A REPORT ON PHASE II

OF THE

MINERAL EXPLORATION PROGRAM

FOR THE

CARCROSS PROJECT

YUKON TERRITORY AND BRITISH COLUMBIA

PREPARED FOR

PACIFIC PETROLEUMS LIMITED

ASHLAND OIL AND REFINING COMPANY

GULF OIL COMPANY LIMITED

By

W, M. Tupper

November 1969

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INTRODUCTION

This report contains the results and recommendations on Phase II of a geochemical exploration program conducted in the Carcross area of the southwestern Yukon Territory and northwestern British Columbia. The area investigated, comprising some 9600 square miles, is outlined in Figure I.

Phase I of the Carcross Project was a reconnaissance geochemical silt sampling program undertaken by Geophoto Services Limited of Calgary in 1968. This program was limited to areas above tree line accessible by helicopter. Silt samples were collected with a density of approxiamtely one sample per two square miles and were analized for cold-extractable heavy metal (THM). A limited number of samples were analized for specific metals. Several potential targets were outlined and one property was staked during this program.

All the silt samples collected during Phase I were analized in February and March, 1969, for total copper, zinc, and molybdenum and some for lead, silver, arsenic, and manganese by Vancouver Geochemical Laboratories Limited. This data was appraised by J. R. Woodcock of Vancouver in March, 1969.

Specifically, Phase II of the Carcross Project was "to evaluate the geochemical anomalies resulting from the 1968 geochemical program carried out by Geophoto Services Limited, and the geochemical anomalies resulting from the analysis of samples by Vancouver Geochemical

Laboratories Limited. The work to be carried out will include ground prospecting, geochemical work, geologic mapping, and such other work as may be deemed necessary. In addition, a geological examination will be made of the Rose Group of mineral claims. Geological and other field work shall be undertaken on these claims if required" (extracted from contract agreement).

FIELD PROGRAM

The writer was assisted in the field by William Ostafichuk of Ottawa and for brief periods by Dan Philips of Whitehorse and John Tarde of Montreal. Field examination commenced on June 13 and ended on August 15. All work was conducted out of Whitehorse and Dezadeash Lake on the Haines highway. Helicopter support was provided by Trans North Turbo Air Limited of Whitehorse; expediting services by Terricon Enterprises Limited, also of Whitehorse. Heavy snow fell on the project area on August 8th and 11th. This greatly hampered field work. Soil samples, for instance, at Lime Creek had to be collected through 8 inches of snow. Temperatures at elevations of 4000 feet and above were in the 20° range.

GEOCHEMICAL PROGRAM

All soil and silt samples collected were analized by Barringer Research Limited in their Whitehorse and Vancouver laboratories for Cu, Pb, and Zn, and a large proportion for Mo, Ag, and As.

The Carcross project area covers most of the Whitehorse copper belt, the Mount Anderson gold-antimony belt, the Montana Mountain gold-silver belt, The Rainy Hollow copper belt and the Squaw Range base metal belt. These mineral belts did not stand out as broad anomalous belts, and in most instances did not stand out as specific anomalies in the original survey.

The Whitehorse copper belt and the Montana gold-silver belt, the two most significant mineral belts in the area, were not detected in the Geophoto Survey. Furthermore, no orientation survey data was available to indicate how deposits in any of the above mineral belts could be geochemically detected, or the nature and form of the dispersion trains resulting from them.

There could be a number of reasons why the above mineral belts or deposits within them were not detected, ie, the sampling coverage was not adequate, or the samples were not analized for the most suitable pathfinder elements. During the current program several orientation surveys were undertaken to answer some of the above problems. An example of one of these is recorded on Figure 2. Samples were collected down drainage from the Arctic gold-silver property on Big Thing Creek. This occurrence is a cluster of narrow gold-silver veins containing pyrite, arsenopyrite, sphalerite, galena, and minor chalcopyrite. No dispersion train was detected for Cu, and Zn, and only a very modest one for Pb. An intense, long dispersion train exists

for As, and Ag. Background for Ag in this area is approximately 0.3 ppm. It is concluded that As and Ag are excellent indicator elements for this type of deposit and that a significant dispersion train exists in the silts down-drainage from them.

It is disconcerting to start follow-up work on a geochemical program when many of the major occurrences and prospects in the area were not detected.

It was noted above that the Phase I sampling program was limited to areas above the tree line accessible by helicopter. The area above tree line comprises about 2/3 of the total area, with the remaining 1/3 below tree line. Historically, prospecting has been confined to the area above tree line. This is confirmed by field evidence and assessment file documentation. It is felt that the entire area above tree line covered by the Carcross project has been prospected. On the other hand only limited prospecting has been done below the tree line. The latter is thus virgin prospecting ground and the probability of finding an unknown ore deposit in this area is much higher than above tree line. This virgin 1/3 of the Carcross project area was not covered by the sampling program.

At the outset of the 1969 program it was intended to do conventional follow-up work on the known anomalies as appraised by Tupper and Woodcock. Anomalies with the higher rating were to be examined first. Conventional follow-up work was to consist of

locating the source of the anomaly and evaluating it through prospecting, mapping, and soil sampling. Difficulties were encountered with this approach in that several existing anomalies could not be located. Considerable time was wasted in the early part of the season trying to locate the reported anomalies. A change in tactics was necessary following this experience and it was decided to routinely resample all the known anomalous streams and those adjacent to them. This program continued until July 12. Conventional follow-up work then followed.

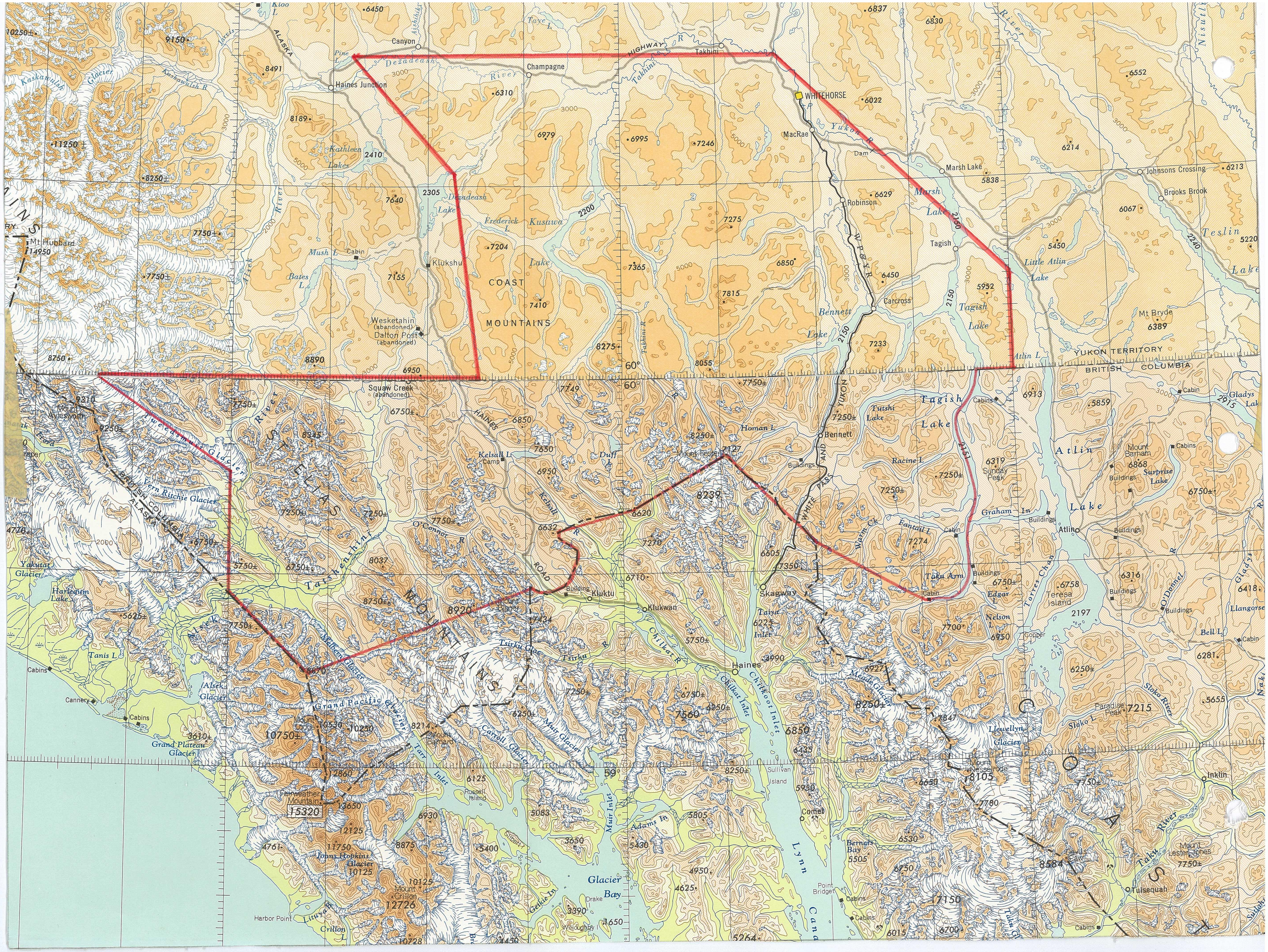
Many localities which were previously considered anomalous were found on resampling to be much less significant. Many of these localities were in areas where it was extremely difficult to obtain good silt samples and the writer suspects that marginally acceptable samples were originally collected. These were probably organic rich, and produced false anomalies. Thus, the number of significant anomalies was greatly reduced.

see Mromium "highs" south of Mt. Anderson

Recommendations regarding areas or properties which are still considered significant and warrant further work are presented at the end of this section of the report. A description of the properties that were staked and the work done on them are then presented. The balance of the report presents the results of the resampling and follow-up program for most of the anomalies recognized in the Tupper-Woodcock appraisal. Each of the anomalies is considered separately by map-area. The Woodcock anomaly numbering system is

used for easy referral to his report and maps. The rating of the anomaly by Woodcock and Tupper follows the anomaly number in brackets. Woodcock used a letter appraisal system with "A" representing a good anomaly and "D" a poor one. Tupper used a number system from 1 to 10 with 10 being a very significant anomaly. The elements for which the stream was anomalous are in the final set of brackets.

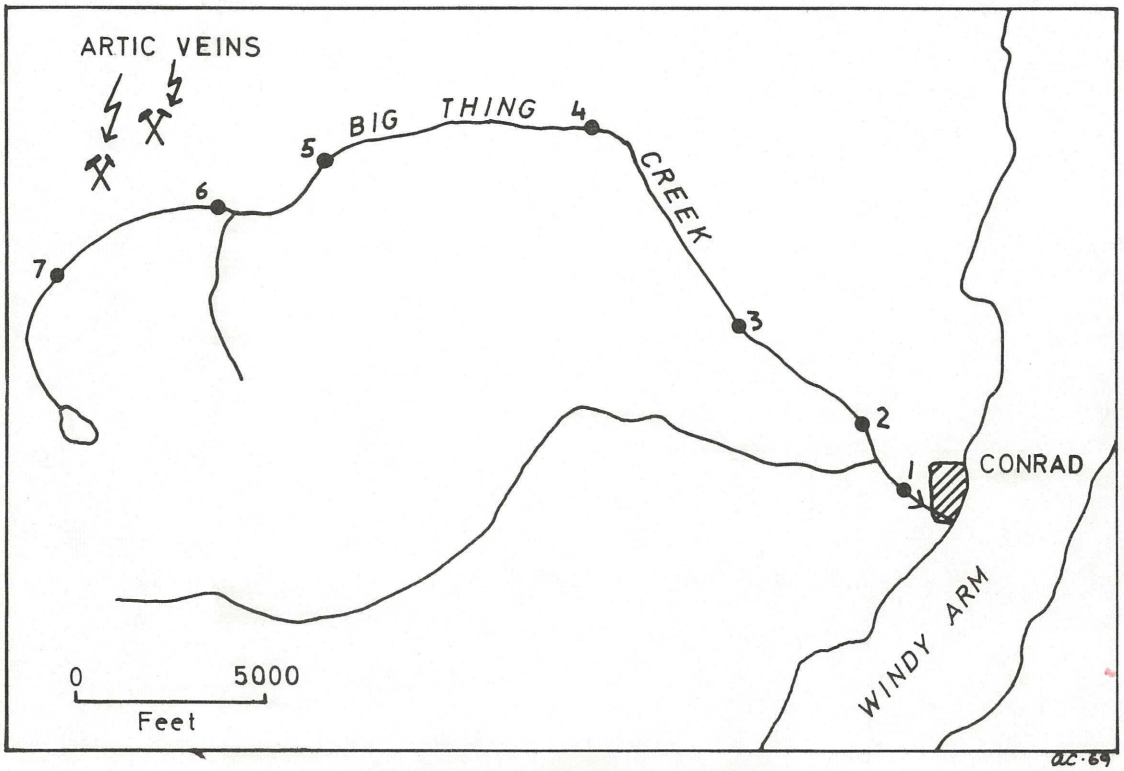
Figures 3 - 7 contain frequency vs concentration plots for each of Zn, Cu, Pb, Mo, and Ag. They are useful in providing a general indication of background, threshold, and anomalous values. It must be remembered however, that these numbers cannot be used universally, as background changes from one geological environment to the next.



WHITEHORSE
Haines Junction
Champagne
Canyon
Takhini
MacRae
Marsh Lake
Johnsons Crossing
Brooks Brook
Robinson
Carcross
Tagish
Bennett
Klukshu
Wesketahin
Dalton Post
COAST
MOUNTAINS
YUKON TERRITORY
BRITISH COLUMBIA
Squaw Creek
Kelsall L.
Homan L.
Atlin
Atlin Lake
Tagish Lake
Skagway
Haines
Klukwan
Klukwan
Chilkat Inlet
Chilkoot Inlet
Lynn Canal
Glacier Bay
Muir Glacier
Muir Inlet
Adams In
Grand Pacific Glacier
Grand Plateau Glacier
Alsek Glacier
Tanis L.
Harlequin Lake
Yakutat Glacier
Mt Hubbard
Mount Fairweather
15320
Johns Hopkins Glacier
Harbor Point
Crillon
Mount Crillon
12726
Tulsequah
Taku River
Llewellyn Glacier
Teresa Island
Surprise Lake
Teslin
Little Atlin Lake
Mt Bryde
6389
Dezadeash Lake
Kusawa Lake
Bates L.
Mush L.
Kathleen Lakes
Bennett Lake
Tagish Lake
Sunday Peak
Graham In
Taku Arm
Nelson
Tsirku R
Chilkat R
Bernes Bay
Point Bridget
Sullivan Island
Dam

Figure·2

105D -SE-4

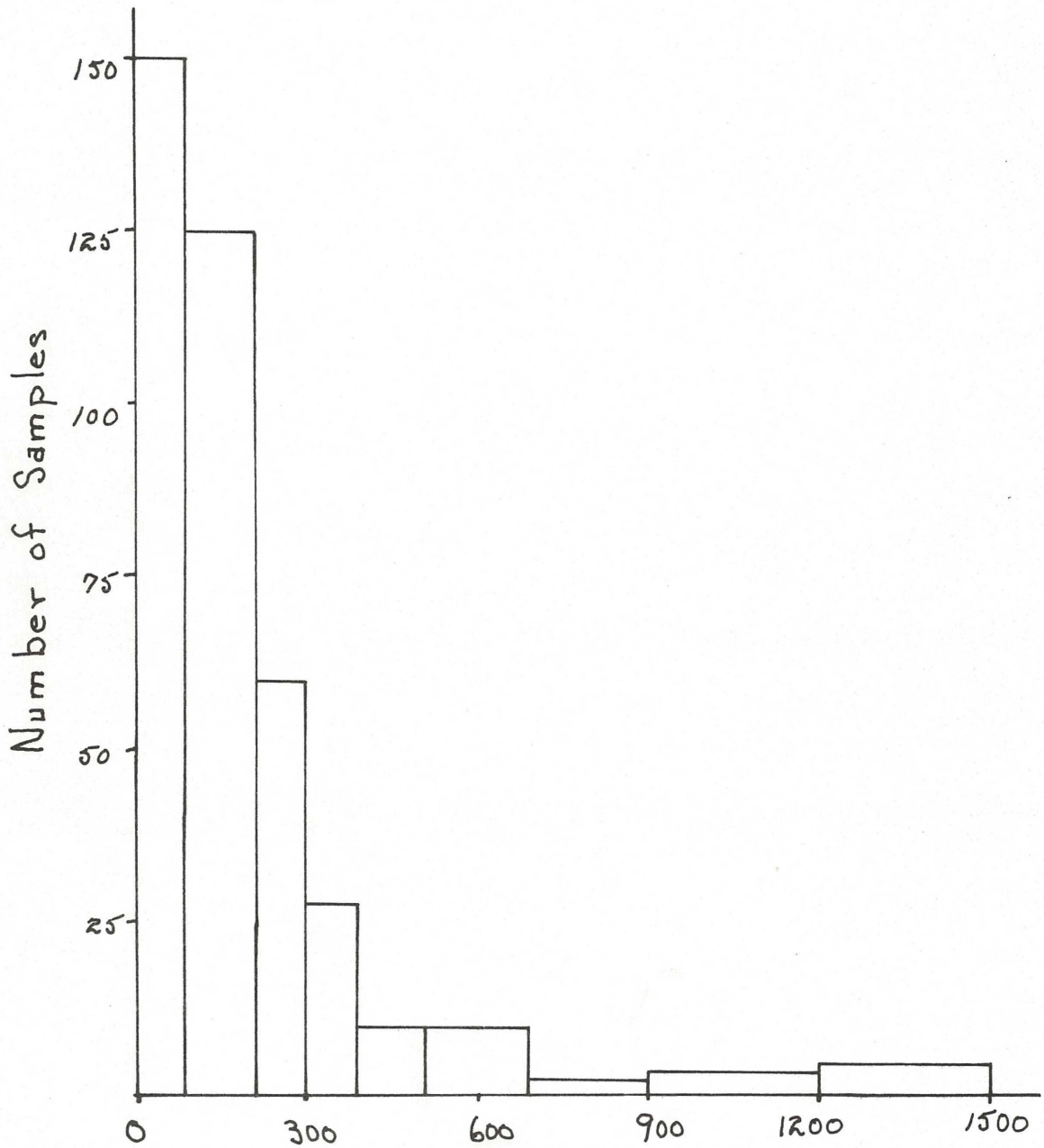


No.	Zn	Cu	Pb	Ag	As
1	119	25	83	1.5	210
2	119	24	78	1.3	215
3	119	24	98	1.8	450
4	163	25	133	2	500
5	183	35	157	3.5	850
6	138	23	133	1.8	750
7	125	15	66	0.5	85

ppm

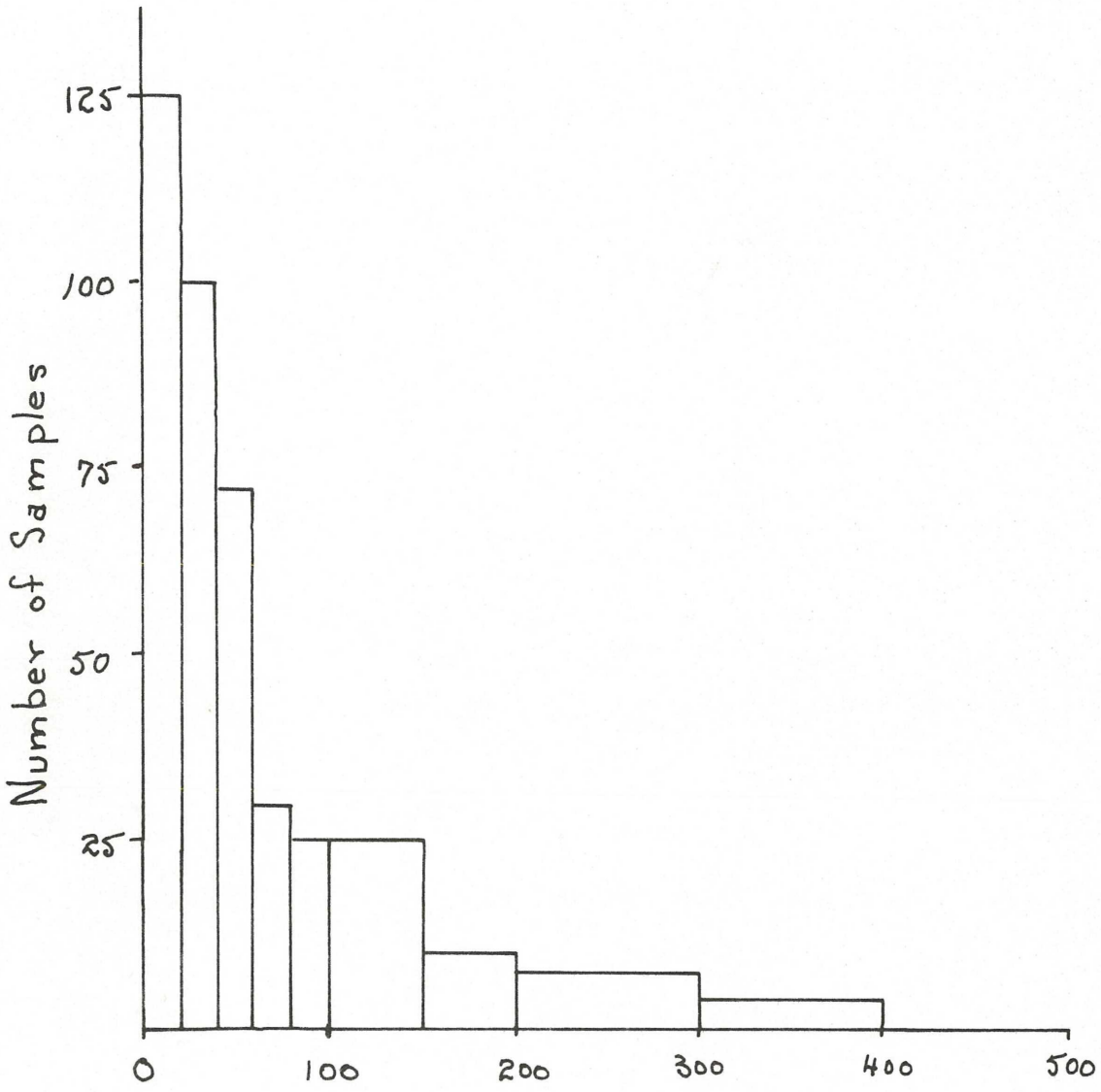
Scale of map
← 1" = 16 miles

Figure 3



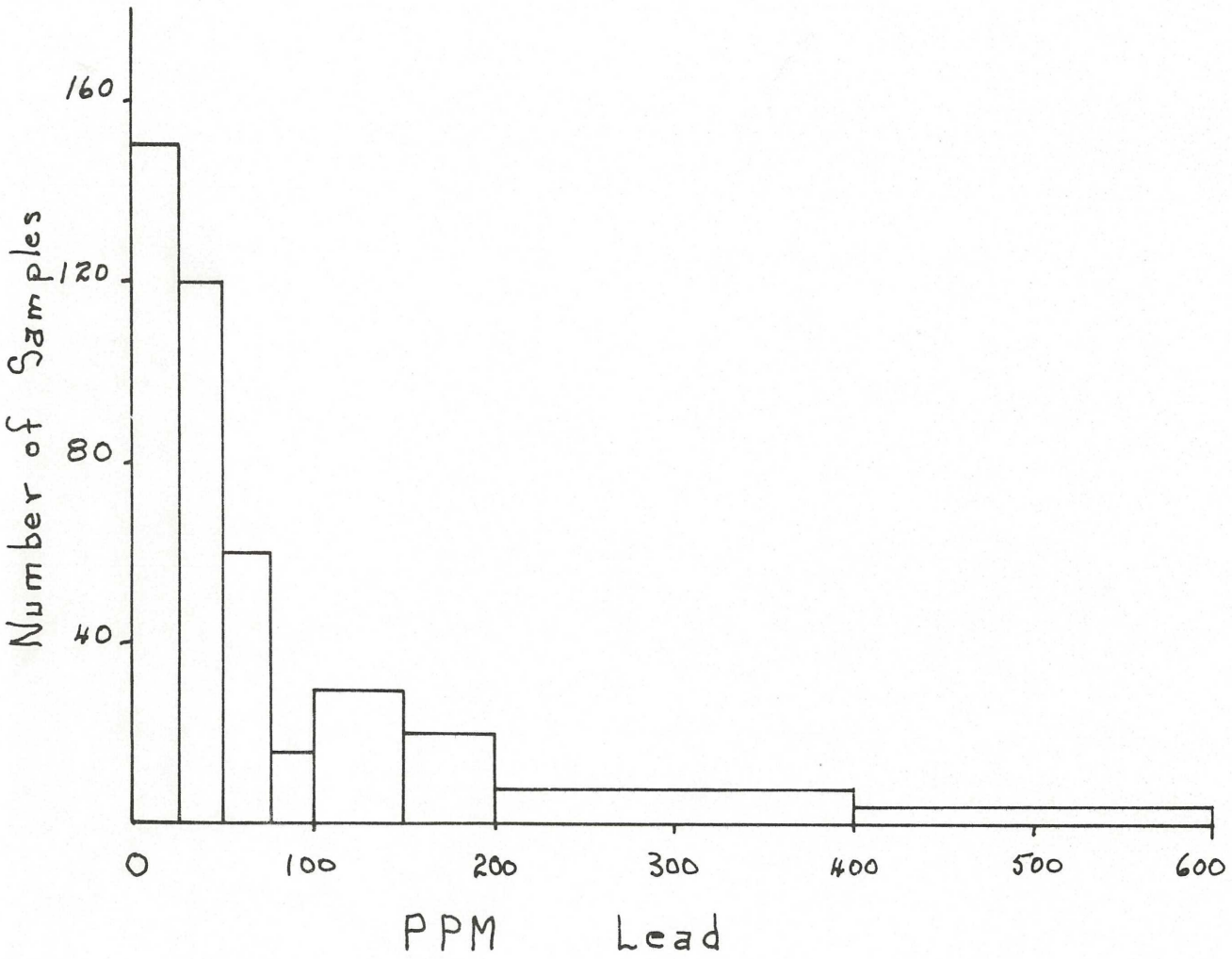
Frequency Diagram
(400 Samples)

Figure - 4



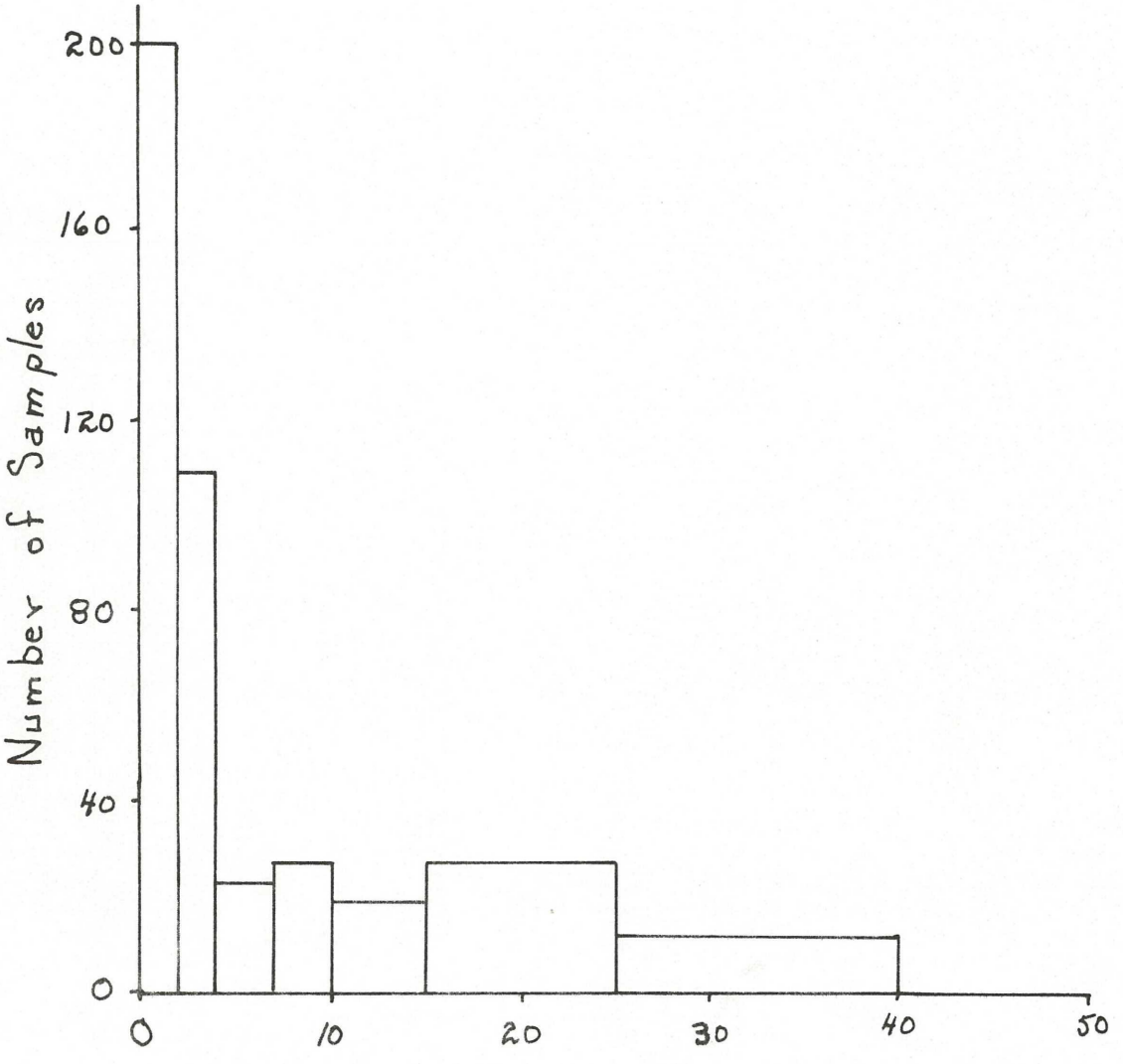
Frequency Diagram
(400 - Samples)

Figure - 5



Frequency Diagram
(450 Samples)

