D.C. SYNDICATE

EXPLORATION REPORT - 1974

by

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Vancouver, B.C.

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INTRODUCTION

The D.C. Syndicate has completed the first year of a three-year program of grassroots exploration in the southwest portion of Yukon Territory. The region involved is that part of Yukon between the Shakwak and Tintina trenches and the emphasis is on exploration for copper.

Research indicated numerous copper occurrences located within 70 miles west and southwest of Minto on the Yukon River. Many of these are described as porphyry copper type deposits. In addition, the recently discovered Minto deposit attracted much attention as a rather distinct type of copper deposit, occurring in gneissic rocks in a granitic environment.

A helicopter supported prospecting program was operated out of Minto with the following objectives:

(a) Examination of the Minto and Williams Creek copper deposits and search for similar deposits.

(b) Examination of the several known porphyry deposits (in the Dawson Range) and search for similar deposits of better grade.

(c) Examination of Mt. Nansen volcanics and search therein for porphyry deposits possibly associated with breccia pipes. Precious metal vein deposits, such as occur at Mt. Nansen, were not considered a primary target.

In addition to the above objectives, one crew was employed for about 70% of the season conducting general reconnaissance

from existing roads between Minto and Whitehorse and northwest to the north end of Aishihik Lake. The areas covered and the generalized geochemical results are indicated on Plate I in the pocket at the back of this report.

At the beginning of the season, one party was expected to explore in the Laberge Lake area, examining intrusive plugs for porphyry deposits. Due to the resignation of a key geologist early in July, this project did not proceed.

GEOLOGY AND MINERALIZATION

We were fortunate in having the newly published "Reconnaissance Geology of Aishihik Lake, Snag and Part of Stewart River Map-Areas" by D.J. Tempelman Kluit, together with his revision of Bostock's Mapping of the Carmacks Map-Area.

These maps, together with previously published geological maps of Laberge, Whitehorse and Glenlyons sheets, provided unusually good information to guide exploration.

Our own mapping is in general agreement with information on the various map sheets although any area examined in detail shows greater complexity and it is often difficult to know whether or not local variations should be considered mappable units. The following remarks generally cover those instances where differences in mapping or in interpretation were encountered.

Pelly Gneiss, Schist Gneiss, Marble

These rock types were prospected in some areas as the Minto deposit was understood to occur in gneissic rocks and copper occurred in schist gneiss at Bradens Canyon.

The Bradens Canyon mineralization was the first showing visited during the season and was considered to be a local copper concentration in an amphibolite band close to the contact with a limestone lens.

Work in gneiss and schist areas failed to locate any other showings. A very minor occurrence of bornite in limestone was found west of Tadru Lake.

Canadian Superior carried out a program of exploration largely centred on gneissic areas southeast of Von Wilczek Lakes, southwest of Fort Selkirk and north of Granite Mountain, without success.

South of Dark Creek, the area of gneissic and granitic rocks was found to extend about two miles farther northwest than is indicated on published maps.

Massive Green Volcanics

Several areas of relatively featureless volcanic rocks were examined. Age relationships are not satisfactorily understood in many cases.

(1) Southwest side Tadru Lake 105 L-5. Sheared chloritic, dark green volcanics. Appear to strike N-10-E with steep dip. These are in fault (?) contact to the west with well banded paragneiss striking 280°, steeply dipping.

(2) North of upper McCabe Creek 115 I-10. Sheared to massive, dark green epidotized volcanics very similar in appearance to those along the Yukon River valley. This is an area of schist gneiss but it was not possible to find sufficient outcrop to outline contact relationships. Geochemical background is low.

(3) Southeast of McGregor Creek and northeast of McGregor valley 115 I-8. This area mapped as volcanics is actually underlain by various granitic rocks with only a few xenoliths of volcanics.

(4) Frenchman Lake - Tatchun Lake - McGregor Creek - Minto 105 L-4, 5; 115 I-8, 10, 11. Massive to sheared dark green volcanics, sometimes porphyritic. Generally rather featureless. Minor occurrences of copper mineralization occur at McCabe Creek, Hoochekoo Bluff and north of the east end of Tatchun Lake. This last occurrence was found by James Mustard and staked as the TAT claims but was not recorded. Minor malachite occurs in volcanics and a small soil sample anomaly was found near the contact with granitic rocks. In spite of the occurrence of these small copper showings, the geochemical response along this belt was very low for both silts and soils.

(5) Five Finger Rapids - Hoochekoo Creek - Big Creek, 115 I-7, 8, 10, 11; Victoria Rock - northwest of Yukon River 115 I-13, 14.
These two belts of dark green, sheared to massive epidotized volcanics were not completely prospected. They are very similar to the volcanics in Group (4) above and are in all likelihood the same formations. However, they differ in that:

(a) Known copper occurrences at the mouth of Williams Creek (Bonanza King); the mouth of Hoochekoo Creek (roadcuts) and the COIN Group are larger and better mineralized than those east of Yukon River.

(b) Geochemical response is generally somewhat higher with some anomalous areas.

(c) There is a horizon of rusty weathering siliceous, apparently altered rocks, mapped as acid tuff and dacite occurring on Big Creek, west of Victoria Rock and north of the west branch of Black Creek north of Yukon River. It is felt that this horizon has not been adequately prospected. Several anomalous soil samples were obtained in widely separated localities. It is expected that several miles of this formation may occur between Yukon River and the west branch of Black Creek. However, no helicopter landing places were found in this area and time did not permit further prospecting.

(6) Triangulation Mountain - Kirkland Creek - Razor Mountain, 115 H-9, 16. These are generally massive, dark green epidotized volcanics, very similar to those described above (5). They are further described by Tempelman Kluit in G.S.C. Paper 73-41.

The Macks magnetite-copper deposit occurs in this area. Minor chalcopyrite mineralization was seen and geochemical response, particularly in soil samples, was anomalous in several areas. In some cases, anomalous zinc results were obtained with only a minor increase in copper content.

It should be noted that none of the presently known copper occurrences in these main volcanic belts approach economic dimensions or grade.

No limestone horizons are known and the environment differs from the Whitehorse copper belt in being wholly volcanic rather than sedimentary and intrusive.

The Williams Creek deposit is a zone of bornite-chalcopyrite mineralization in a schistose, east-dipping roof pendant. The pendant is, in places, so schistose as to mask its origin. In other places, it is gneissic, similar in some respects to Minto and to local areas of gneiss near Tadru Lake. However, some zones of relatively fresh, less altered, well bedded, tuffaceous volcanics occur in close proximity to the mineralized zone.

It is thought the mineralization is confined to remnants of tuffaceous volcanics related to the massive volcanics exposed along the Yukon River valley.

Dimensions of the main No. 1 zone are 75' wide, 1200' long with the deepest hole intersecting at 1400'. Grade is about 1% Cu. Oxidation is virtually complete to 600' and extends to 800'. There is no enrichment zone.

Lack of enrichment is due primarily to lack of pyrite mineralization. This also is the apparent reason for little or no geochemical response in silt sampling (Archer-Cathro).

Diorite, Gabbro

Intruding the massive volcanics, gneiss, and schist areas are small plugs of diorite and gabbro. In general, these are relatively fresh looking coarse-grained rocks. Most are distinctly magnetic and appear as fairly small, positive aeromagnetic anomalies (i.e. intrusive northwest of Tatchun Lake). Two plugs are non-magnetic but are generally similar in appearance.

A group of gabbro outcrops at the mouth of Wolverine Creek (115 J-11) are fine-grained, very dense, altered in appearance, dark coloured and magnetic. They are intruded by dykes of granodiorite composition and apparently underlie the Selkirk volcanics which are non-magnetic. No sulphides were seen.

