

BACON & CROWHURST LTD.
CONSULTING ENGINEERS

September 30, 1976

Mr. H.C. Fromme, President,
Yukon Revenue Mines Ltd.,
117 Industrial Road,
Whitehorse, Y.T.

Dear Mr. Fromme:

I am pleased to submit herewith my report concerning your Gem group of mineral claims situated about 30 miles east of Ross River, Yukon Territory. Pursuant to Mr. H. Johannes' request, I examined these claims on the 27th and 28th of August 1976, accompanied by your Mr. R.A. Granger, Director and Field Manager of Yukon Revenue Mines Ltd.

In my opinion, your property warrants continued careful exploration. Access is relatively easy, and work can be completed inexpensively.

In my opinion, the property offers a good chance to discover economic zones of base metal sulphide mineralization at depth. Extensive and almost complete leaching and/or oxidation has taken place; only meager values of copper, zinc and lead result from surface sampling, but this is to be expected.

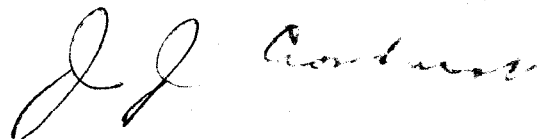
Tractor trenching could be entertained, but the depth of the alteration could be excessive and prevent any conclusive results being obtained. Short hole, 'A' size core, diamond drilling is therefore recommended, to take place early in 1977.

My recommendations are that the sum of \$38,000 be provided, as soon as may be arranged, to cover the cost of this first phase of exploration.

Your confidence in entrusting this study to our appraisal is appreciated.

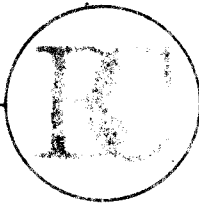
Yours very truly,

BACON & CROWHURST LTD.



J. J. Crowhurst

JJC/ic



BACON & CROWHURST LTD.

1720-1055 West Hastings Street
Vancouver 1, B.C.

REPORT

on the

GEM GROUP

ROSS RIVER AREA, YUKON TERRITORY

for

YUKON REVENUE MINES LTD.

by

J. J. CROWHURST, B.A. Sc., P. Eng.

Vancouver, B.C.

September 30, 1976

Fig. 1

BACON & CROWHURST LTD.

YUKON REVENUE MINES LTD.

