta-Volcanics, Banded Greenstones	CC	Chalcocite
		Di	Diorite
		Alter	Altered
		Tr.	Trace
		Diss	Disseminated
		Porphy	Porphyry
		Fr.	Fracture
			Foliation, Bedding, Banding
			Fracturing

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M-3

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5775 MAP 3

Map to accompany "Geophysical and Geochemical survey on the Bun Claims" by P. Folk P.Eng., Dec. 1975.

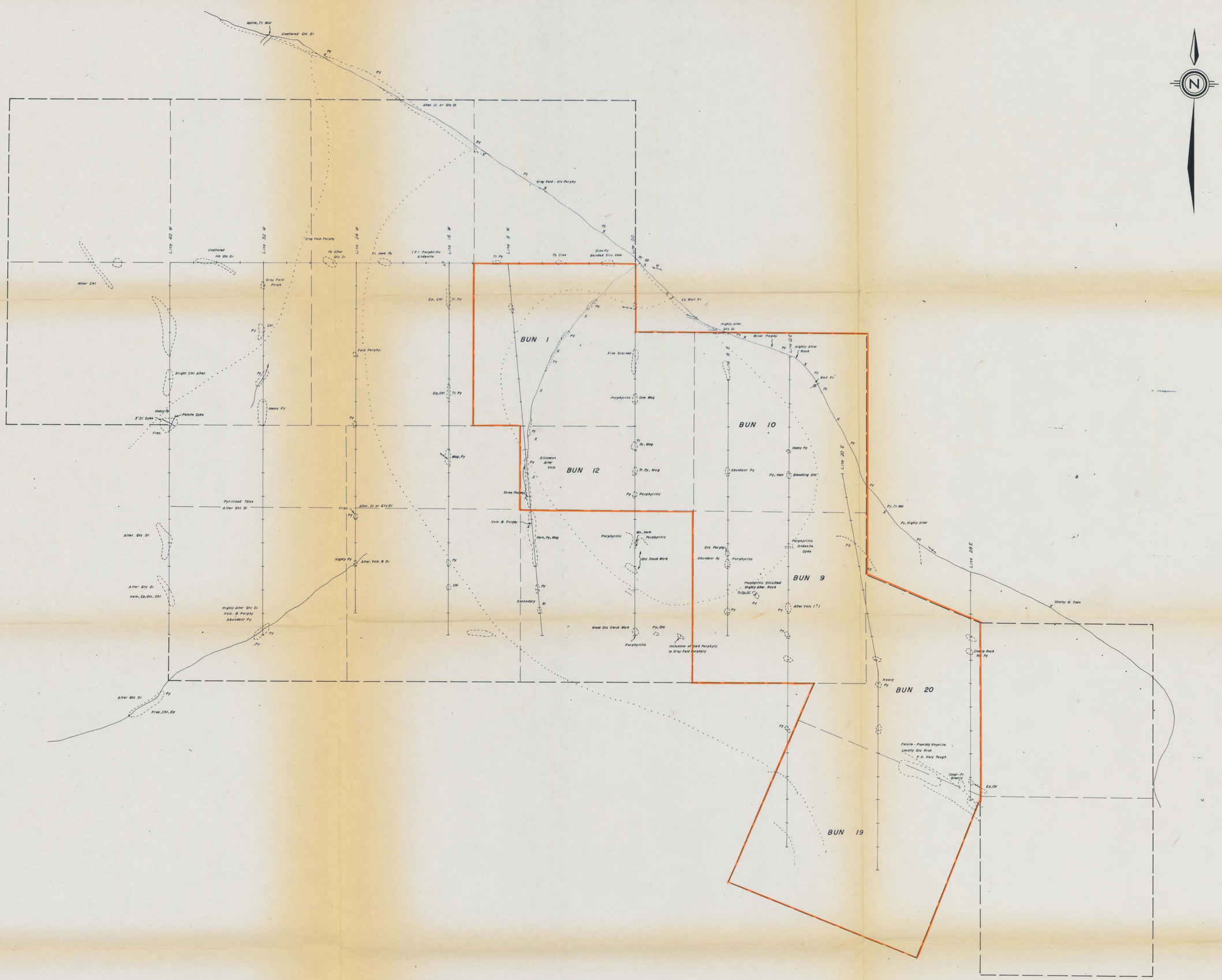
BUN CLAIMS
SAUMAREZ BLUFF — JERVIS INLET

GEOLOGY

400 0 400 800 feet
Scale

November 1974 Figure No-3

GLOBAL DRAFTING Jan 16/76



LEGEND

- Quartz – Feldspar Porphyry
- Feldspar Porphyry, Aplite, Felsite
- Quartz Diorite
- Altered Quartz Diorite
- Fine Grained Diorite, Porphyritic Diorite
- Meta – Sediments, Slates, Conglomerates
- Meta – Volcanics, Banded Greenstones

Py	Pyrite
Hem	Hematite
Mag	Magnetite
Qtz	Quartz
Mo	Molybdenite
Cp	Chalcopyrite
CC	Chalcocite
Di	Diorite
Alter	Altered

Tr.	Trace
Diss	Disseminated
Porphy	Porphyry
Fr.	Fracture
	Foliation, Bedding, Banding
	Fracturing

Map to accompany "Geophysical and Geochemical survey on the Bun Claims" by P. Folk P. Eng., Dec. 1975.