There is an aeromagnetic anomaly related to these gabbro outcrops which is out of all proportion in size and intensity to what might be expected. A similar anomaly in the Black Creek area (115 J-13) to the northwest is thought to be caused by similar intrusives, although poor exposure and limited prospecting did nothing to clarify the situation.

It has been suggested that this group of intrusives may include feeders for the Carmacks volcanics. The writer feels the essentially non-magnetic diorites near Big Creek may be related to the Carmacks formation. The magnetic plugs along the massive greenstone belt, however, may be older and, spatially, are far removed from large areas of Carmacks volcanics.

The highly magnetic outcrops at Wolverine Creek may be part of a very much larger intrusive obscured by the wide river valley

deposits and Selkirk volcanics. This postulated intrusive is suggested by the writer as a possible source of copper mineralization for the Minto deposit, during later intrusion of quartz monzonite porphyry.

Hornblende Granodiorite

This rock type is described by Tempelman Kluit in G.S.C. Paper 73-41. During our program, it was generally termed "older granodiorite" due to its crumbly nature on exposed surfaces and common "castles" left by weathering.

This formation appears to be unfavourable as a mineralizing source. It is the "country rock" regionally surrounding younger intrusives which may contain mineralization.

In Snag and Aishihik map-areas, this rock type seems to be reasonably well defined. On the Carmacks map sheet, Bostock's unit 10 (Map 340A, Memoir 189) or Tempelman Kluit's unit TRgdm (Open File 200) encompasses a wide range of intrusives. Our own mapping has been only partially successful in separating these units.

Pink Quartz Monzonite

This rock appears to be intrusive into the hornblende granodiorite. It is the country rock occupying large areas around the Minto and Williams Creek deposits, and is one of the more extensive rock types making up the large, multiple intrusion batholith east of Yukon River on map sheets 115 I-8 and 9. The rock varies from fresh massive to foliated. Prominent jointing and foliation generally trends northwesterly and is commonly steeply dipping.

The Minto deposit is a biotite rich, somewhat gneissic, flat-lying, schlieren-like zone within this rock type. Mafic minerals within the monzonite in the vicinity of the deposit probably have a higher percentage of biotite than elsewhere. Dr. R. Beavon, Canadian Superior Exploration, considers this to be a schlieren of older sediments within the intrusive.

Southwest of Tatlmain Lake, well within the intrusive mass, a xenolith of dark grey green, recrystallized volcanic rock was found. This body is over 100 feet long, up to 2 feet thick, cut by narrow dykes of the quartz monzonite and is flat-lying. No sulphides were found.

Alaskite Granite

The central core of the batholith on map sheets 115 I-8, 9 consists of a medium-grained, light-coloured granitic rock with little or no mafic mineral content. It cuts the porphyritic monzonite as a younger intrusion. It may be related to Tempelman Kluit's Coffee Creek granite.

Big Creek Granite

Included in the hornblende granodiorite unit on the Carmacks sheet is a rather distinctive, pink to red coloured granite. This granite occurs along the northeast side of Big Creek east of Prospector Mountain, in core from the TAD property at the forks in Hayes Creek, and northeast of the Carmacks volcanics west of Mt. Pitts. The granite is medium to coarse-grained with white, interstitial quartz contrasting sharply with the pink to red feldspars.

Along Big Creek, this granite is serpentinized along fault and fracture zones and weathers to a brown or buff colour.

The granite is cut by basic to andesitic dykes which are thought to be feeders to Carmacks volcanics.

West of Mt. Pitts, this granite contains zones of brecciation, silicification and quartz veining which carry some low-grade gold and silver values. This silicification is not known to cut the Carmacks volcanics.

Quartz Biotite Feldspar Porphyry

This is a medium grained rock occurring along the west bank of Hayes Creek on the NADA claim group. White to grey feldspar phenocrysts are prominent throughout the rock together with scattered, small, biotite books and much less prominent, dark quartz phenocrysts. It is mineralized with pyrrhotite, pyrite, chalcopyrite and minor molybdenite. A sample of random pieces assayed 0.11% copper, 0.04 oz. silver and 0.005 oz. gold per ton.

This type of porphyry is similar to some in the Babine Lake area of B.C.

The quartz phenocrysts separate this rock type from the much more common feldspar porphyries described by Tempelman Kluit (G.S.C. Paper 73-41) that occur in the Carmacks area.

Rhyolite

Intrusive and extrusive bodies of rhyolite occur in several places south and west of Big Creek. At the Granite Mountain and Klazan prospects, brecciated, altered rhyolite is prominent and

looks like a very favourable rock. However, except for quartz veining and some pyrite, no significant mineralization is evident.

Rhyolites on the northeast slopes of Granite Mountain and on the south side of Prospector Mountain are apparently devoid of economic mineralization.

This rock type appears to have been intruded later than the introduction of copper mineralization.

Mt. Nansen Volcanics (Casino Volcanics)

Tempelman Kluit suggested in his description of Aishihik-Snag-Stewart River area geology (Open File 161) that the Casino and Mt. Nansen volcanics are generally equivalent. It was known that Cyprus had explored a porphyry-breccia pipe copper prospect at Mt. Nansen. As a result, it was felt the Mt. Nansen volcanics should be mapped and prospected in search of centres of volcanic activity in hopes of finding other mineralized breccia pipes.

Adequate descriptions of these volcanic rocks are given in G.S.C. Paper 73-41.

Work covered the Mt. Nansen volcanics in the southwest portion of the Carmacks map sheet trending southeast from Prospector Mt. and near Klaza Creek. Brief examinations were made of Mt. Nansen, Apex Mountain, Mt. Cockfield and Patton Hill (Casino).

Because the geologist assigned to this project left on July 5th, the job of mapping these volcanics to locate volcanic centres was not carried out. Considerable difficulty was encountered in separating the volcanics from intrusive and/or extrusive, dark to pale green, feldspar porphyry. Our opinion was that this porphyry was a contemporaneous and integral part of the Mt. Nansen volcanics.

No prospects of importance were found. Geochemistry indicates there are no important copper-bearing zones outcropping immediately southeast of Prospector Mtn. On Prospector Mtn., geochemical results indicate large, weakly anomalous areas but the geology is extremely complex and we have not adequately explained the results. No mineralized showings of economic interest were found.

At Apex Mountain, similar minor indications of mineralization were found.

On Prospector Mtn., Apex Mtn., Mt. Cockfield and Patton Hill, mineralization is associated with intrusive rocks, rather than Mt. Nansen volcanics which are dominantly extrusive.

Varicoloured Acid Tuff

This rock type occupies large areas east of Aishihik Lake. Prospecting was directed to these volcanics because of the mapped occurrence of a copper showing (SATO) about four miles north of Long Lake. The volcanics were found to be barren and uninteresting.

On examination of the SATO showing, it was found to consist of minor copper in a dioritic intrusive centre, surrounded by magnetic granodiorite which intrudes the quartz monzonite of the region.

Carmacks Group

These are generally andesitic to basaltic, dark coloured flow rocks. Locally, hematite colours some flows a dark red. Silica (agate) fills voids in basalt flows east and south of Prospector Mtn., along the general southerly projection of the gold-bearing, silicified

zones in Big Creek granite and schist gneiss west of Mt. Pitts. This is the only evidence of a remote possibility that this silicification is younger than the Carmacks volcanics.

At Mt. Pitts, a fine to medium-grained granitic rock, grey to pinkish in colour, with very minor pyrite and rare specks of chalcopyrite appears to intrude the Carmacks volcanics. Bostock mapped this rock as younger than the Carmacks. Tempelman Kluit considers it a window of older rock. The writer is convinced this rock is intrusive into the Carmacks. Considerable time was spent looking for "windows" in the Carmacks south of the Minto deposit. No windows were found.

