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REPORTS ON

KWOIS CK. CU. PROPERTY, B.C.	NTS. 92-L/3-E
ZEBALLOS AREA, B.C.	NTS. 92-L/2 W½
CUP CLAIMS, B.C.	NTS. 92-F/7 E½
COUS CK. CU. PROPERTY, B.C.	NTS. 92-F/2 W½

Vancouver, B.C. Sept.125/75 S.H. Pilcher

REPORT ON

KWOIS CREEK COPPER PROPERTY

N.T.S. 92-L/3-E

S.H. Pilcher

Vancouver, B.C.

September 25, 1975

KWOIS CREEK COPPER PROPERTY

N.T.S. 92-L/3-E

Introduction

This property, consisting of the 14 CU claims is located in rugged and heavily timbered terrain approximately 3 miles northwest of Tahsish Inlet (Figure 1). The owner, Mr. Sam Craig, is trying to find someone who will do enough work to hold the claims for at least one year.

The writer spent one day on the property in the company of Mr. Craig, during which time several of the mineralized areas as well as the surrounding country rocks were examined along the traverse indicated in Figure 2. As a point of interest, during regional reconnaissance by Falconbridge the previous year, silt samples collected from the lower parts of the Craig Creek drainage were found to be highly anomalous in copper and molybdenum.

History

The property was first staked in 1969 by Bralorne-Canfer as a result of follow-up of some anomalous silt samples. No work was done at this time. Mr. Craig staked the area in 1971 and restaked it in 1973. During this year Phelps Dodge did some reconnaissance mapping, chip sampling of mineralized outcrop, and a limited amount of geochemistry. Moneta Porcupine Mines optioned the property and in May 1974 spent one week mapping and sampling around the known showings.

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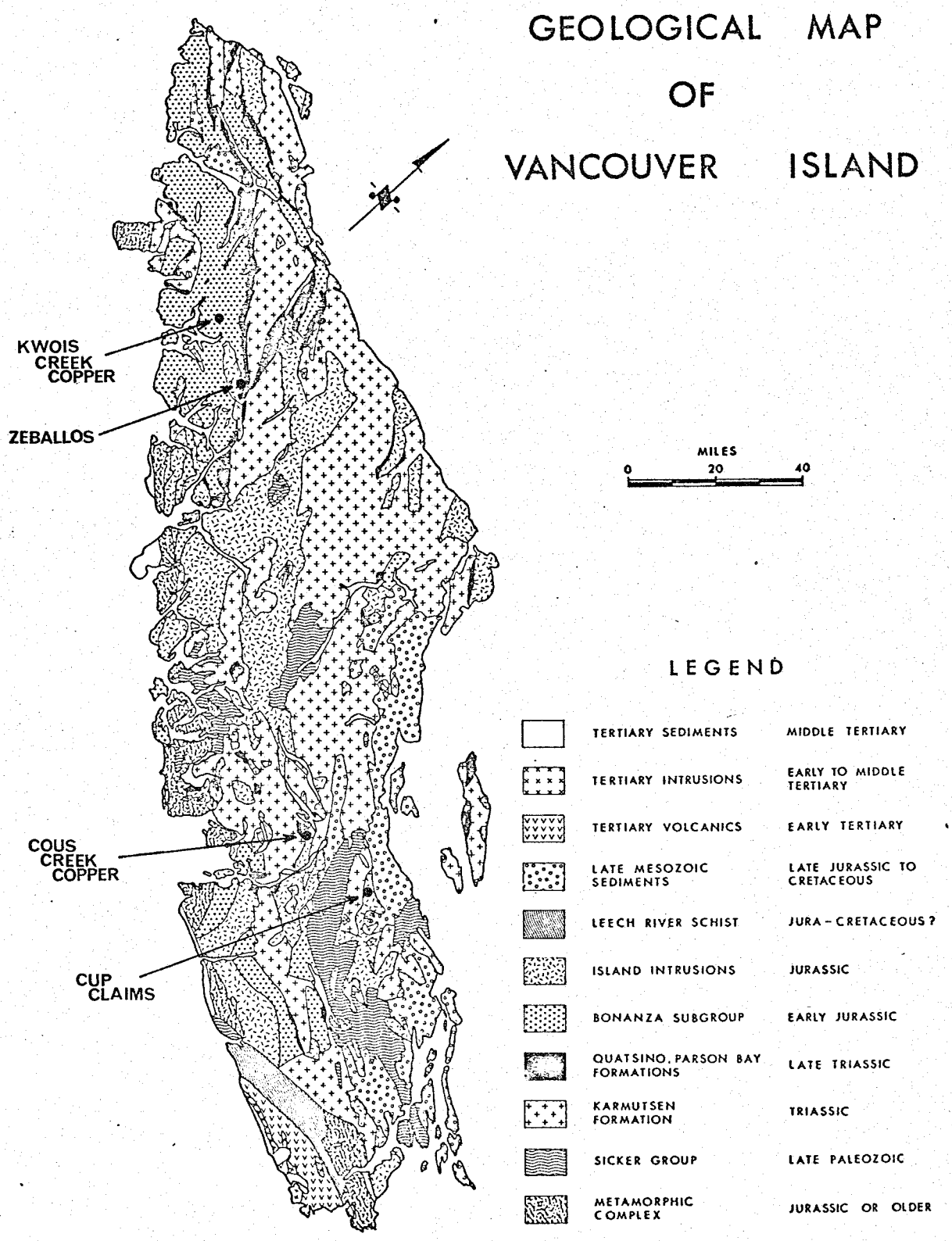
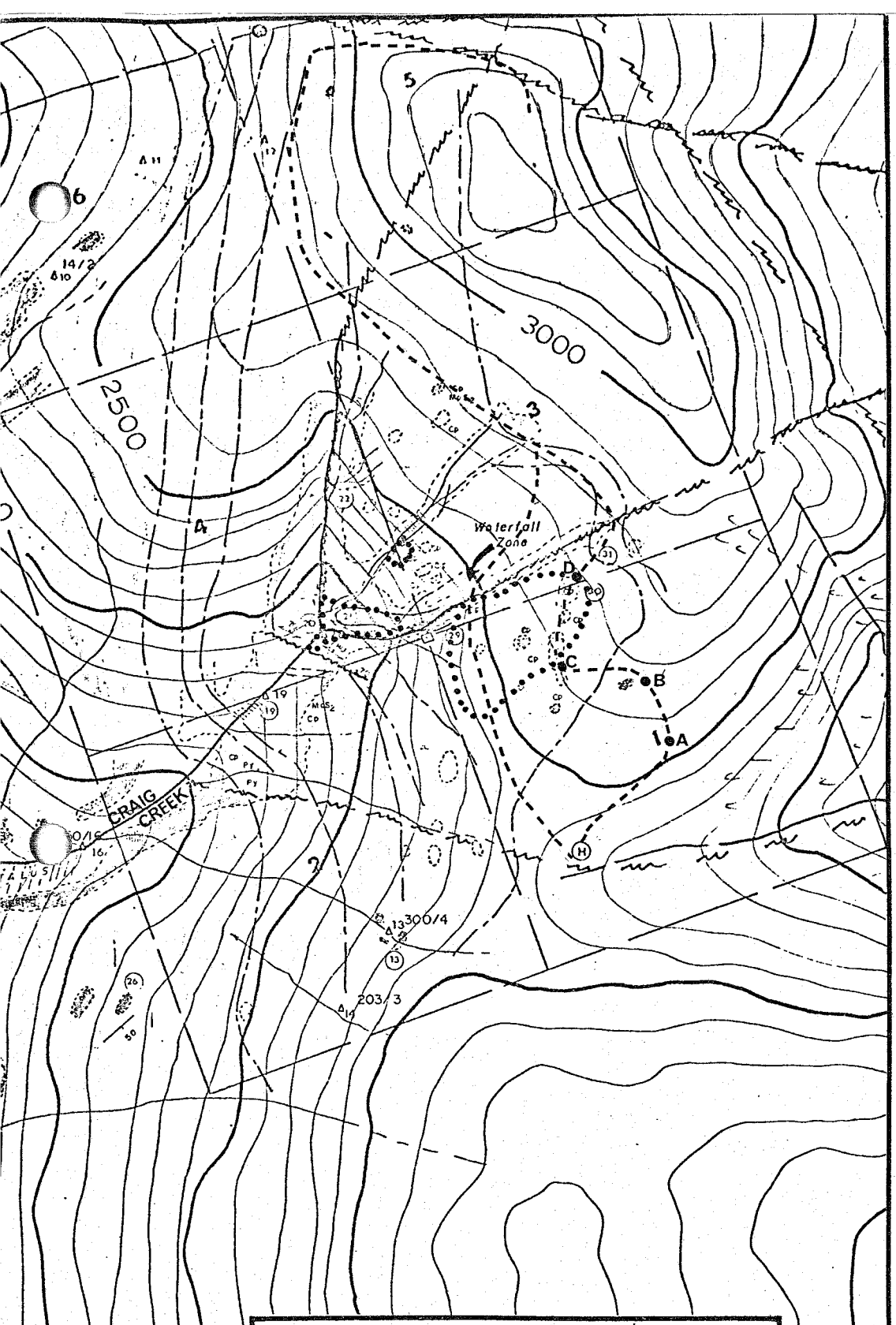