GEM GROUP 1-16

GENERAL LOCATION MAP

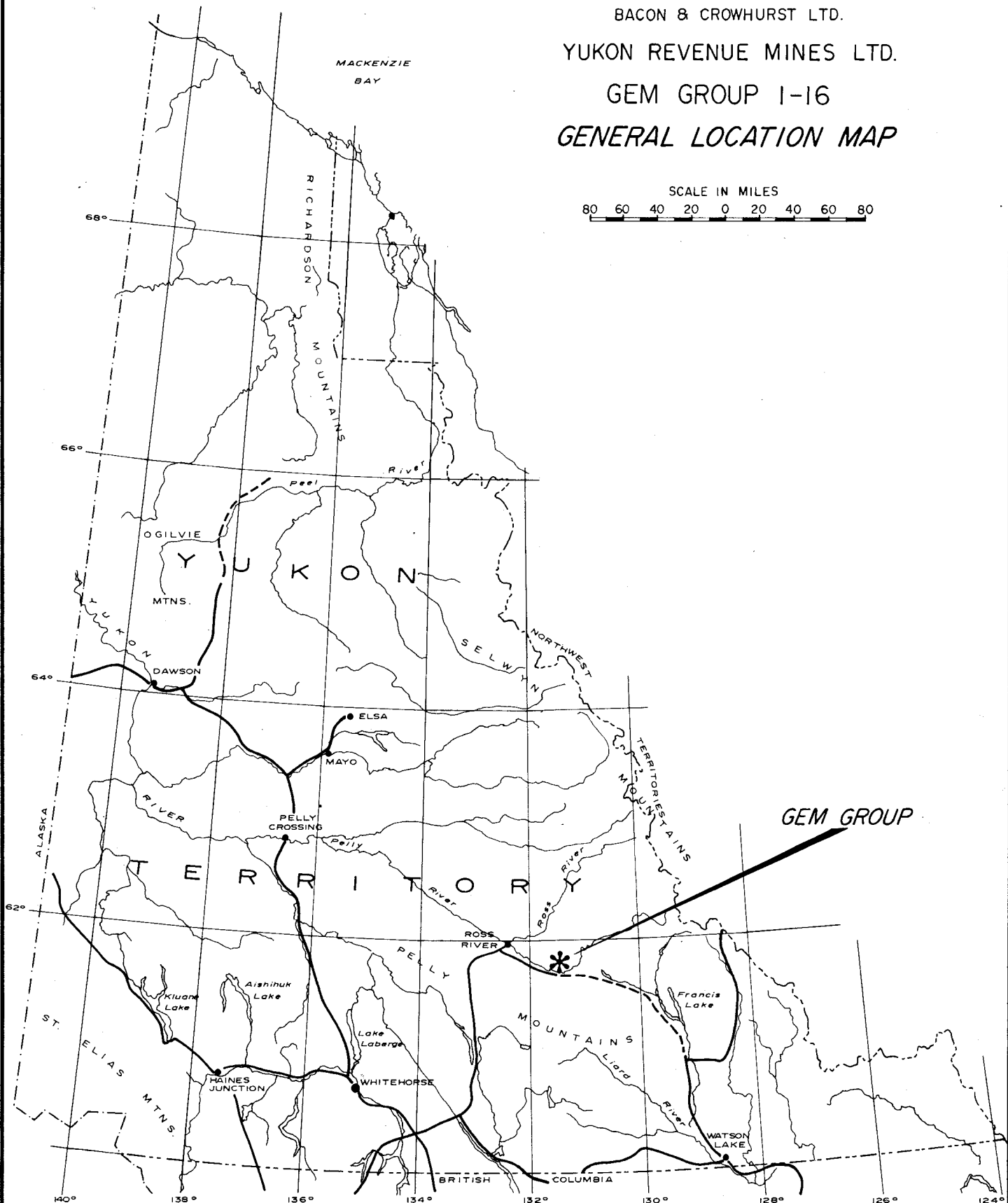
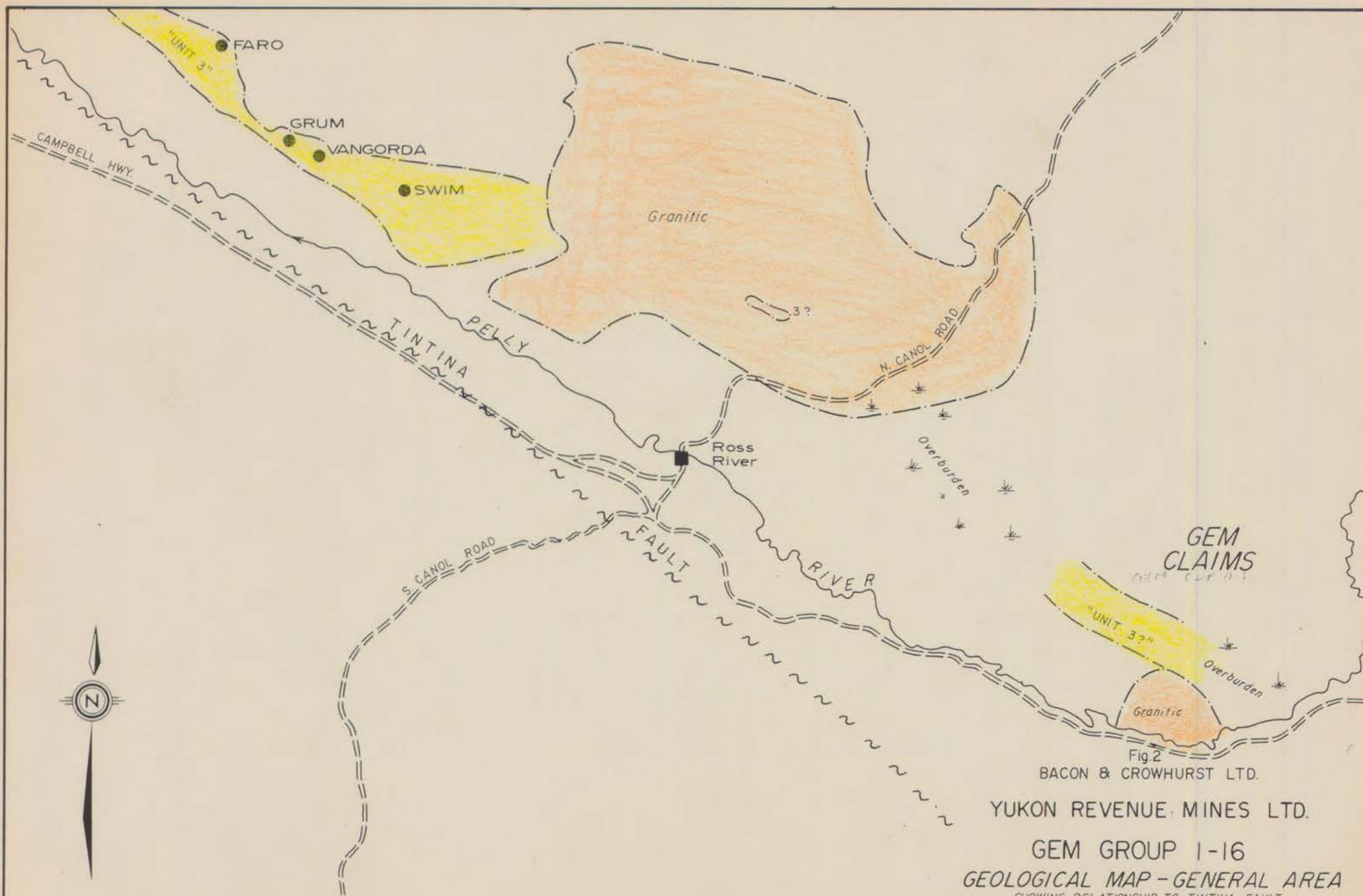


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LIST OF ILLUSTRATIONS

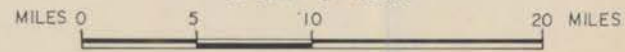
Fig. 1	General Location - Gem Group	Frontispiece
Fig. 2	Geological Map - General Area	Following 'Table of Contents'
Fig. 3	Geology Map - Gem Group - 1"=1/2 mile	Following Page 4
Fig. 4	Geology Map - Gem Group - Discovery area - 1"=500 ft.	Following Fig. 3
Fig. 5	Copper Geochemical Survey	Following Page 6
Fig. 6	Lead Geochemical Survey	Following Fig. 5
Fig. 7	Zinc Geochemical Survey	Following Fig. 6



GEM CLAIMS
0279 0280 03

Fig 2
BACON & CROWHURST LTD.