On a creek flowing east into Big Creek and 3½ miles south of the COIN showings, the Carmacks volcanics are apparently underlain by a hematite-rich, boulder conglomerate which contains large rounded boulders of the coarsely porphyritic granodiorite and monzonite within which the Minto deposit occurs.

North of Dark Creek, a conglomerate of small, well-rounded pebbles to small cobbles appears to consist mainly of volcanic debris and quartz. It is probably intraformational.

On Big Creek and in other areas, steeply-dipping andesitic to basaltic dykes occur which appear to be feeders to the overlying, flat Carmacks volcanics. In places, these dykes can be seen cutting the lower flows well up into the Carmacks sequence.

Selkirk Volcanics

These volcanics are flat-lying, generally non-magnetic and restricted to the lower half of Wolverine Creek, the Yukon River valley and north from Selkirk toward Volcano Mtn. The lower flows on Wolverine Creek are dark augite basalts lying on the granitic and gneissic older rocks. To the north, along Yukon River, several separate flows are evident, including striking exposures of columnar basalt.

Bostock gives a good description of these rocks in Memoir 189.

GEOCHEMISTRY

Silt sampling is conducted as a routine part of the general prospecting program and, in areas of poor drainage or scant outcrop, widely spaced soil samples are also taken. Several areas of some special interest were soil sampled on grid patterns of varied spacing.

SAMPLE PROCEDURE VARIATIONS

During the last half of May and on into June, many creek beds are filled with solid ice. Spring run-off floods over this ice and cuts parallel channels in ice and snow. This run-off carries some silt and, in the early part of the season, many silt samples were made up of this material. It is conjectural how truly representative this material is.

Later in the summer, thawing of permafrost locally causes widespread slumping of creek banks, producing large quantities

of silt downstream. This results in having several consecutive samples in these streams consisting essentially of silt derived from the one area of slumping. Whereas silt above this area may be scarce, it is probably much more indicative of true dispersion values.

During the last week of September, creek beds freeze from the bottom in areas of permafrost and some silt samples are in reality lumps of frozen muck from stream bottom or bank that must be chopped out with grub-hoe or pick.

Soil sampling also presents problems in permafrost areas. Experiments were made as follows:

(1) Use of augers up to 1½" diameter - useless.

(2) Chopping out ice, roots and soil by brute force with mattocks. This can be done but is hard, dirty work. This method is considered as good as any under some conditions.

(3) Removal of moss cover over area of about 3 square feet and allowing ice to thaw for several days. This makes subsequent sampling a little easier but is too slow.

(4) Removal of moss with grub hoe and chopping out ice and soil with an ice chisel. This is probably the best method for regular grid sampling.

(5) Sampling of central material from frost boils. This is the easiest, quickest method. Spacing may be haphazard but, if there are sufficient frost boils, this method is preferable to all others for the initial soil sampling program on a property.

One or, in places, two layers of white volcanic ash occur over very large areas. It is considered necessary to take soil

samples below these layers but, in many areas of permafrost, it is practically impossible to be sure this has been achieved.

The quality of silt samples also suffers because of ash, as the desirable silt material is often diluted with apparently barren ash. In some cases, material in very small tributaries consists almost entirely of ash and results here may not be reliable.

PROCEDURE

The sampling program involved the taking of approximately 4700 samples, of which approximately 2960 were silt samples. Distribution of these samples is indicated on the accompanying 1:250,000 maps.

Most samples were dried and sifted through 40 mesh screen at D.C. base before being sent to Chemex Labs for analysis. Generally, only two determinations were made on each sample. During the early part of the season, these were for copper and molybdenum. As molybdenum results were very low, this was changed to copper and molybdenum determinations solely in wholly granitic areas, and copper and zinc determinations in areas of volcanics or mixed formations. Late in the season, a small number of determinations were made for Ag, Pb, Sb, As where some indications of gold mineralization were found.

RESULTS

Approximately 1035 determinations were made for molybdenum, mainly in the Carmacks and Aishihik Lake areas. No significant anomalies were found and Mo was not found to be important as a pathfinder for areas of copper mineralization.

A histogram of copper values for some 2961 silt and 1709 soil samples (Fig. I) illustrates the low tenor of background values for the area and seems to indicate that values of 50 ppm or greater are of significance for both soils and silts. On this basis (i.e. threshold value of 50 ppm), only 8.5% of copper determinations were anomalous.

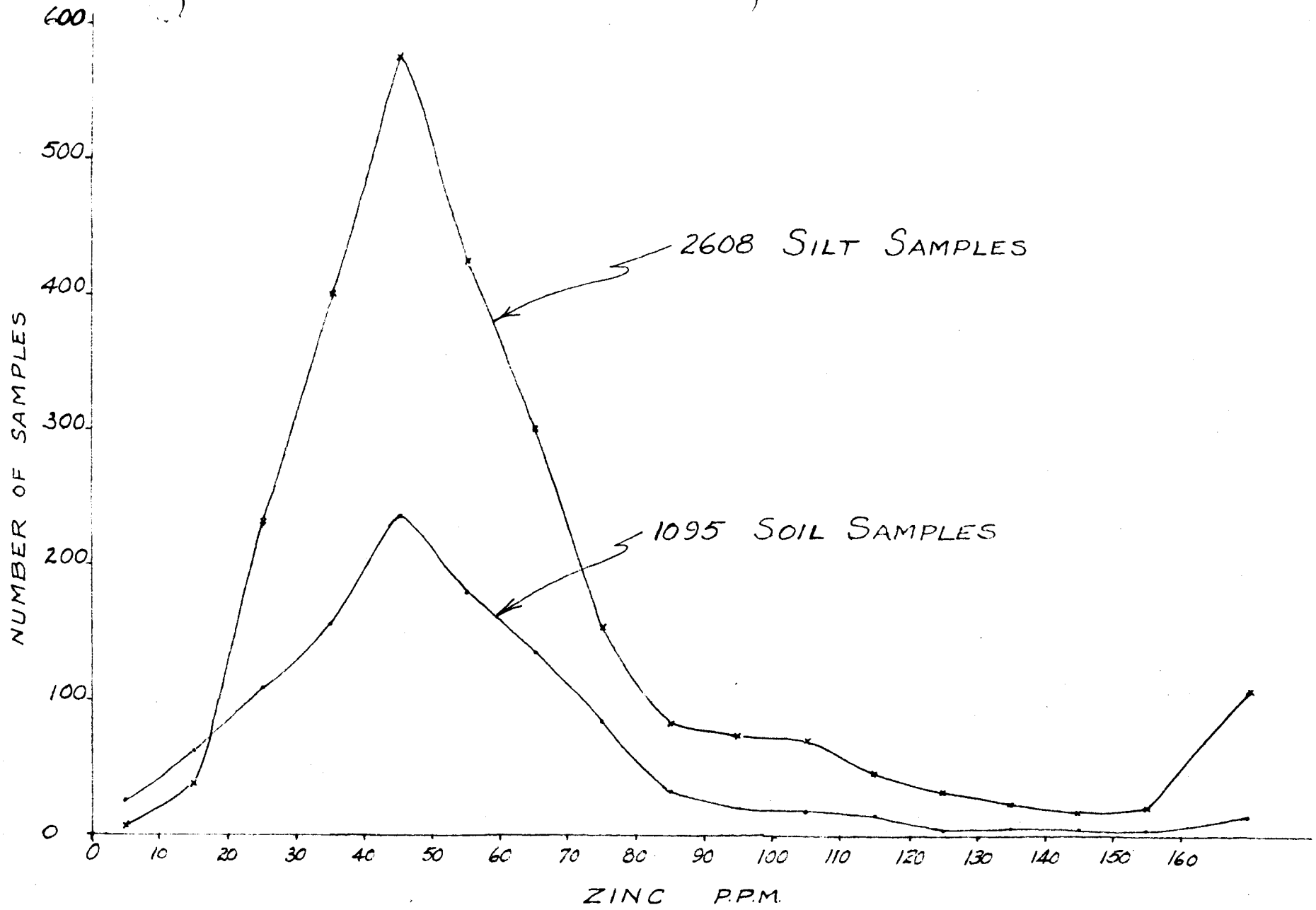
The histogram of zinc values (Fig. II) for 2608 silt samples and 1095 soil samples indicates a threshold value of 100 ppm. Only 10.2% of the zinc determinations exceed this value.