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BUN CLAIMS

SAUMAREZ BLUFF — JERVIS INLET

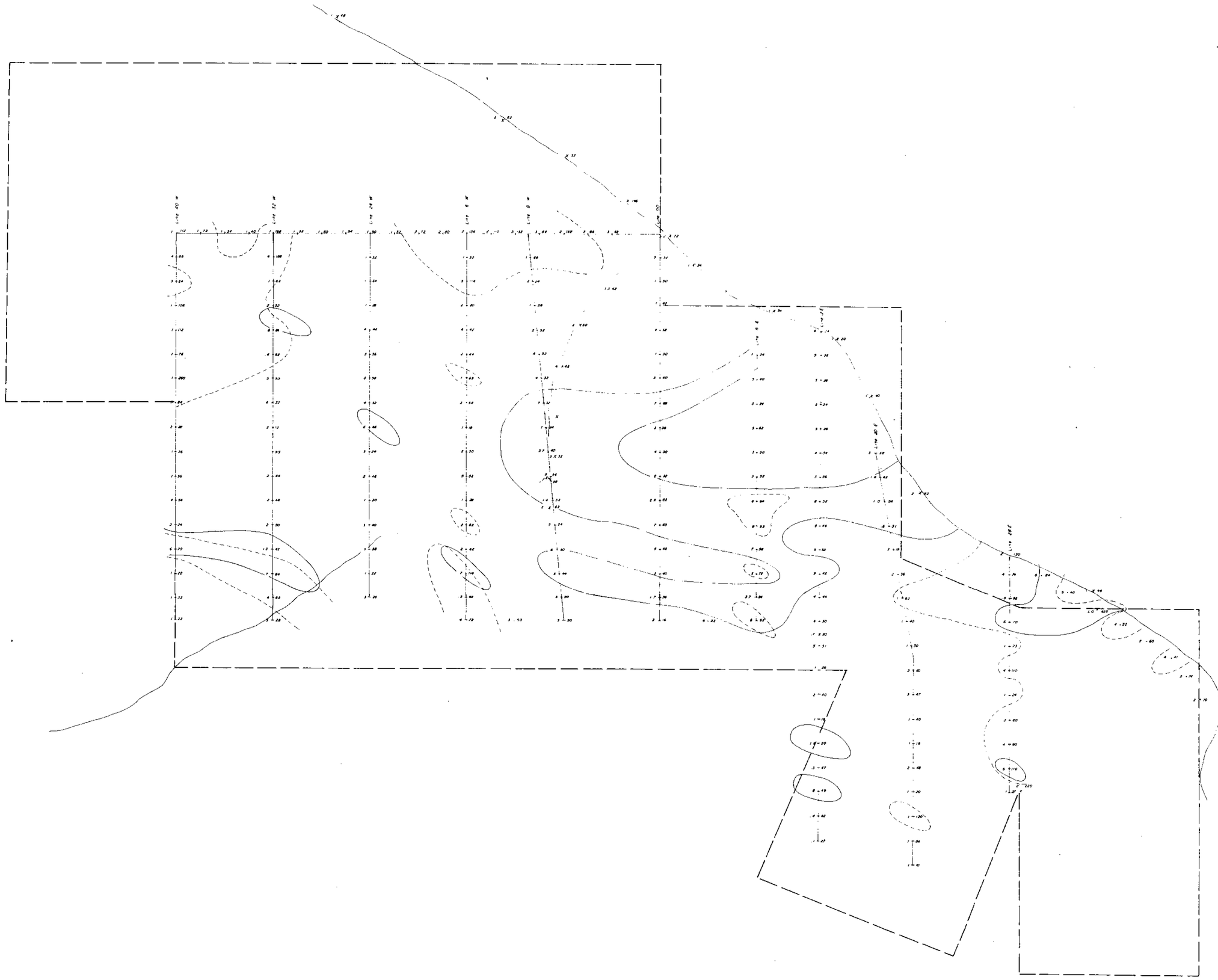
GEOLOGY

400 0 400 800 feet

Scale

November 1974 Figure No—

GLOBAL DRAFTING



LEGEND

- Zinc Contour > 60 ppm
- Silver Contour > 5 ppm
- x Rock Sample
- · Soil Sample

Silver in ppm / Zinc in ppm

Soil Grid

Map to accompany "Geophysical and Geochemical survey on the Bun Claims" by P. Falk, P. Eng., Dec. 1975