Figure 1. Location Map



LEGEND

INTRUSIVES
Middle Jurassic

- Feldspar Diorite: Fine grained, dark grey border phase intrusive. Occasional chalcopyrite and quartz-molybdenite veinlets.
- Granodiorite
  - (a) Light gray to white, fresh fine to medium grained.
  - (b) Altered, mineralized zone, trachyandesite Porphry. White fine to medium grained, plagioclase weakly sericitized. Mafic content is lower than (a), less than 1% chalcopyrite and minor pyrite finely disseminated in groundmass.
- Feldspar Trachyandesite Porphyry
  Gray, fine grained groundmass containing subhedral plagioclase laths, minor hornsblende and quartz phenocrysts. Close spaced fractures coated with chalcopyrite, minor pyrite and bornite. Finely disseminated chalcopyrite in groundmass. Total sulphides 1%. Typical reddish weathering in outcrop.

VOLCANICS
Lower Jurassic (Vancouver Group)

- Bonanza Volcanics: Massive dark gray to green andesite. Interbedded flows fragmental and tuffs.

METAMORPHICS

- Hornblende Pyroxene Hornfels: Dark grey to black fine grained chalcopyrite, magnetite, pyrite and pyrrhotite.
- Silicified, feldspathized bleached contact zone.

- Bedding Attitude
- Shear Attitude
- Fault Attitude - observed
- Fault Attitude - interpreted
- Contact
- Outline of Outcrop Area
- Mo - Molybdenite
- Py - Pyrite
- Cp - Chalcopyrite
- Ep - Epidote
- Mag - Magnetite
- A1 - Survey Station
- Silt Sample
- Soil Sample
- 19 - Specimen Location
- Claim Post
- H - Helicopter Pad
- Waterfall
- 12/3 - Cu/Mo Geochemical Values

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

Fig. 2

Areas of Consistent Visible Chalcopyrite Mineralization

---- Traverse Line (Sept. 9, 1975)

Scale: 1 inch≈600 Ft.

N

MONETA PORCUPINE MINES LTD.

Atled Exploration Management Ltd
420 - 475 HOWE ST VANCOUVER 1, BC

Cu Claims Kwois Creek Area

ALBERNI MINING DIVISION NTS 92 L

SCALE	1" = 600'
DRAWN	ph
DATE	MARCH 1974
DRAWER	606 C

GEOLOGY

In September 1974 City Services optioned the property from Moneta Porcupine and spent 5 days doing mapping, sampling, and geochemistry over the same general area. Apparently the only additional work done at this time was reconnaissance soil geochemisty over various parts of the intrusion and along the eastern intrusive-volcanic contact area, roughly following the 2800 foot contour. This work involved approximately 80 samples.

Detailed descriptions of the results of these two programs are included in two reports written by G.C. Gutrath, both of which are on file in the Vancouver office.