These threshold values, however, may have no real significance in locating economic mineralization.

(1) Silt sampling downstream from significant copper mineralization with abundant pyrite, as at Granite Mountain, gave results over 100 ppm Cu for several thousand feet. Sampling downstream from similar zones with abundant pyrite and little or no copper mineralization gave no significant copper anomaly. Examples are KLAZAN and WON claim groups.

(2) Silt sampling near economic copper mineralization with little or no pyrite, as at Minto and Williams Creek, gave only weak anomalies. Our own sampling on the undisturbed slopes north of the Minto deposits gave only two silt results exceeding 50 ppm Cu. It is reported that the initial sampling by Silver Standard gave only one anomalous result of 275 ppm Cu over the Silver Standard showings whereas the main creek ran from 30 to 70 ppm (sampling by Keno Hill).

(3) Zinc values are not necessarily coincident with copper values and gave no significant aid in prospecting for copper.



D C SYNDICATE

ZINC HISTOGRAM

1974

FIGURE II

Several zones of slightly anomalous zinc values were found in areas of Mt. Nansen volcanics and minor galena and chalcopyrite mineralization was sometimes found in these areas. Nothing of economic importance seemed to be present.

Two areas of anomalous zinc values with a few anomalous copper values in presumably granitic terrain near Triangulation Mountain should receive further checking.

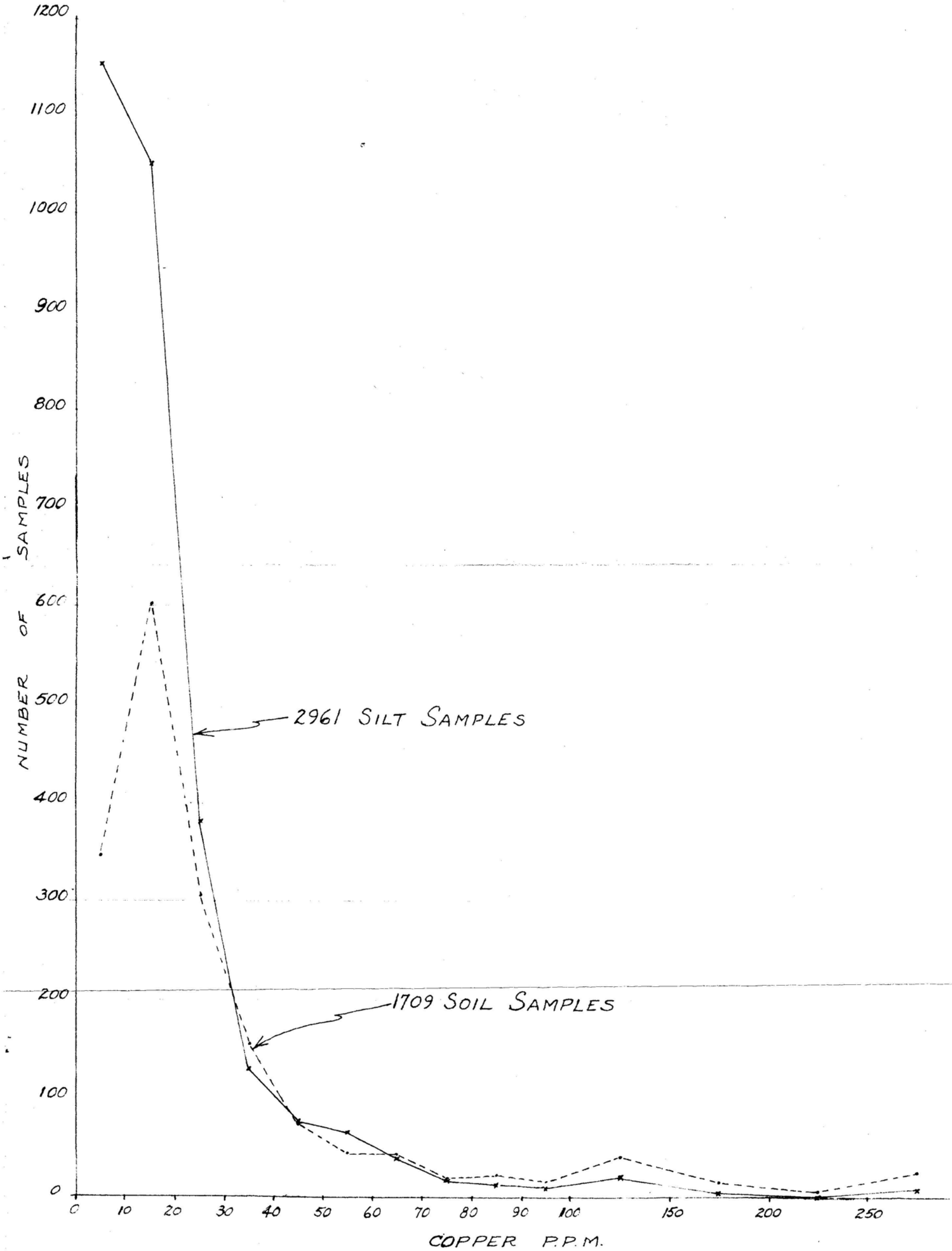
These observations indicate all geochemical results must be considered in relation to the local geology.

West of Mt. Pitts, three widely separated zones of silicification in schists and in granite were checked for gold. Assays of 0.01 to 0.03 oz. Au and 0.10 to 0.39 oz. Ag were received. A specimen showing more than usual quantities of limonite on fractures and cavities was analysed spectrographically for twenty elements. Results of this analysis are given on Page 20.

Results of widely spaced follow-up soil sampling are shown on Plate II. Since these locations are not staked, the index map has been masked. Histograms of results on these soil samples for lead, antimony and arsenic are shown on Figure III.

No significantly anomalous values were obtained in soil samples for silver and the histogram for lead shows that no anomalous results occur for that element.