YUKON REVENUE MINES LTD.
GEM GROUP 1-16
GEOLOGICAL MAP - GENERAL AREA
SHOWING RELATIONSHIP TO TINTINA FAULT
& UNIT "3" ROCKS



CONCLUSIONS

Yukon Revenue Mines Ltd. has acquired 85 claims about 30 air miles east of Ross River in the Yukon Territory. These claims comprise the Gem Group, and appear to be along the strike of and underlain by the same series of rocks that constitute the host for the large and economically important lead-zinc-silver deposits of the Cyprus Anvil Mining Corporation and others in the Anvil Range.

Although insignificant base metal values have been obtained by surface sampling, it is evident that extensive and almost complete leaching and/or oxidation of the sulphides in a wide (+400 feet) and long (+7000 feet) black, graphitic, shaly member has taken place.

Geochemistry over the discovery areas has outlined two zones, one 2000' x 300' approximately and the other about 1000' x 300', contained within the shale horizon. These zones reported higher than background values for copper, lead and zinc. Much of the favourable shale member has not been covered by the geochemistry as yet; other zones, no doubt, exist along strike in both directions.

Shallow, hand-dug pits, up to six feet deep, failed to penetrate the leached oxidized zone; it would appear from the good permeability of the shales that this altered zone may be as much as fifty to seventy feet deep.

Although no road connection to the property exists, access is easy during the summer season by means of an overland route, nine to ten miles long, from the Campbell Highway lying to the south of the property, or by chartered helicopter from Ross River, Y.T.

Elevations range from 3200' to 4600' above sea level. The discovery area is at approximately 4000' above sea level.

The Gem Group of claims therefore presents, in our opinion, an attractive exploration target directed at the discovery of large base metal sulphide deposits.

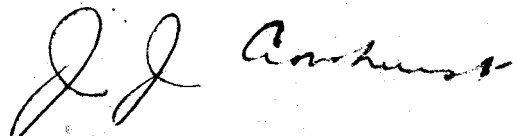
RECOMMENDATIONS

It is recommended that the sum of \$38,000 be provided, as soon as may be arranged, to cover the costs of preliminary exploration work, as detailed below:

Geological mapping, geochemistry, supervision and engineering connected with diamond drill program - one geologist and one helper - salary and wages	\$5,000
Support field costs and supplies	1,500
Helicopter support	3,000
Diamond drilling - 6 holes, each 300' long - or 1800' - at direct cost of \$15.00 per foot, 'A' size core	24,000
Evaluation of results and further recommendations	<u>1,000</u>
	\$34,500
Contingencies @ 10%	<u>3,500</u>
	\$38,000

Respectfully submitted,

BACON & CROWHURST LTD.



J. J. Crowhurst, B. A. Sc., P. Eng.

LOCATION AND ACCESS

The property is located north of the Pelly River in the Yukon Territory, about 30 air miles east of the settlement of Ross River. Its position is approximately 61°50' North, 131°30' West (see Figs. 1 & 2).

Access is at present either by foot about 9-10 miles northerly from the Campbell Highway east of Ross River, or by chartered helicopter from Ross River.

PROPERTY

<u>Claim Name</u>	<u>Number of Claims</u>	<u>Method of Acquisition</u>
Gem 1-16 inclusive	16	Optioned from A. Carlos of Whitehorse, Y.T.
Gem 17	1	Staked by Yukon Revenue Mines Ltd.
BB 1-68 inclusive	68	Staked by Yukon Revenue Mines Ltd.
<u>Total</u>	<u>85</u>	

- 4 -

HISTORY

It is reported that Kerr Addison Mines Ltd. staked 6 claims in 1966 to cover an oxidized outcrop situated a short distance south of the present Gem #2 claim. Kerr Addison then apparently carried out stream sediment geochemistry, and identified zinc values in the small creek which traverses the centre of the Yukon Revenue property from west to east. The claims were, however, dropped after one year.

The property remained open until 1973 when Mr. A. Harman, acting for a Ross River syndicate, staked 40 claims over the area. It is not known whether any work was done at this time; the claims again lapsed.

In 1974, Mr. A. Carlos prospected the area, staked claims, and completed some preliminary geochemistry. A few copper and zinc values were found by this work at the east end of the present property but, due to insufficient funds, the property once again fell open.

On June 26th and 27th, 1976, Mr. Carlos re-staked the area as the Gem Nos. 1-16 claims and, subsequently, optioned the property to your company, Yukon Revenue Mines Ltd.

Your company, under Mr. R.A. Granger's direction, carried out further prospecting, preliminary geological mapping and a geochemical soil survey during the remainder of the 1976 summer season (see Figs. 3 to 7 inclusive). Coincident zinc, copper and lead anomalous areas were found.