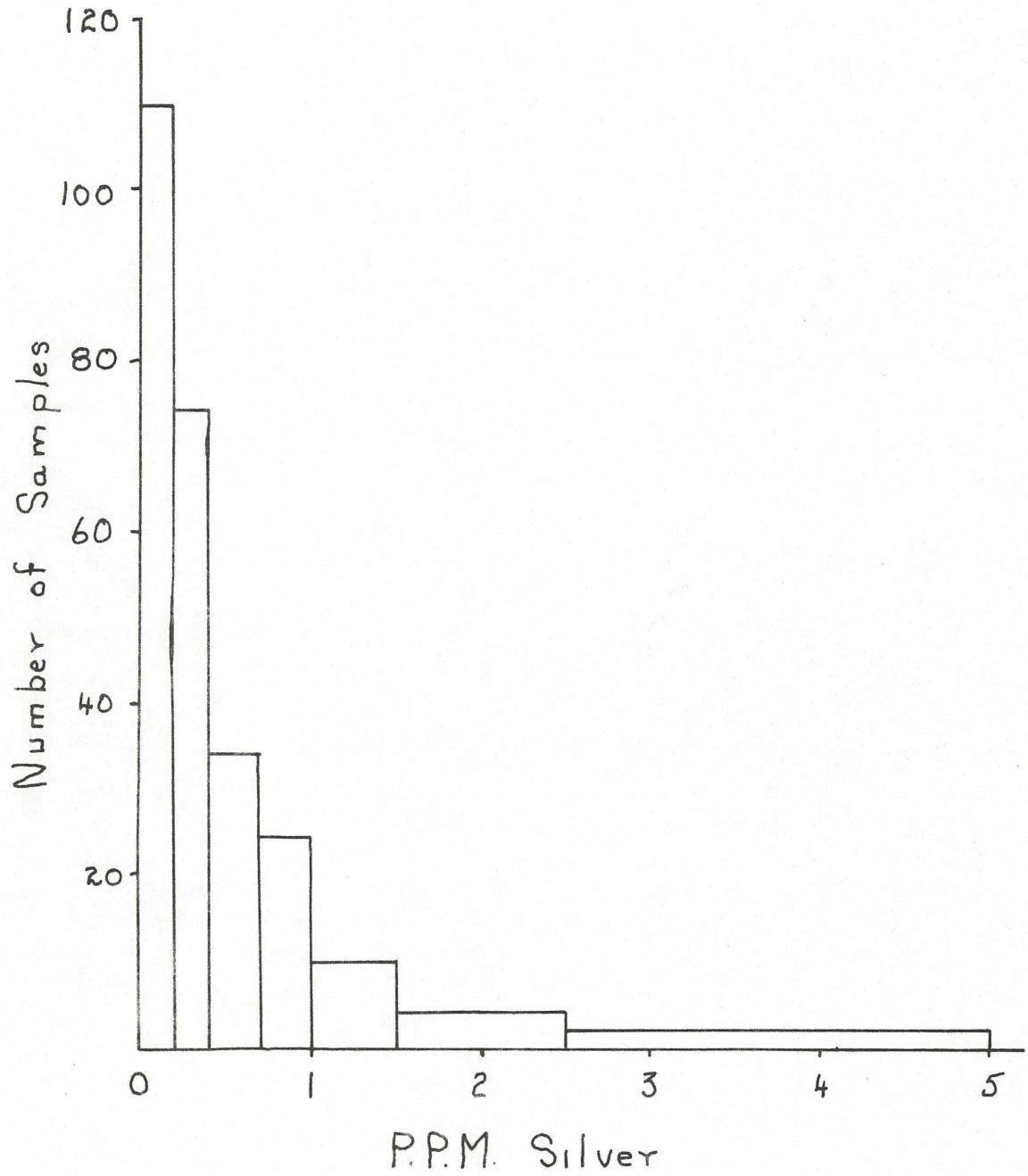
Figure 6



Frequency Diagram

(430 Samples)

Figure - 7



Frequency Diagram
(260 Samples)

SUMMARY AND RECOMMENDATIONS

(1) Rose Lake claim group. The entire claim group was prospected, locally mapped and silt sampled. An insignificant amount of sulfides was found on the property and no anomalies were found in the stream sediments. Thus, no further work is warrented. It is recommended that the claims be dropped. ~~(map attached)~~

(2) Lime Creek claim group. A significant stream sediment anomaly for zinc was found on the headwaters of Lime Creek. The area is underlain by massive limestones with a few thin intercalated bands of rhyolite and andesite. Sixteen claims were staked to cover the source of the anomaly. The area of interest was prospected, mapped, and soil sampled. No evidence of zinc mineralization was noted and the modest soil anomalies found are not considered significant. The claim group is not considered to have any further economic potential. It is recommended that no further work be done on the claim group and the claims be dropped. (map attached)

(3) Kelsall Lake claim group. A large zinc-copper anomaly was found near the southwest end of Kelsall Lake. Thirty-two claims were staked to cover the anomalous zone. The area of interest was prospected, mapped and soil sampled. Bedrock does not outcrop in the immediate area of the anomaly, but meta-diorites occur to the east, and andesites, rhyolites, and limestones to the south and west. Several significant, generally coincident, zinc and copper

soil anomalies were found. No further geochemical work is warrented. It is recommended that a reconnaissance type E-M geophysical survey be run over that part of the grid from 6+00S to 45+00S and from the base line east to 18+00E. This geophysical program should locate any existing sulfide bodies. The area outlined for geophysical work should also be mapped geologically on a scale of 1 inch to 300 feet. (map attached)

(4) Radelet Creek claim group. Large molybdenum anomalies occur in several streams draining an area south of Radelet Creek and east of Primrose River. They were traced to a rugged mountain ridge, some 10,000 feet in length, underlain entirely by granite. Granite boulders were found in lateral and terminal moraines formed during alpine glaciation which contained thin coatings of molybdenite. Disseminated molybdenite was found at one locality in place, and in a quartz vein at another. The terrain is extremely rugged, with some 3500 feet of local relief. Forty-eight claims were staked to cover the area of interest. The geology of the area is favourable for a "porphyry type" molybdenum deposit. It is recommended that the ridge be prospected and mapped in detail. This must be done by an experienced mountain climber with good climbing equipment. This program should deliniate areas favourable for further follow-up work. (map attached)

carried out by Peter Thompson 1970

(5) General. None of the other anomalies or areas examined are considered sufficiently significant to warrent further work. It is recommended that no further work be done on any of the remaining anomalous areas. Anomalies 104M-SE-1, 104M-NE-2, 105D-SW-16,20, 105D-NW-2 were the most difficult to place in this category.

(6) Uranium. The northern part of British Columbia and the Yukon Territory have not been prospected for uranium. Parts of the Carcross area are geologically favourable for uranium, ie, some of the marginal batholitic areas and the arenaceous and pelitic sedimentary basins. Stream sediments have become a useful tool in the search for uranium deposits. It is recommended that some 2000 of the silt samples already collected be analized for uranium. This could be done at a cost of $4,000.00 . Areas and sample numbers can be provided if it is decided to proceed with this program.

Rose Claim Group

105-D-SW-8

The Rose anomaly was the most significant found by Geophoto Services in 1968. Twenty-four claims were staked by them to cover the anomaly. Investigation of the claim group had high priority for 1969 and was the first project undertaken.

The area immediately adjacent to the showings was mapped (Figure 8), the general area prospected, and silt samples collected from the streams draining the claim group.

Bedrock consists of intercalated quartzites, biotite-mica schists, and marble. Nothing distinctive was noted in the quartzites or mica schists except that one of the mica minerals weathers readily to limonite, which stains and pervades much of the outcrop, thus giving it a gossaniferous appearance. Three marble horizons were mapped (Figure 8), the lower one structurally being the thickest (approximately 200 feet thick). Garnet, diopside and epidote are locally present in the marble. All the above rocks strike N30°E to N20°W and dip to the west-northwest between 25° and 40°. All are intruded on the west by coarse-grained quartz diorite.

The entire claim group was prospected. Two zones containing sulfides were examined. Forty percent of the area around the two mineralized zones is outcrop. The major occurrences were in the middle marble horizon some 150 feet above the junction of the streams and 200 feet east of post 1, claim 9. The largest lense in this area

was 8-12 inches wide and four feet long, and was estimated to contain 20 percent sphalerite and 8 percent galena. Some 100 feet to the north were two other small lenses containing sulfide debris. It was not certain if the debris was in place. Both had a maximum length of 6 feet. The sulfide minerals are coarse grained and the sphalerite dark colored.

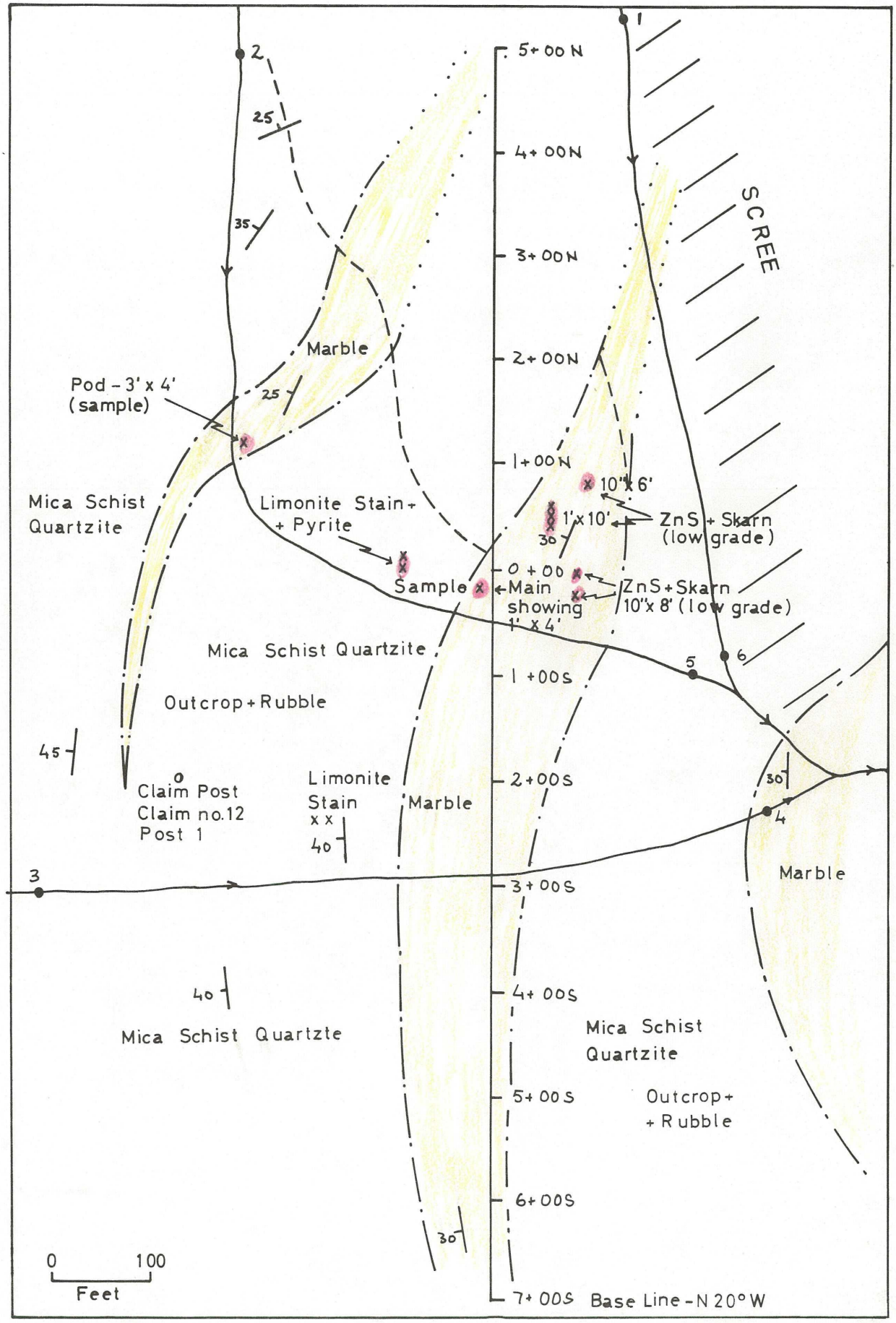
The second sulfide zone is in the mica schist above the middle marble horizon. It is 5 feet thick, 8-10 feet long, and comprised of 5-8 percent pyrite and pyrrhotite. No base metals were noted. The local rocks are iron stained.

The extent of sulfide mineralization found was disappointingly small.

The silt samples collected contained only background to slightly anomalous amounts of Zn and Ag, and background amounts of Cu and Pb. No significant dispersion train exists (Figure 9). If a major sulfide zone existed a much larger geochemical anomaly would be expected.

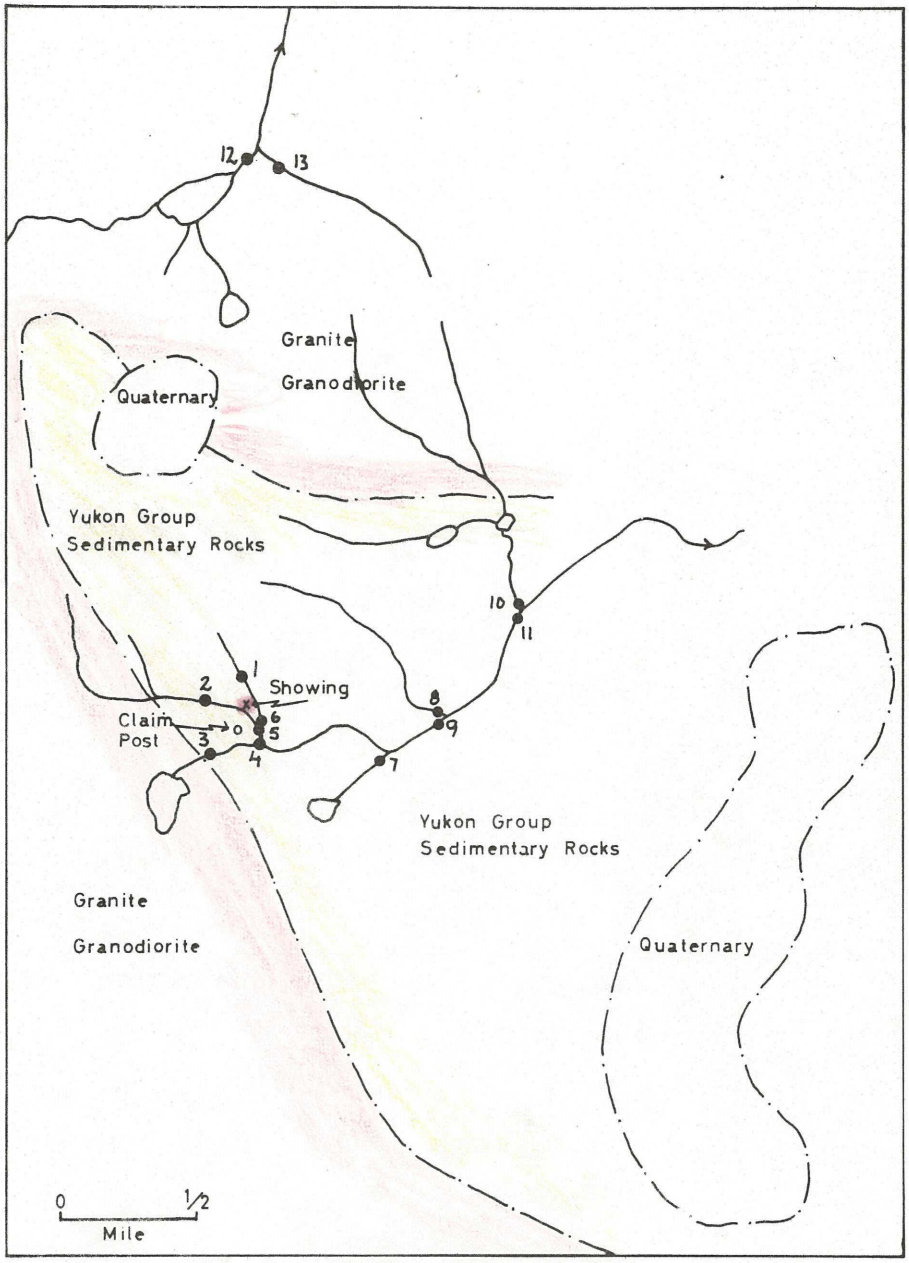
No further work is warrented on the claim group because of the insignificant amount of sulfides found and the lack of a significant anomaly in the stream sediments. It is thus concluded that no large sulfide body exists on the property. It is recommended that the claims be dropped.

Figure·8
ROSE CLAIM GROUP



Figure·9

ROSE CLAIM GROUP '



No	Zn	Cu	Pb	Mo	Ag
1	408	78	71	2	0.6
2	125	32	28	3	0.2
3	Lost Sample				
4	397	46	42	2	0.3
5	170	46	52	1	0.2
6	359	100	84	2	0.5
7	221	58	44	2	0.2
8	279	28	54	2	0.2
9	203	35	43	2	0.2
10	183	44	34	2	0.2
11	295	35	34	2	0.2
12	106	22	21	3	0.1
13	70	20	12	2	0.1

ppm

Lime Creek Claim Group

105-D-SE-3 (D,6) (Zn,Pb)

This was located by Geophoto Services and reported by them as anomaly "A". When the samples were analized for their specific metals it stood out as a significant anomaly (1200 ppm Zn), but was not considered as such by Woodcock. Drilling was in progress on an adjacent property during 1969. Nothing is known about the ore target on this property.

The anomaly was duplicated when the area was resampled in 1969 (Figure 10, station 3). Adjacent streams to the north and south are not anomalous.

The area is underlain in large part by a series of northwest trending massive limestones which contain a few thin intercalated volcanic rocks (Figure 12). A large mass of buff colored rhyolite occurs on the valley wall 1.5 miles to the south. Proceeding down the anomalous stream from top to bottom and presumably going up section, the stratigraphy is as follows; the oldest rocks are a thick massive buff-grey limestone; they are overlain by 80 feet of massive fine grained grey rhyolite, which is overlain by 6 feet of black slate, which is overlain by 60 feet of andesite in part agglomeratic. Two hundred feet of limestone separate this andesite from an overlying unit which is about 400 feet thick. The remainder of the immediate section is limestone. No sulfides or other evidence of base metal mineralization was noted along the creek or

in the outcrops examined in the area.

When the anomalous stream was traversed in early July the upper reaches of the stream were dry. Water appeared in the stream at the base of the upper andesite unit. This locality coincided with the anomaly cut-off in the stream (Figure 10).

Sixteen claims were staked (Figure 11) over the anomaly in early August because

a. the anomaly appeared significant,

b. the geology was favourable, ie, a rhyolite, andesite complex with slate in the transition zone, all part of the Cache Creek group.

c. a drilling program was in progress 1.5 miles west during the entire summer.

The claims were geologically mapped and prospected following the staking program. A grid with the base line extending for 4000 feet (325°) and with cross lines every 300 feet extending 2000 feet northeast and 500 feet southwest from the base line was laid out to cover the area adjacent to and updrainage from the cutoff in the stream. The grid covered a steep west facing slope. Soil samples were collected over the entire grid at 100 foot intervals (Figure 13). The soils in this area are thin and immature, all samples were collected below the "A" horizon. Approximately one-half of the soil samples were collected with 6 to 8 inches of snow on the ground. The Zn, Cu, Pb values in the soil are presented on Figures 14-16.

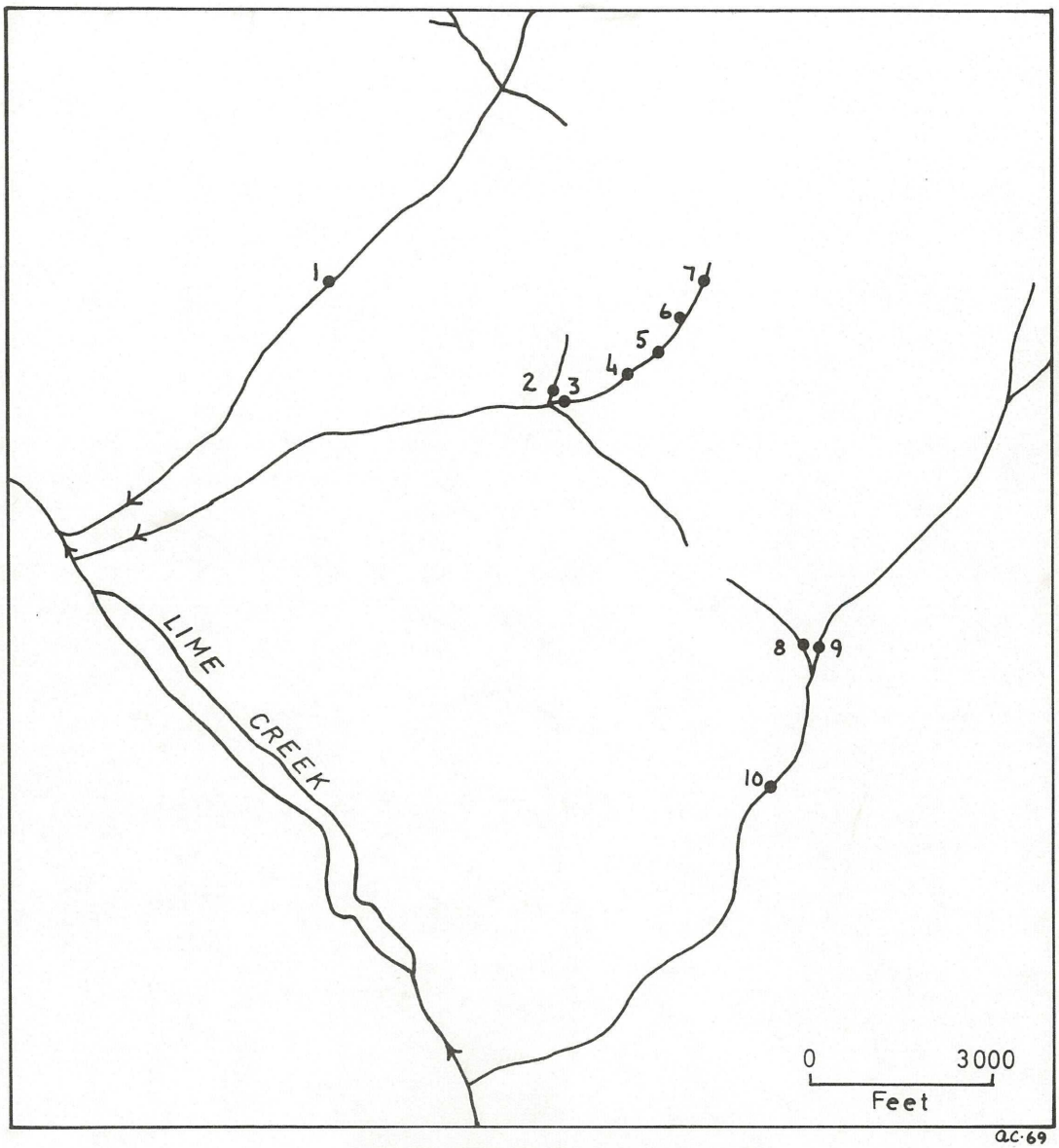
Modest coincident anomalies occur for all three metals with the pattern for Zn being the most pronounced and complex. The anomalous areas coincide in part with the volcanic complex. A small Cu anomaly occurs on the southern part of the grid.

The highest concentrations for Zn,Cu, and Pb are 250, 145 and 190 ppm respectively. These soil anomalies are not considered significant. No source for the stream dispersion pattern has been found. Apart from the stream dispersion pattern no indications of zinc mineralization were noted.

The property is not considered to have economic potential and no further work is recommended.

Figure·10

LIME CREEK SILT SAMPLES

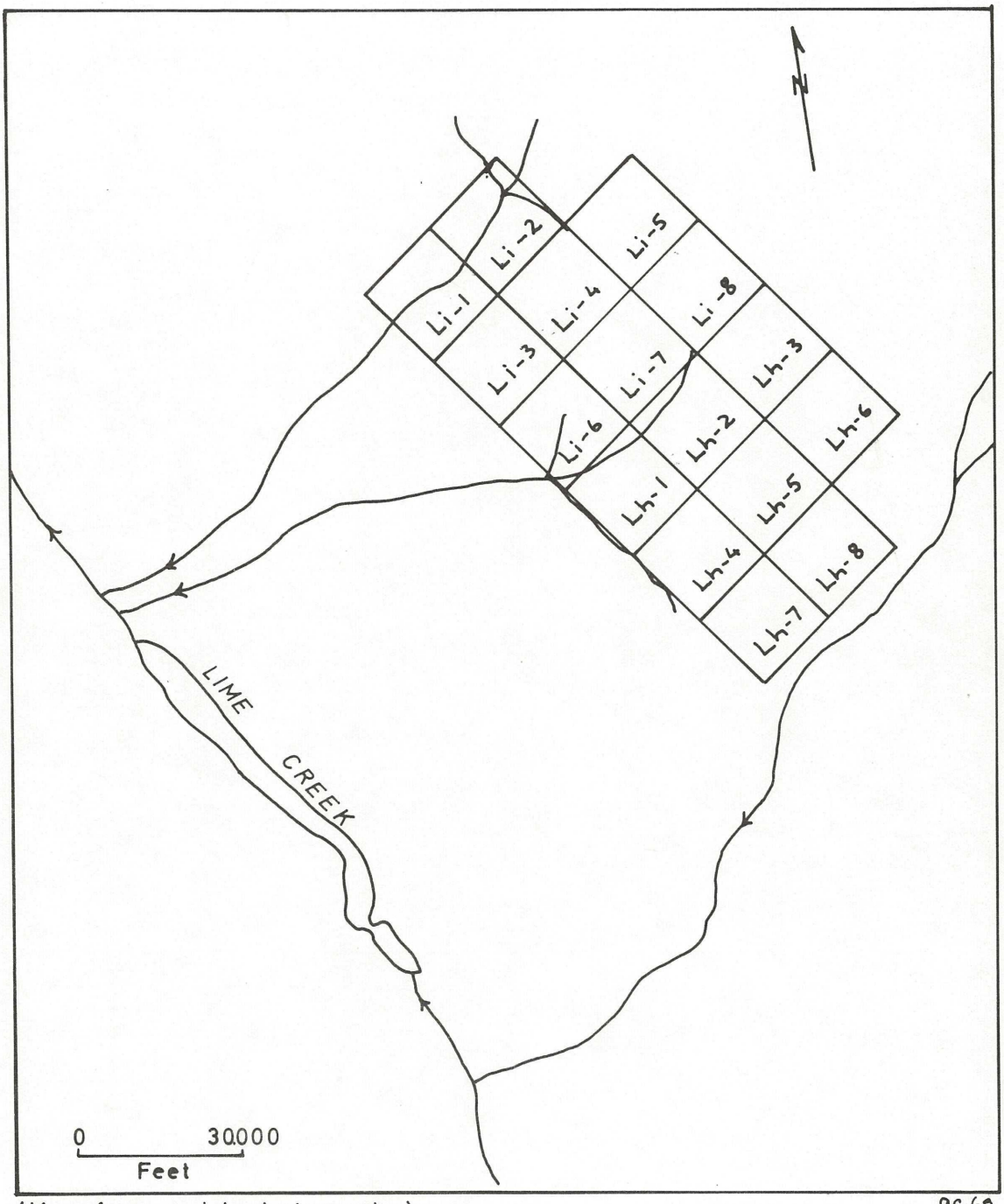


No.	Zn	Cu	Pb	Mo	Ag
1	90	36	26	2	0.1
2	131	22	52	2	0.3
3	359	28	64	2	0.4
4	1310	38	133	2	1.2
5	176	23	84	2	0.7
6	55	84	34	2	0.4
7	70	63	26	2	0.2
8	60	28	39	2	0.2
9	60	187	25	2	0.1
10	140	62	34	2	0.1

ppm

Figure·11

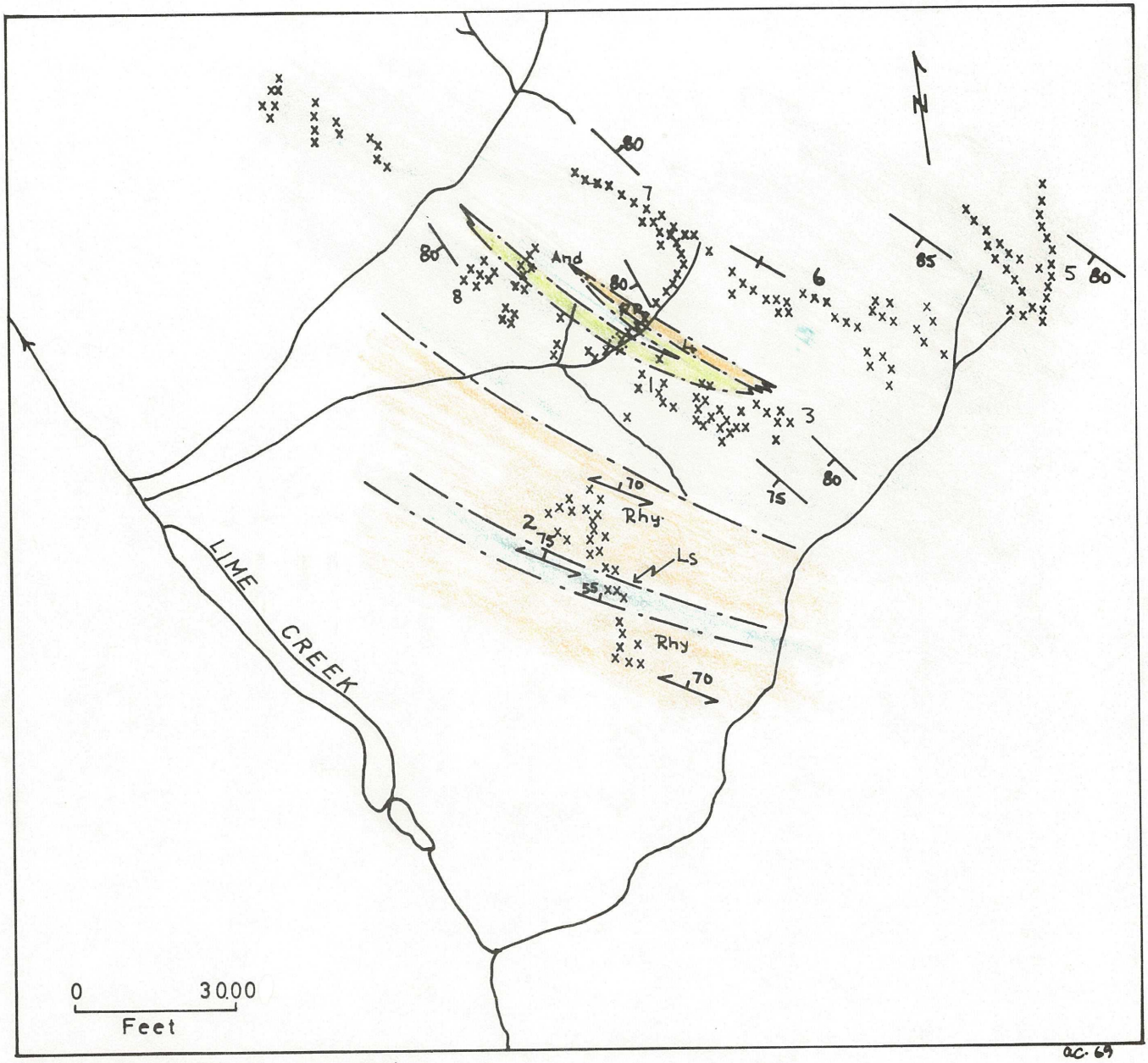
CLAIM MAP LIME CREEK



(Map from aerial photographs)