The curves for antimony indicate that background values are below 5 ppm and two families of anomalous results occur. The first

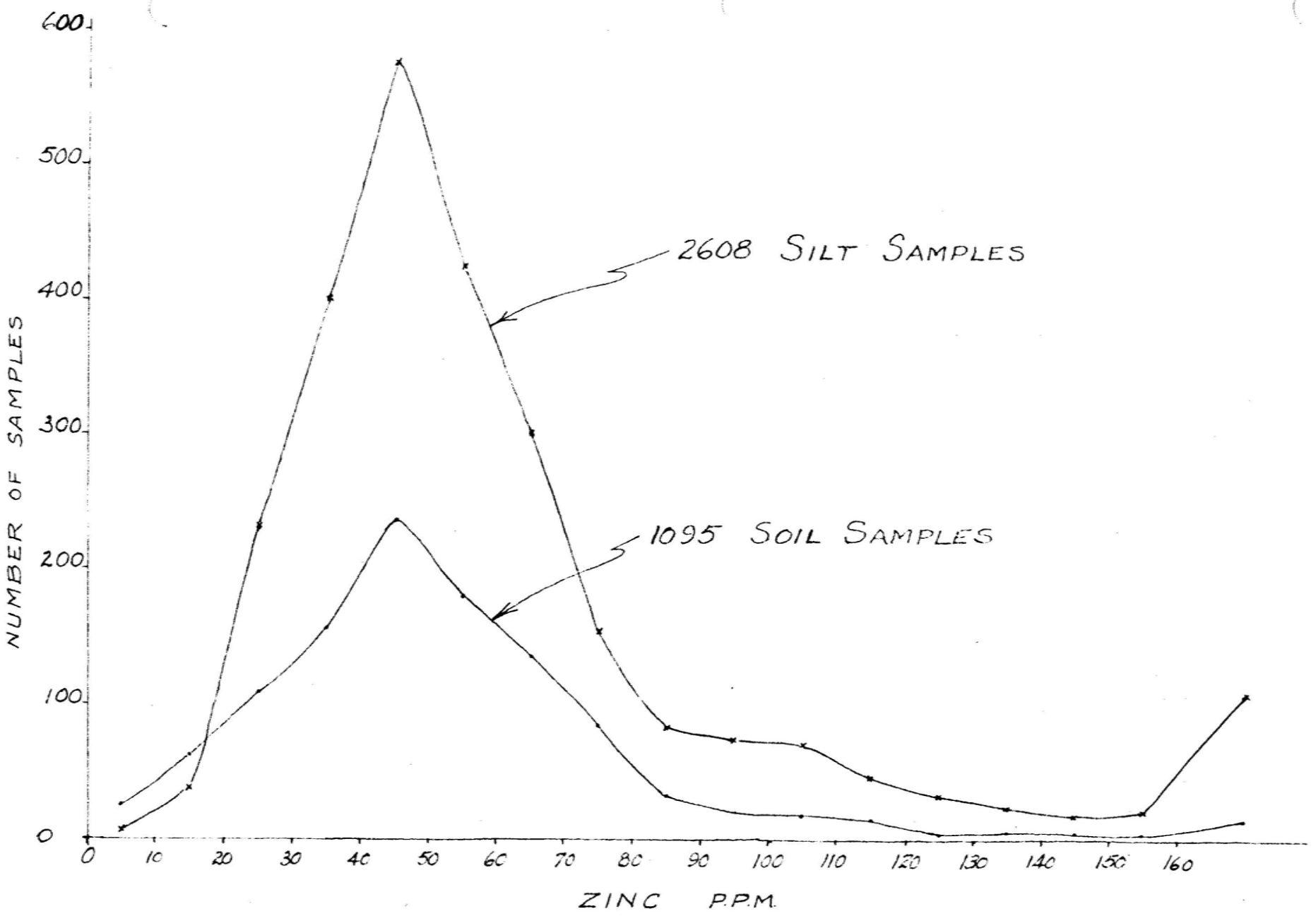


DC SYNDICATE

COPPER HISTOGRAM

1974

FIGURE I

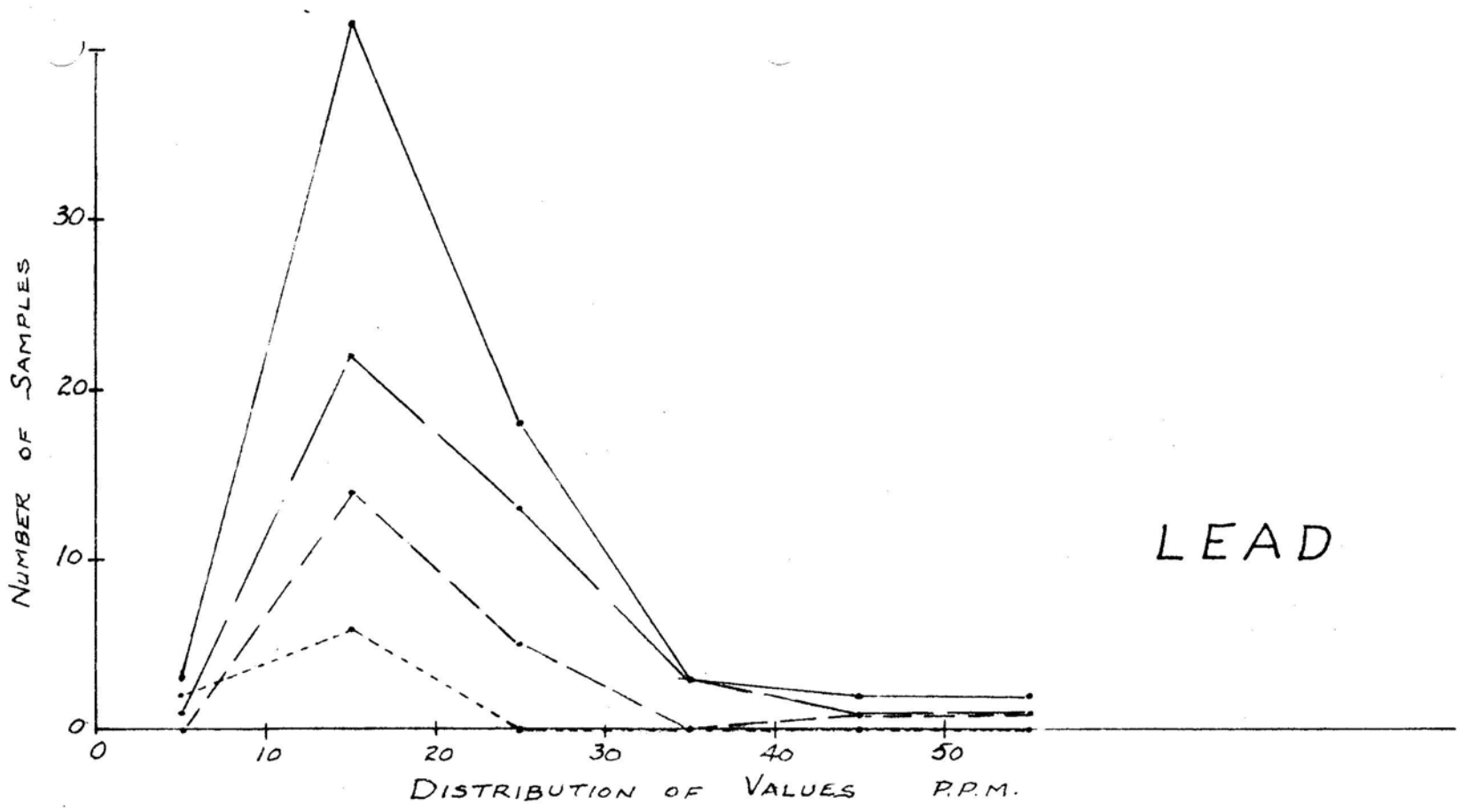