Several small pits were then dug in an effort to uncover primary mineralization in the coal black graphitic shale series (see Figs. 3 & 4). None,

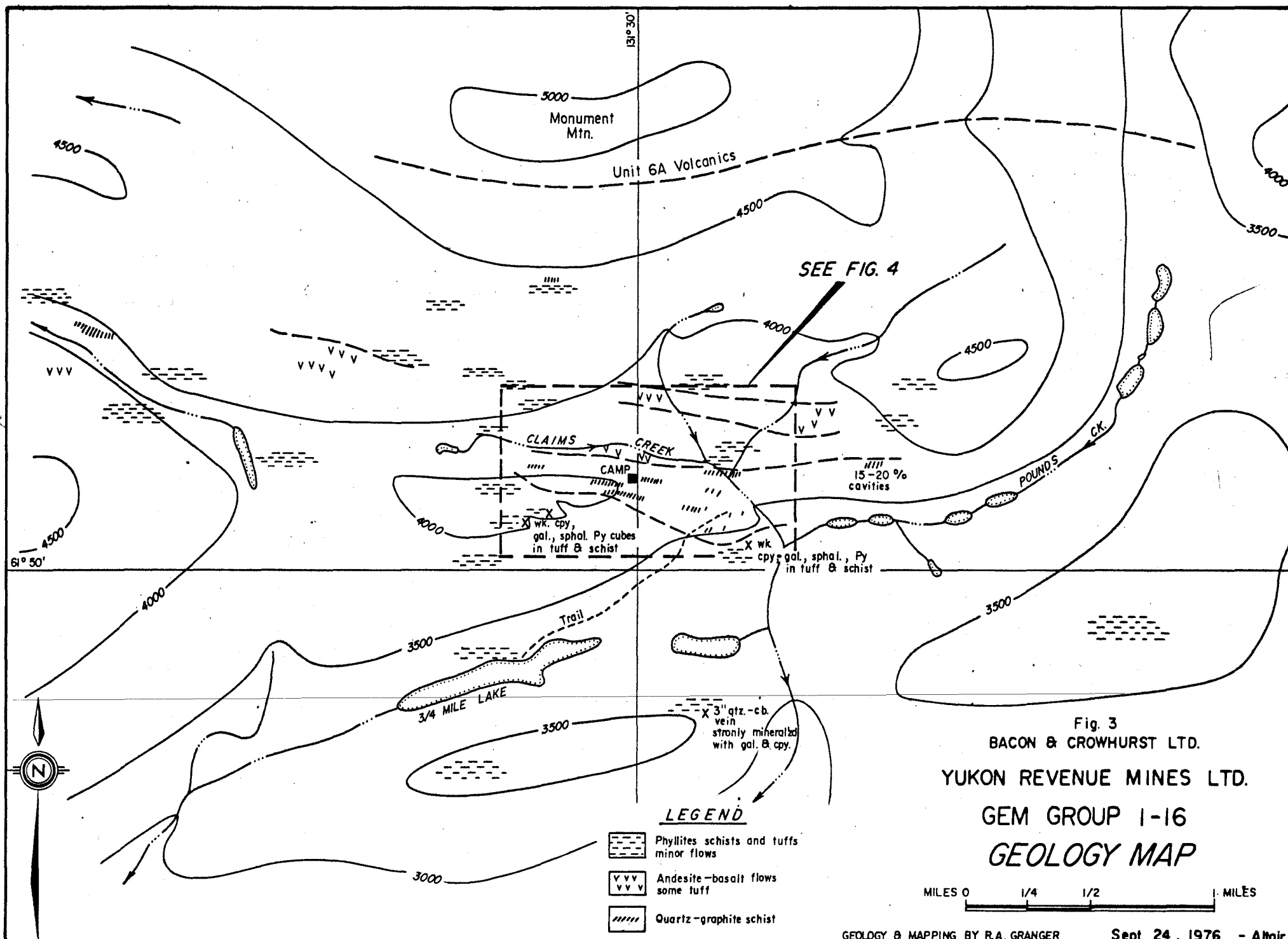


Fig. 3
 BACON & CROWHURST LTD.
 YUKON REVENUE MINES LTD.
 GEM GROUP 1-16
GEOLOGY MAP

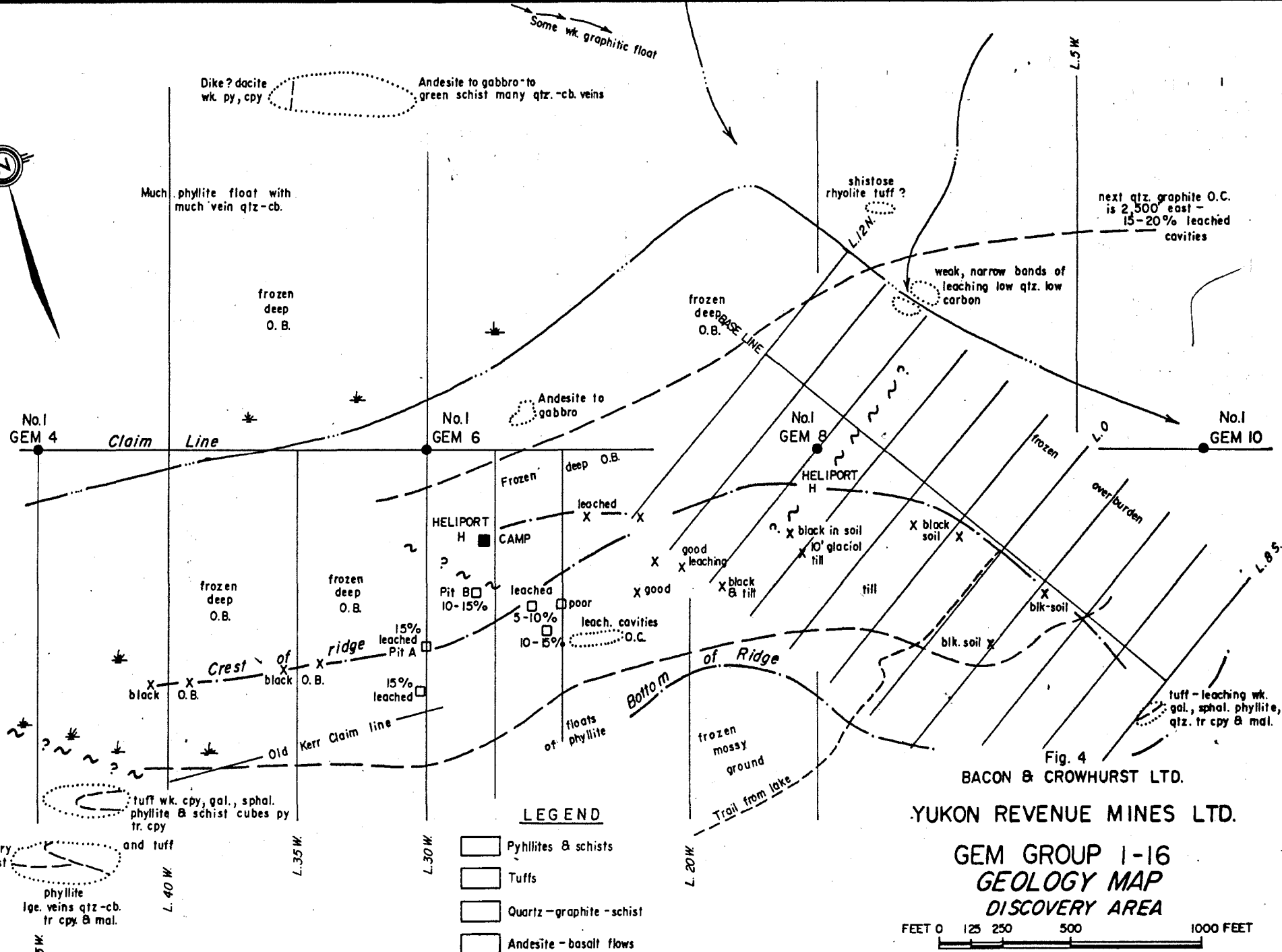


Fig. 4
 BACON & CROWHURST LTD.
 YUKON REVENUE MINES LTD.
 GEM GROUP 1-16
 GEOLOGY MAP
 DISCOVERY AREA
 FEET 0 125 250 500 1000 FEET

however, was successful. Quite extensive oxidation occurs as limonite ringed cavities and vugs in thin laminated layers in the shales; this indicates almost complete leaching has taken place.

Six "character" samples from these pits and other locations were taken by the writer on August 28th, 1976. A description of these samples and their copper, lead and zinc assays forms part of this report. Minor base metal values were thus reported but, since the mineralization has obviously been so thoroughly oxidized and/or leached, the absolute amounts of these values are considered to be of little or no significance except to identify the possibilities.

GEOLOGY AND MINERALIZATION

The Gen. property, in the writer's opinion, is probably underlain by what is classified by Dr. D.J. Tempelman-Kluit (Bulletin 208 - Geological Survey of Canada) as the lower member of Unit 3. It is to be noted that Page 59 of this Bulletin states that this Unit #3 comprises the host rocks for large and economically important lead-zinc-silver deposits in the close-by Anvil Range.

This lower member of Unit 3, classified as Cambrian (?) or Ordovician (?) in age, is described by Dr. Tempelman-Kluit as "about 1000' thick and contains phyllite and, locally, schist that is distinguished by its relatively high quartz content. This member is distinctive too in containing fairly abundant graphitic phyllite and lacking in large greenstone bodies (3a) although tuffaceous beds are present. The upper member of the structural sequence, about 3000 feet thick, contains numerous large greenstone bodies and tuffaceous beds in the phyllitic rocks....."