Mr. Gutrath concludes that the areas of known mineralization have an indicated overall grade of less than 0.15% copper and minor molybdenum. Because of the relatively low grade and limited extent of the known mineralization the options were dropped.

Geology

For a detailed description of the geology the reader is referred to the reports by Mr. Gutrath.

In general an elongate, north-trending granodiorite intrusive crops out for at least 3500 feet (Figure 2), cutting Bonanza volcanic rocks. The volcanics have been silicified and hornfelsed adjacent to the intrusion, especially near its western contact. The intrusion contains several phases, including a diorite border phase to the west and a dike-like monzonite or latite porphyry mass which appears to occupy a central position within the granodiorite.

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Mineralization

The three main areas of known copper mineralization occur within the granodiorite and monzonite porphyry as indicated in Figure 2. Some mineralization is also reported in the hornfels and diorite border phases. In the hornfels chalcopyrite and minor bornite are said to occur in massive lenses of pyrrhotite and pyrite and less commonly as disseminations in the groundmass. The chalcopyrite content varies from trace to less than 1%. The diorite is weakly mineralized with minor disseminated pyrite and chalcopyrite. It also contains random veinlets of pyrite and chalcopyrite and widely spaced, 1/2 to 1 inch quartz-molybdenite veins. The diorite and hornfels zones to the west were not visited by the writer, however part of the traverse was along the eastern contact zone and several small but well mineralized areas were noted in the volcanics here.

The monzonite porphyry was not visited; however the mineralization is said to be similar to that of the Waterfall zone. Chalcopyrite and bornite accompanied by quartz and minor pyrite are said to occur as coatings on closely spaced fractures in the monzonite porphyry. Chalcopyrite is also present as fine disseminations within the groundmass of the porphyry as well as within the groundmass of the granodiorite peripheral to the porphyry.

At the Waterfall zone a somewhat finer grained phase of the granodiorite is exposed for 150 feet along the creek. The creek itself follows a northeast trending fault and the rock here is sheared and

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highly fractured and shattered. Chalcopyrite, pyrite, pyrrhotite and minor bornite and molybdenite occur as weak disseminations and as paper-thin coatings on fractures.

East of the Waterfall zone along traverse C-D fairly consistent disseminated chalcopyrite and pyrite were observed in the granodiorite. This was the best mineralization seen by the writer. Total sulfides probably average 1-3% with copper values in the 0.2-0.3% range.

Granodiorite is exposed in a small creek along traverse A-B. This rock contains about 1% disseminated sulfides (pyrite and chalcopyrite). The intrusive here is within an area previously mapped as volcanic.

The small mineralized area to the northwest of the Waterfall zone was not visited.

Assays of all the previous sampling are shown in Table 1. The best material was that sampled by Phelps Dodge. The exact location of these samples is not known but they are from the general porphyry - Waterfall zone - traverse C-D area. A sample from the Waterfall zone collected by the writer assayed 0.1% copper and 0.001% molybdenum and another collected along traverse C-D assayed 0.19% copper and 0.001% molybdenum.

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TABLE 1

MONETA PORCUPINE sampling:

		MoS_2%	Cu%	Au Oz/T	Ag Oz/T
1956-A	-Waterfall zone-West side shear zone-fractured 15 feet wide. (chip sample)	.001	0.09		
1957A	-Waterfall zone-Centre section Fractured, weakly altered quartz granodiorite 20 feet. (chip sample)	.001	0.11		
1958A	-Waterfall zone-Eastside. Fractured feldspar porphyry 25 feet (chip sample)	.001	0.21		

The waterfall zone is in the east fork of Craig Creek. Good outcrop is exposed for 80 feet at the base of a vertical cliff.

		MoS_2%	Cu%	Au Oz/T	Ag Oz/T
1959A	-Biotite hornfels (grab sample)	.001	0.21	0.003	0.07
1960A	-Biotite hornfels (grab sample)	.001	0.20	0.003	0.007
1961A	-Feldspar Quartz Monzonite Porphyry-specimen 21 area. (grab sample)	.001	0.31	0.003	0.09

PHELPS DODGE sampling:

		Copper %	Molybdenite %
Blast area - waterfall Zone area - 3 samples		.035	.032
		.069	.050
		.17	.040
	Average	.09	.04
Quartz granodiorite From east fork area		.323	.015
		.175	.050
		.241	.060
	Average	.246	.042
Peripheral Granitic Phase of Granodiorite Collected along 3,000 foot traverse.		.272	.067
		.365	.016
		.172	.021
	Average	.269	.034

Conclusions

The conclusions of Mr. Gutrath are certainly valid concerning the areas of known mineralization; however the area is extremely rugged and vegetation is thick and based on the limited amount of time spent on the property by previous workers, possibilities for economic mineralization have not been exhausted. Under more favourable economic and political conditions the property would deserve a fairly detailed mapping and soil geochemical survey over the area already mapped and extending eastward into that indicated as volcanic. Under the present conditions such a project is not feasible; however an interest in the property could probably be obtained by doing the work necessary to hold the claims for a year. This could be done by a week's mapping and soil geochemistry in the "volcanic" area along the eastern part of the claim group.

S.H. Pilcher

Vancouver, B.C.

September 25, 1975

ZEBALLOS AREA

N.T.S. 92-L/2 W-1/2

Sam Craig is attempting to amalgamate a number of the properties in the Zeballos gold camp in the hopes of making a viable operation. He has no finances to develop the project and hopes to interest a major company in the undertaking. This interest he hopes to generate by "large, low-grade" copper potential as well as the gold. At present he is trying to find high-grade gold ore, left from the previous operations, which he can mine out easily and transport via helicopter to the nearest road.

Regarding the copper mineralization, Mr. Craig had observed scattered sulfides exposed along some new logging road cuts (Figure 3). He was hopeful that this mineralization was significant and that it indicated possible continuous mineralization with other showings drilled by Hill Stark and Associates in 1961 (Figure 4). This drilling, located several thousand feet to the southwest, is supposed to have delineated 97,000 tons of 1.98% copper as indicated on a copy of a plan and section which Mr. Craig had obtained from an unknown report. It is thought that the drilling was done in the vicinity of two old drill sites (A & B, Figure 3), but the exact location could not be verified.