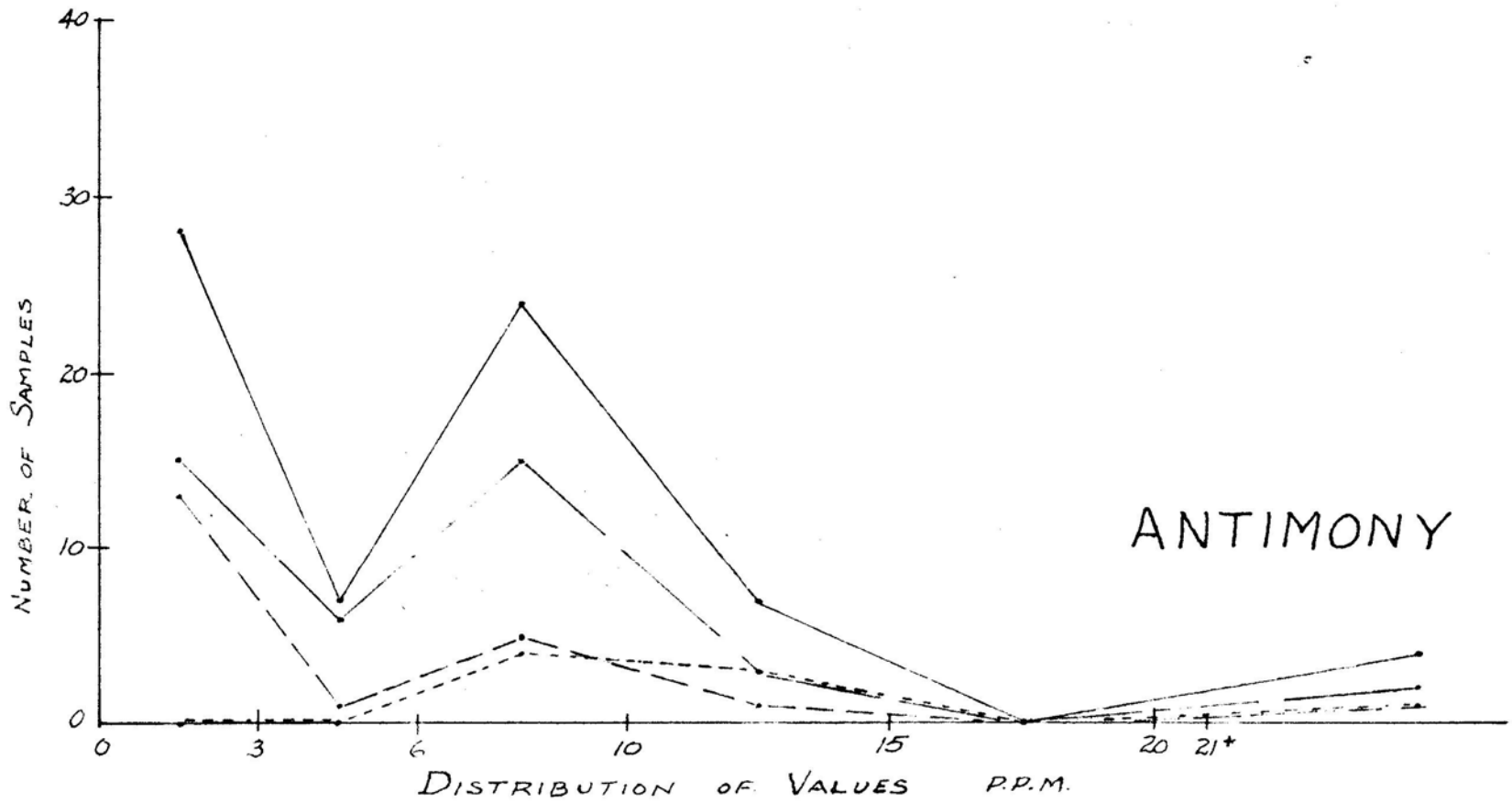
D C SYNDICATE

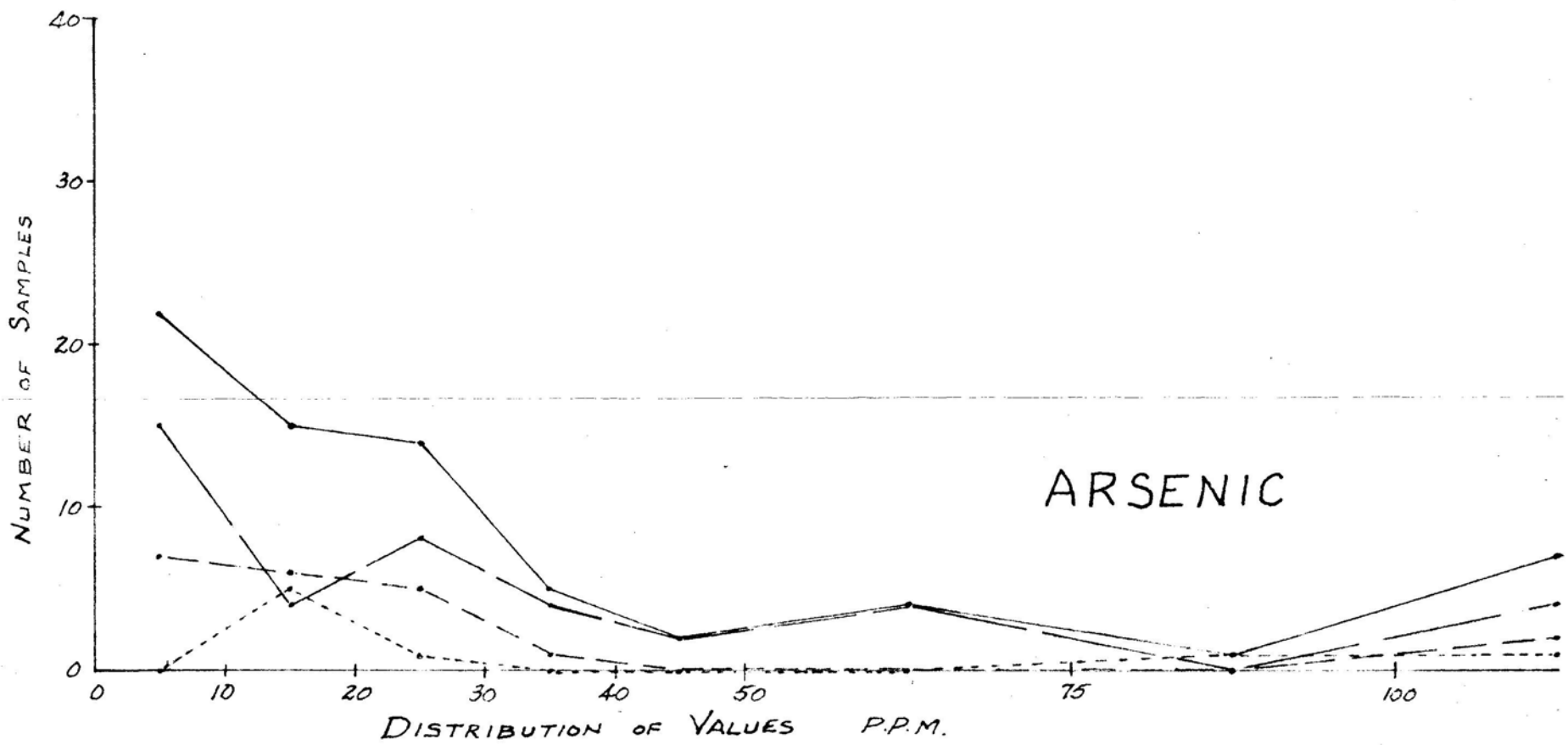
ZINC HISTOGRAM

1974

FIGURE II







TOTAL SAMPLES
A ZONE SAMPLES
B ZONE SAMPLES
D ZONE SAMPLES

D.C. SYNDICATE
GOLD ZONES A, B, & D.