Again (Page 7) - "Phyllite from the lower part of the unit contains more than 50% quartz" and "Graphitic phyllite of the lower member generally contains 25 per cent or more graphite with quartz and muscovite, but biotite and chlorite are absent."

The rocks underlying the Gem claims are shown on the Geological Survey of Canada Map 8 - 1960 - "Geology - Finlayson Lake - Yukon Territory" as generally belonging to Group 'A'. This group is evidently classified by the G.S.C. to be of uncertain age and is described as quartz-biotite and quartz chlorite schist, micaceous quartzite, hornfels, minor phyllite and limestone.

Cliffs and outcrop areas to the southeast and close to the Gem claims were observed from the air; these have been examined on the ground by Mr. Granger who states, that they are composed of light coloured phyllites and/or siliceous schists. The regional dip appears to be at about 45° northeast. These outcrops, no doubt, largely formed the basis for the G.S.C. classification.

Overlying these phyllites, however, is a highly graphitic shaly member, also dipping 45° N.E. This is at least 400 feet thick, and is covered by thin but very extensive overburden, and would only be noticed by detailed ground study. This layer has been traced over a horizontal distance of at least one and one half miles by Yukon Revenue. Its presence is verified by one cliff exposure on Gem #4 and #6 claims, several shallow pits (up to 6' deep) and the holes dug for geochemistry samples, in addition to other meager outcrop areas spaced intermittently along the strike.