The showings along the road cuts were examined by the writer and found to consist of only very minor to trace amounts of pyrite, chalcopyrite, and bornite which occur mostly as fillings of widely scattered hairline fractures within mixed volcanic and intrusive rock.

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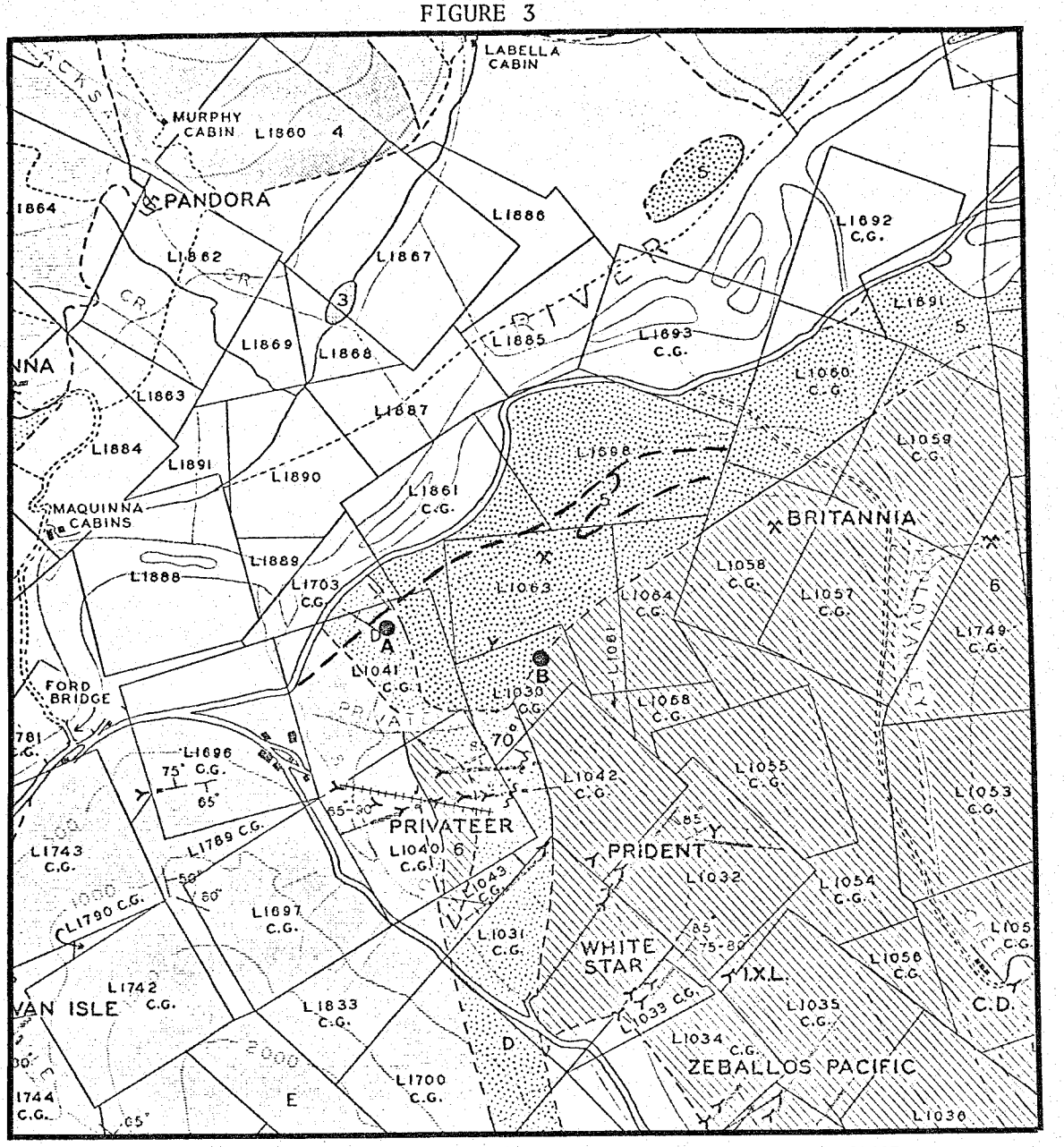
FIGURE 3



ZEBALLOS MINING CAMP, AREAL GEOLOGY

BRITISH COLUMBIA DEPARTMENT OF MINES
VICTORIA B.C.

● Old Drill Set-Up (approx. location)

— — — Section of New Logging Road Examined (approx. location)

COAST INTRUSIVES

- 6 QUARTZ DIORITE
- 5 DIORITE AND VOLCANICS BRECCIATED AND CEMENTED BY QUARTZ DIORITE
- 4 GRANODIORITE
- 3 DIORITE CUT BY MANY GRANODIORITE DYKES
- 2 HORNBLENDE DIORITE
- 1 GABBRO