SOIL SAMPLE ELEMENT DISTRIBUTION

FIGURE III 1974

of these covers the range 5 to 15 ppm and the second is above 20 ppm. Three samples ran 22, 24 and 25 ppm while a high of 175 ppm was obtained from one sample. Carlin ores range from 5 to 450 ppm.*

The curves for arsenic indicate background values below 45 ppm with two families of anomalous results covering the ranges 50 to 75 ppm and over 100 ppm. Values from five samples range from 50 to 75 ppm while eight samples ran from 100 to 500 ppm. Carlin ores are reported to average 480 ppm As.*

It is to be noted that no anomalous results were obtained from our regular silt sample program in the vicinity of these silicified zones, and their discovery is due entirely to careful geological observation on the part of James Mustard.

A program of detailed sampling and mapping is indicated for the 1975 season.

Early in the 1974 season, an effort was made to investigate the feasibility of soil sampling pingos. Scores of pingos have been located in the region (G.S.C. Paper 69-34) and, as they occur near the base of gentle slopes underlain by permafrost and are related to local drainage, it was felt that a few soil samples on a pingo might be as informational as many more soil samples on a hillside. Although a few pingos were located and sampled, the immediate difficulty of identifying and locating each pingo seemed to outweigh any possible advantages.

* G.S.C. Paper 74-45

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. SP 144

TO: D. C. Syndicate
c/o Bacon & Crowhurst
1720 - 1055 W. Hastings
Vancouver, B. C.

ATTN:

INVOICE NO. 12396

RECEIVED Aug. 30/74

ANALYSED Sept. 3/74

SAMPLE NO. :	Lower Concentration Limit (ppm)	#4853
Antimony	50	2000
Arsenic	20	2000
Beryllium	5	bcl
Boron	20	bcl
Cadmium	20	bcl
Chromium	10	100
Cobalt	10	bcl
Copper	1	50
Gallium	2	10
Lead	5	500
Manganese	5	500
Molybdenum	10	10
Nickel	5	20
Silver	1	5
Thorium	100	bcl
Tin	20	bcl
Titanium	5	1000
Vanadium	10	10
Zinc	50	100
Zirconium	20	50

Concentration Range

>5000 ppm =>5000 ppm	50 ppm = 25-100 ppm
5000 ppm = 2500-10000 ppm	20 ppm = 10-50 ppm
2000 ppm = 1000-4000 ppm	10 ppm = 5-20 ppm
1000 ppm = 500-2000 ppm	5 ppm = 2-10 ppm
500 ppm = 250-1000 ppm	2 ppm = 1-4 ppm
200 ppm = 100-400 ppm	1 ppm = 0.5-2 ppm
100 ppm = 5-200 ppm	bcl = below concentration limit

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: A. E. Hayes

PROSPECTING RESULTS

The published aeromagnetic maps are very useful in outlining the major geological features such as the Massive Volcanics along Yukon River, or the Carmacks Volcanics, etc. They also point up regions of complex igneous activity and possible mineralization as at Granite Mtn., Yukon Revenue, Prospector Mtn., Mt. Pitts, etc.

However, the more important prospects - Minto, Williams Creek and Casino - are not at all obvious as prospecting targets from the aeromagnetics.

Our combination of aeromagnetics, geochemistry, geological mapping and prospecting has indicated the following target areas:

(1) Gold Zones (See Plate II in pocket)

West of Mt. Pitts, three zones of silicification were found to have low gold and silver content, together with geochemically anomalous arsenic and antimony. Soil samples are at very wide intervals, mapping is incomplete and the target areas are not staked. It is proposed that these areas receive detailed investigation during 1975.

(2) Massive Volcanics

(a) As described above, a horizon of acid volcanics occurs on Big Creek, west of Victoria Rock and north of Yukon River. The total extent of this horizon is not known. Several instances of anomalous copper values indicate the horizon may warrant detailed prospecting. This would be in search of a volcanogenic deposit.

(b) In the Triangulation Mtn. - Kirkland Creek area, several broad areas indicate anomalous values for copper and zinc. One zone of anomalous results seems to follow the volcanic-intrusive contact. This is difficult country to prospect and considerable work has been done by other interests. The area warrants consideration. Initial efforts will be directed to obtaining copies of results obtained by other companies.

(3) Williams Creek - Merrice Creek

Several anomalous soil samples came from a limited area west of Merrice Creek which may not be covered by existing claims. Checking of location of claims and limited geological mapping would be warranted if a crew is working in the vicinity.

(4) NADA Claim Group

Soil sampling and preliminary mapping on this property were inconclusive. Plates III and IV, prepared by J. Mustard, depict results obtained. It may be possible to acquire maps and records from Archer-Cathro covering their previous work here. There is a possibility of:

(a) More concentrated copper mineralization under Hayes Creek in the quartz biotite feldspar porphyry. This assumes increased fracturing in the valley floor prior to mineralization.

(b) Gold-copper mineralization between Klines Gulch and Sonora Gulch on the north margin of the property. This could be in the intrusive rocks or in the schist gneiss complex - there are records of placer gold and lode gold mining in Klines Gulch.

(5) Minto-Keno Area

A single silt sample from a very small trickle north of the Minto deposit was anomalous for both copper and zinc. It is possible this stream was contaminated by a nearby campsite but the possibility of a mineralized zone cannot be completely dismissed. This silt location is on DEF claims held by Keno Hill et al.

SUMMARY OF CLAIMS RECORDED

Claim Name	Staker	Date of Staking	Date of Recording	Remarks
WON 1-8	J.P.Stevenson	June 24/74	July 9/74	No further work
9-16	J.C. Stephen	June 28/74	July 9/74	is planned.
NADA 1-8	J.W. Mustard	Aug. 2/74	Aug. 29/74	Further research
9-16	Joan Mustard	Aug. 5/74	Aug. 30/74	is warranted
17-24	D.S. Wood	Aug. 12/74	Aug. 29/74	initially

Respectfully submitted,

J.C. Stephen

63°00'

62°00'

61°00'

138°00'

137°00'

136°00'

YUKON RIVER

PELLY RIVER

MACMILLAN RIVER

NISLING RIVER

KLAZA RIVER

LITTLE SALMON RIVER

BLACK CREEK

VOLCANO MTN

DIAMAIN LAKE

BRADEN'S CANYON

CANADIAN CREEK

BRITANNIA CREEK

PATTON'S HILL

DIP CREEK

SCHWATKA RIVER

HAYES CREEK

NADA GROUP

MOUNT COCKFIELD

VICTORIA ROCK

WOLVERINE CREEK

STAKED AREA MAP 115I-11

MOUNT PITTS

DAIR CREEK

VON WILCZEK LAKES

NEEDLEROCK CREEK

TATAMAIN LAKE

MCCABE CK.

APEX MTN.

PROSPECTOR MOUNTAIN

STAKED AREA MAP 115I-7

MCGREGOR CK.

TADRU LAKE

BIG CREEK

GOG GROUP

WOLF GROUP

GRANITE MOUNTAIN

MILLARD CK.

MERRICE

KLAZA MOUNTAIN

SEYMOUR CREEK

ROB CREEK

CROSSING CK.

TATCHUN CK.

FAT GROUP

FRENCHMAN LAKE

MAHONEY CREEK

HANSEN CREEK

NISLING RIVER

TWIN LAKES

TRACKS

TRIANGULATION MON. 'C'

KIRKLAND CREEK

COGHLAN LAKE

SEKULMUN LAKE

AISHIHIK LAKE

LONG LAKE

NORDENSKIOLD RIVER

BRAEBURN LAKE

WEST DISHIHIK RIVER

DISHIHIK RIVER

DEZADEASH RIVER

FOX LAKE

LABERGE LAKE

TAKHINI RIVER

WHITEHORSE

LEGEND

SILT SAMPLES <50 ppm, 50-100ppm, >100ppm Cu.

SOIL SAMPLES <50ppm, 50-100ppm, >100ppm Cu.