QC·69

Figure-12
GEOLOGICAL MAP
LIME CREEK CLAIM GROUP



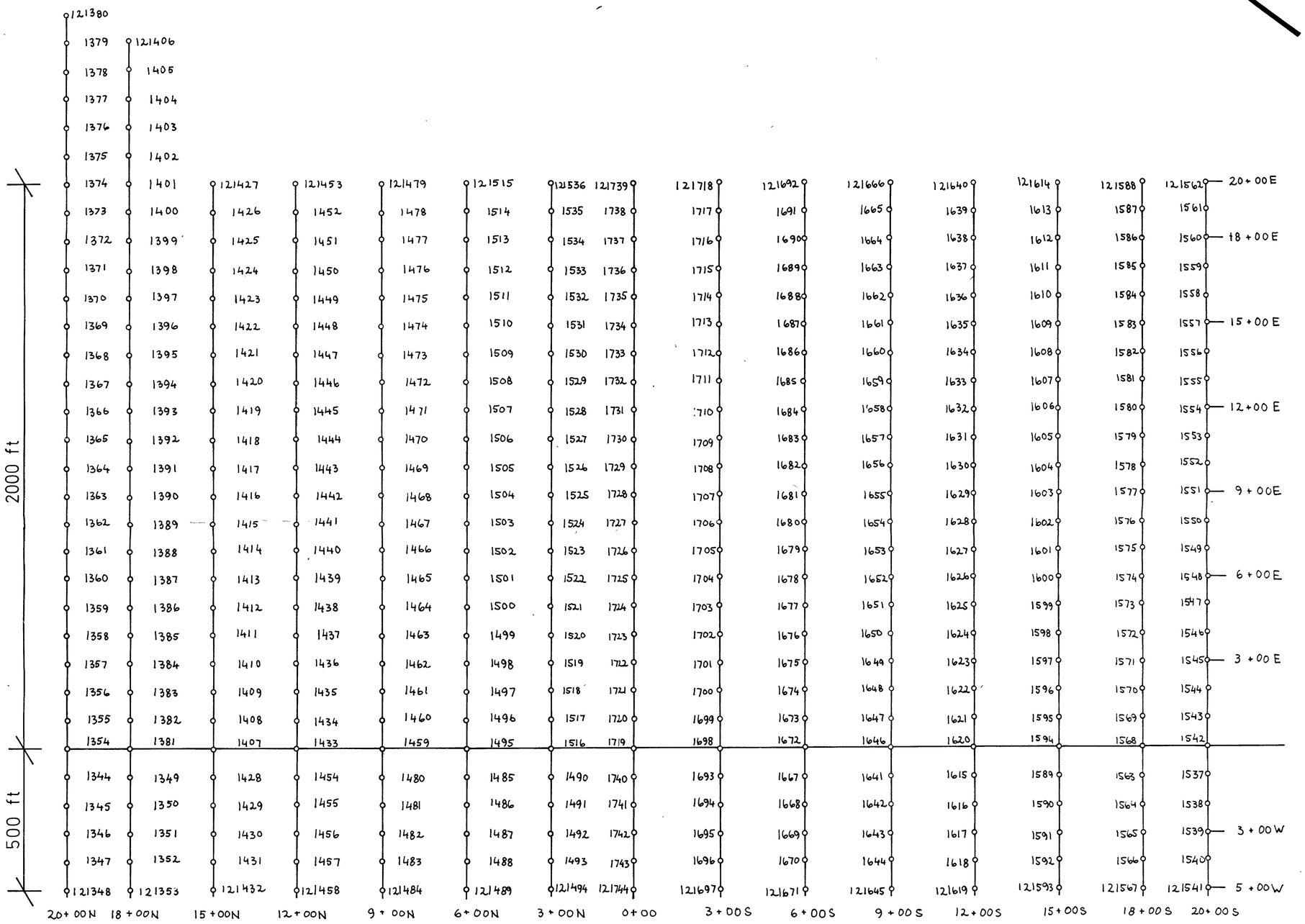
(Map from aerial photographs)

Rhyolite

Andesite

Limestone

Figure 13



CARCROSS PROJECT

LIME CREEK CLAIM GROUP

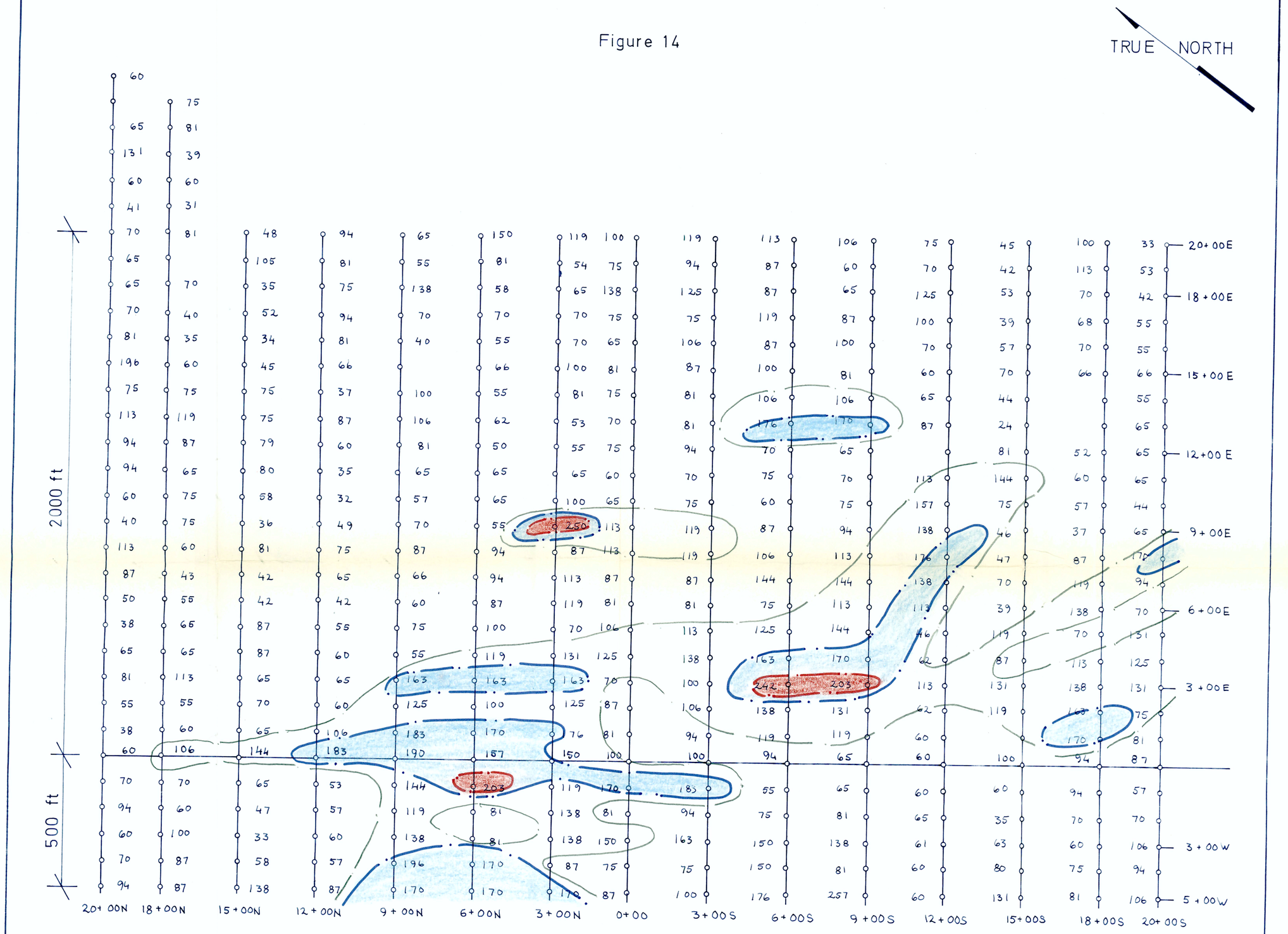
Soil Sample Grid

0 300 600 900

Scale in Feet

1000559845

Figure 14



> 200 ppm

150 — 200 ppm

100 — 150 ppm

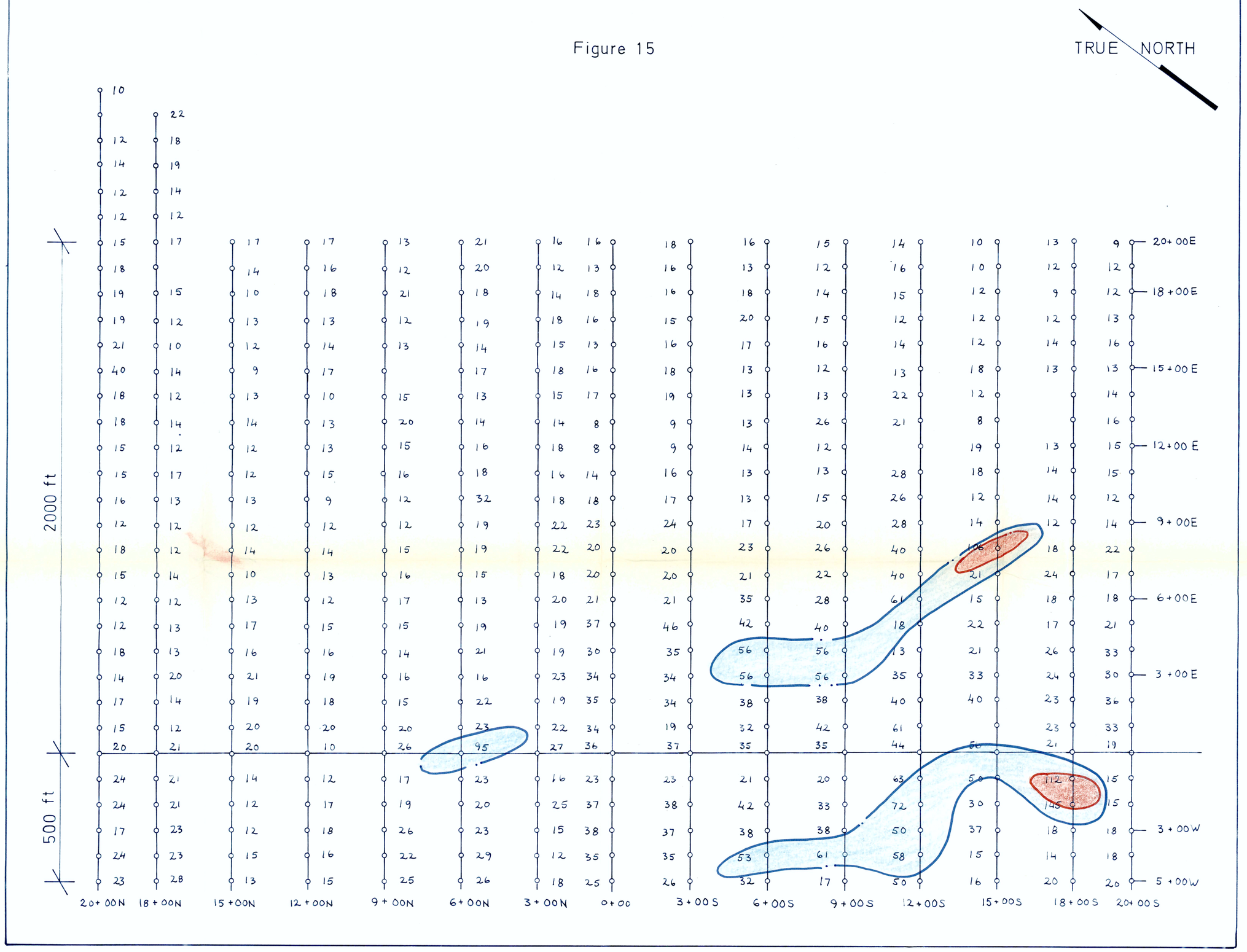
CARCROSS PROJECT
LIME CREEK CLAIM GROUP
Zinc (ppm) in Soils

0 300 600 900

Scale in Feet

1000559845

Figure 15



> 100 ppm

50 – 100 ppm

CARCROSS PROJECT

LIME CREEK CLAIM GROUP

Copper (ppm) in Soils

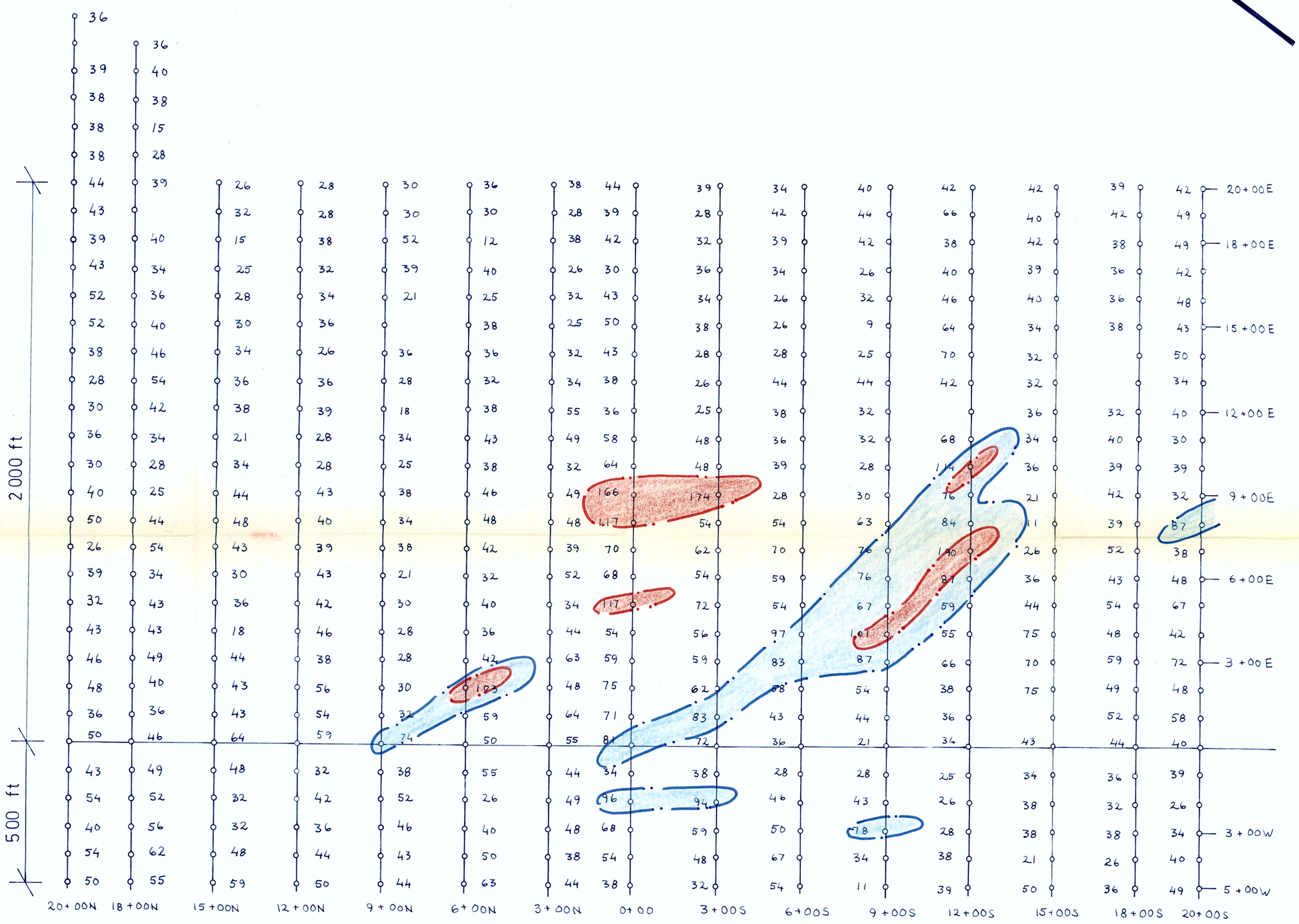
0 300 600 900

Scale in Feet

10005598 45

Figure 16

TRUE NORTH



> 100 ppm

75 — 100 ppm

CARCROSS PROJECT

LIME CREEK CLAIM GROUP

Lead (ppm) in Soils

0 300 600 900

Scale in Feet

/000559845

Kelsall Lake Claim Group 114 P NE 11

A large zinc-copper anomaly was found in one of the streams flowing into the southwest corner of Kelsall Lake while a nearby stream was being checked for a potential Cu anomaly. The silts were so anomalous they could not be titrated to the end point with the cold extractable metal test. The source of the metals was traced to a series of springs draining the base of a steep slope. The springs and streamlets extending for some 2500 feet along the base of the slope were anomalous (Figure 17). All the streams in the immediate area were sampled but no other localities were anomalous.

Kelsall Lake is situated 2 miles east of the Haines highway and is easily accessable. Local relief is approximately 1200 feet and the area is open and treeless. The anomalies found in the silts were most significant ranging up to 6000 ppm Zn and 1600 ppm Cu. No outcrops were found in the immediate anomalous area. The area was considered to have economic potential. Thirty-two claims were staked to cover the area of interest (Figure 18).

The area was mapped, prospected and soil sampled after the area was staked.

As noted above no outcrops were found in the immediate anomalous area. A large mass of diorite or meta-andesite outcrops on the ridge and plateau some 1000 feet above the anomalous springs (Figure 19). Andesite outcrops some 3000 feet southeast of the anomalous zone, and intercalated bands of limestone, rhyolite, and andesite outcrop to the southwest. Northeast and northwest

trending faults cut the area. No evidence of economic mineralization was noted while prospecting.

Soils in the area are transported and immature. All samples were collected from below the "A" horizon. No significant Pb anomalies exist (Figure 23). Several significant Zn anomalies occur between lines 12+00S and 45+00S and the base line to 18+00E (Figure 21). The pronounced Zn anomaly west of the base line between 33+00S and 39+00S is probably associated with stream dispersion. Copper anomalies are more widespread than Zn (Figure 22). The most significant lie between lines 12+00S and 42+00S and generally coincide with the Zn anomalies in this area. The diffuse Cu anomalies on the east side of the grid may be due to a higher background associated with the diorite. The anomalies are somewhat discontinuous, but this could be expected on steep slopes with transported soils.

Several significant Cu and Zn anomalies occur on the grid, but no further geochemical work is warrented.

It is recommended that a reconnaissance type E-M geophysical survey be run over that part of the grid containing the geochemical anomalies. It should cover the area from 6+00S to 45+00S and from the base line to 18+00E. Pickets will have to be placed on the grid before the geophysical survey can be undertaken. This specific area should also be mapped on a scale 1 inch to 300 feet.

Figure-17

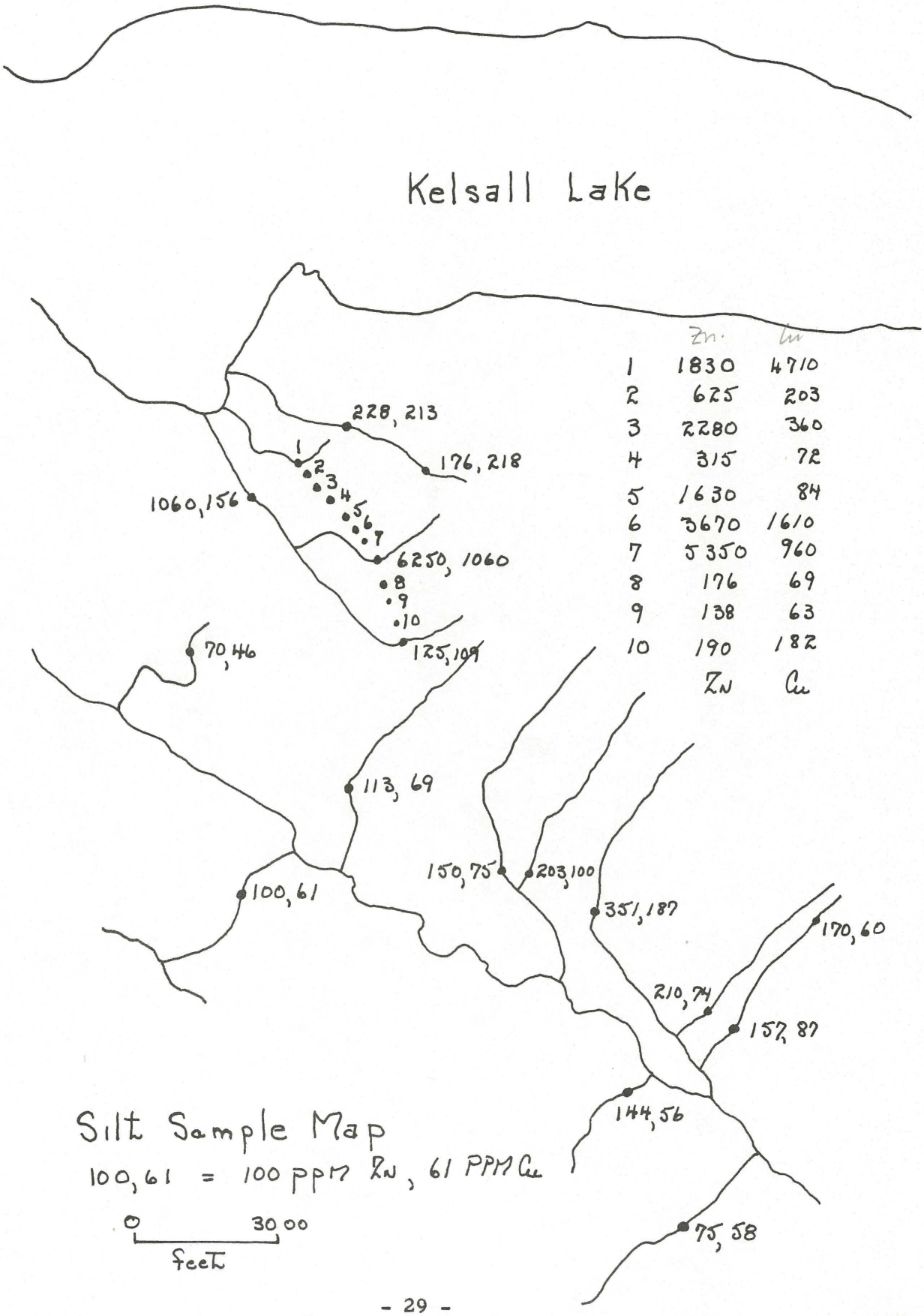
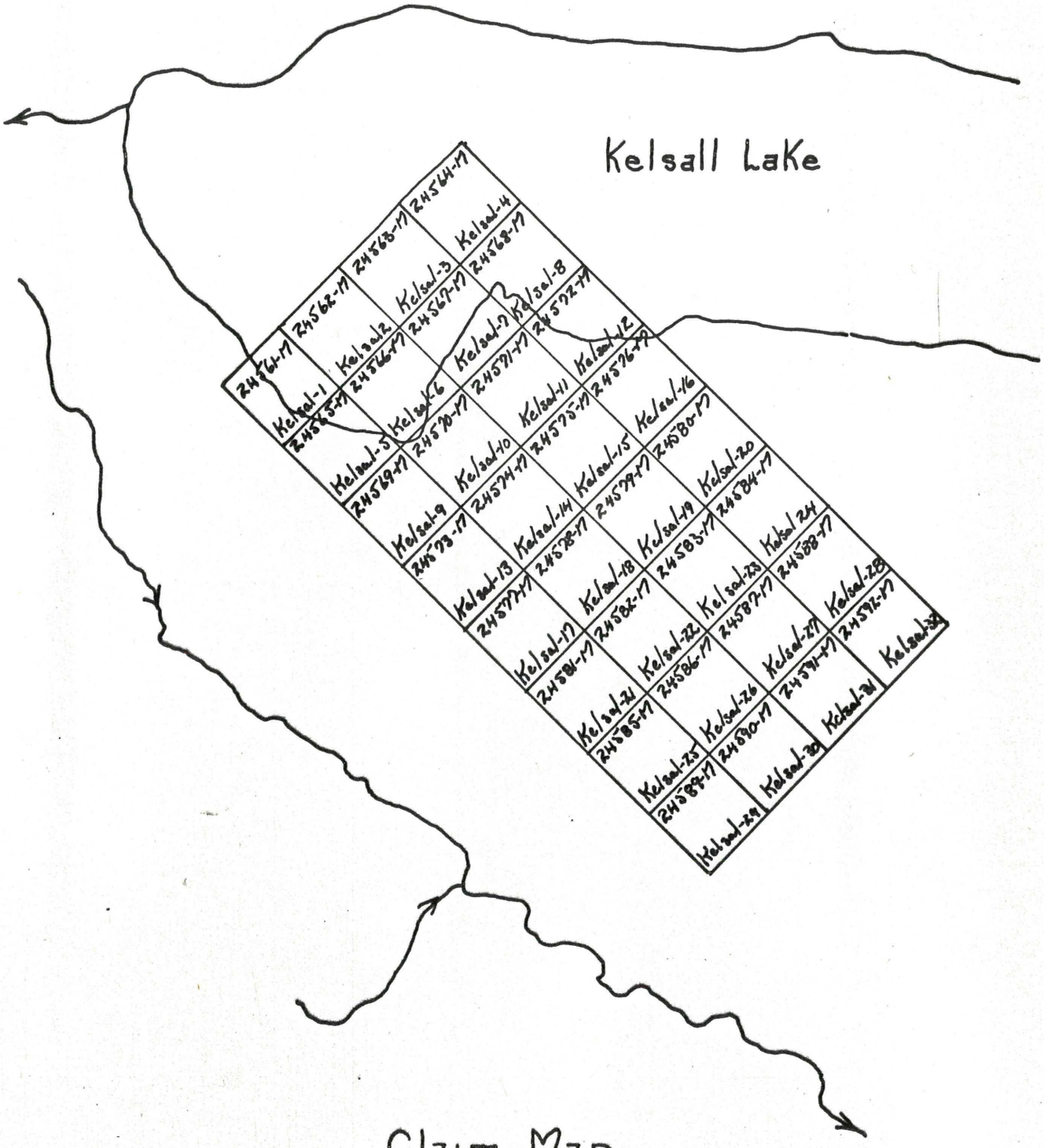

Kelsall Lake
Zn. Cu
1 1830 4710
2 625 203
3 2280 360
4 315 72
5 1630 84
6 3670 1610
7 5350 960
8 176 69
9 138 63
10 190 182
Zn Cu
228, 213
176, 218
1060, 156
6250, 1060
125, 109
70, 46
113, 69
150, 75
203, 100
100, 61
351, 187
170, 60
210, 74
157, 87
144, 56
75, 58
Silt Sample Map
100, 61 = 100 ppm Zn, 61 PPM Cu
0
30.00
feet

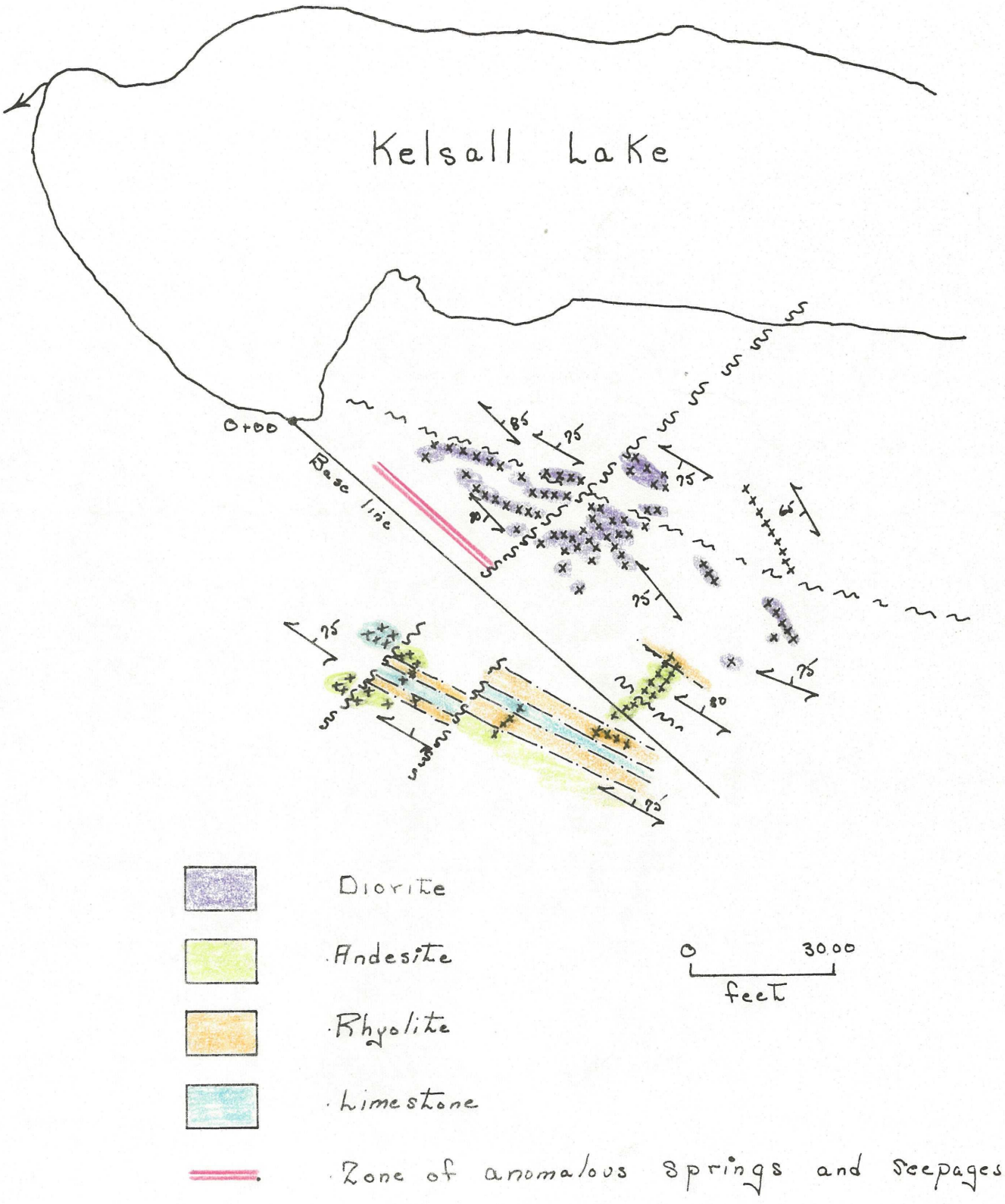
Figure-18



Claim Map

0 30.00 feet

Figure 19


Kelsall Lake
0+00
Base line
85
75
80
Diorite
Andesite
Rhyolite
Limestone
Zone of anomalous springs and seepages
0
30.00
feet

Radelet Creek Claim Group

104-M-NW-1

This anomaly was not recognized in the original work by Geophoto Services, but was outlined when the samples were analized by Woodcock in 1969. Good Mo anomalies occurred in several streams draining an area south of Radelet Creek and east of Primrose River. On resampling during the 1969 field season the anomalies were reproduced and found to be significant. They were traced to a source area, a ridge some 10,000 feet in length, underlain entirely by granite (Figures 24,26).

The topography is steep and very rugged, with local relief of the order of 3000 feet. The north facing cirques are partly filled with permanent ice. Most of the cirque walls are unscaleable without climbing equipment.

The entire area, as noted above, is underlain by granite. Several textural and compositional varieties occur, all are badly fractured and jointed. It was not possible to map these granites because of the ice cover and steep topography. Furthermore, 8 inches of snow fell on August 8, followed by a 10 inch fall on August 11. The snow prevented further geological work being done in 1969.

Granite boulders were found while prospecting which contained thin coatings of molybdenite along fracture planes. Generally the whole fracture was covered with molybdenite. Disseminated molybdenite was noted in a few boulders. These

boulders occur within extensive boulder trains formed as lateral or terminal moraines during alpine glaciation. Specifically these boulders were found in two north facing cirques which are three-quarters of a mile apart (Figure 26). No mineralized material was found on the west slope facing Primrose River.

In the molybdenite bearing trains or moraines it is estimated that 1-3 percent of the boulders carry molybdenite. Two selected grab samples from the boulders contained 0.41 and 0.549 percent MoS_2. It was not possible to ascertain if the Mo bearing granites contain specific mineralogical, textural, or alteration characteristics. However, one variety appeared to be more common. It is comprised of quartz and feldspar phenocrysts embedded in a grey fine grained matrix. The quartz phenocrysts are locally embayed. Some disseminated FeS_2 was noted in this granite.

Disseminated molybdenite was found in outcrop at one locality on the crest of the ridge (Figure 26). It occurred over an area 3 feet by 5 feet. Molybdenite was also found in a small quartz vein on a spurr 2000 north of the above locality.