Department of
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BUN CLAIMS

SAUMAREZ BLUFF — JERVIS INLET

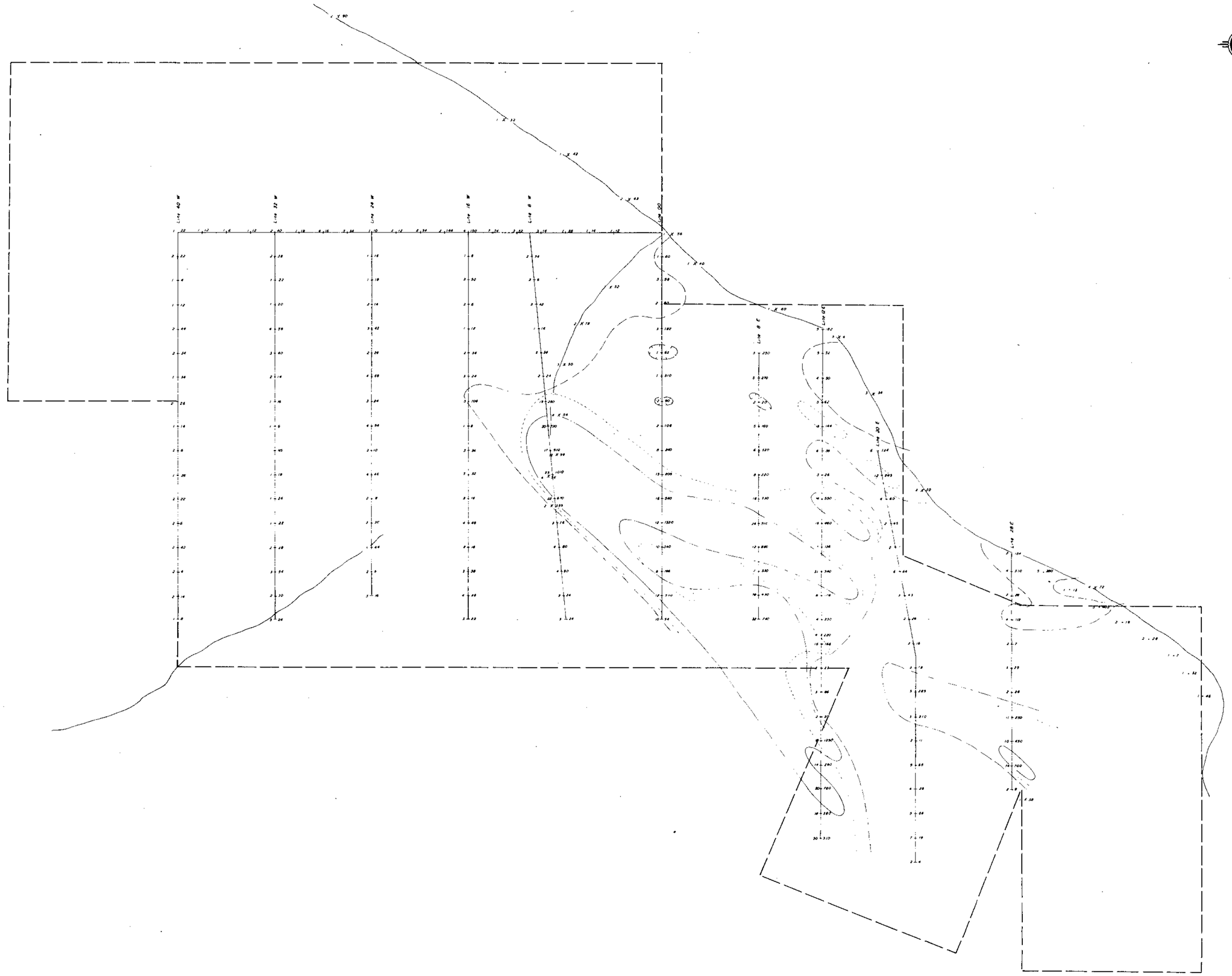
SOIL & ROCK GEOCHEMISTRY — Zn & Ag

400 0 400 800 feet
Scale

November 1974 Figure No. 4

Peter Falk
Jan 16/76

GLOBAL DRAFTING



LEGEND

- Copper Contour ≥ 500 ppm
- Copper Contour ≥ 100 ppm
- Molybdenum Contour ≥ 10 ppm
- Rock Sample
- Soil Sample

Molybdenum in ppm — Copper in ppm

Soil Grid

Map to accompany "Geophysical and Geochemical survey on the Bun Claims" by P. Folk, P.Eng., Dec. 1975.

Department of
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ASSESSMENT REPORT
NO. 5775 MAP 5

BUN CLAIMS

SALMAREZ BLUFF — JERVIS INLET

SOIL & ROCK GEOCHEMISTRY — Cu & Mo

400 0 400 800 feet
Scale

November 1974 Figure No— 5

Peter Folk
Dec 19/76

GLOBAL DRAFTING