AREA PROSPECTED

D C SYNDICATE

SILT AND SOIL SAMPLE LOCATIONS

1974 PROGRAM

YUKON TERR.

Scale 1: 250,000

PLATE 1

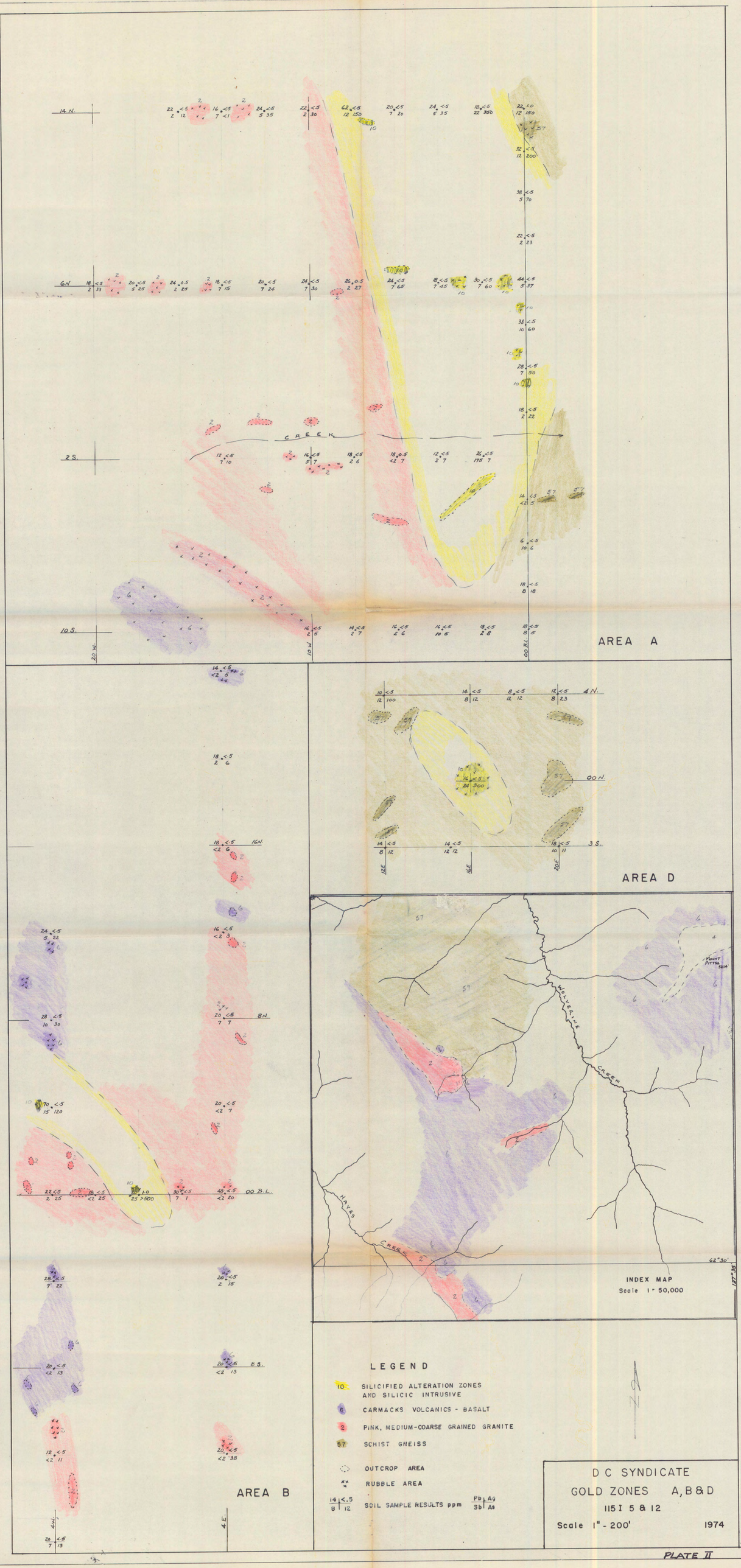
AREA A
AREA B
AREA D
CREEK
WOLVERINE CREEK
HAYES CREEK
Mount Pyrite 5214'
14 N.
6N
2 S.
10 S.
20 W.
10 W.
00 B.L.
4 N.
00 N.
3 S.
16N
8N
8S.
4E.
12E
16E
20E
62°30'
137°30'
INDEX MAP
Scale 1" = 50,000
LEGEND
SILICIFIED ALTERATION ZONES AND SILICIC INTRUSIVE
CARMACKS VOLCANICS - BASALT
PINK, MEDIUM-COARSE GRAINED GRANITE
SCHIST GNEISS
OUTCROP AREA
RUBBLE AREA
SOIL SAMPLE RESULTS ppm Pb/Ag Sb/As
D C SYNDICATE
GOLD ZONES A, B & D
115I 5 & 12
Scale 1" - 200'
1974

PLATE II

N.

MAG. N.

31°

28 N

24 N

20 N

16 N

12 N

8 N

4 N

BL

4 S

8 S

12 S

16 S

20 S

24 S

28 S

24 W 20 W 16 W 12 W 8 W 4 W 00

4 E 8 E 12 E 16 E 20 E 24 E 28 E 32 E 36E

40 E 44 E

HAYES CREEK

Sericite

Approximate Height of Land

Not Mapped

Limits of Hayes Creek Valley

LEGEND

- 3 QUARTZ FELDSPAR PORPHYRY
- 2 SCHIST GNEISS quartz, hornblende, (chlorite)
- 1 GRANULITE quartz, feldspar, mylonitic
- ALLUVIUM
- Outcrop, Trenches
- Geologic Contact – defined, assumed
- Schistosity – inclined
- Placer Gold Workings
- Lode Pits (gold)
- Cabin
- Cut and/or Chained Line
- Sericite Boundary

Scale 1" = 400'

0 400 800

D.C. SYNDICATE

GEOLOGY

NADA CLAIM GROUP

YUKON, Y.T.

N.T.S. NO. 115J–9

62°38' 138°00'

AUGUST, 1974 J. MUSTARD

PLATE III

DP 50 Y37273

DP 52 Y37275

DP 54 Y37277

DP 56 Y37279

N.

MAG.

31°

NADA 23 Y80546

NADA 24 Y80547

NADA 7 Y80538

NADA 8 Y80539

NADA 15 Y80554

NADA 21 Y80544

NADA 22 Y80545

NADA 5 Y80536

NADA 6 Y80537

NADA 13 Y80552

NADA 19 Y80542

NADA 20 Y80543

NADA 3 Y80534

NADA 4 Y80535

NADA 11 Y80550

NADA 17 Y80540

NADA 18 Y80541

NADA 1 Y80532

NADA 2 Y80533

NADA 9 Y80548

28N 24N 20N 16N 12N 8N 4N BL 4S 8S 12S 16S 20S 24S 28S

24 W 20 W 16 W 12 W 8 W 4 W 00 4 E 8 E 12 E 16 E 20 E 24 E 28 E 32 E 36 W 40 W 44 W

DP 37 Y36960

DP 39 Y36962

DP 41 Y37264

DP 43 Y37266

DP 45 Y37268

DP 47 Y37270

LEGEND

28–36 Soil Sample Location
Cu, Zn in p.p.m.

Cut and/or Chained Line

Claim Boundary

Scale
1" = 400
0 400 800

D.C. SYNDICATE

SOIL SAMPLE RESULTS

NADA CLAIM GROUP

YUKON Y.T.

N.T.S. NO. 115J–9

62° 38' 138°00'

AUGUST, 1974 J. MUSTARD

PLATE IV