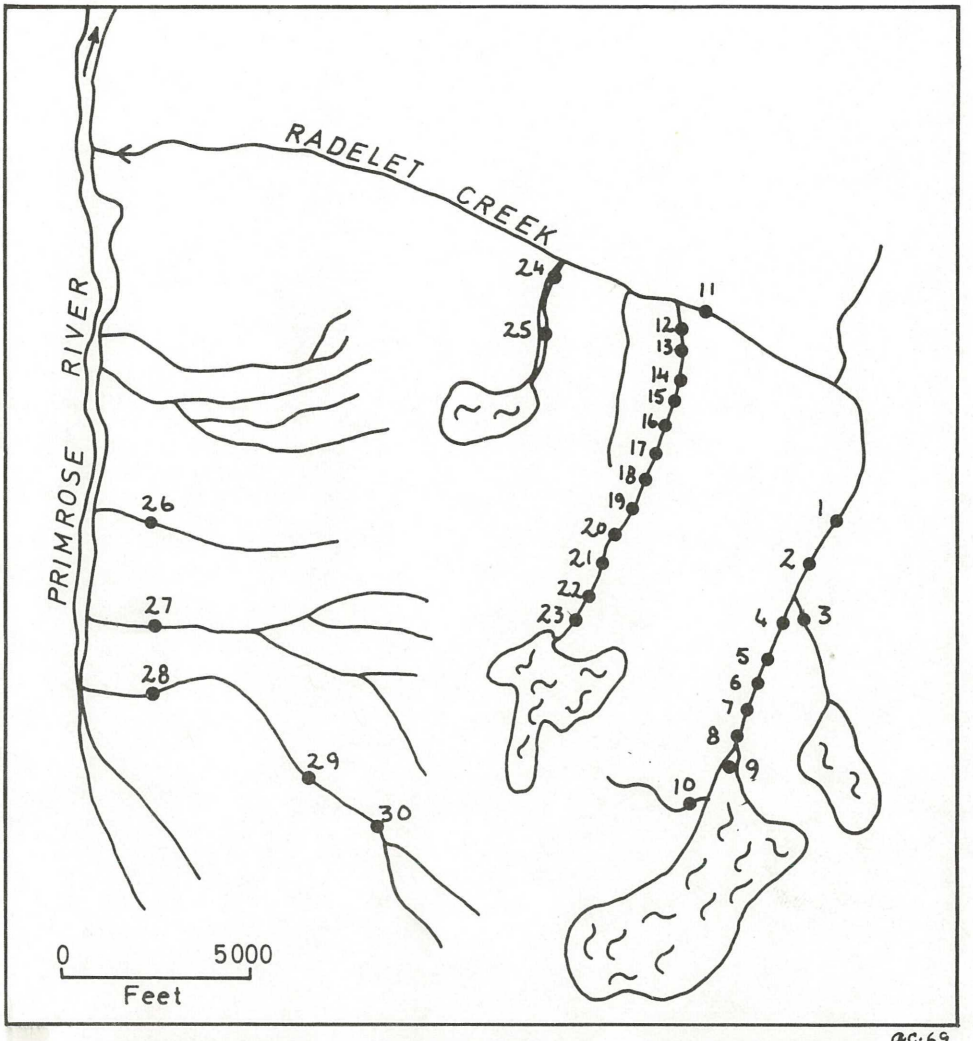
Sufficient molybdenite was found in the granite boulders to account for the magnitude of the stream anomaly. The question remains, however, is there sufficient concentration of Mo in any area to be of economic interest. Data is not available to answer this question. Forty-eight claims were staked over the area of interest to protect it and provide an opportunity to examine it further (Figure 25).

The geology of the area is extremely favourable for the occurrence of a "porphyry type" deposit. The area is entirely underlain by an older granite which is locally intruded by younger stocks. Furthermore, it occurs just off the southwest flank of the Bennet Lake volcanic cauldera and its associated ring dykes.

It is recommended that the ridge be mapped and prospected in detail. This must be done by an experienced climber with good climbing equipment. If areas are found where the granite contains appreciable molybdenite in place, either along fractures, or as disseminations, then geophysical work and/ or a drilling program should be initiated. It is estimated that it will require 10 to 14 days to map and prospect the area. It must be done between June 25 and August 15 because of snow conditions.

Figure·24

104M - NW - 1



No.	Cu	Mo
1	4	3
2	4	3
3	2	3
4	3	3
5	12	3
6	9	3
7	3	4
8	4	4
9	4	4
10	9	8

ppm

No.	Cu	Mo
11	3	2
12	20	30
13	21	30
14	20	18
15	18	16
16	20	20
17	20	18
18	22	30
19	21	30
20	20	20

ppm

No.	Cu	Mo
21	22	18
22	35	20
23	22	20
24	14	16
25	20	16
26	16	20
27	33	20
28	14	6
29	14	3
30	10	2

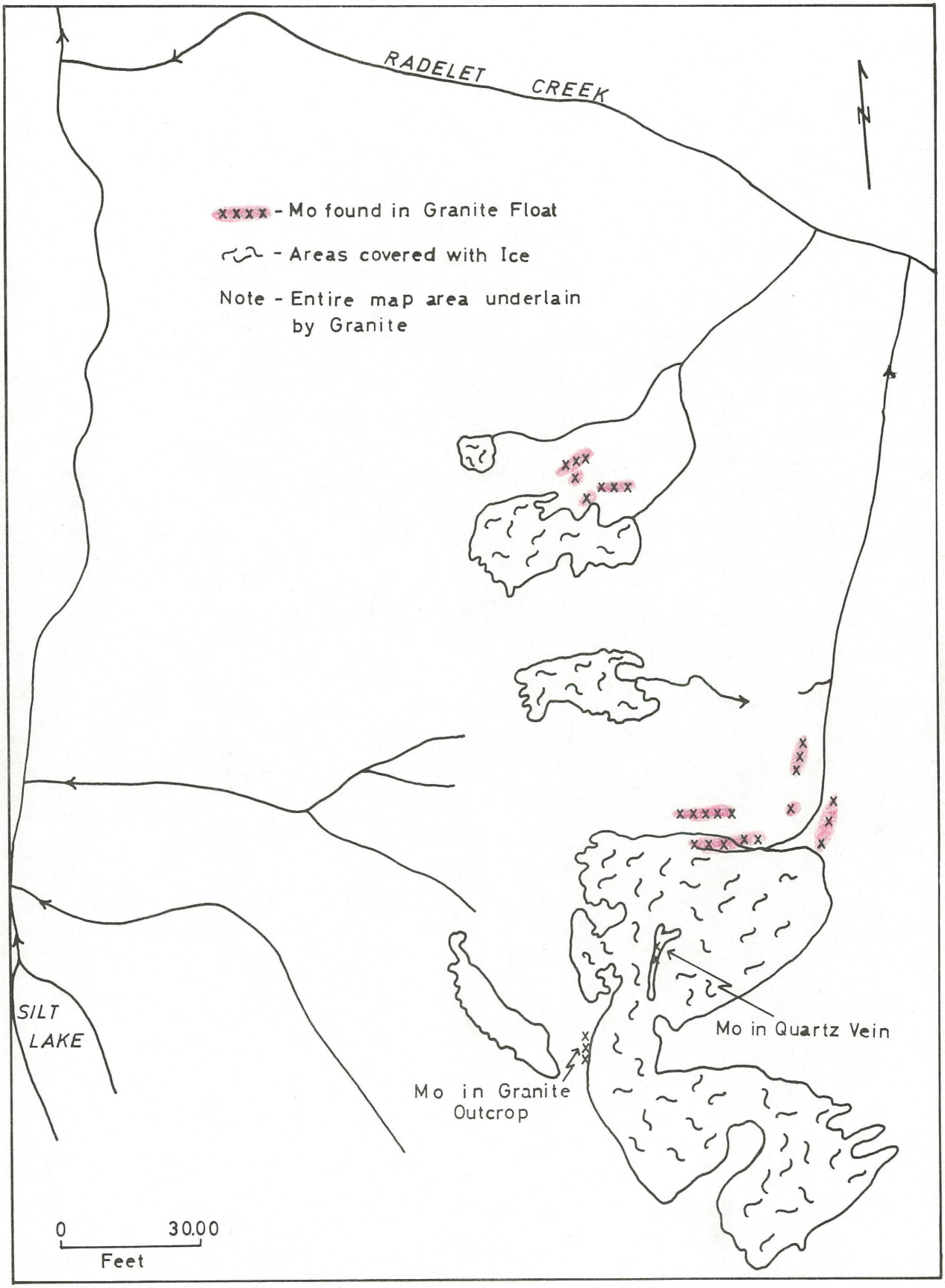
ppm

Figure·25

CLAIM MAP - RADELET CREEK

(Map from aerial photographs)

Figure·26
RADELET CREEK AREA



(Map from aerial photographs)

114-O-NE

No anomalies exist in that part of the map-area sampled.

114-P-NW

114-P-NW-1 (D,2) (Cu)

Streams north of Range Lake on resampling contained 45-55 ppm Cu and are not considered anomalous (Figure 27).

114-P-NW-2 (D,2) (Cu)

Streams contained only 25-80 ppm Cu on resampling and are not considered anomalous (Figure 28).

114-P-NW-3 (C-,4) (Cu,Mo)

Stream on resampling contained 60 and 2 ppm Cu and Mo respectively, and is not considered anomalous (Figure 28).

114-P-NW-4 (C,4) (Zn,Mo,THM)

Similiar metal concentrations were obtained on resampling (Figure 28). Zinc is marginally anomalous and molybdenum anomalous. Other metals are in the background range. All adjacent streams contain background concentrations. The anomalous stream was traversed from its head to Detour Creek, a difference in elevation of 4000 feet. This drainage basin is underlain by argillites and limestones of the Mush Lake Group. Just above station 7 is a 75 foot

thick slaty argillite horizon which is limonite stained. This rock unit contains 3-5 percent pyrite. Two rock samples contained 110,130, and 3 and 2 ppm Zn and Mo respectively. The stream bottom and rock debris in the stream downstream from this rock unit are encrusted and cemented with limonite and calcareous material. This encrustation decreases downstream. Some of this material was undoubtedly incorporated into the stream sediments collected for analysis. The limonite-carbonate material presumably co-precipitated Zn and Mo producing a false anomaly. Metal concentrations above station 7 are lower. No other indicators of economic mineralization were noted in the drainage basin. No further work is warrented on this anomaly.

114-P-NW-5 (D,2) (Mo,Zn)

Similiar metal concentrations were obtained on resampling the central tributary of Kudwat Creek (Figure 29). One of the north tributaries of the central tributary was marginally anomalous in Mo and Zn. Silt samples were extremely difficult to obtain. The valley is broad, open, treeless and generally grass covered. Bedrock consists of limestone, slaty argillite, and quartzite. These rocks strike northwest and dip northeast. The slaty-argillite contains up to 3 percent pyrite in ½ to 2 inch pods. These rocks and those downslope are limonite stained. Bedrock in this area is believed to be the same as that underlying 114-P-NW-4. The entire drainage basin was prospected. No evidence of economic mineralization

was noted. The main tributary (Station 1) contains only background metal concentrations. No further work is warrented on this drainage basin.

114-P-NW-6 (C+,5) (Cu)

A large tributary of the Alsek River was anomalous in Cu. This stream drains a large area underlain by Cache Creek volcanics. The water level was very high when the stream was resampled because of glacier melt water. The stream on resampling contained only 45-65 ppm Cu and is not considered anomalous (Figure 30).

114-P-NW-7 (NIL, 4)

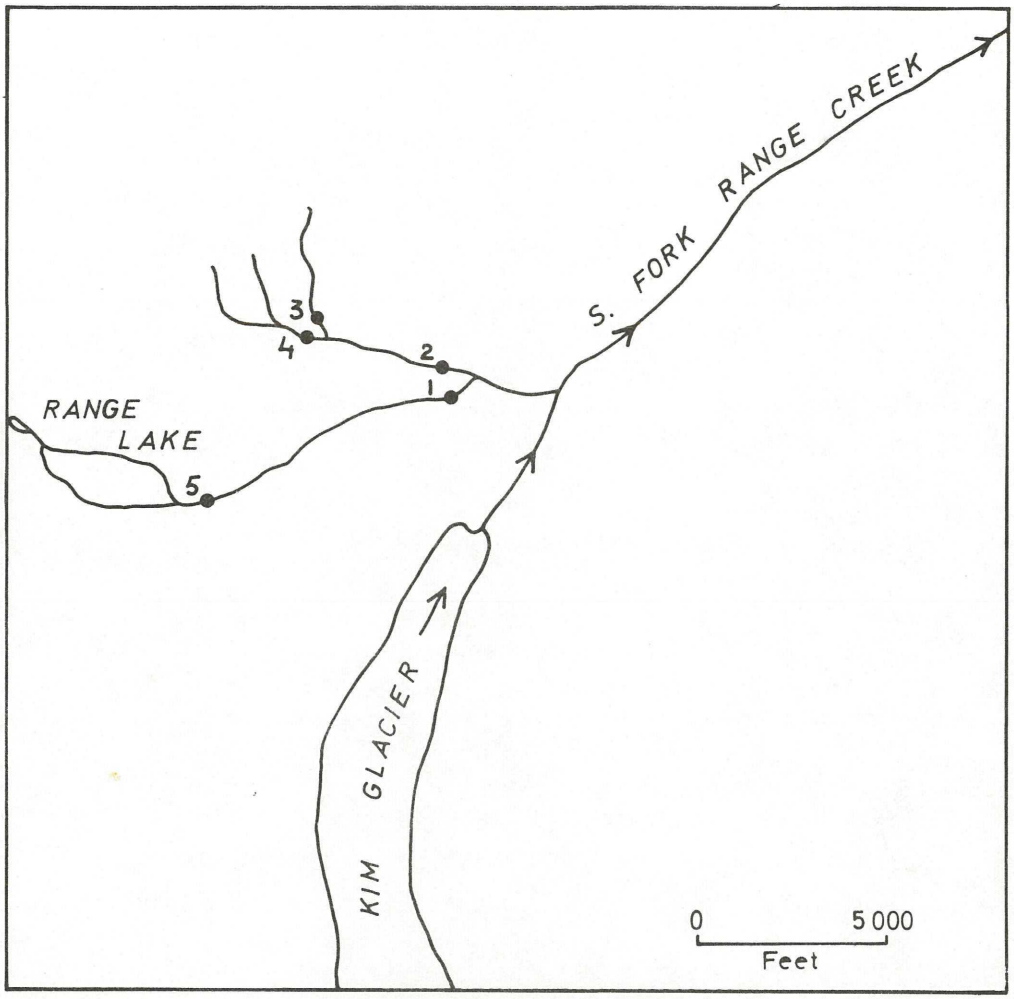
Part of Fredrickson Creek and another 3 miles north, which drains the south slope of Red Mountain (137°10W, 59°45N) were anomalous in Zn and to a lesser extent Mo (Figure 31). Bedrock in the northern drainage basin is dominantely limestone with minor quartzite. The valley is steep and the stream fast flowing. Silt samples were difficult to obtain. The quartzite contains 2-3 percent pyrite and is limonite stained (hence Red Mountain).

Outcrops were not found in Fredrickson Creek. The stream flows through 60-80 feet of alluvium. One scree slope contained highly fractured and altered andesite. Good silt samples were available.

Both streams on resampling contained only background Zn and Mo concentrations. No further work is warrented.

Figure·27

114 P-NW-1

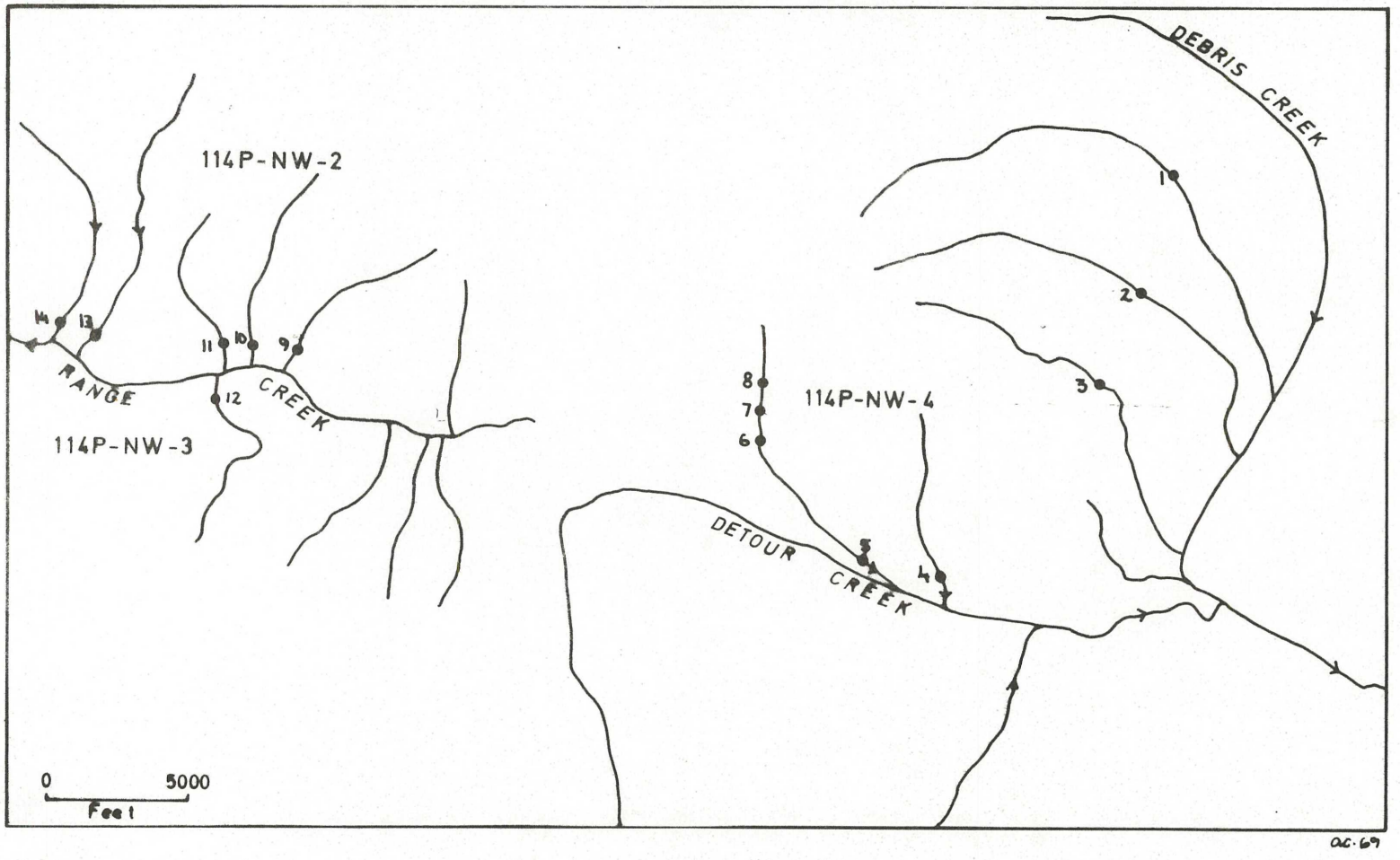


No.	Zn	Cu	Pb	Mo
1	81	50	36	2
2	100	56	38	2
3	119	48	42	2
4	131	53	42	2
5	157	46	46	2

ppm

Figure·28

114P - NW - 2, 3, 4

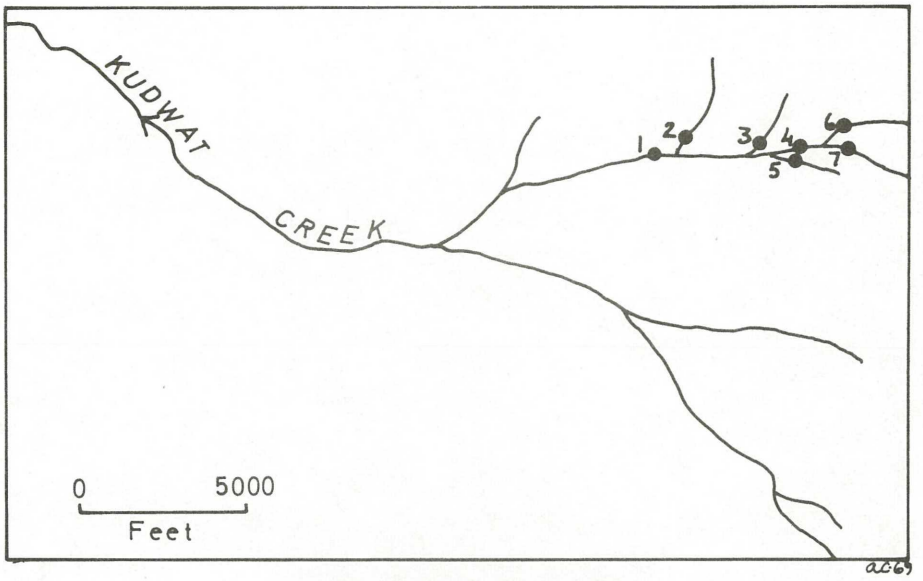


No	Zn	Cu	Pb	Mo
1	65	26	32	2
2	288	42	32	2
3	103	32	28	2
4	55	27	43	2
5	351	34	49	6
6	570	53	49	18
7	397	44	48	18
8	176	72	54	10
9	29	25	36	2
10	157	45	40	2
11	25	23	38	2
12	81	61	40	2
13	75	78	40	2
14	60	42	34	2

ppm

Figure·29

114 P-NW-5

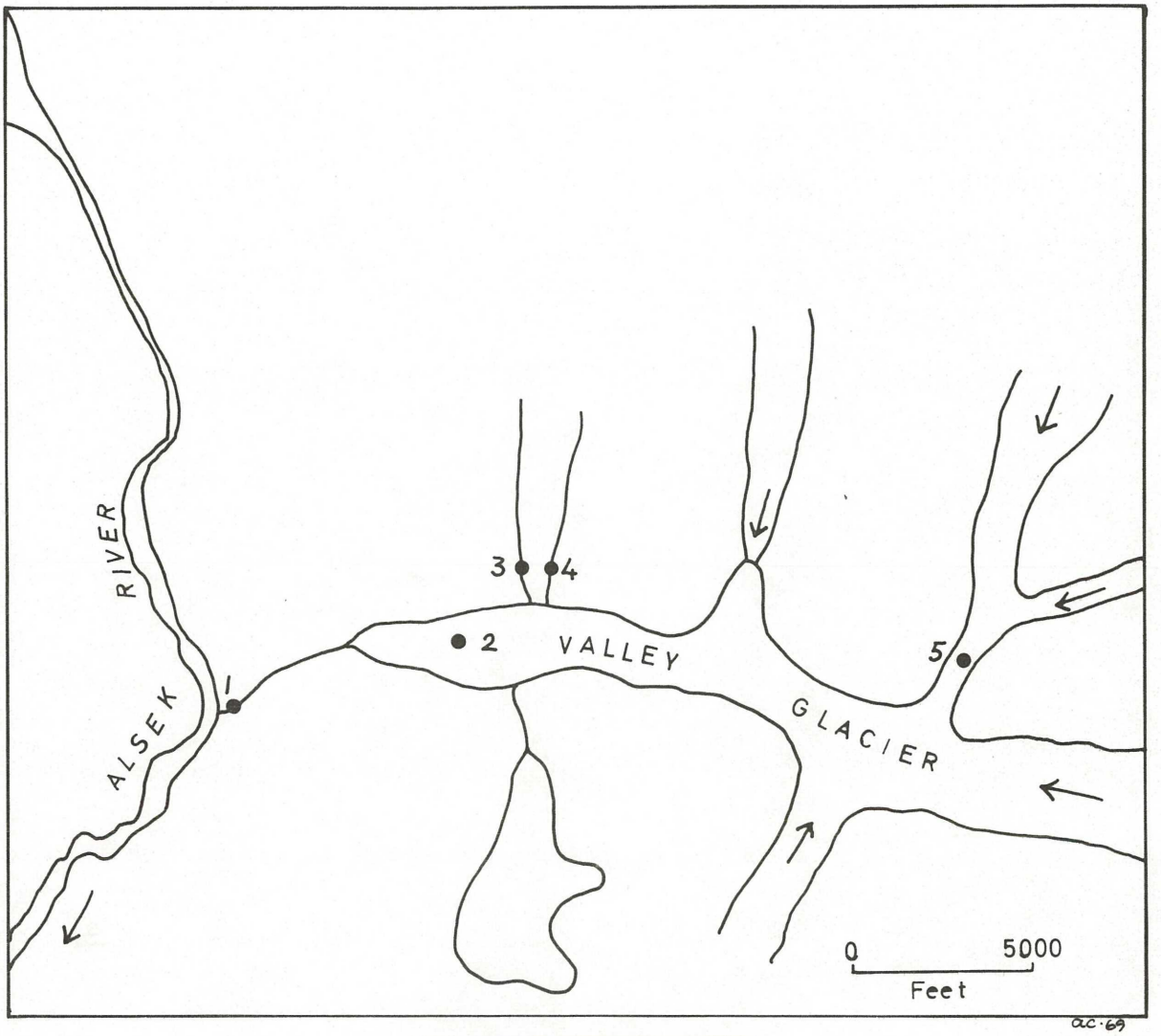


No.	Zn	Cu	Pb	Mo
1	131	29	48	2
2	351	46	44	8
3	113	42	38	6
4	81	42	46	2
5	257	17	46	3
6	45	19	30	2
7	119	46	43	2

ppm

Figure·30

114 P-NW-6

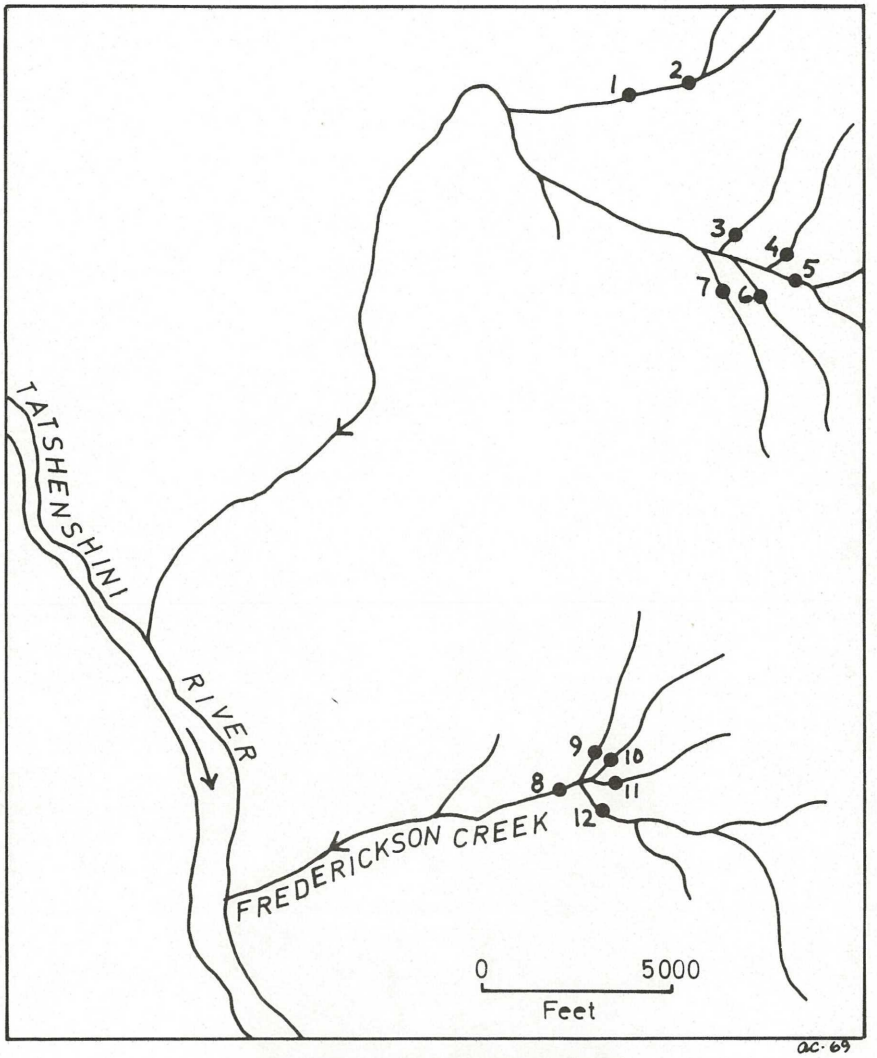


No.	Zn	cu	Pb	Mo
1	87	45	39	2
2	52	63	43	2
3	70	44	25	3
4	42	46	21	
5	183	50	36	2

ppm

Figure·31

114 P-NW-7



No	Zn	Cu	Pb	Mo
1	150	53	44	2
2	150	50	52	2
3	144	32	15	2
4	138	32	36	2
5	144	32	15	2
6	81	32	25	2
7	157	50	44	2
8	55	24	30	3
9	81	42	43	2
10	81	40	55	2
11	113	40	48	2
12	55	24	11	6

ppm

114-P-NE-1 (D+,2) (Mo, Zn)

A single station draining argillites and phyllites of the Cache Creek group was anomalous in Mo and Zn. The Mo and Zn content on resampling was just above background in the "anomalous" tributary and in the main stream below it (Figure 32, Stations 2 and 3). No further work is warrented. A single station 2.5 miles further south on O'Conner Creek containing 520 and 8 ppm Zn and Mo respectively was also resampled (Figure 32, Station 1). It contained only background values and is of no further interest.

114-P-NE-2 (C-,3) (Zn,Cu)

A single tributary of O'Conner Creek north of Jarvis glacier was anomalous. The area is underlain by phyllites and quartzites of the Cache Creek group. The streams have extremely steep gradients and were in flood stage at time of sampling because of melt water. Silt samples were extremely difficult to obtain. On resampling, only background metal concentrations were obtained (Figure 32, Stations 5 - 9) No further work is warrented.

114-P-NE-3 (C-,2) (Mo)

A small stream south of Mineral Lakes was anomalous in Mo. The area is underlain by granite. Silts were rich in organic matter and difficult to obtain. On resampling, only background values were obtained (Figure 33). No further work is warrented.

114-P-NE-4 (C+,3) (Zn,Pb)

This area was moderately anomalous for Zn and Pb. The eastern part is underlain by andesite and the western part by granite. The drainage basin concerned is staked. Two small chalcopyrite showings were noted in the vicinity of stations 16 and 20 (Figure 33). Some of the stations on resampling were slightly anomalous in Zn and Pb, but not significantly so. Work was in progress on the property in 1969.

114-P-NE-4A (2) (Cu,Zn)

Two tributaries of the Klehini River were considered to be slightly anomalous in Cu and Zn. Both tributaries were resampled, but yielded only background values (Figure 33). The area is underlain by slates and quartzites. No further work is warrented.

114-P-NE-5 (C,4) (Cu)

The area is underlain by granite. Silt samples were manganese rich and difficult to obtain. Only background Cu concentrations were obtained on resampling (Figure 33). Originally a manganese rich sample must have been collected and resulted in a false anomaly. No further work is warrented.

114-P-NE-6 (C,3) (Cu,Mo)

This anomalous zone is underlain by granite and is staked. Work was in progress on the property in 1969. None of the stations resampled were anomalous in Cu, but stations 7 and 8 were moderately anomalous in Mo (Figure 33).

114-P-NE-7 (C,5) (Mo,Cu)
114-P-SE-1

A large area (5 miles by 4 miles) was anomalous in Mo and to a lesser extent Cu. The entire area is underlain by granite. Silt samples were extremely difficult to obtain and were enriched in both manganese and organic material. Most of the streams have steep gradients. On resampling, none of the streams were anomalous in Mo or Cu (Figure 34). Station two was anomalous in Zn and Pb. Stations upstream and downstream were not anomalous. This anomalous station is considered to be due to manganese and/or organic enrichment and is not considered significant. No further work is warrented.

114-P-NE-8 (C+,3) (Cu)

The anomalous zone is underlain by the Mush Lake volcanic series. Locally this series is comprised of slates and argillites, with minor quartzites. They strike N30°W and dip eastward. All are highly fractured. On resampling, no large Cu anomalies were found, but station 4 was significantly anomalous in Zn (Figure 35). Upstream from station 4, but downstream from station 5 is a zone of hematite staining, sericitization, and pyritization. Pyrite comprises between 5 and 12 percent of the rock. No Zn, Pb, or Cu minerals were noted. The pyrite zone is believed to be parallel to the bedding. No anomalies were found in the streams flowing south of the mountain. While this zone is of interest, it is not considered to have economic significance. The area is staked, but no work was observed in progress in 1969.