INTRUDED ROCKS

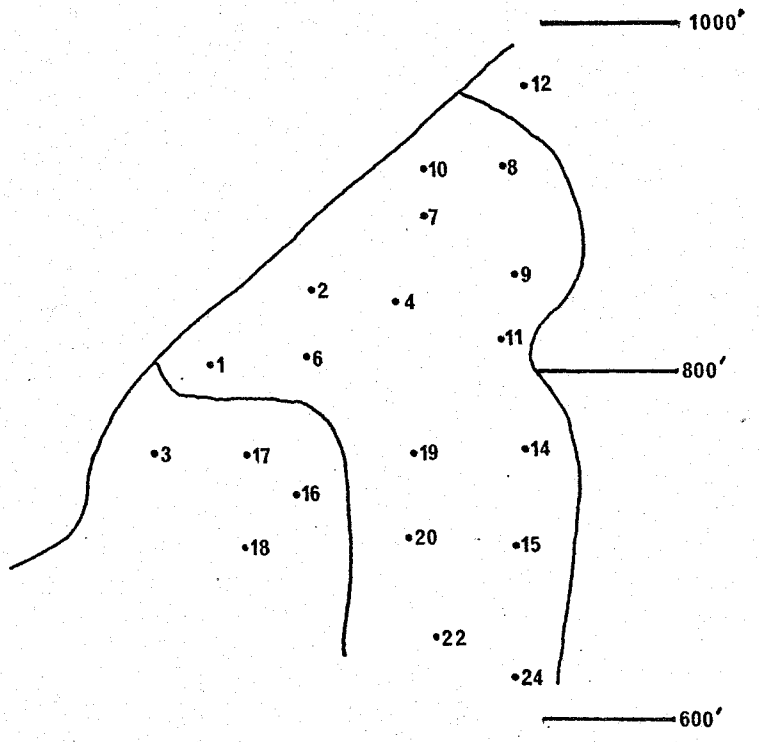
- E ANDESITE CHIEFLY PYROCLASTICS (DARK GREEN, HORNBLENDE FELDSPAR CRYSTAL TUFFS AND VOLCANIC BRECCIA), SOME LAVA
- D LIME-SILICATE ROCKS
- C LIGHT-COLOURED VOLCANICS (FELDSPAR CRYSTAL TUFFS AND DACITE TUFFS AND FLOWS)
- B LIMESTONE
- A ANDESITE CHIEFLY DARK GREEN LAVA (FINE-GRAINED AND AMYGDALOIDAL PHASES)

SCALE 1000 0 1000 2000 FEET

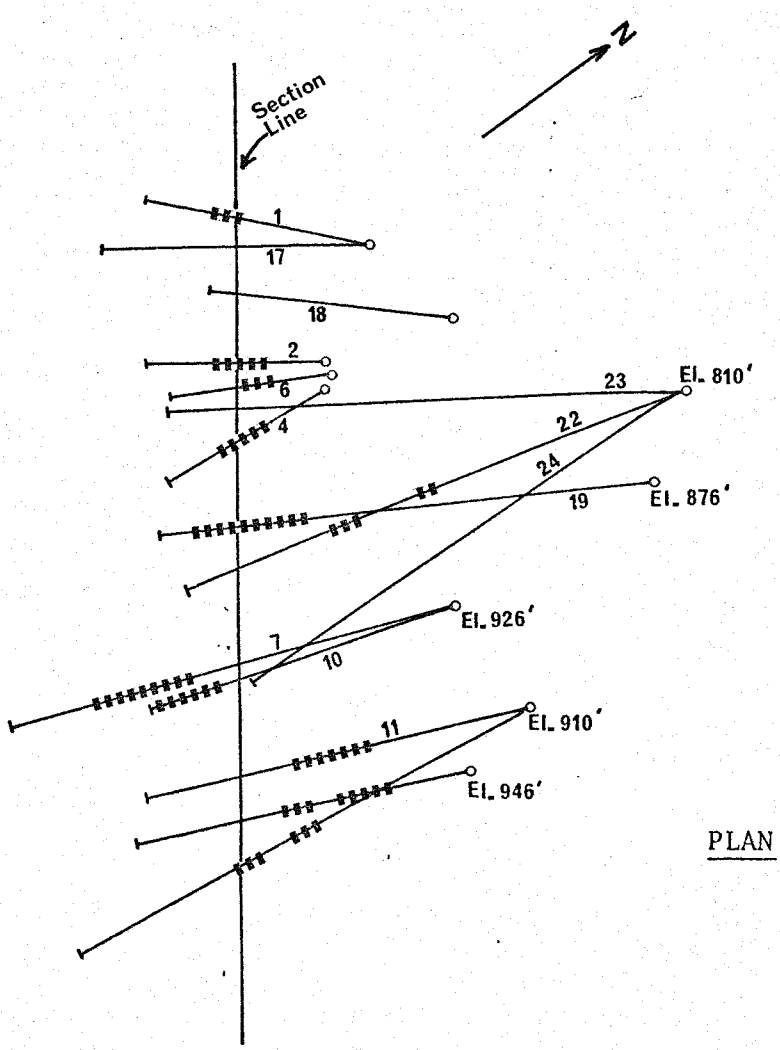
Figure 4. Rough Sketch Map of Drilling by Hill Stark and Associates. Dec. 1961

(Location Not Known)

Scale: 1 inch = 90 ft. (approx)



SECTION



PLAN

The mineralization here is of no interest. Barren rock is exposed to the southwest along the road and there is no indication to suggest any potential for large tonnages of low grade copper mineralization in commercial quantities.

The gold potential of the area is attractive in terms of small tonnages of high grade ore. This is something that might interest a junior company.

S.H. Pilcher

Vancouver, B.C.

September 26, 1975

CUP CLAIMS

N.T.S. 92-F/7 E-1/2

These claims are located 12 miles east of Port Alberni and about 3 miles southeast of the east end of Cameron Lake (Figure 5). The owner is Mr. Rod Rodstrom of 1174 Lockley, Victoria (Phone:383-5537). Access to the property is via logging roads from either Coombs or Parksville.

A medium to fine grained granodiorite is exposed for approximately 1200 feet in two parallel logging road cuts (Figure 5). The cuts are 800 feet apart with the westernmost being about 300 feet lower in elevation. The granodiorite is fresh and it contains many hornblende-rich inclusions of various sizes. In some outcrops the inclusions predominate over the granodiorite matrix.

Chalcopyrite is present throughout both areas of exposure. It occurs as true disseminations in both the granodiorite and the inclusions, usually as medium grained clots but occasionally in very coarse intergrowths up to an inch in diameter. Rarely the chalcopyrite fills tight, dry fractures. No quartz or pyrite are present in any of the outcrops observed. Over restricted areas the chalcopyrite content may run as high as 2%, but the overall average is well below 1%. A composite sample collected by the writer assayed 0.07% copper.

There is very little rock exposed beyond the road cuts and the extent of the mineralization is not known. Mr. Rodstrom states that mineralized float is present over a relatively large area (800' x 1500'). Some mineralized volcanic float has also been found on the property.