This graphitic shaly member contains much quartz in thin lensy laminations from 1/8" to over 1" long and 1/32" to 1/4" thick, separated 1/2" to several inches apart, which apparently has been injected along the bedding planes.

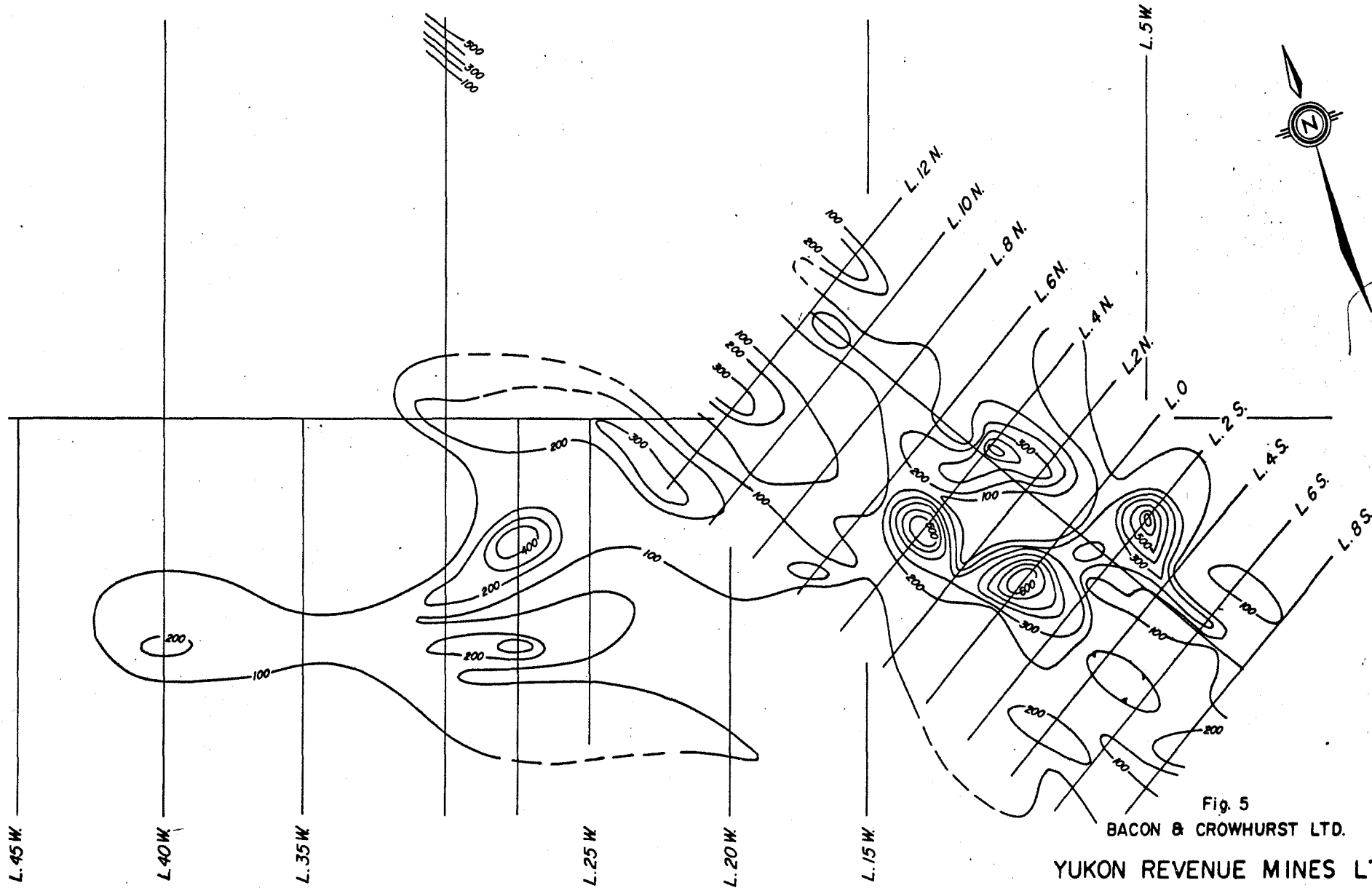
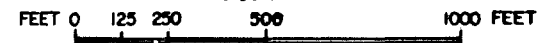


Fig. 5
BACON & CROWHURST LTD.

YUKON REVENUE MINES LTD.