114-P-NE-9 (B+,6) (Cu)

The eastern part of the anomalous zone is underlain by granite, and the western part by slates and argillites similiar to those in the area of 114-P-NE-8. This anomalous zone is also staked. Station 20 (Figure 35) is indeed anomalous in Zn and Cu. This station was sampled twice and was anomalous on both occasions.

114-P-NE-10 (C+,4) (Cu)

A granite contact cuts across this anomalous zone. Rocks in contact with the granite are slates and argillites. Only background values were obtained on resampling (Figure 35). No further work is warrented.

114-P-NE-11 (B-,5) (Cu)

This anomaly, adjacent to Kelsall Lake (Figure 17) is described elsewhere.

Note: In the Mush Lake volcanic series south of Blanchard Creek and north of Kelsall Lake no volcanic rocks were noted. Evidence suggests the area has been prospected.

114-P-SW

No anomalies exist in that part of the map-area sampled.

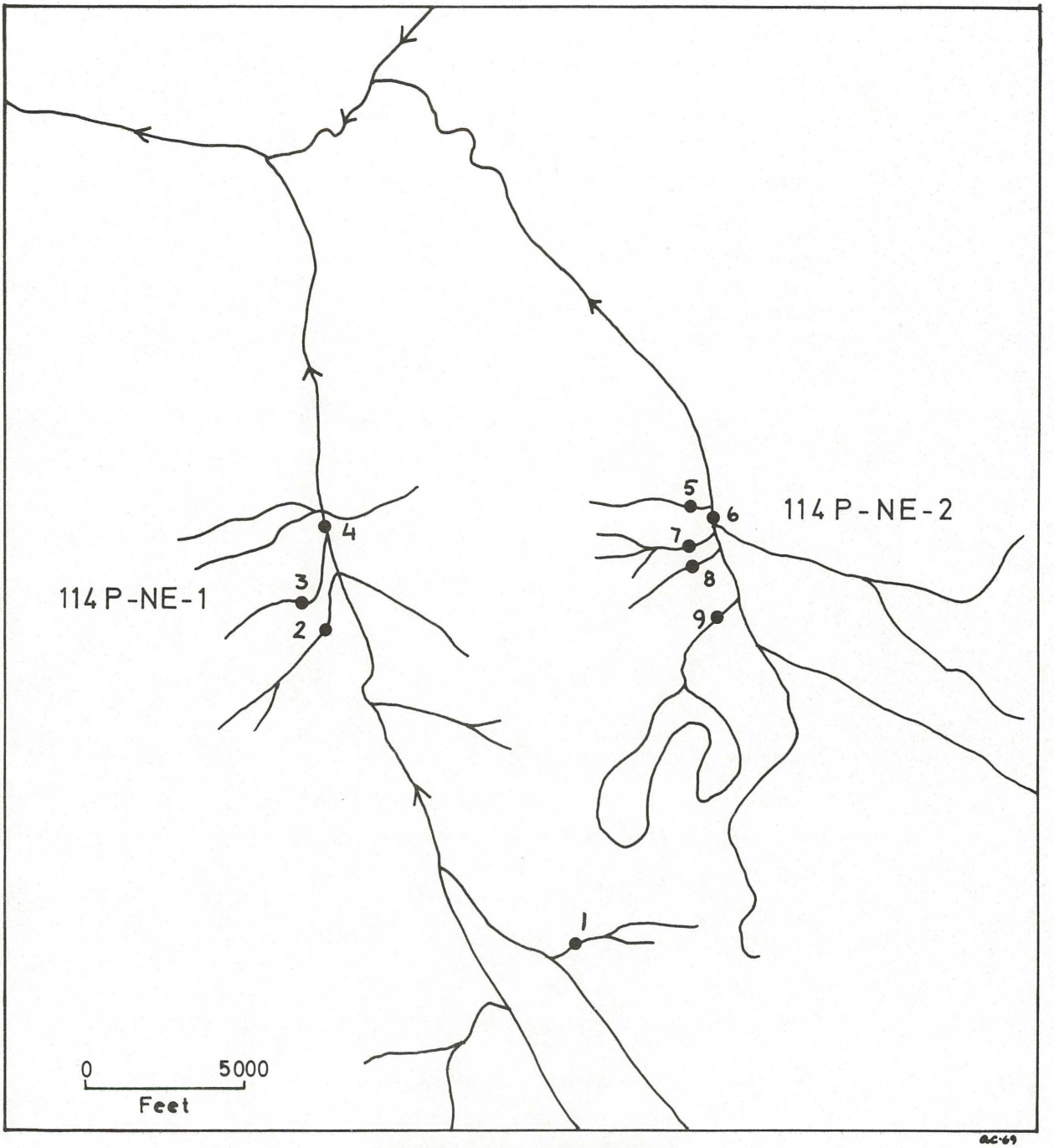
114-P-SE

114-P-SE-1

See anomaly 114-P-NE-7.

Figure-32

114 P-NE-1, 2

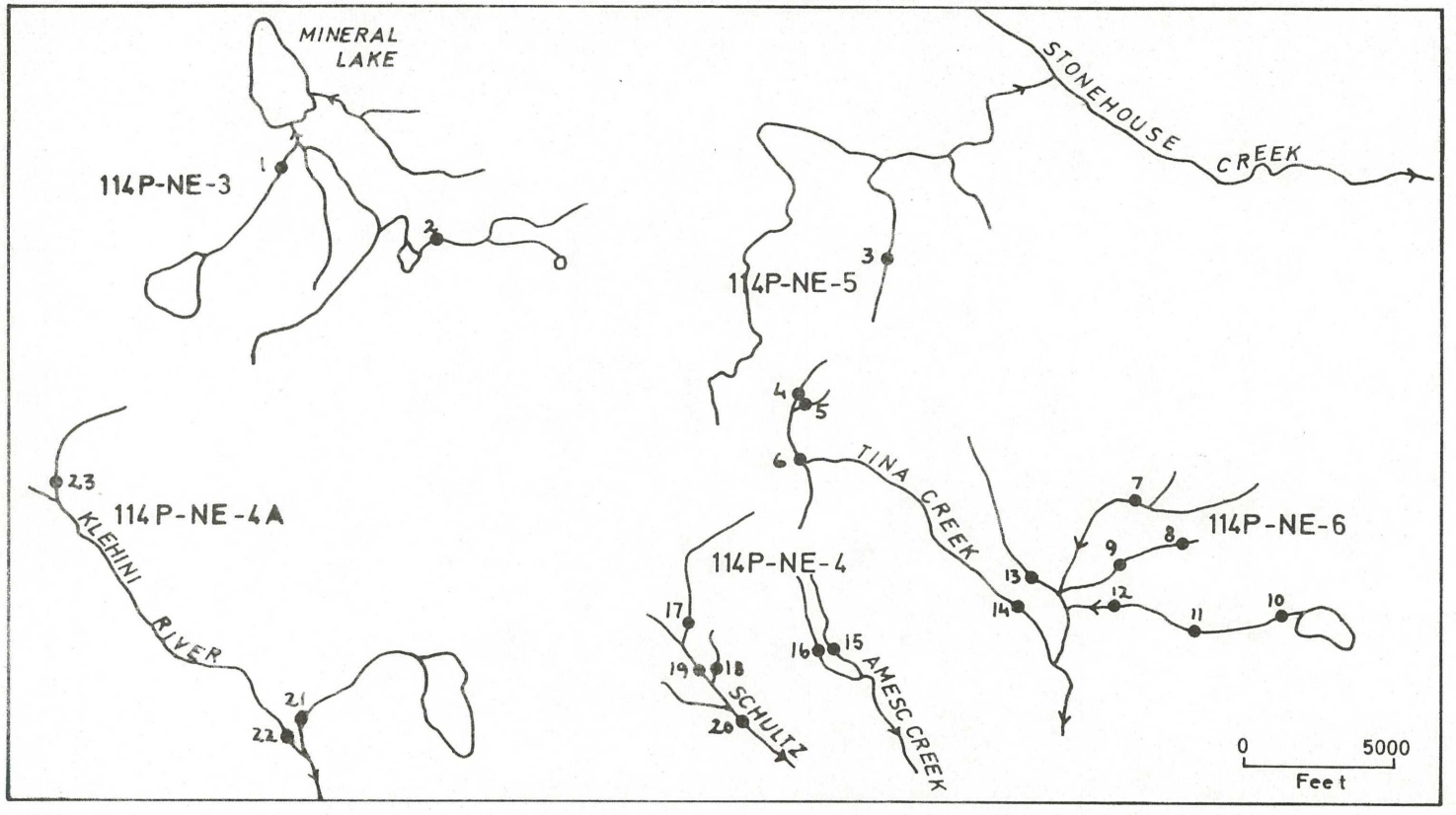


No.	Zn	Cu	Pb	Mo
1	94	35	39	2
2	50	35	36	2
3	290	70	49	2
4	106	40	36	2
5	190	42	58	2
6	106	26	62	2
7	176	18	49	2
8	317	66	54	8
9	293	60	40	10

ppm

Figure·33

114 P - NE - 3, 4, 4A, 5, 6

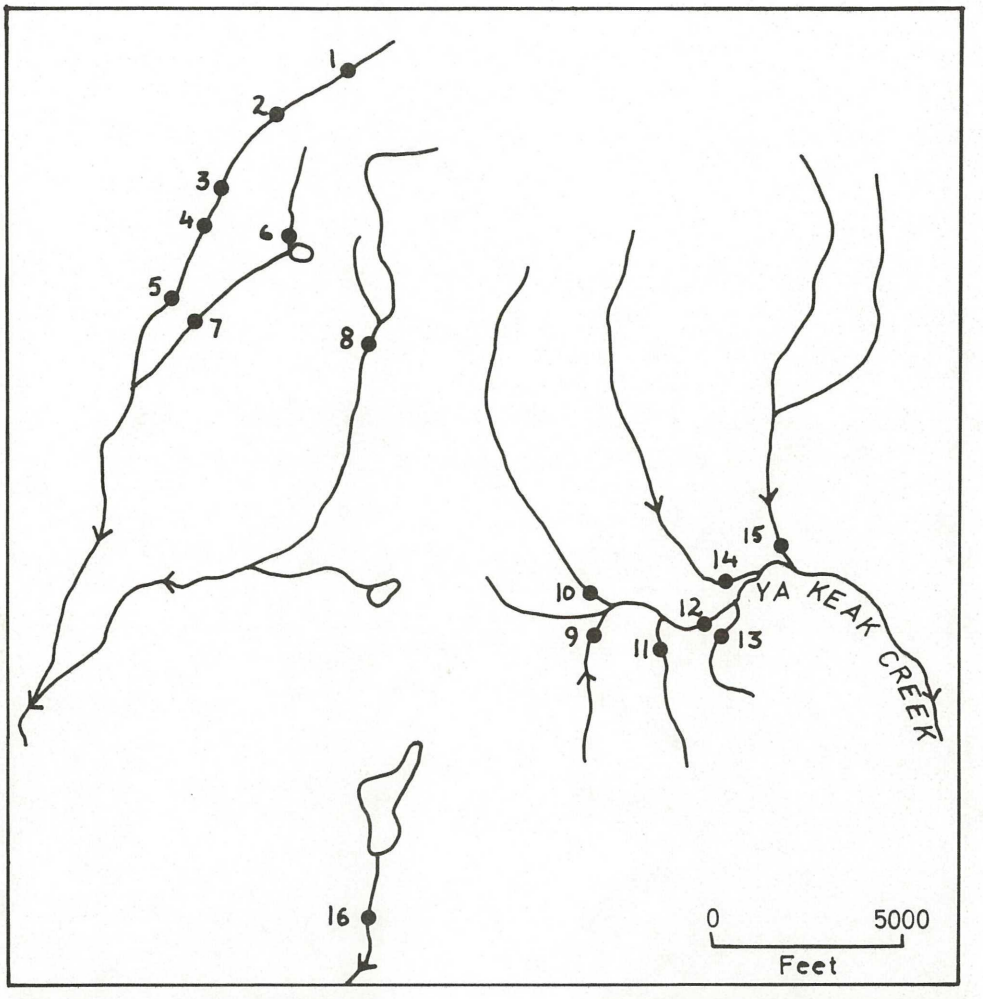


No	Zn	Cu	Pb	Mo	Ag
1	264	72	39	6	
2	119	61	40	2	
3	190	19	40	6	
4	81	26	42	2	
5	94	239	48	2	
6	65	32	39	2	
7	65	13	30	14	
8	60	44	25	14	0.1
9	221	6	15	4	
10	60	44	12	8	0.2
11	52	66	18	4	0.1
12	250	50	25	4	
13	65	18	28	6	
14	87	14	56	4	
15	315	32	119	2	
16	157	40	70	2	
17	55	40	52	3	
18	279	56	166	2	
19	131	32	54	2	
20	209	32	109	6	
21	163	112	38	2	
22					
23	125	84	30	4	

ppm

Figure 34

114P-NE-7,
114P-SE-1



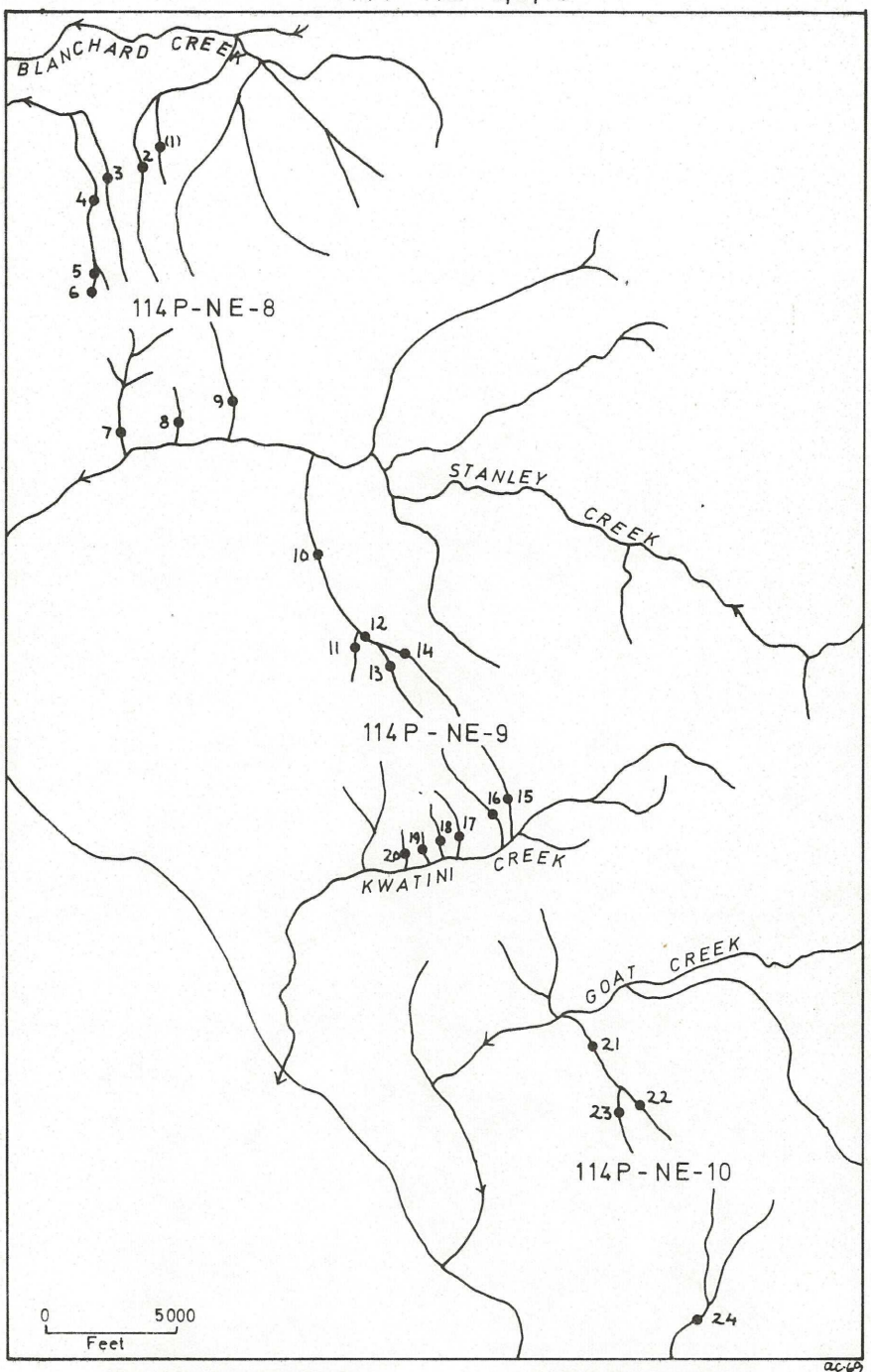
No.	Zn	Cu	Pb	Mo
1	131	42	46	2
2	1440	118	406	3
3	87	22	52	6
4	65	18	32	10
5	75	50	28	4
6	18	9	15	8
7	60	19	26	10
8	65	48	38	4

ppm

No	Zn	Cu	Pb	Mo
9	37	8	18	4
10	35	21	21	4
11	176	25	43	2
12	55	13	10	4
13	55	13	15	2
14	34	7	26	4
15	55	33	36	2
16	72	24	36	

Figure·35

114 P NE 8,9,10



No.	Zn	Cu	Pb	Mo
1	60	46	30	2
2	65	118	32	2
3	60	84	20	2
4	870	109	26	4
5	131	66	46	16
6	119	53	46	20
7	65	46	35	2
8	60	66	46	2
9	70	87	46	2
10	113	87	28	3
11	114	84	26	3
12	94	109	25	3

ppm

No	Zn	Cu	Pb	Mo
13	100	112	26	4
14	65	23	21	3
15	70	19	25	2
16	60	17	25	2
17	113	166	30	3
18	163	125	15	3
19	150	161	34	3
20	1190	388	36	4
21	81	87	28	2
22	65	50	25	2
23	100	121	36	2
24	90	84	36	2

ppm

115-A-SE-1 (C-,2) (Mo)

The entire anomalous area is underlain by granite. The terrain is relatively flat and the drainage sluggish. Furthermore, good silts are difficult to obtain and most are organic rich. The granitic mass is very homogeneous. Background concentrations were obtained on resampling for Cu, Pb, and Zn, and only stations 4 and 5 were moderatley high in Mo (Figure 36). The anomaly is not considered significant because of the modest intensity of the Mo anomaly, the lack of a long dispersion train, and the organic content of the silts. No further work is recommended.

115-A-SE-2 (NIL,2) (Cu,Mo,Zn)

One station on a tributary of Pass Creek (136°40'W, 60°8'N) was slightly anomalous. This stream, and the one adjacent to it on the west contained on resampling 203,9,32,3, and 106,22,28, and 3 ppm Zn, Cu, Pb, and Mo respectively. These concentrations are not anomalous. No further work is recommended.

115-A-SE-3 (NIL)

A large intense airborne magnetic anomaly exists south of Sandpiper Creek (136°6'W, 60°20'N). The bedrock underlying the anomalous zone was examined and is comprised of coarse grained diorite and gabbro, locally containing up to 10 percent magnetite. The rock masse is fresh, is believed to be layered, and contains

sufficient magnetite to account for the magnetic anomaly. A host rock of this type could contain deposits of Cu, Ni, and Co. Only background concentrations of these three metals occur in the stream sediments draining the gabbroic mass (Figure 37), and Woodcock map 115-A-SE for Cu). No further work is warrented. It should also be noted that this area was mapped and prospected in 1968 by an unknown party.

115-A-NE

115-A-NE-1 (D,2) (Pb)

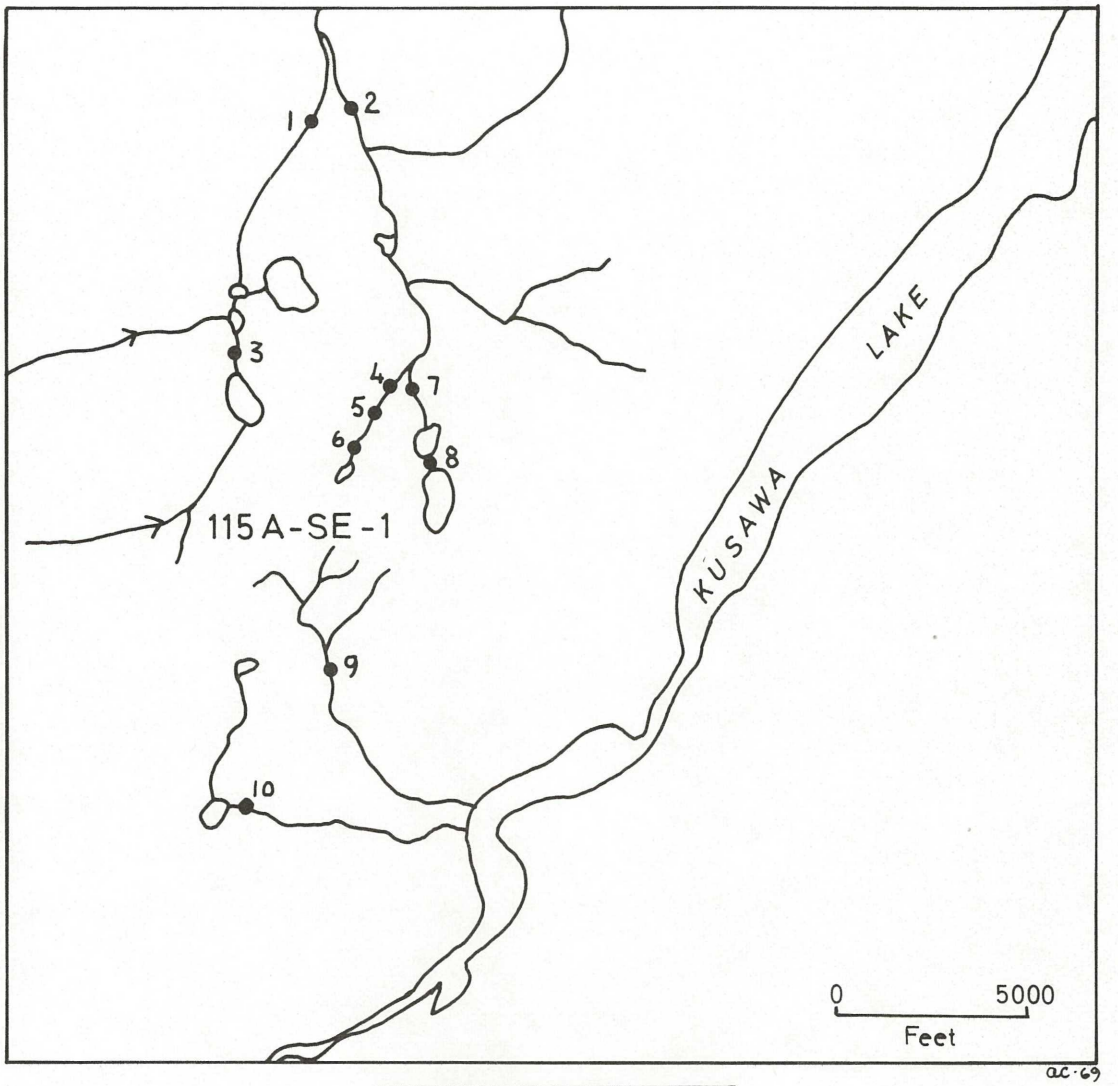
One station (Y-3145) was anomalous in this area, which is underlain by granite. The stream gradients are gentle, and stream sediments were difficult to obtain. Only background Pb concentrations were obtained on resampling (Figure 38). No further work is warrented.

115-A-NW

No anomalies exist in that part of the map-area sampled.

Figure 36

115 A-SE-1

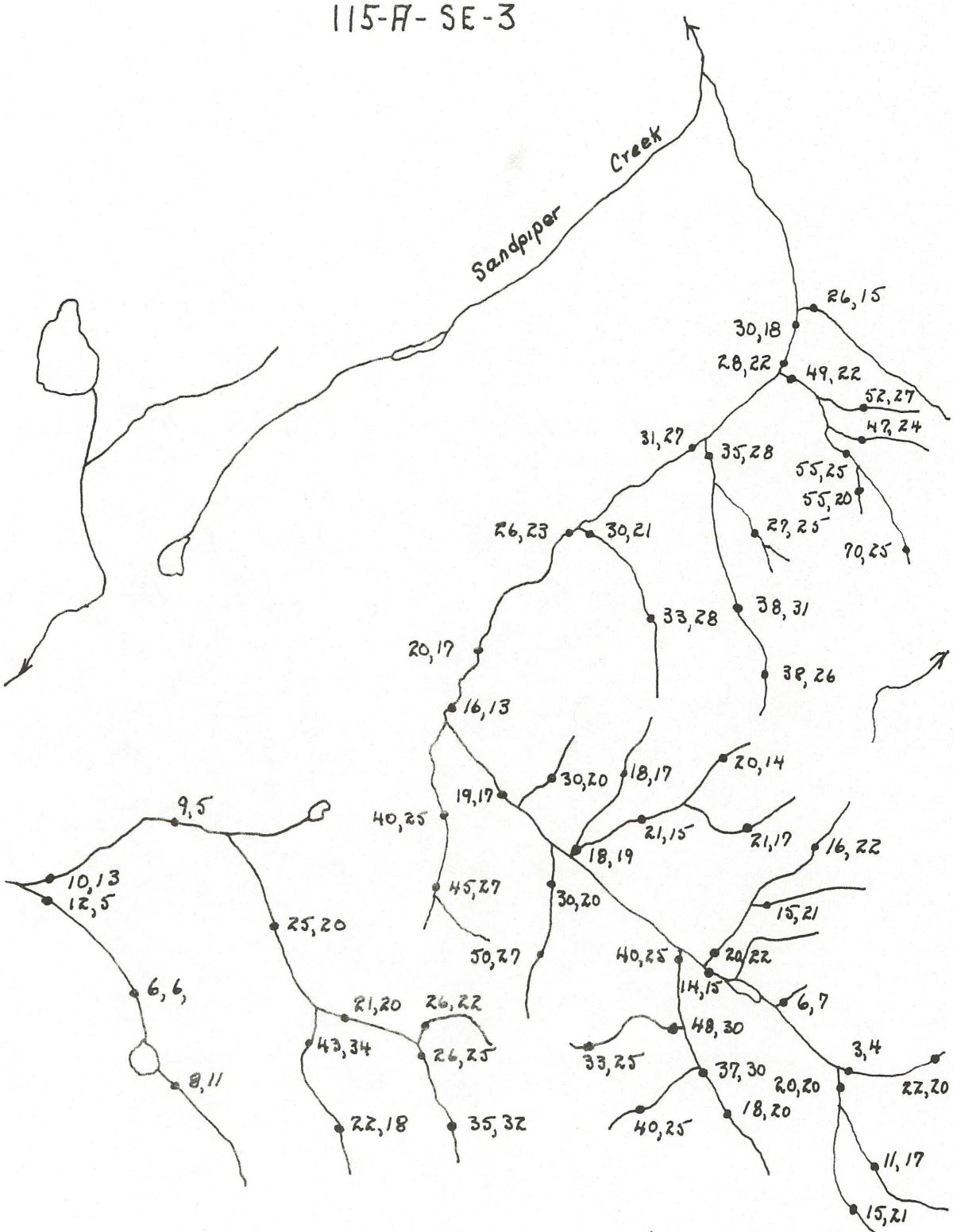


No.	Zn	Cu	Pb	Mo
1	120	60	46	2
2	120	66	30	2
3	200	78	46	2
4	131	11	15	12
5	386	93	10	16
6	12	9	10	6
7	144	12	12	3
8	78	60	24	4
9	160	66	28	3
10	240	76	24	3

ppm

Figure 37

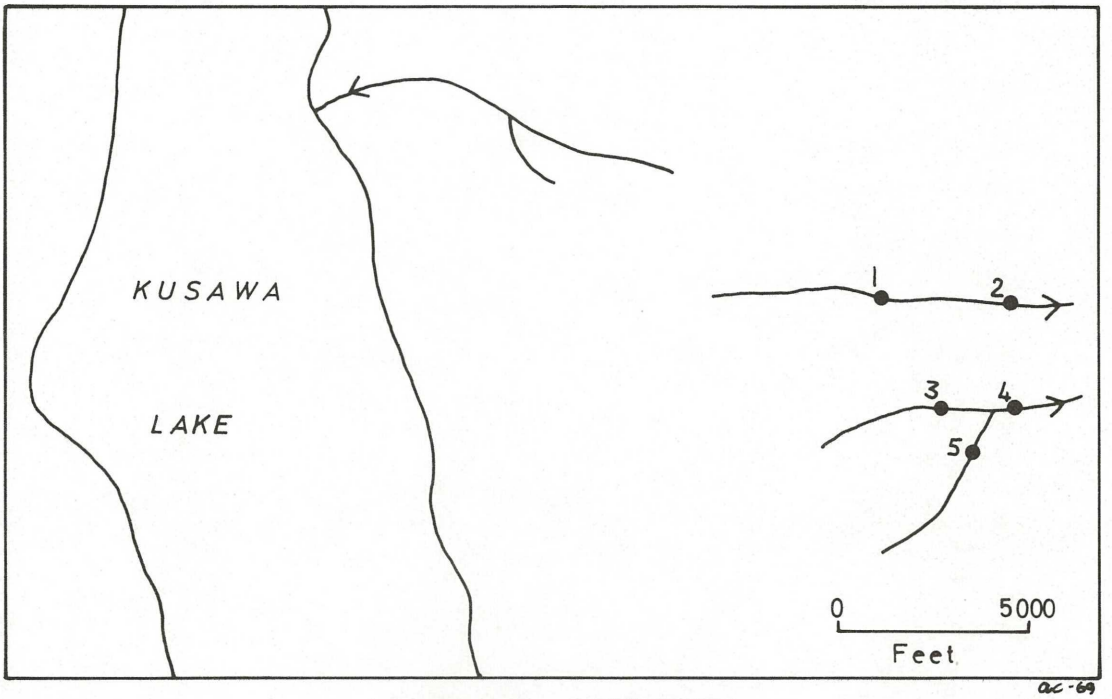
115-A-SE-3



Kusawa Lake

Figure-38

115 A - NE - 1



No.	Zn	Cu	Pb	Mo
1	144	12	12	3
2	131	11	15	2
3	60	5	18	2
4	87	20	16	2
5	55	4	11	2

ppm

105-D-NW-1 (C+,4) (Cu)

An intense Cu anomaly occurred at one station on a tributary of the Ibex River. The area is interpreted to be underlain by the Lewis River group. No outcrops were noted in the area. The terrain is broad, open and treeless. All the silt samples collected contained about 20 percent organic material. On resampling, all stations contained less than 50 ppm Cu (Figure 39). These concentrations are not considered anomalous and no further work is warrented.

105-D-NW-2 (C+,4) (Mo,Cu,Zn)

This drainage basin is underlain by fresh granodiorite, which contains a few isolated grains of pyrite. The rock is hematite stained especially on fractured and weathered surfaces. This is most noticeable in the cirque at the head of the stream. The entire drainage basin was prospected. No copper stain or massive gossan material was noted. The stream gradient is gentle, silt samples were difficult to obtain and locally were manganese stained. Silt samples were collected on two occasions, with both suites containing essentially identical metal concentrations. Stations 6 and 7 are indeed anomalous in Zn and Mo (Figure 40). It is however, difficult to envisage a zinc deposit occurring in a massive granitic terrain. It is therefore assumed the anomaly is false, possibly being related

to manganese enrichments noted above. It is realized this explanation is not completely warrented, but no further work is recommended.

105-D-NW-3 (C-,3) (Zn,Pb)

This anomalous zone is also underlain by granite, but no hematite staining was noted. Stream conditions are similiar to 105-D-NW-2. Stations 9 and 10 are anomalous (Figure 40). An explanation and recommendation similiar to that for 105-D-NW-2 is also put forward for this anomaly.