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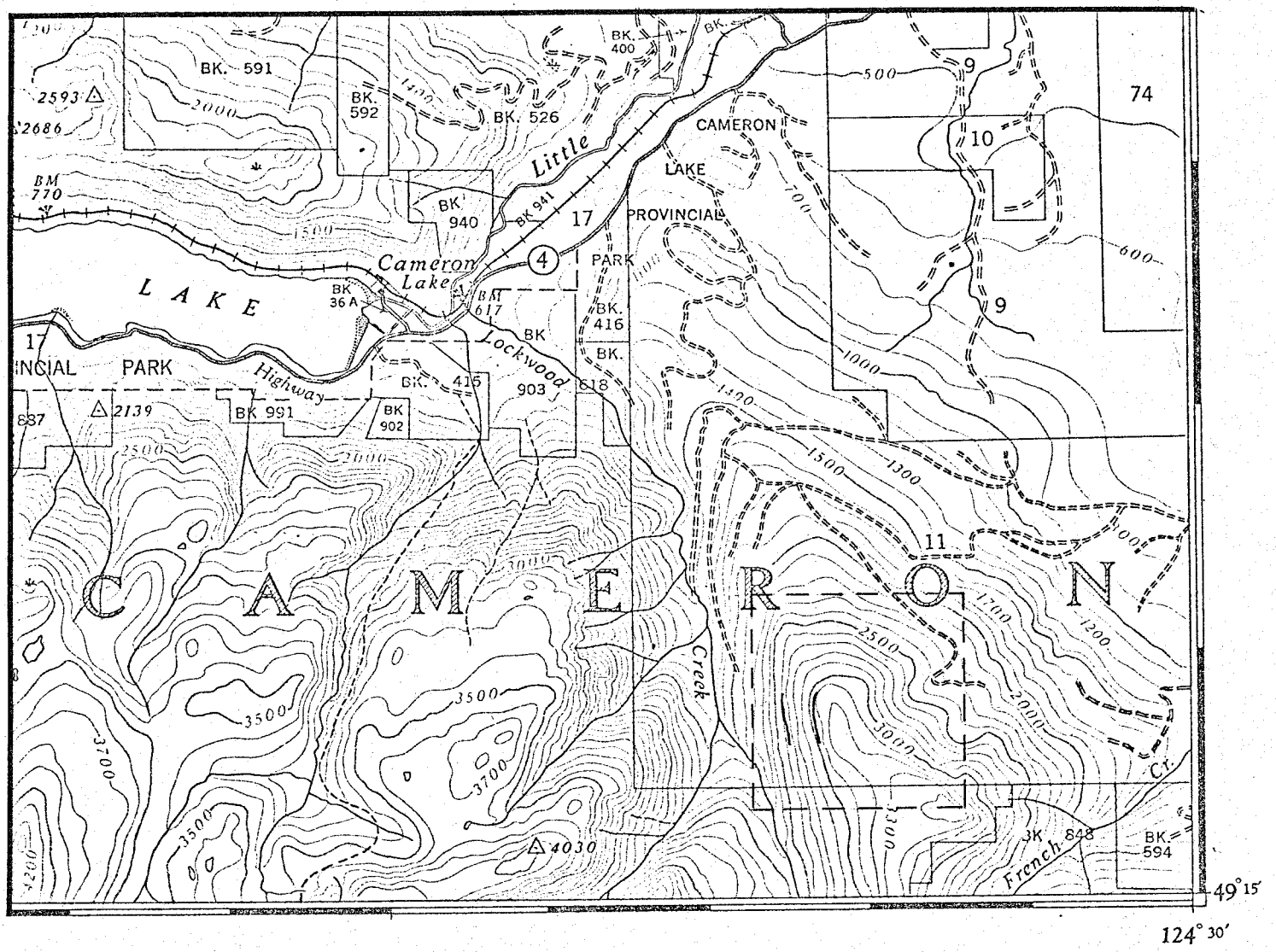

FIGURE 5. Location Map Showing General Area of Cup Claims.

General Claim Area

Logging Road Cuts With Exposed Outcrop

Scale: 1:50,000

Approximately 4000 feet northeast of the road cuts is an old chalcopyrite, pyrite, magnetite skarn showing which was drilled several years ago by Western Mines. This appears to be a narrow zone of 20 to 30 feet in width and extending perhaps 1000 feet along strike. According to Rodstrom Western pulled 20 feet of 2% copper from one hole and 100 feet of 0.5% copper from another.

The CUP claims, though not particularly exciting, are of some interest, and the property does warrant at least a geochemical soil survey. Rodstrom is willing to do the sampling if someone will pay for the analyses. Under more favourable economic conditions I would recommend such a program; however with the present restrictions such a program is probably not justified.

Rodstrom has had a prospector's grant and Eastwood from the Dept. of Mines has examined the property. At the time of the writer's visit (September 11, 1975) no offer had yet been made by the government.

S.H. Pilcher

Vancouver, B.C.

September 26, 1975

COUS CREEK COPPER PROPERTY

N.T.S. 92-F/2 W-1/2

Introduction

Cous Creek Copper Mines Limited is a private stock company which holds 38 claims in the Port Alberni area. The officers include Mr. Lawrence Vezina, President (1077 Goldstream Avenue, Victoria, 478-7435), and Mr. Wallace Maxmenko, Secretary-Treasurer (R.R. 1 McKenzie Road, Port Alberni, 723-8685).

The claims are located 7 miles southwest of Port Alberni and just south of Stirling Arm on Sproat Lake (Figure 6). Access is via logging road from Port Alberni.

Mr. Vezina has received several prospecting grants, thus giving the government first rights. Eastwood has apparently recommended that the government make an offer on the property; however that esteemed group are waiting to see what offers are made by private industry. Both Noranda and Asarco have examined the claims and Noranda is reported to be ready to negotiate an option. This may turn out to be a test case regarding government participation in exploration ventures.

The writer visited the property on September 12 in the company of Mr. Vezina and Mr. Maxmenko. Mineralization is here exposed in a number of pits and trenches (Figure 6) put in by Mr. Vezina in the general area of a Quatsino-Karmutsen contact. Locations of these cuts were determined by outcrop as well as reddish soil coloration. All available assays are included in Table 2.