GEM GROUP 1-16
GEOCHEMICAL SURVEY
COPPER



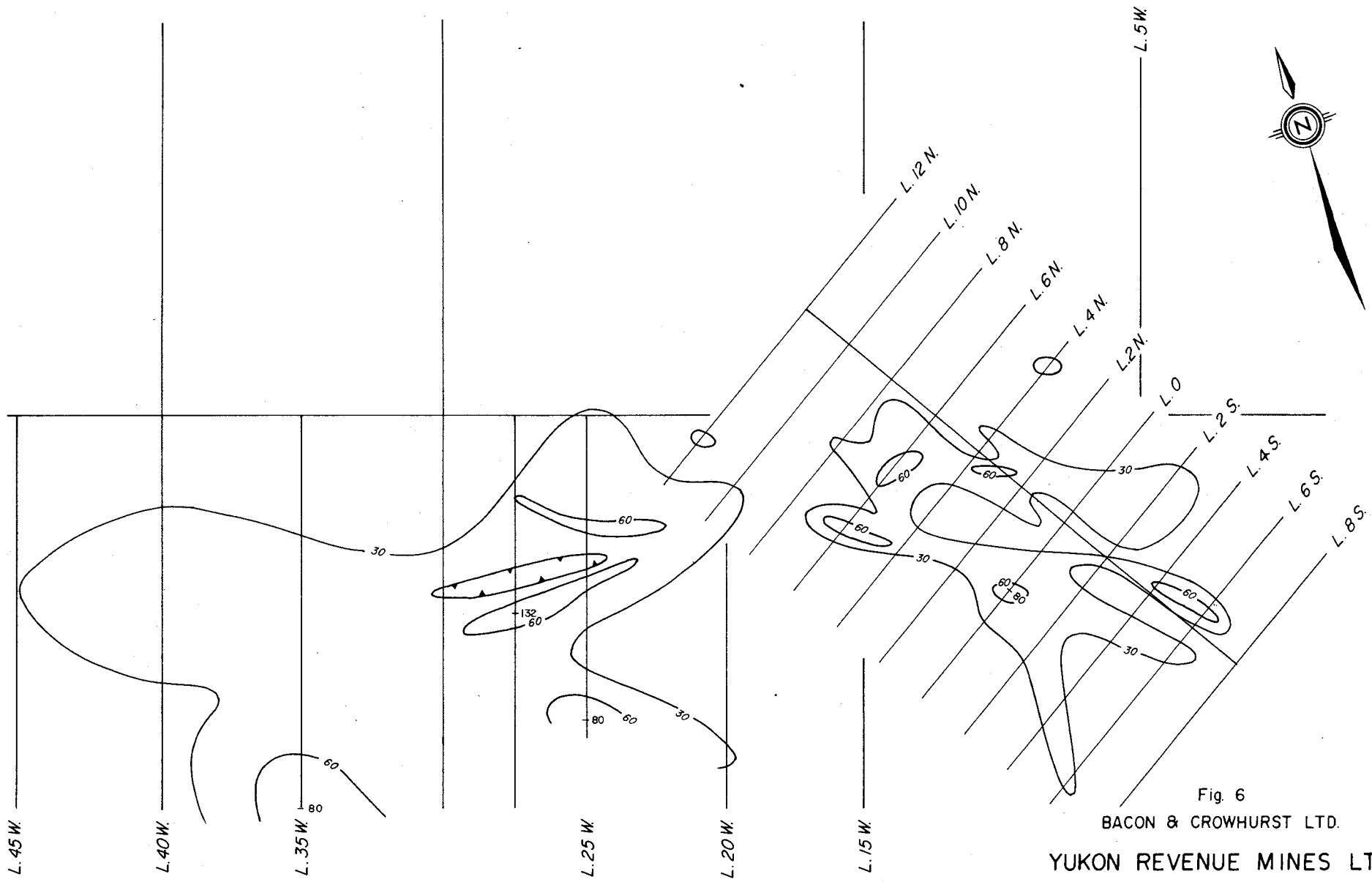
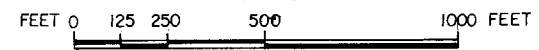