105-D-SW

105-D-SW-1 (C-,3) (Cu,Mo)

Streams flowing east into Rose Lake have extremely steep gradients. The area is underlain by Yukon Group sedimentary rocks. The anomalous streams and those adjacent to them on resampling contained only background Cu and Mo values (Figure 41). No further work is recommended.

105-D-SW-2 (D,1) (Zn)

This anomaly was not considered significant enough to investigate.

105-D-SW-3 (B-,3) (Ag,As,Cu,Pb,Zn)

Yukon Group sediments underlie the anomalous zone. The valleys

are broad and open. Silt samples were extremely difficult to obtain. No limonite, gossans, or other evidence of economic mineralization were noted. On resampling, the metal concentrations obtained were not considered significant enough to warrent further follow-up work (Figure 42). No further work is recommended.

105-D-SW-4 (C,2) (Zn,Pb)

This anomaly was not considered significant enough to warrent investigation.

105-D-SW-5 (C+,2) (Cu)

One station (Y2534) on this stream contained 600 ppm Cu. On resampling, this station contained 35 ppm Cu, and a station 1500 feet downstream from it contained 44 ppm Cu. No further work is warrented.

105-D-SW-6 (D,1) (Cu)

This anomaly was not considered significant enough to warrent investigation.

105-D-SW-7 (B,6) (Mo,Cu,Zn)

This anomalous zone lies on Red Ridge, a prominent mountain south of Watson River. The top and base of the ridge were examined and prospected. Steep talus slopes prevented examination of the valley walls. Most of the ridge is underlain by latites, rhyolites, and andesites. Metasedimentary rocks occur on the eastern part of the ridge. The volcanic and sedimentary rocks are intruded by

granite and/or granodiorite. A hornfels zone is developed around the granite (Figure 43). A large gossan zone covers the central part of the ridge, hence the name Red Ridge. It appears to be confined to the volcanic rocks, which contain fine disseminations and seamlets of pyrite and pyrrhotite. These sulfides weather to limonite, staining the rock a brilliant red. Some of this limonite is transported down slope and stains the downslope rocks. Pyrite was also noted in the granitic rocks. One area covering about 100 feet square immediately west of the highest peak contained some Cu staining. Several old pits exist in this area. Evidence suggests the ridge has been prospected and staked in the past. Nothing was noted on Red Ridge to suggest the presence of a large sulfide mass.

Only background metal concentrations were found on resampling the streams draining the base of Red Ridge (Figure 43). Station 3 is a possible exception. No further work is recommended.

105-D-SW-8

Described earlier.

105-D-SW-9 (B,6) (Cu,Zn,Mo,Ag)

The geology of the area is complex. It is underlain by quartzites and mica schists of the Yukon Group which are intruded by fresh one feldspar granitoid rocks. The metasediments are fractured, contorted, and pyritized near the contact, and are heavily limonite

stained giving them an overall gossaniferous appearance. It is estimated these rocks contain 1-5 percent pyrite as disseminations and veinlets. They dip northeast at 65°. An enormous rock glacier comprised entirely of large blocks of granite fill the middle part of the southern stream and block it off. The rock glacier is 300-400 feet high and many of the granite boulders in it contain isolated pyrite grains.

Background metal values were found in the northern stream, and slightly anomalous Zn and Cu concentrations were found in the southern stream (Figure 44). Note that stations 20 and 25 were organic rich. The southern anomaly is not considered significant. The situation exists where an enormous amount of broken rock and rubble in place, on scree slopes, and in the rock glacier is being weathered. The weathering products of the pyrite probably lower the pH of the water and increase the solubility of any small amount of heavy metals which may be present in the bedrock, thus enhancing the silt anomaly. No further work is recommended in this area. Note that station 19 drains the workings from the gold prospect on Mount Skukum.

105-D-SW-10 (B,5) (Mo)

Shattered, fractured, and highly weathered buff rhyolites underlie this area. Outcrops exist over 70 percent of the basin. Features suggestive of economic mineralization were not noted. Four

stations contained slightly anomalous amounts of Mo on resampling. These samples were all organic rich (Figure 45). Only background metal concentrations were found in the other samples. No further work is recommended.

105-D-SW-11 (C,5) (Mo,As,Ag)

This anomaly lies within the Skukum Copper property of Yukon Antimony Corporation (Findley 1969). It was not investigated.

105-D-SW-12 (A,8) (As,Pb,Mo)

This anomaly lies within the Becker-Cochran property of Yukon Antimony Corporation (Findley 1969). Extensive surface and underground exploration work has been done on this property in the last few years. The drainage basin was not sampled.

105-D-SW-14 (D+,2) (Cu)

This anomaly is held by Silver Pack Mines Limited, an affiliate of International Mine Services Limited. Considerable work was carried out on the property between 1966 and 1968. The anomaly was not investigated.

105-D-SW-15 (D,1) (Mo)

Two small streams flowing westward into the Takhini River and draining an area underlain by granitoid rocks were slightly anomalous in Mo. This anomaly was not considered significant enough to investigate and no work was undertaken in the immediate area.

105-D-SW-16,20 (D,B,2,6) (Ag,Pb)

This area is underlain by a Tertiary volcanic complex which is probably a subsidence cauldera. A granitic ring dike surrounds the cauldera. Both are intrusive into older granitoid rocks which occur in the western part of the anomalous area. Silt samples were extremely difficult to find and several were organic rich (Figure 46). Most of the streams were sampled twice with the average value recorded. In the original survey several of the streams containted 1-8 ppm Ag. In this investigation most of the stations contained less than 1.0 ppm. Those that were higher (5,6,and 19) were all organic rich. The Ag concentrations found are borderline on being significant. No evidence of economic mineralization was noted during fairly extensive prospecting. Lambert, while mapping the area in detail found no minerals of economic interest (personal communications). Considering all the geological and geochemical data available, no further work is warrented.

105-D-SW-17 (C,2) (Mo)

Two creeks south of Alligator Lake were anomalous in Mo. The gradients of both streams are flat with the stream bottoms filled with organic material. Stations Y755 and Y804 on resampling contained only 2 and 4 ppm Mo respectively despite the fact they contained 10-15 percent organic material. No further work is recommended on this anomaly.

105-D-SW-18 (C+,6) (Zn,Pb)

This area lies on the southeast flank of Lakeview Mountain. It is underlain by fine-grained, banded, buff rhyolites. Granite boulders were noted on the northeast flank of Lakeview Mountain. An extremely large anomaly (Zn,Cu,Pb,Ag) exists on the south slope (Former station Y895, Figure 47). A sharp cutoff occurs above station 2. Samples 3 and 4 contained only background values. Rhyolites on the east bank of the stream near the cutoff point contained some disseminated pyrite plus thin coatings of sphalerite and galena on fractures. These coatings are approximately 1/16 of an inch thick. The combined Pb-Zn content is estimated to be less than 0.5 percent. A small gossan exists down drainage from the mineralized zone. Prospecting and local soil sampling turned up no other occurrences. It is felt that sufficient sulfides occur in the mineralized zone described above to account for the stream anomaly. If this is true, it demonstrates the sensitive detection capabilities of the geochemical method. No further work is recommended.

105-D-SW-19 (C,1) (Cu)

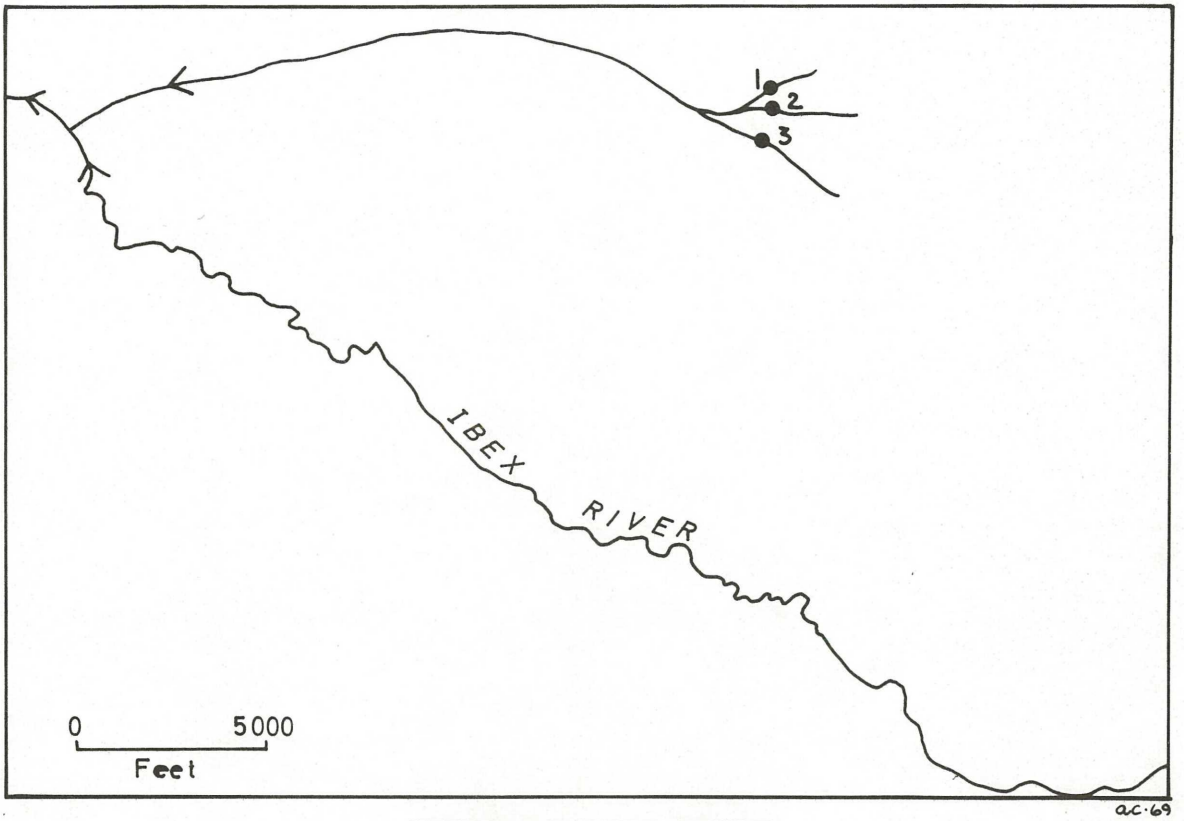
A single station was anomalous in Cu in the original survey. On resampling, this station and two others adjacent to it contained only background Cu concentrations. No further work is recommended.

105-D-SW-21 (C+,4) (Pb,Ag,As,Cu,Mo)

This drainage basin is underlain by Triassic and Eocene volcanics, ring-dike batholithic intrusives, and Yukon Group sedimentary rocks. The geological environment is complex and potentially favourable for mineral deposits. The area was staked in early July by a Whitehorse resident. The anomaly was not investigated.

Figure·39

105 D - NW - 1

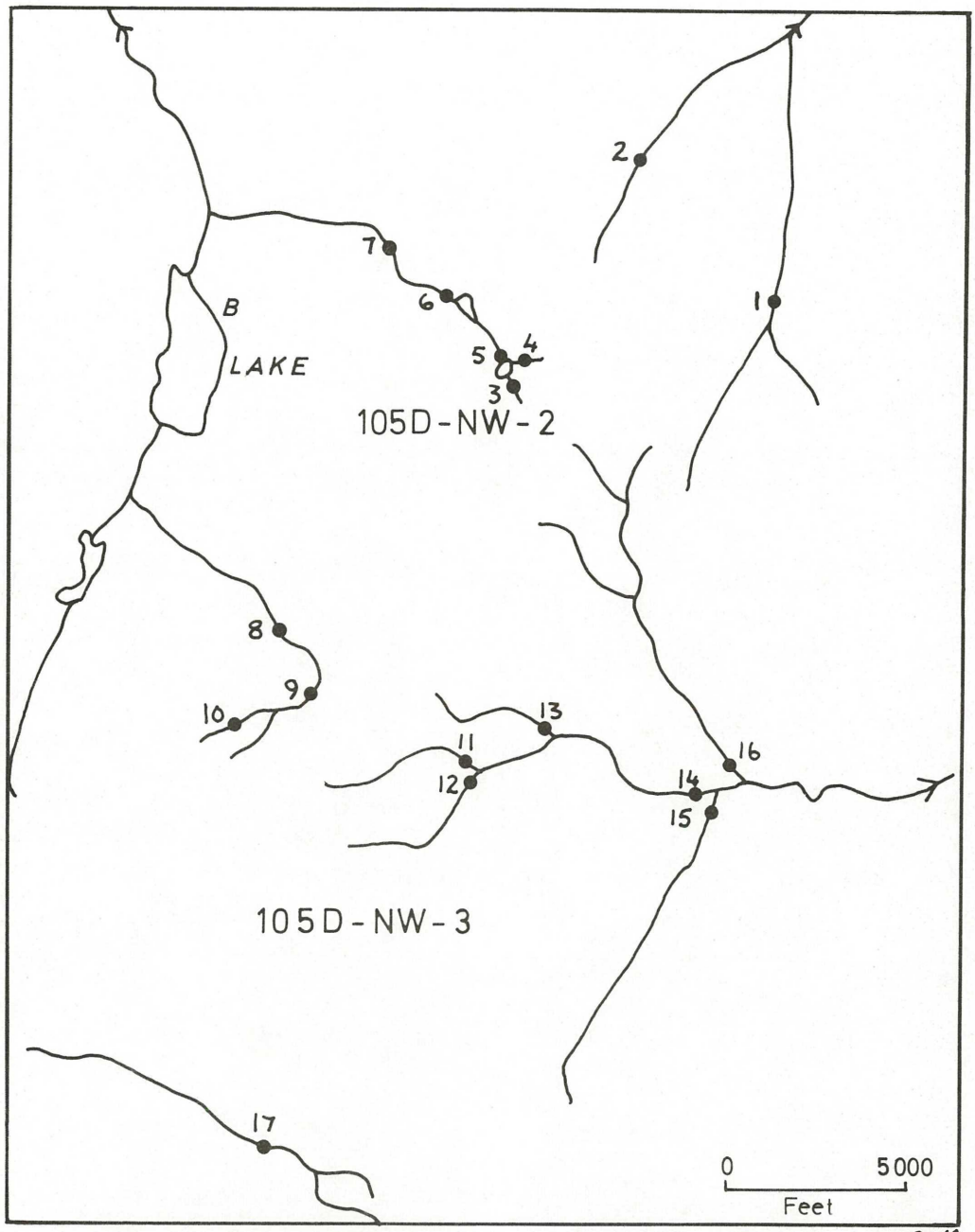


No.	Zn	Cu	Pb	Mo
1	144	22	30	2
2	94	17	11	2
3	60	42	21	2

ppm

Figure·40

105D-NW-2, 3



No.	Zn	Cu	Pb	Mo	Ag
1	170	42	44	2	
2	210	14	42	2	
3	113	121	68	2	
4	235	44	82	3	
5	65	75	40	12	
6	1700	84	99	30	
7	1130	42	62	18	
8	442	9	43	3	
9	1500	18	157	6	

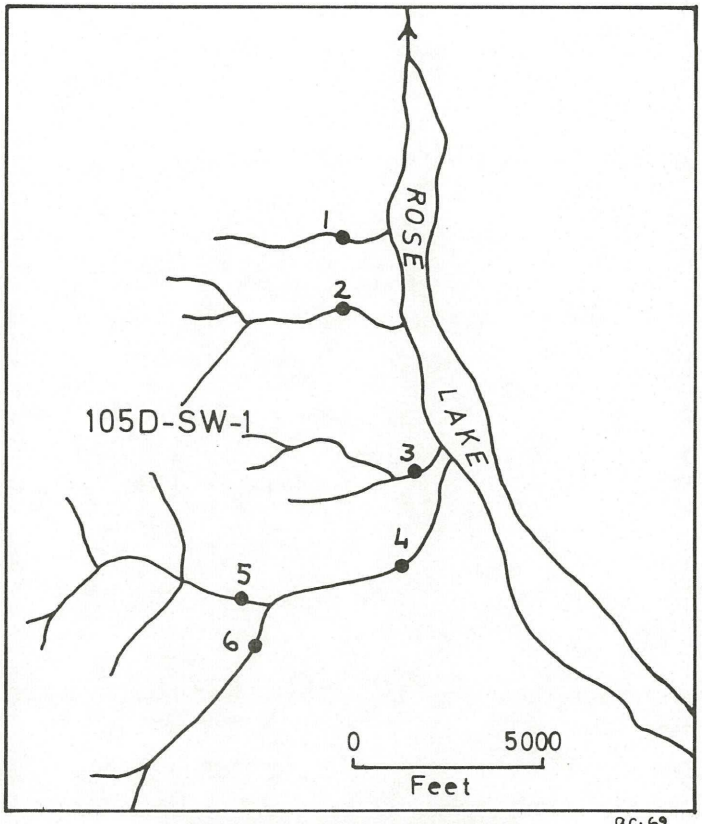
ppm

No.	Zn	Cu	Pb	Mo	Ag
10	1380	20	250	6	0.5
11	315	9	38	4	0.1
12	209	12	44	2	0.1
13	351	13	43	2	
14	431	10	50	3	0.9
15	131	7	42	2	0.4
16	140	20	44	2	0.1
17	138	10	43	3	0.2

ppm

Figure-41

105D - SW-1

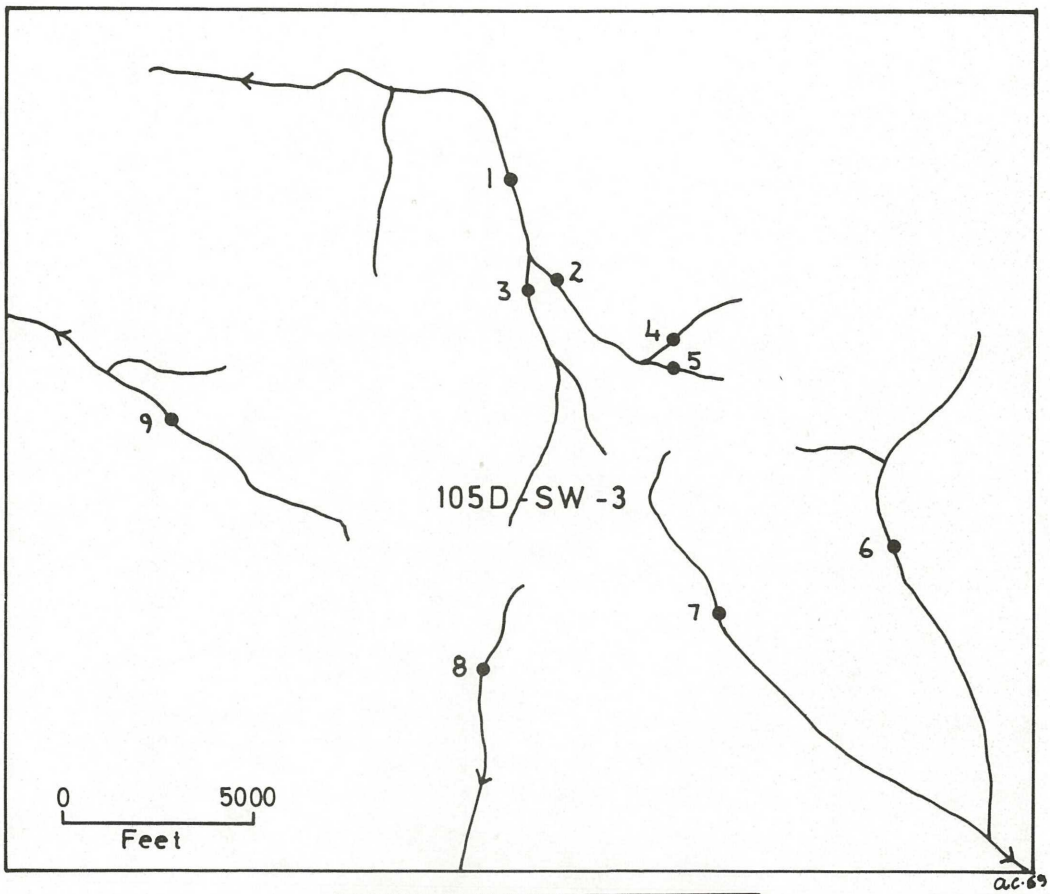


No.	Zn	Cu	Pb	Mo
1	190	46	34	2
2	46	18	18	2
3	264	75	39	3
4	48	16	21	2
5	98	42	24	2
6	172	64	24	2

ppm

Figure·42

105D - SW- 3

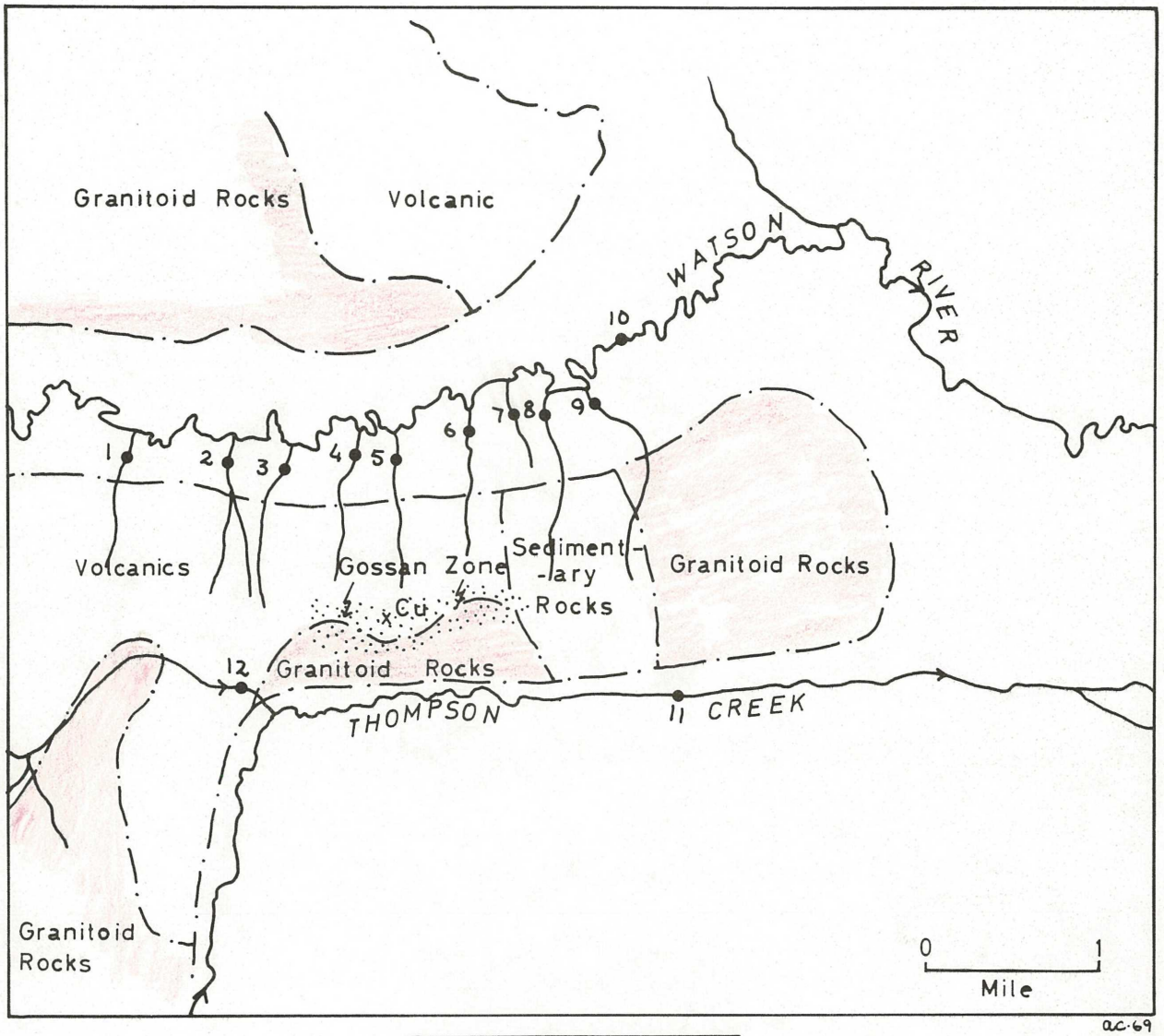


No.	Zn	Cu	Pb	Mo	Ag
1	190	56	42	2	0.2
2	322	12	40	4	0.4
3	322	42	62	2	0.3
4	183	21	24	3	0.2
5	308	87	53	6	0.2
6	190	48	56	4	0.2
7	140	70	49	3	0.2
8	210	40	48	2	0.2
9	170	48	40	2	0.2

ppm

Figure 43

105D - SW - 7

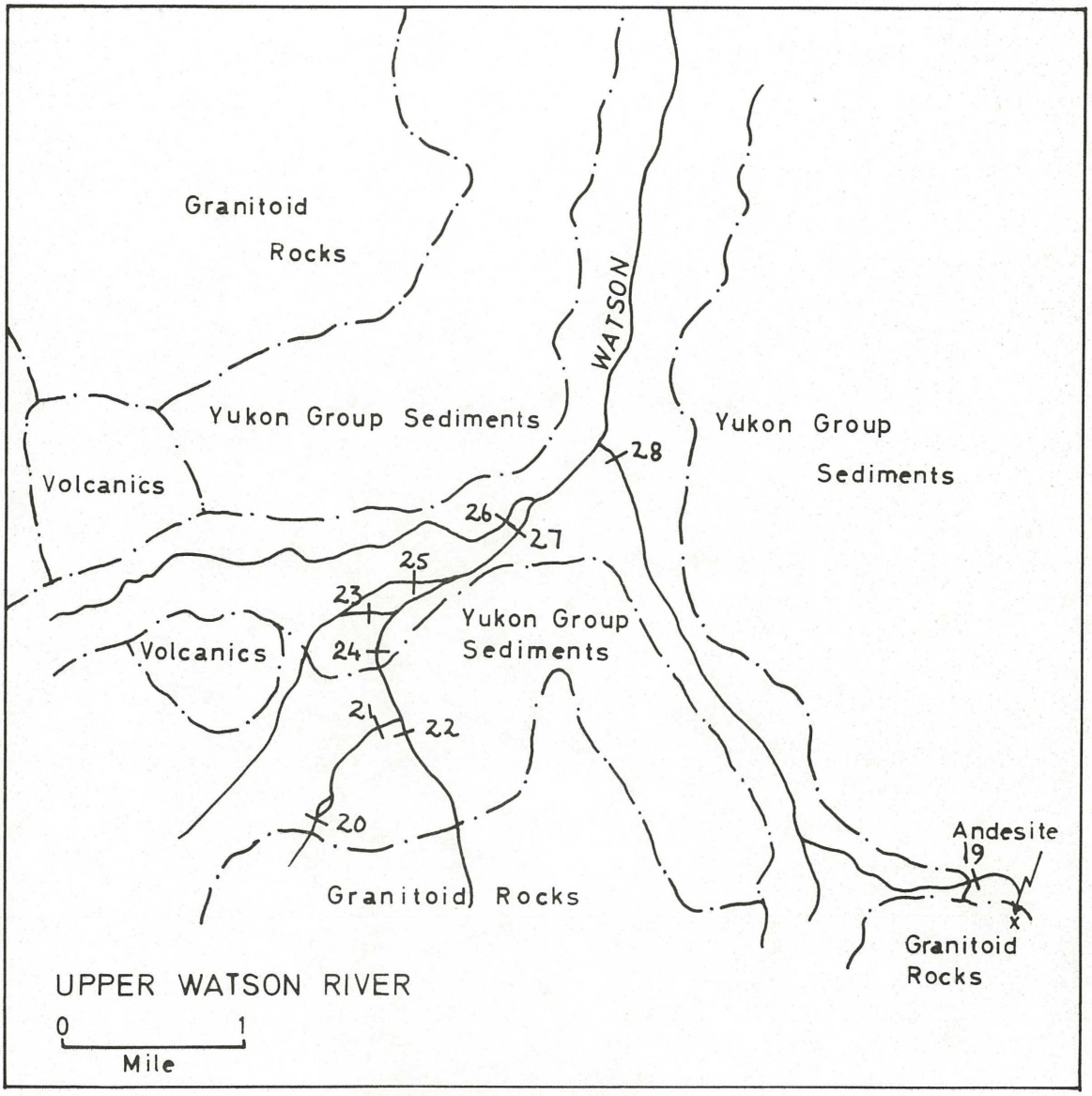


No.	Zn	Cu	Pb	Mo
1	114	64	32	2
2	76	60	44	2
3	54	53	34	7
4	70	66	32	2
5	96	76	44	2
6	39	42	28	2
7	140	64	38	2
8	170	60	44	2
9	176	44	66	2
10	47	32	44	2
11	186	72	44	2
12	210	47	42	2

ppm

Figure-44

105D-SW-9



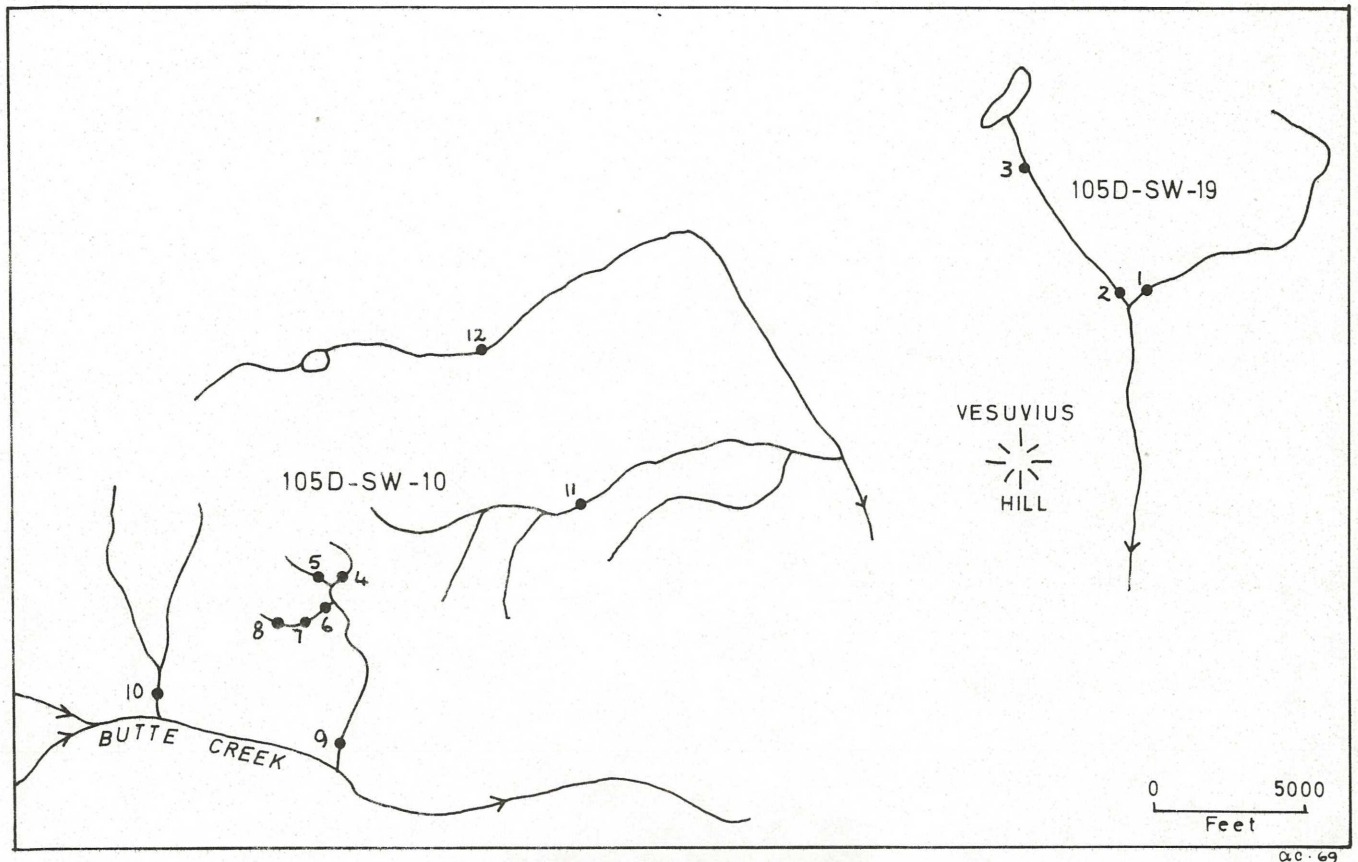
No.	Zn	Cu	Pb	Mo
19	453	135	133	2
20*	359	106	36	2
21	242	93	34	4
22	113	16	26	4
23	48	11	15	2
24	113	17	38	2
25*	359	140	36	8
26	87	50	38	2
27	125	16	26	4
28*	170	56	48	3