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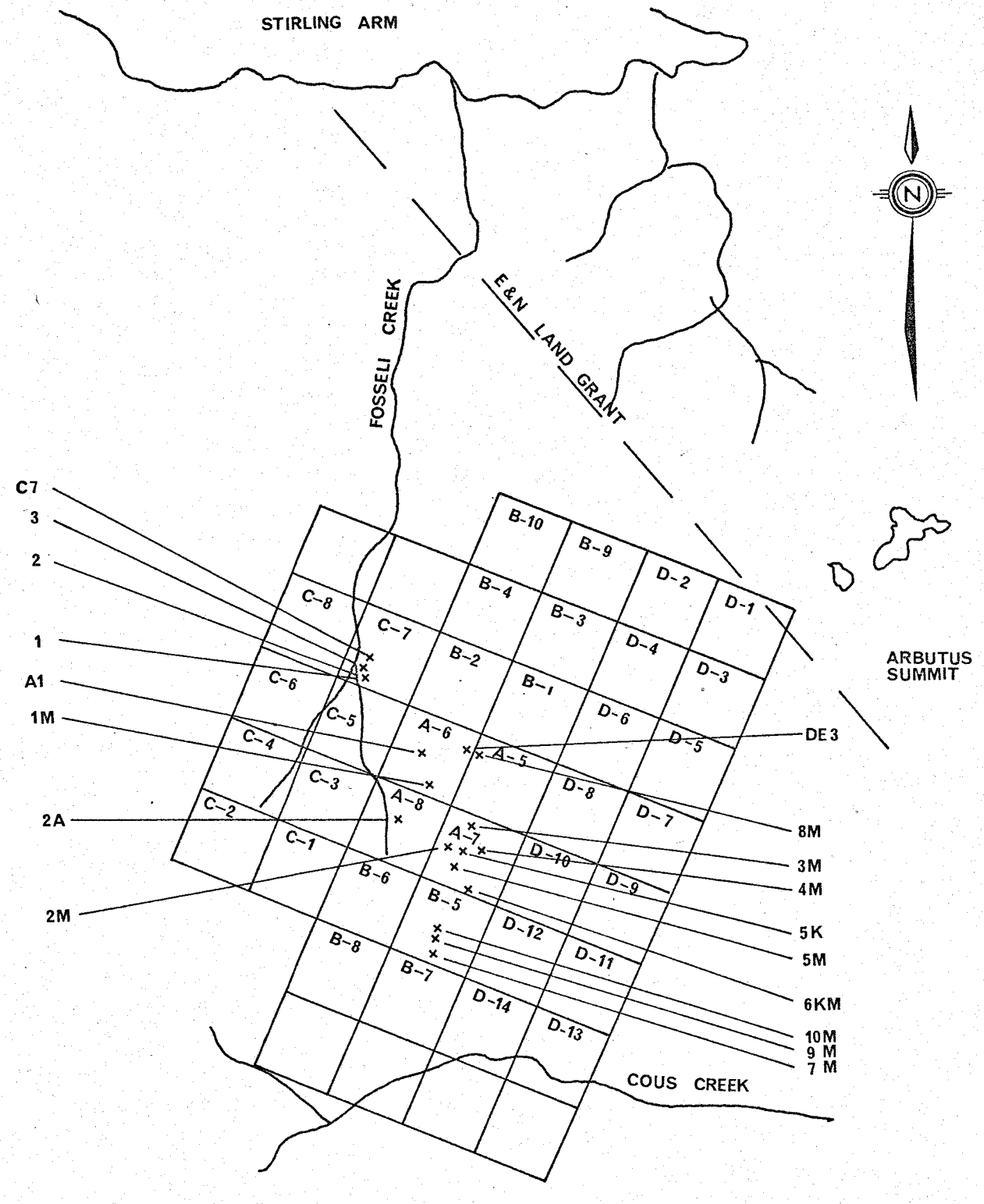

FIGURE 6. Location Map of Cous Creek Copper Claims Showing the Various Pits and Trenches.

Scale: 1 inch = 2500 feet (approx.)

TABLE 2A. Assays of Samples Collected by Cous Creek Copper

LABORATORY No.	SUBMITTER'S MARK	LABORATORY REPORT
34020 #3m	741 D	Spectrochemical Analysis: 0.17% Copper and a trace of Nickel were found; the other base metals found, and their percentages, were those occurring normally in rocks. Gold - trace Silver - trace
34021 #4m	742 D	Spectrochemical Analysis: 12.6% Copper, a trace of Nickel, 0.06% Zinc, and 0.07% Cobalt were found; the other base metals found, and their percentages, were those occurring normally in rocks. Gold - 0.01 ozs./tn Silver - 1.0 oz./tn.
34022 #6K.	743 D	Spectrochemical Analysis: 0.17% Copper was found; the other base metals found, and their percentages, were those occurring normally in rocks. Gold - Trace Silver - 0.2 ozs./tn.

LABORATORY No.	SUBMITTER'S MARK	LABORATORY REPORT
33968 1m-2m	2511 D	Spectrochemical Analysis: 0.1% Lead and 0.05% Cobalt were found. The other base metals found, and their percentages, were those occurring normally in rocks. No Nickel was found. Gold - Trace Silver - 1.1 oz. per ton Copper - 5.5%

MARKED	GOLD OZ/ST ~~OR/MT~~ XXXX	SILVER OZ/ST ~~OR/MT~~ XXXX	COPPER (Cu %)	XXX	XXX	XXX	XXX	XXXX
101 JJ	Trace	Trace	0.09					
102 JJ	0.002	Trace	0.03					
103 JJ	0.002	Trace	0.01					

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TABLE 2B. Assays of Samples from Pits 1A and 2A Sent To The Tacoma Smelter August, 1974. Total Weight was 180 lbs.