ppm

* Organic rich

Figure·45

105D-SW-10, 19

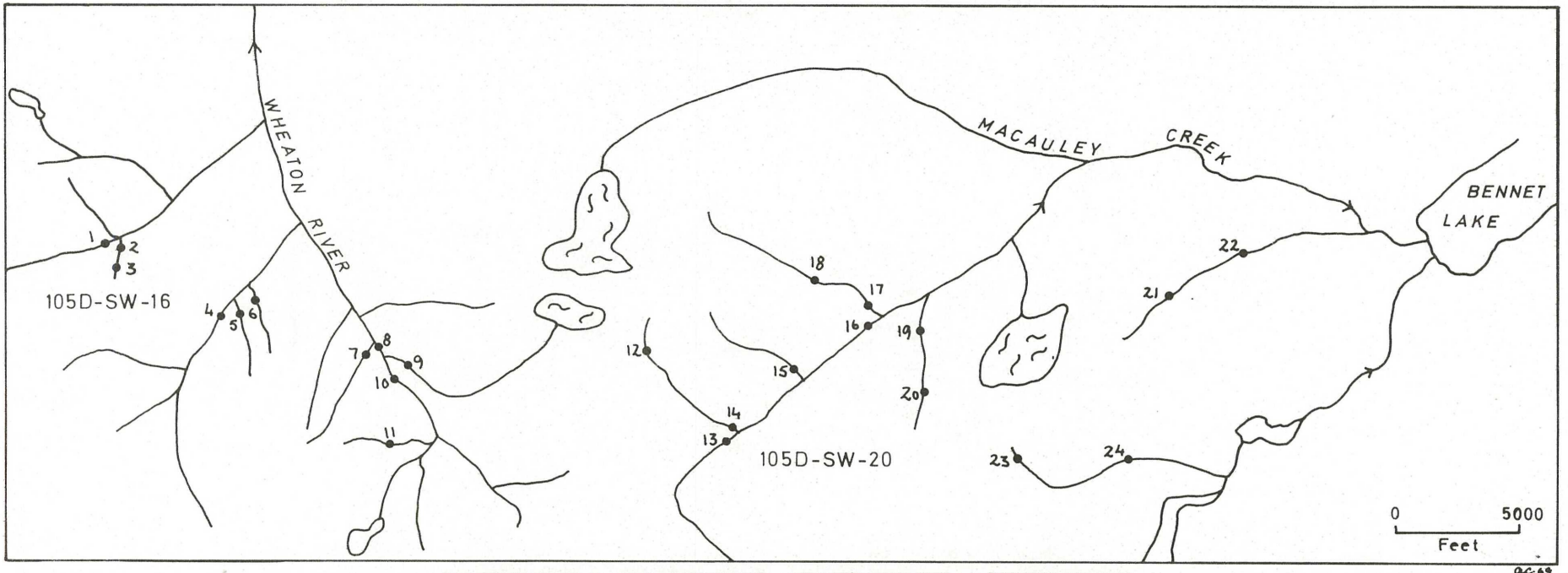


No.	Zn	Cu	Pb	Mo	Ag
1	140	38	90	2	0.1
2	120	44	100	2	0.1
3	131	76	54	4	0.1
4	375	44	77	10	0.4
5	203	38	77	10	0.4
6	442	34	346	6	0.8
7	397	23	116	6	1.0
8	150	5	59	3	0.3
9	140	26	44	1	0.1
10	170	44	60	1	0.1
11	206	76	77	1	0.1
12	140	38	54	1	0.1

ppm

Figure·46

105D-SW-16, 20



No.	Pb	Ag
1	50	0.2
2*	157	0.8
3*	590	
4	182	0.4
5*	441	3.0
6*	358	3.0

ppm

No.	Pb	Ag
7		0.8
8	60	0.2
9*	72	0.4
10	44	0.2
11	74	0.5
12	68	0.4

ppm

No.	Pb	Ag
13	50	0.3
14*	125	0.2
15	117	0.2
16	68	0.4
17	70	
18	84	0.4

ppm

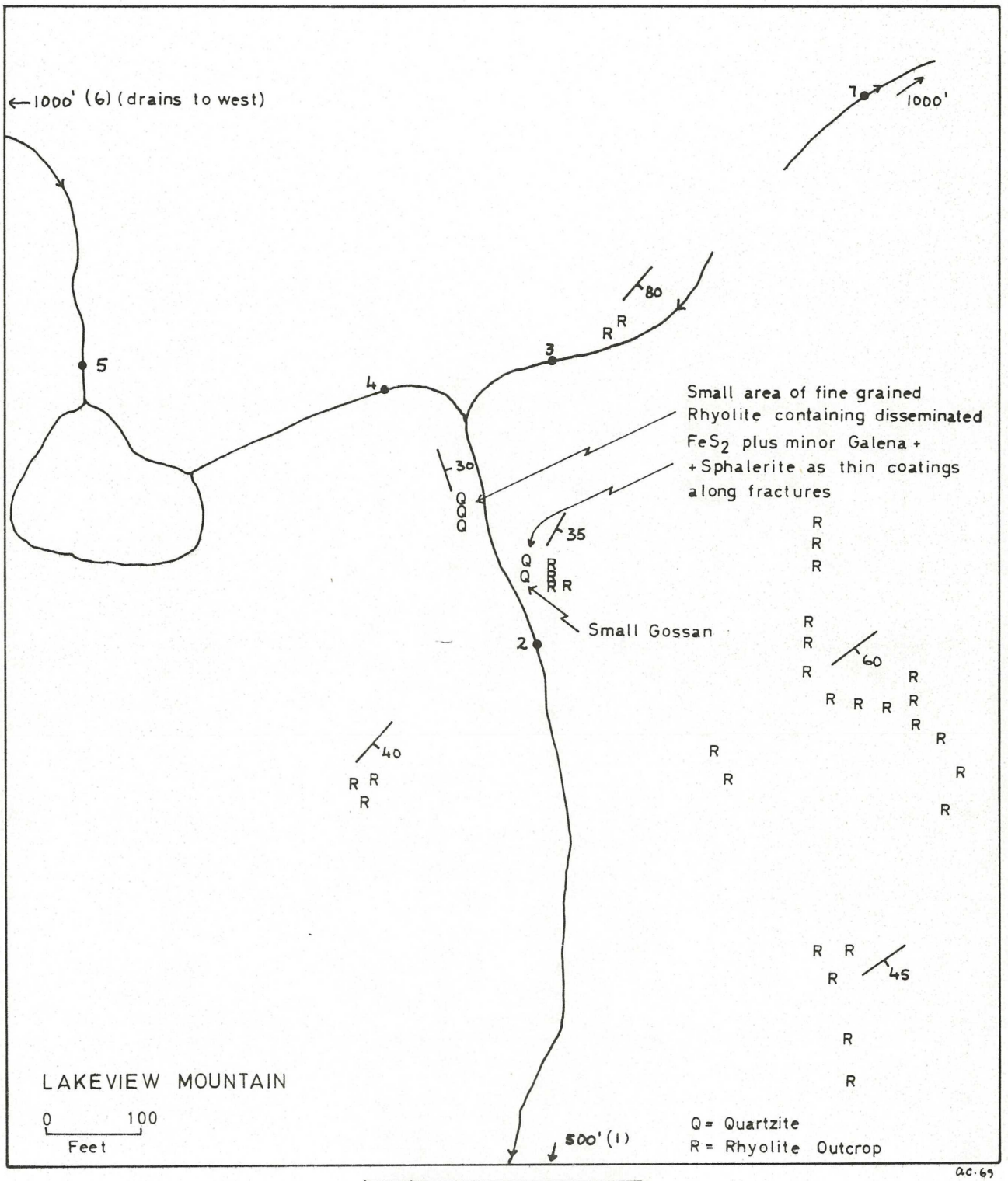
No.	Pb	Ag
19*	224	2.0
20*	310	
21	82	0.3
22*	84	0.8
23	68	0.5
24	125	0.1

ppm

* Organic rich

Figure·47

105D - SW - 18



No.	Zn	Cu	Pb	Mo	Ag
1	600	2	6	4	0.9
2	6250	471	182	2	6.0
3	286	22	105	2	0.1
4	351	22	99	3	0.1
5	170	18	62	2	0.5
6	270	40	72	2	0.1
7	250	42	80	3	0.1

ppm

105-D-SE-1 (C,3) (Cu,Zn)

This anomalous area is underlain by argillites and quartzites locally intruded by a feldspar porphyry of the Laberge Series. The porphyry is exposed on the north slope of Caribou Mountain and over a small area on the south slope. Stream gradients are steep and stream bottoms are covered with gravel and rock debris making silt samples difficult to obtain. No evidence of economic mineralization was noted. On resampling good coverage was obtained (Figure 48), All Cu and Zn values are in the background range. No further work is warrented.

105-D-SE-2 (C,2) (Cu)

On the north slope of Jubilee Mountain Cache Creek volcanic rocks are intruded by an ultramafic mass. The latter is not well exposed with only boulders being noted. The entire ultramafic mass appears to be staked and work was in progress on the property in 1969. Because the area was staked and work in progress, further silt sampling was not done. Only two samples were collected, both from streams draining the north slope. They both contained about 30 percent organic material and 56 and 135 ppm Cu respectively. These samples are not considered anomalous because of their high organic content.

105-D-SE-3 (D,5)

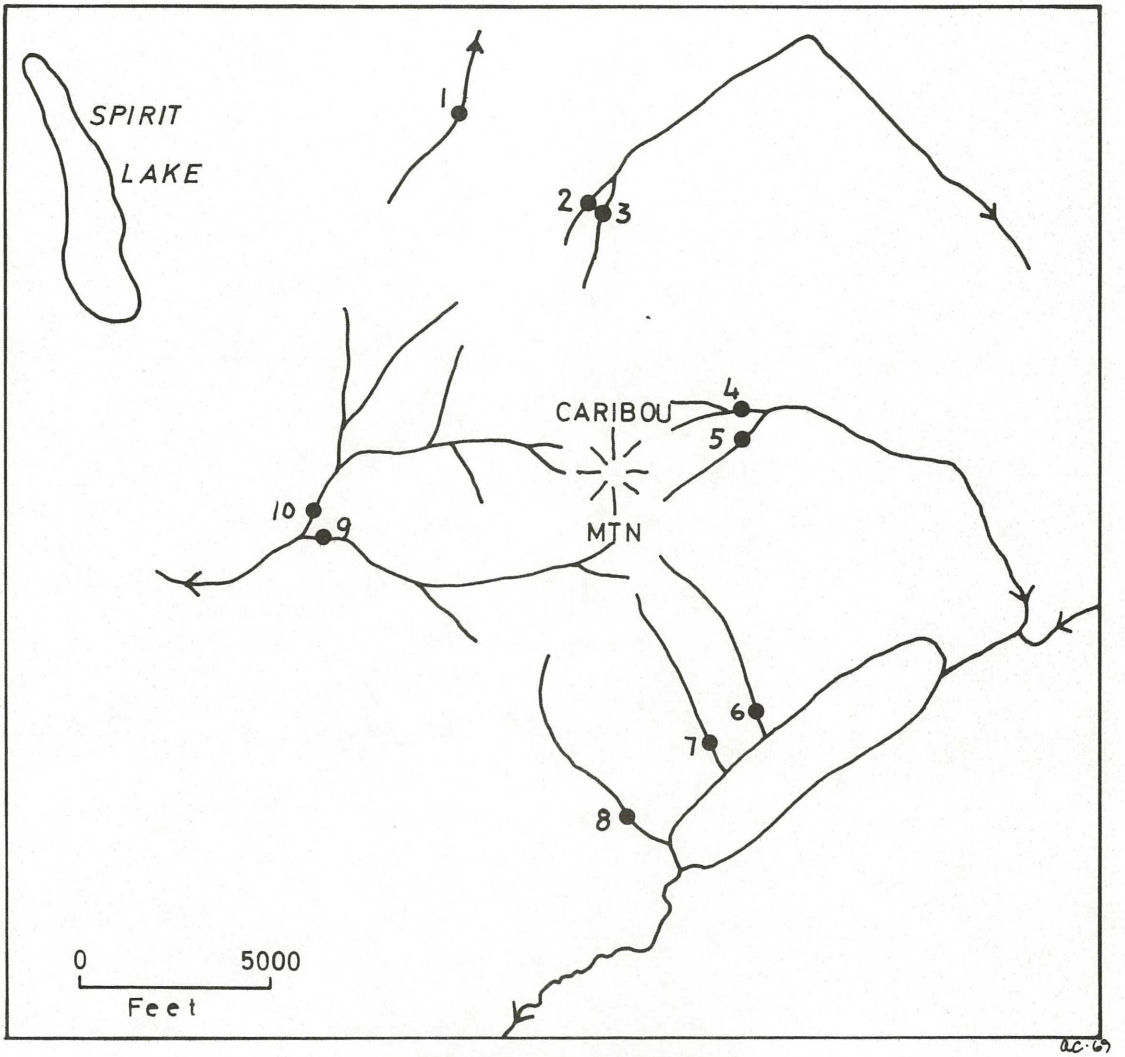
This is the Lime Creek anomaly. It was described previously (Figure 10).

105-D-SE-4 (NIL)

This was previously described (Figure 2).

Figure·48

105 D-SE-1



No.	Zn	Cu	Pb	Mo
1	110	70	46	2
2	94	63	43	3
3	170	84	63	2
4	125	106	55	6
5	119	63	46	3
6	140	62	40	1
7	90	46	26	2
8	170	76	42	1
9	115	50	46	2
10	119	84	43	2

ppm

104-M-NW-1

Described earlier (Figure 24).

104-M-NW-2 (C-,3) (Mo,Zn,Pb)

This area is underlain by granite. The upper reaches of the Partridge River valley is broad and open. Silt samples were difficult to obtain. In the original survey only one station contained anomalous metal values. On resampling all stations contained background metal concentrations except station 7 (Figure 49). That sample (station 7) contained about 30 percent organic material. No further work is recommended.

104-M-NW-3 (D,2) (Zn)

This area is also underlain by granite. The streams involved have extremely steep gradients. Good silts were available. On resampling only background metal values were obtained (Figure 49). No further work is recommended.

104-M-NW-4 (C-,2) (Mo)

This area,cut by several major lineations, is underlain by granite. Good silts were not available. The material in the stream bottoms is all a granite wash. The silts on resampling contained slightly anomalous amounts of Mo (Figure 50), but they are not of the magnitude of those obtained previously. Limited prospecting did not reveal any evidence of economic mineralization. The Mo metal values

are not considered significant enough to warrent further investigation.

104-M-NW-5 (C,3) (Mo)

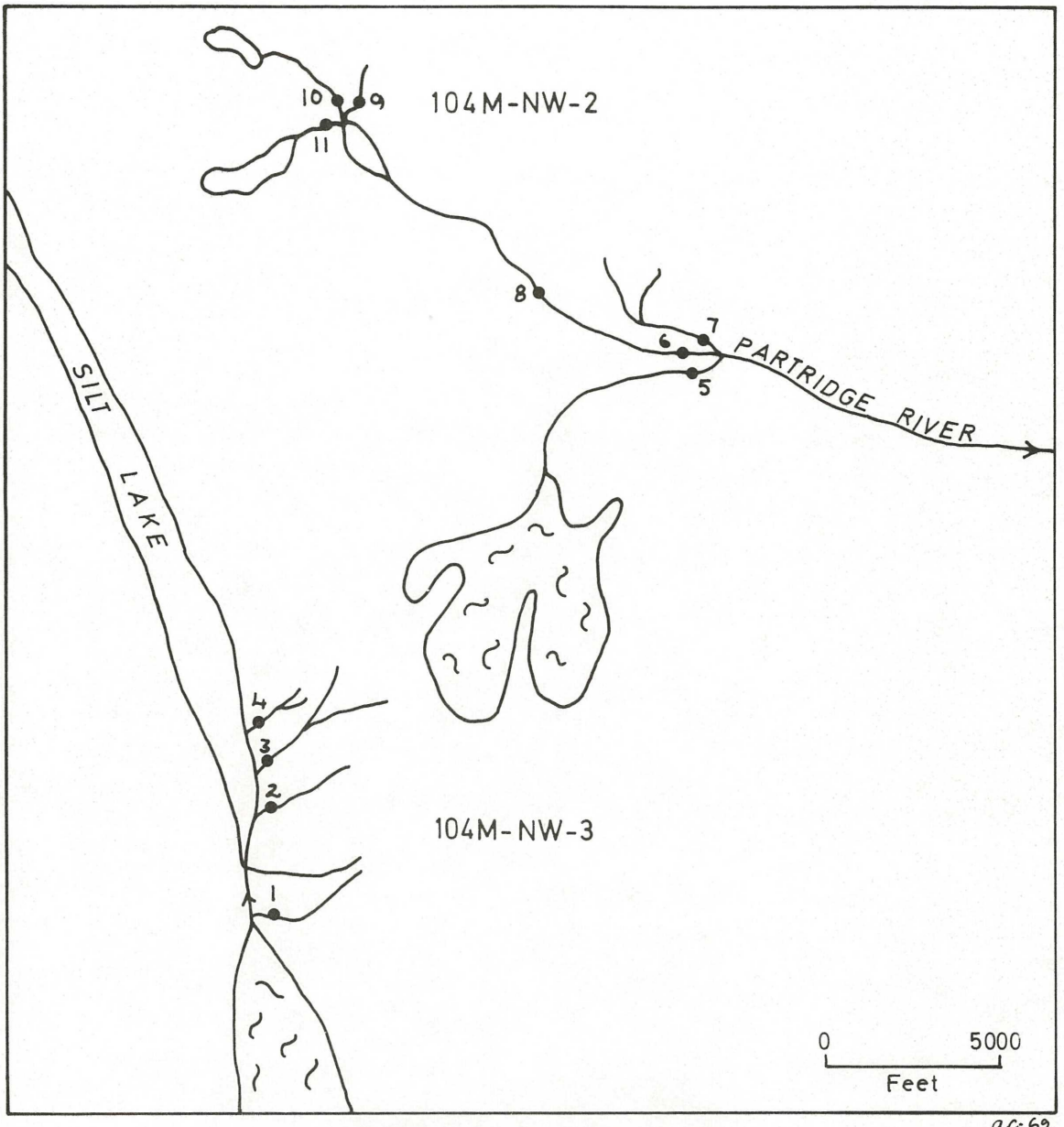
This area is underlain by granite. The terrain and stream environment is similiar to that at 104-M-NW-4. No evidence of economic mineralization was noted. Slightly anomalous Mo values were obtained in the stream sediments, but they are not of the same magnitude as those obtained earlier, and are not considered significant enough to warrent further investigation (Figure 50).

104-M-NW-6 (NIL)

This area, centered on 135°41'W, 59°53'N, is underlain by a young granitic stock similiar to that at Radelet Creek. The streams draining the area were resampled on the expectation that this stock could contain Mo mineralization similiar to that at Radelet Creek. However, only background Mo concentrations were obtained in the stream sediments (Figure 51). No further work is warrented.

Figure·49

104M - NW - 2, 3

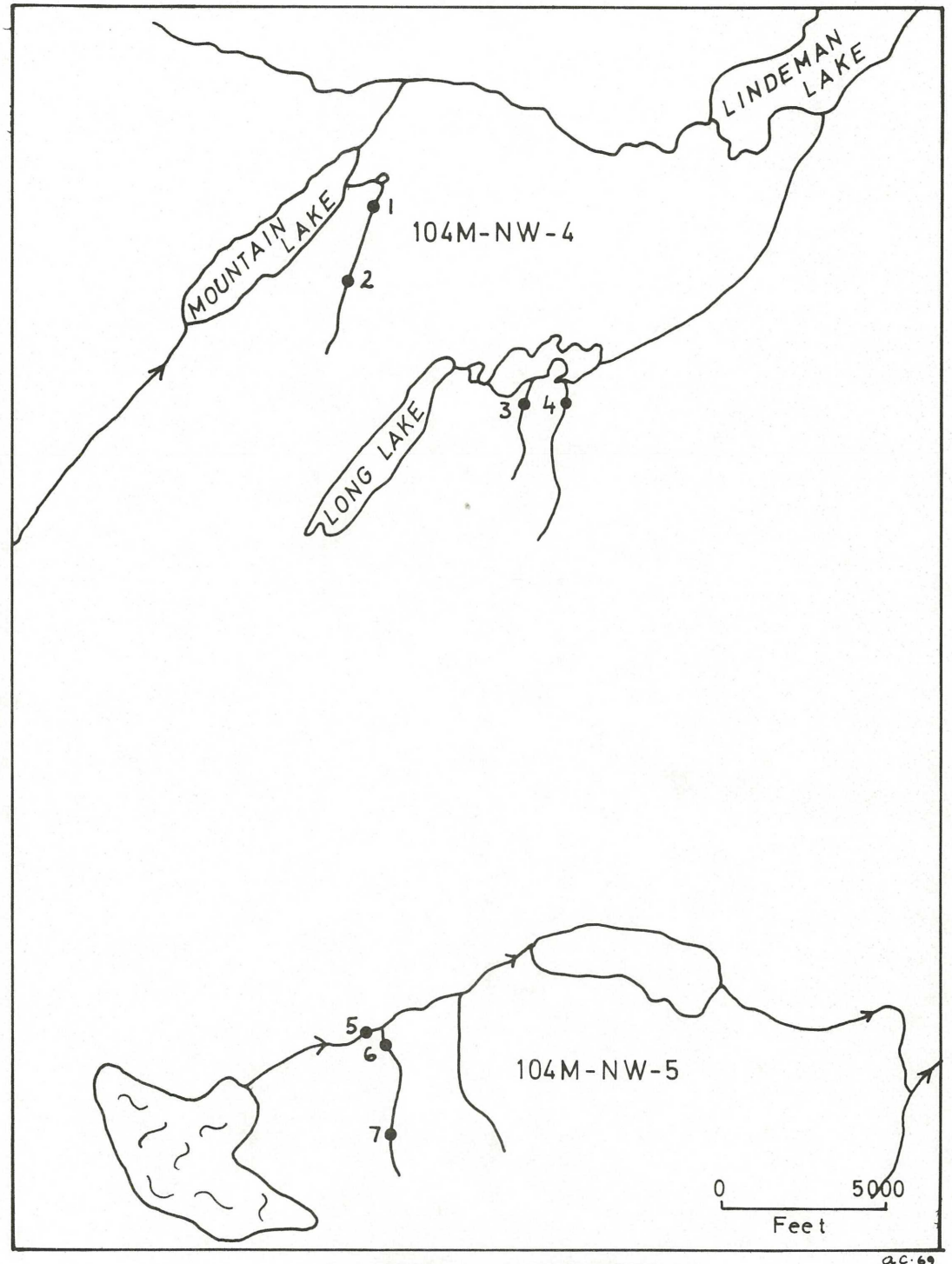


No.	Zn	Cu	Pb	Mo	Ag
1	176	3	48	4	0.3
2	293	6	74	8	0.3
3	203	3	50	4	0.4
4	221	2	59	12	0.3
5	228	3	34	2	0.2
6	176	2	44	3	0.3
7	359	4	71	8	1.0
8	100	2	43	3	0.3
9	70	2	43	4	0.2
10	87	2	21	4	0.3
11	228	8	125	4	0.7

ppm

Figure 50

104M - NW - 4, 5

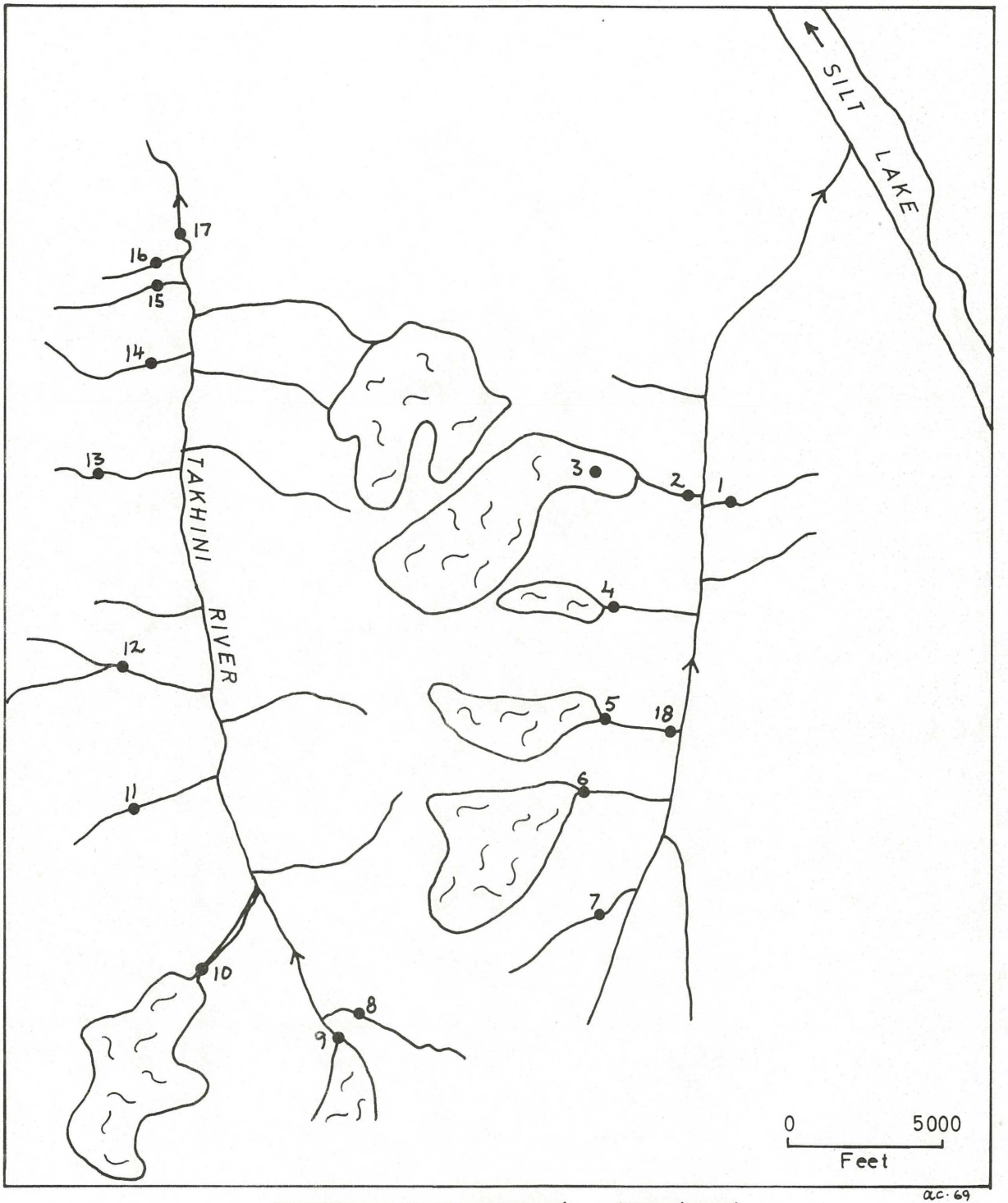


No	Zn	Cu	Pb	Mo	Ag
1	300	17	38	12	0.6
2	106	12	48	6	0.1
3	196	12	59	10	0.1
4	264	7	48	8	0.3
5	36	5	28	3	0.4
6	36	6	25	8	0.2
7	163	12	21	8	0.7

ppm

Figure-51

104M - NW -6



No.	Mo
1	4
2	3
3	2
4	6
5	2
6	2

ppm

No.	Mo
7	4
8	2
9	2
10	3
11	2
12	2

ppm

No.	Mo
13	3
14	4
15	4
16	4
17	2
18	3

ppm

104-M-NE-1 (C,4) (Mo,Cu)

This anomalous drainage basin lying to the west of Lake Bennet and southeast of Munroe Lake is completely underlain by coarse-grained porphyritic granite. The basin is open and exposures are excellent. Two days were spent prospecting and silt sampling the general area. The granite is homogeneous, no dykes or veins, or other indicators of economic mineralization were noted. Silt samples were collected in detail (Figure 52). Good samples were readily obtained. None of the stations were anomalous in Cu, but several were slightly anomalous in Mo. No suitable source for the Mo or explanation of the anomaly was found. No evidence of any sort was noted to suggest the presence of Mo mineralization. No further work is recommended.

104-M-NE-2 (D,2) (Cu)

This area is underlain by meta-andesite and biotite gneiss. Both the andesite and gneiss locally contain up to 2-3 percent pyrite. When these zones weather, they yield spectacular gossans from a distance, which on close examination are thin coatings of hematite. Background metal concentrations were obtained on resampling (Figure 52). No further work is recommended.

104-M-NE-3 (A,8) (Zn,Pb,Ag,As)

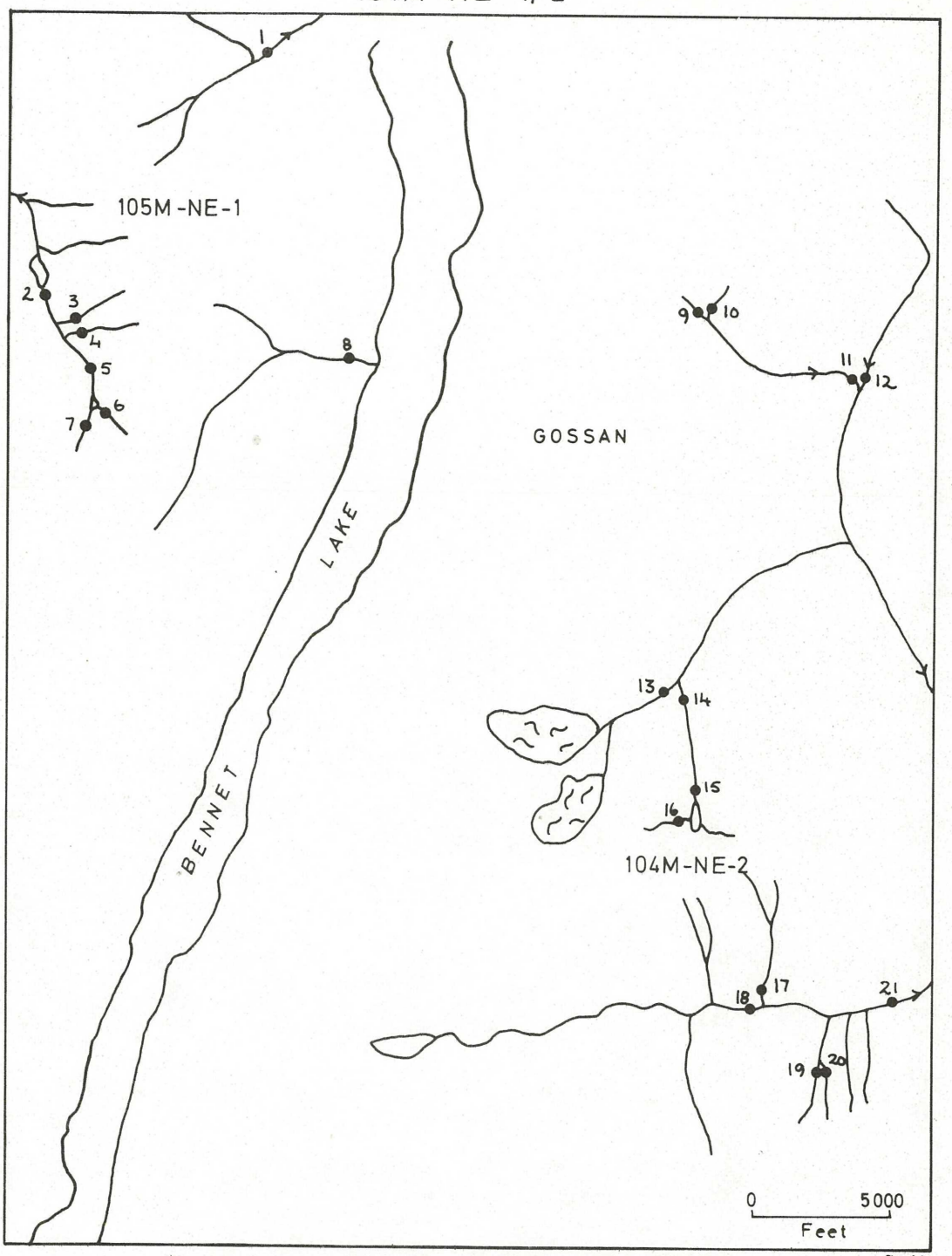
This anomaly was rated among the highest in the Carcross area. The northern part of the anomalous area is underlain by granite, with rhyolite and argillites being the dominant rock types between the granite and Racine Creek. Large sections of the stream beds were filled with boulders, making silt samples difficult to find. Many of the silts were organic rich. The lower reaches of all streams are well below treeline. Three days were spent in the area silt sampling and prospecting. The original anomaly could not be located in the resampling program (Figure 53). In fact, very low background metal concentrations were obtained. The writer is confident the original anomaly was not in the streams indicated or those adjacent to them. It is possible the anomaly was geographically misplaced. Silt samples were collected from some of the possible alternate streams within 3-5 miles of Racine Creek. These also contained background metal concentrations. No further work is recommended.