We regret the delay in reporting on the ore samples you left with us on July 8, but, as you know, we have been on strike for over a month. We now have the assays which are as follows:

	Gold	Silver	Copper	Silica	Iron	Lime	Sulphur	Aluminum
	Ounces per ton		Percent					
Sample	Au	Ag	Cu	SiO2	Fe	CaO	S	Al2O3
1	Tr	0.60	2.06	15.6	8.0	37.9	4.9	0.5
2	Tr	Tr	0.96	40.4	7.0	20.3	0.9	12.4
3	Tr	Tr	0.11	33.4	15.7	17.9	4.8	11.0
4	Tr	Tr	0.06	35.8	21.5	12.8	2.7	13.5
5	Tr	0.35	3.97	16.6	9.7	33.1	9.1	1.0
			1.43	28.4	12.4	24.4	4.5	7.7

On the basis of present metal prices and the enclosed Fluxing Ore Schedule, the material represented by Sample No. 1 would be worth approximatelv $20 per ton and Sample No. 5 $47 per ton FOB smelter, For purposes of this evaluation we have calculated the CaO back to CaCO3 and considered it as SiO2.

If you wish to make a trial shipment of either of these ores, please advise and we will make the necessary arrangements.

TABLE 2C. Assays of Samples Collected by the Writer.

	Oz./Ton		Percent	
PIT	AU	AG	CU	NI
2M			0.20	
10M	tr.	0.10	0.52	
3M	tr.	0.10	0.17	
8M		tr.	0.10	
5M			0.19	0.02
C7	0.02			

Geology

The cuts to the north and west (DE 3, 8M, C7, 1, 2, 3, A1, LM, 2A) generally exhibit typical skarn type alteration and mineralization consisting of calcite, epidote, garnet and other calc-silicates accompanied by varying amounts of pyrite, chalcopyrite with or without magnetite. These showings occur in both altered limestone and volcanic rock. The remaining cuts (3M, 4M, 5K, 6KM, 7M, 9M, 10M) expose massive pyrrhotite carrying varying amounts of chalcopyrite and enclosed in relatively unaltered volcanic rock.

Of those having the more typical skarn type character, magnetite is present in the cuts at A1, 1M, 8M, and DE3. The pit at A1 exposes an irregular skarn zone in limestone, the skarn carrying veinlets and lenses of pyrite and chalcopyrite. Vezina made a 30 ton shipment from this pit (average 4% copper) to Britannia in 1974. There is no indication however of any additional ore remaining in the pit. To the south at 1M, a 12 foot trench cuts nearly massive magnetite containing pyrite and chalcopyrite. The overall grade here is probably about 1% copper. At 8M a 5 foot zone of mineralization similar to that at 1M is exposed. The wallrock here is all volcanic. A composite sample collected here by the writer assayed .01% copper and trace silver. Trench DE3 trends north-south along the Quatsino-Karmutsen contact for approximately 35 feet. Both rock types here contain some magnetite and a few specks of pyrite and chalcopyrite. Directly on the contact is a 2 foot zone of heavily oxidized and iron stained material.

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Although these four cuts described above contain somewhat similar mineralization there is no indication of any continuity between them.

In the area of cuts 1, 2, and 3 massive garnet is in contact with relatively fresh limestone. Within the skarn massive pyrite and pyritic gossan are exposed along the creek for approximately 70 feet. At pit C7 altered limestone is cut by a small shear. The rock contains a few specks of pyrite and chalcopyrite. A sample collected here by the writer assayed 0.02 ounces per ton gold.

At location 2A, 3 pits have been blasted into volcanic rock. The easternmost pit is barren. An the others the rock is heavily altered to epidote and seamed with calcite. The altered rock is peppered with coarse clots of chalcopyrite and would probably assay 2-3% copper. The mineralization within the pits however is patchy and there is no indication that the mineralization extends beyond the pit boundaries.

The cuts along the north-south trend between 3M and 7M expose massive pyrrhotite with varying amounts of pyrite and chalcopyrite. The largest trench, at 3M, extends about 30 feet in an east-west direction across this trend. Massive pyrrhotite is present throughout the entire trench. A composite sample taken here assayed 0.17% copper, trace gold, and 0.10 ounces silver. At 2M pyrrhotite is exposed over 15 feet. Some magnetite is present in this cut. One sample collected by the writer assayed 0.20% copper. The highest grade material was seen at 4M, a north-south trench about 12 feet in length. A sample taken by Mr. Vezina assayed 12.6% copper, 1 ounce silver, and 0.01 ounces gold. A Noranda assay is reported to have run 15% copper.

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The pit at 5K contains altered volcanic rock with pyrite and traces of chalcopyrite. At 5M a 6 x 10 foot trench exposes massive pyrrhotite with abundant pyrite but only minor amounts of chalcopyrite. A sample of this material assayed 0.19% copper and 0.02% nickel A shallow pit at 6 KM contains a small pod of massive pyrrhotite. The surrounding volcanics are cut by stringers of pyrite and pyrrhotite.

The above showings, though they are similar and occur over a fairly restricted area, do not appear to be parts of one continously mineralized zone. Indeed, there are generally outcrops of barren basic volcanic rocks between the various cuts. That these showings represent separate mineralized zones is substantiated by a magnetometer survey run by Asarco. They report that the magnetic highs are restricted to the immediate areas of the individual cuts (J. McDougall communication with L. Applegate).

The cuts at 7, 9, and 10M also expose massive pyrrhotite but in this area reddish soil between the cuts indicated a probable continous zone extending for approximately 400 feet in a north-south direction. The longest trench, located at 10M, cuts east-west across this trend for 12 feet. A composite sample collected here assayed 0.52% copper, 0.10 ounces silver, and trace gold.

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Conclusions

The potential for large tonnages of copper-magnetite ore is negligible. All the showings of this type of mineralization are relatively small and localized. The only possibility would be something located at depth and having no surface indication. This could easily be checked with a magnetometer survey.

The copper-pyrrhotite mineralization is more immpressive due to the relatively high copper values found in some of the cuts. By all indications however this mineralization occurs as small separate masses, and as such is of no particular interest. Disregarding Asarco's findings this could easily be checked with a combined EM and magnetometer survey. Even if some continuity were found between showings, in all likelihood overall tonnages and grades would at the most support only a small operation. If Falconbridge is interested in this type of situation a rapid magnetometer and EM survey could probably be done without any commitments. This survey should clearly determine the potential of the property.

S.H. Pilcher

Vancouver, B.C.

September 26, 1975