104-M-NE-4 (D+,2) (Cu)

This area, underlain by volcanic rocks and argillites, had two streams containing slightly anomalous amounts of Cu. These streams were resampled (Figure 54). Only background Cu concentrations were obtained. No geologic evidence of economic mineralization was noted. No further work is recommended.

Figure·52

104M-NE-1, 2



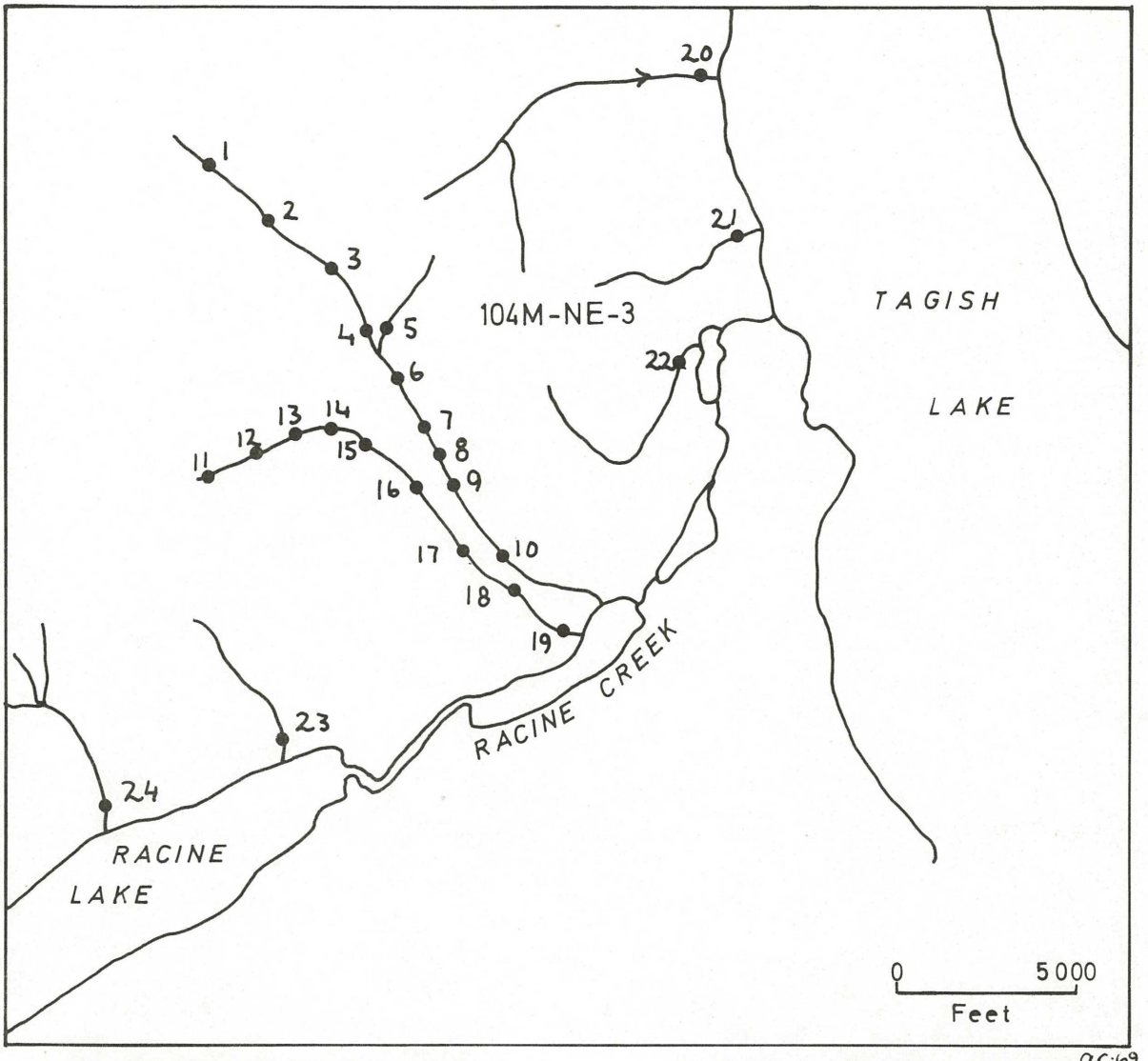
No.	Zn	Cu	Pb	Mo
1	150	35	40	2
2	163	46	104	18
3	176	37	49	30
4	150	25	55	16
5	183	35	56	24
6	150	12	40	14
7	125	20	43	16
8	140	20	56	4
9	342	42	80	14
10	408	46	125	10
11	144	25	43	4

No.	Zn	Cu	Pb	Mo
12	106	20	36	3
13	81	61	66	8
14	170	78	84	2
15	271	64	52	2
16	170	81	68	12
17	209	125	56	16
18	35	25	21	6
19	131	69	56	8
20	163	109	70	12
21	140	70	56	4

ppm

Figure·53

104M-NE-3



No.	Zn	Cu	Pb	Mo	Ag
1	53	21	26	2	0.1
2	53	20	12	2	0.1
3	44	18	18	2	0.1
4	46	18	12	2	0.1
5	70	10	15	2	0.1
6	60	16	18	2	0.1
7	60	18	26	4	0.1
8	70	26	26	2	
9	70	38	30	10	0.1
10	64	20	12	2	
11	81	56	32	2	0.2
12	94	66	36	2	0.1

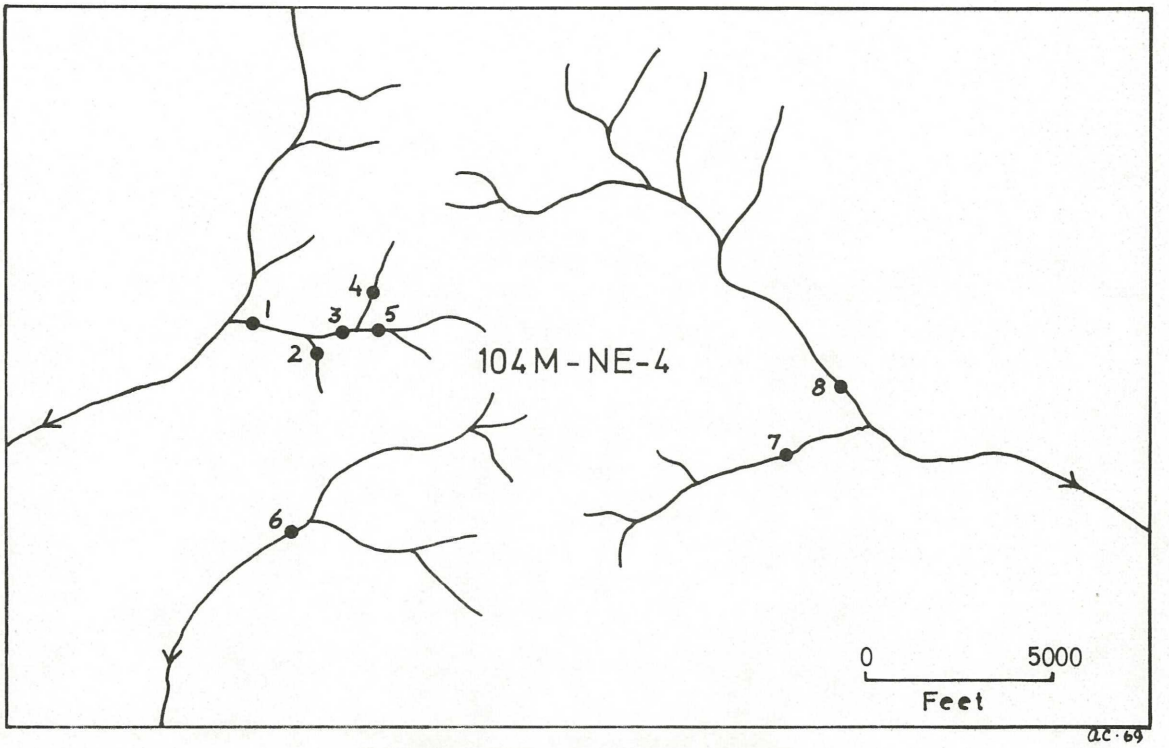
ppm

No.	Zn	Cu	Pb	Mo	Ag
13	87	58	30	2	0.3
14	87	46	39	2	0.2
15	65	32	28	3	0.1
16	55	28	26	3	0.1
17	70	40	30	2	0.2
18	50	20	25	2	0.1
19	42	15	12	2	0.2
20	106	20	36	2	0.2
21	40	58	18	2	0.1
22	70	32	26	2	0.1
23	70	10	26	3	0.1
24	94	18	39	2	0.2

ppm

Figure·54

104M-NE-4



No	Zn	Cu	Pb	Mo	Ag
1	120	60	42	2	0.2
2	119	67	39	2	0.3
3	100	63	36	2	0.3
4	75	64	36	10	0.1
5	65	61	32	4	0.1
6	80	36	40	2	0.1
7	87	40	44	6	0.1
8	120	77	40	2	0.1

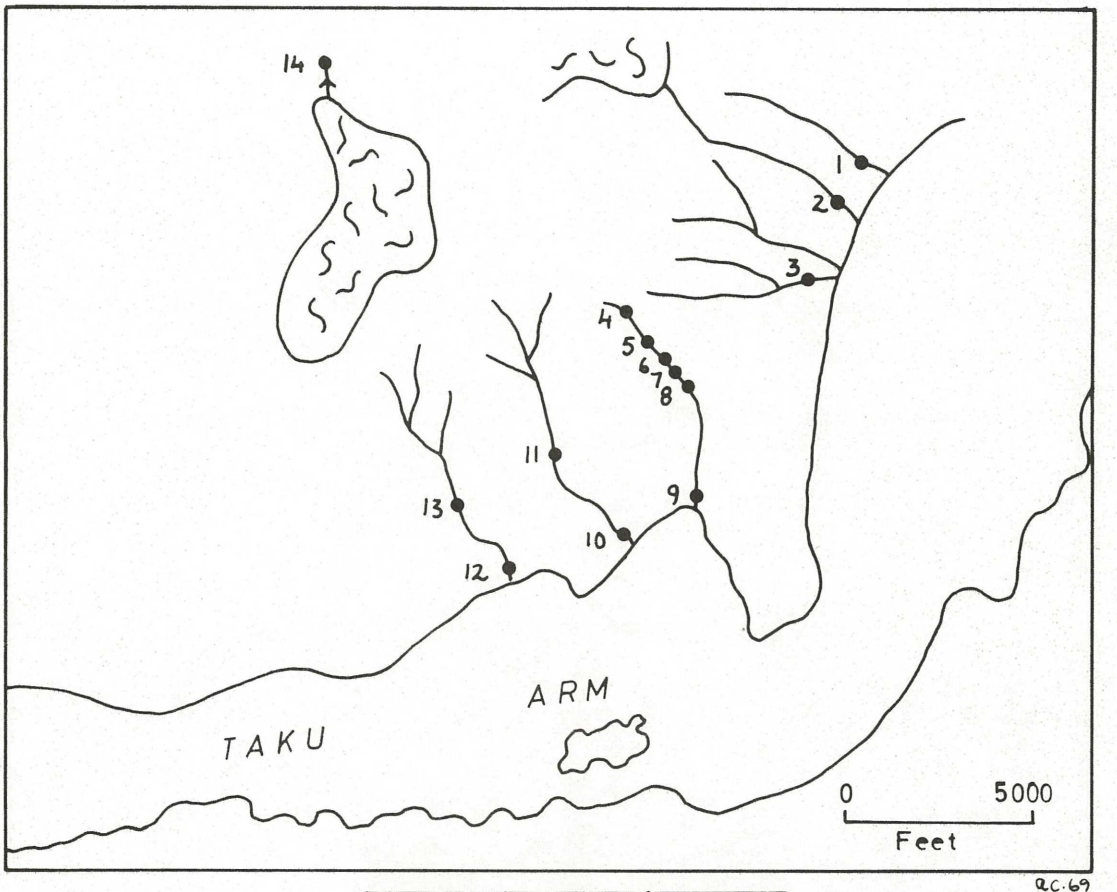
ppm

104-M-SE-1 (B-,7) (Mo)

This area contained one of the highest anomalies in the Carcross area. The geology as plotted on the regional geological map is correct. The contact between Yukon Group sediments and the eastern edge of the Coast Intrusion batholith cuts across the area. The metasedimentary rocks are mainly quartz-biotite schists and quartzites. No carbonate skarn material was noted. A large pegmatite dyke intrudes the metasedimentary rocks some 1000 feet east of the granite contact. Local relief is of the order of 500 feet. Two days were spent prospecting and examining the area. The silt samples on resampling indeed contained anomalous amounts of Mo (Figure 55, Stations 4-11). None of the adjacent streams contained anomalous Mo concentrations. Two quartz veins which contained molybdenite, both about 18 inches wide, were found in the headwaters region of the anomalous streams. A grab sample from one of these veins contained 0.26 percent MoS_2. A few Mo-bearing quartz fragments were noted in the talus slopes. The writer is of the opinion these quartz veins are present in sufficient volume to produce the Mo concentrations found. Furthermore, this type of quartz-vein mineralization is not considered to have economic potential. No further work is recommended in this area.

Figure-55

104M - SE -1



No	Zn	Cu	Pb	Mo	Ag
1	144	26	64	4	0.3
2	170	69	28	2	
3	183	48	72	3	0.2
4	100	156	55	90	0.3
5	106	145	104	100	0.3
6	221	75	68	12	0.1
7	163	56	59	8	0.2
8	100	48	28	18	0.1
9	106	56	34	20	0.1
10	65	28	34	30	02
11	87	44	44	40	0.4
12	60	3	28	2	0.2
13	58	22	44	2	0.1
14	70	26	28	2	0.1

ppm

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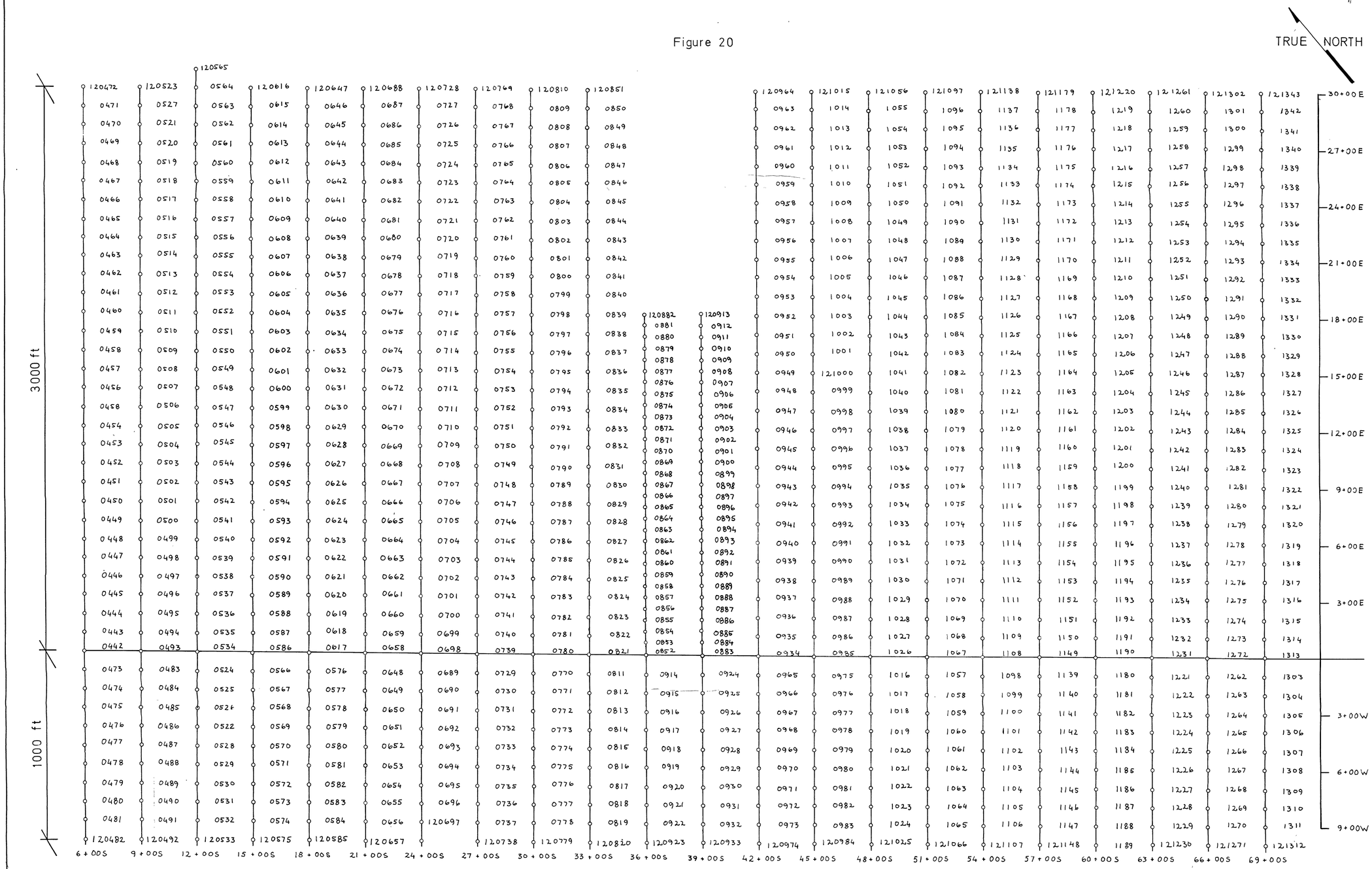
Figure 20



1000559845

CARCROSS PROJECT

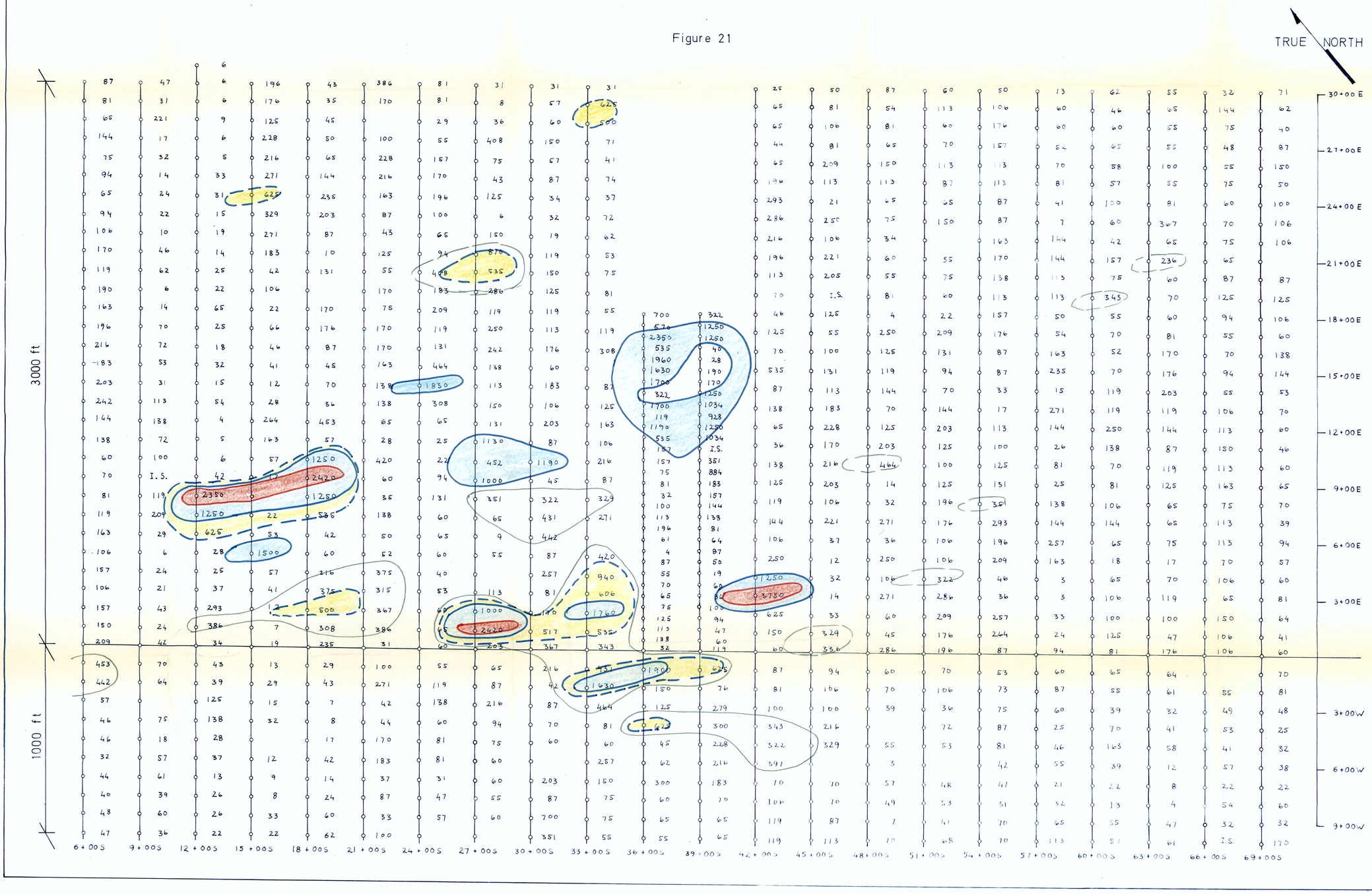
KELSALL LAKE CLAIM GROUP

Soil Sample Grid

0 300 600 900

Scale in Feet

Figure 21



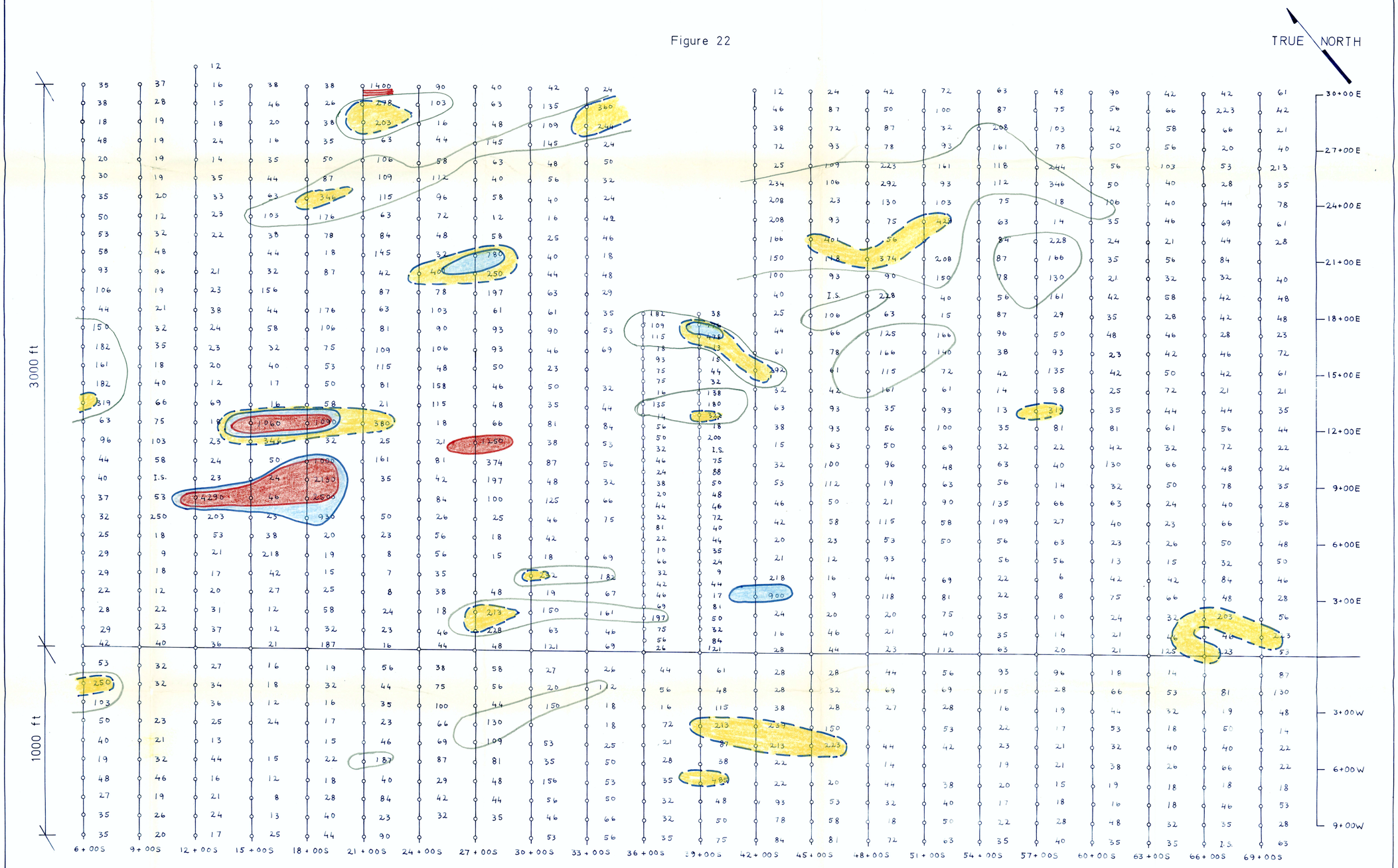
1000559845

- > 2000 ppm
- 1000 – 2000 ppm
- 500 – 1000 ppm
- 300 – 500 ppm

CARCROSS PROJECT
KELSALL LAKE CLAIM GROUP
Zinc (ppm) in Soils

0 300 600 900
Scale in Feet

Figure 22



> 1000 ppm

500 — 1000 ppm

200 — 500 ppm

100 — 200 ppm

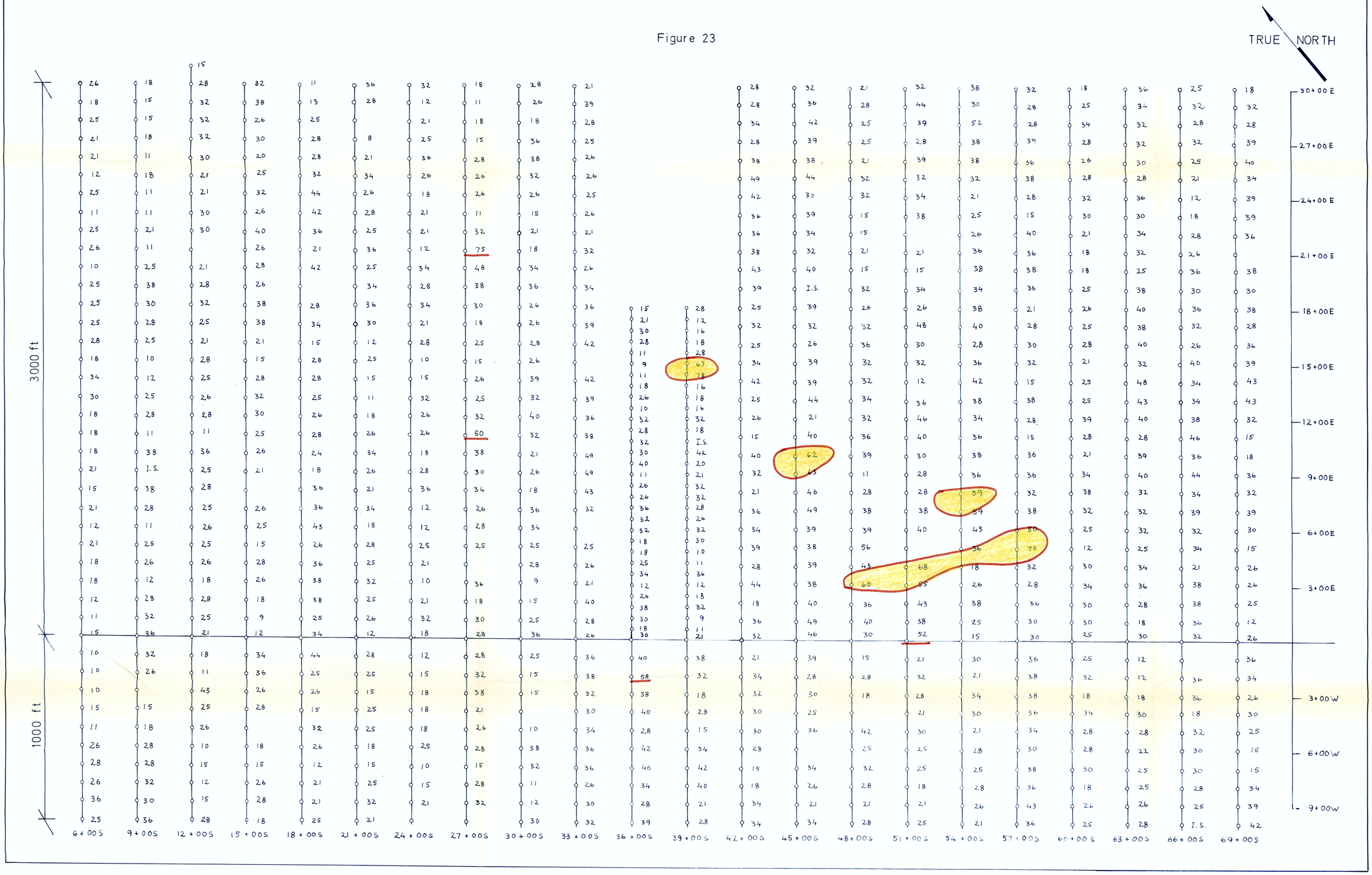
CARCROSS PROJECT
KELSALL LAKE CLAIM GROUP
Copper (ppm) in Soils

0 300 600 900

Scale in Feet

1000559845

Figure 23



> 50 ppm

1000559845

CARCROSS PROJECT
KELSALL LAKE CLAIM GROUP
Lead (ppm) in Soils

0 300 600 900
Scale in Feet