Fig. 6
 BACON & CROWHURST LTD.
 YUKON REVENUE MINES LTD.
 GEM GROUP 1-16
 GEOCHEMICAL SURVEY
 LEAD



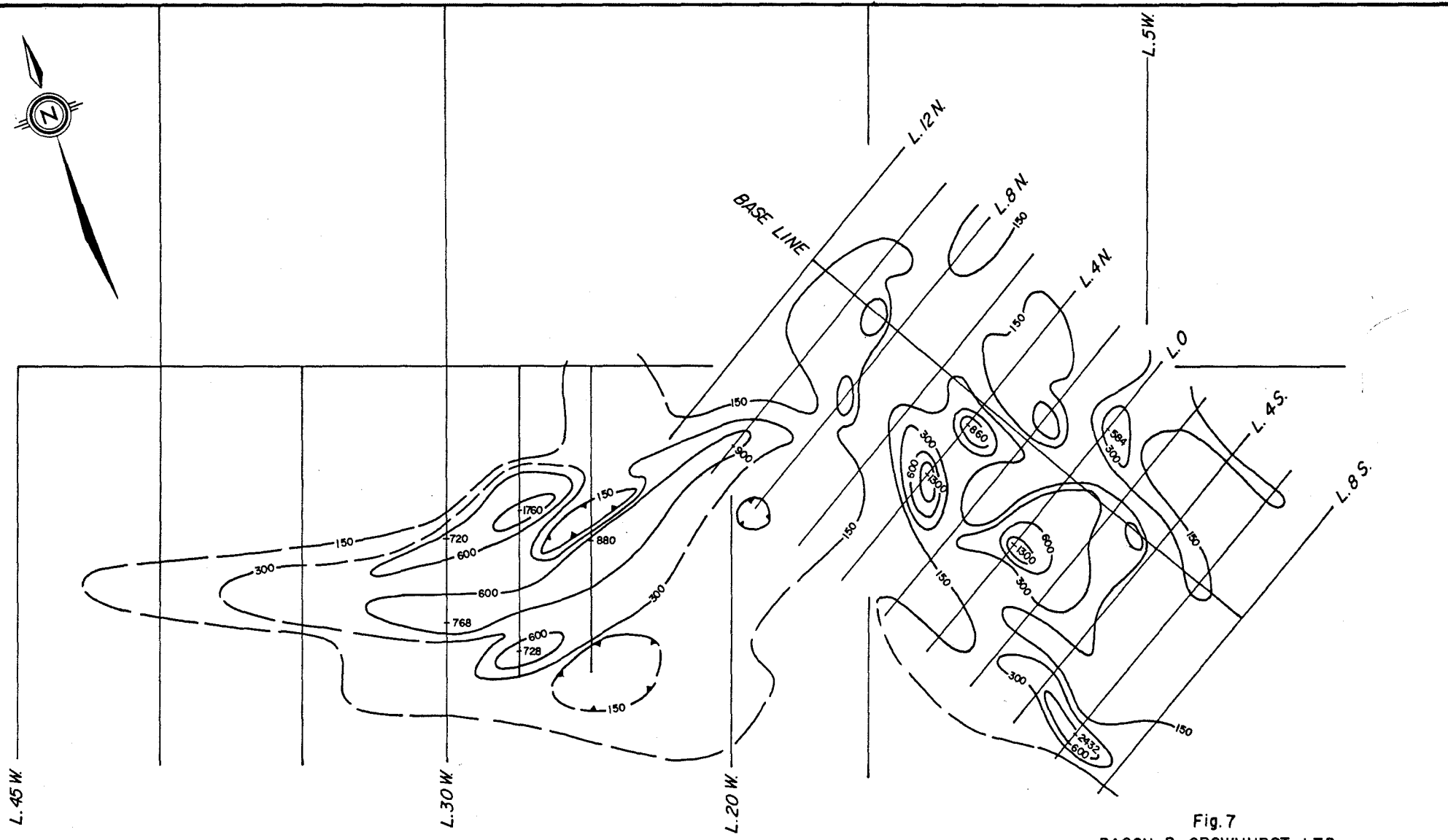
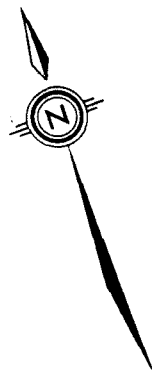


Fig. 7
BACON & CROWHURST LTD.
YUKON REVENUE MINES LTD.
GEM GROUP 1-16
GEOCHEMICAL SURVEY
ZINC

FEET 0 125 250 500 1000 FEET

Of similar size and position in the shaly partings are linear "boxworks" of cavities and vugs surrounded by paper thin oxidation, light brown to yellow in colour.

No sulphides were observed, although many specimens were studied. The deepest pits (6'+), as stated before, contained the same thinly laminated oxidized boxwork, accompanied by silicification.

The assays of the samples taken indicate that copper, lead and zinc sulphides were originally present but leaching and/or oxidation has removed almost all of these metallic values in the near surface portion of the siliceous graphitic shales. It is to be noted that these shales appear to be extremely permeable along the parting planes, and would permit the passage of solutions thereby very easily.

Overlying this highly carbonaceous shaly layer and across the transverse east-west valley, oxidized cliff-like outcrops of volcanic rocks were partly examined. These are of intermediate to basic composition and contain sparse pyrite flecks. No other sulphides were seen, although Mr. Granger reported one or two isolated specimens containing a very small amount of chalcopyrite had been observed.

A recent communication from Mr. Granger stated that: "A new outcrop had been discovered after the time of your visit, about 1/2 mile easterly beyond the last known exposure. It appears to be the 'best' material to date with boxworks occupying about 20% of the volume. Again, the boxworks appear to represent chalco and sphalerite. The geochemical survey work did not extend to this location."

Again, Mr. Granger has reported that graphitic rocks have been observed in a gorge some 2-3/4 miles west-north-west of the camp, containing a small number (5%) of leached cavities but with minor amounts of chalcopyrite.

SAMPLE INFORMATION

<u>Number</u>	<u>Location</u>		<u>Description</u>	<u>Assay</u>		
	<u>No. 2 Grid Reference</u>			<u>% Copper</u>	<u>% Lead</u>	<u>% Zinc</u>
	<u>South</u>	<u>West</u>				
1	700	2550	Crumbled black shale across 36" in bottom of pit	0.01*	NA	0.01
2	725	2450	Black shale across 60" - on cliff face	0.01*	NA	0.01
3	575	2830	Black shale across 60" - bottom of pit	0.01*	NA	0.02
4	750	3000	Grey shale - selected specimens	0.01*	NA	0.03
5	750	3000	Black shale across 36" - bottom of pit	0.01*	NA	0.02
6	1340	4300	Oxidized yellow brown sediments	0.01*	0.46	2.18

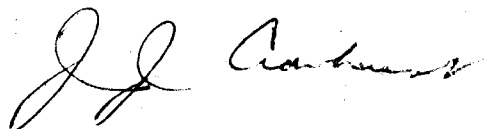
* Less than

NA - Not assayed

CERTIFICATE

I, John James Crowhurst, DO HEREBY CERTIFY THAT

1. I am a practising mining engineer with Bacon & Crowhurst Ltd., 1720 - 1055 West Hastings Street, Vancouver, B.C.
2. I am a graduate of the University of British Columbia and have been granted the degree of Bachelor of Applied Science.
3. I have been practising my profession as a mining engineer for 35 years.
4. I am a member of the Association of Professional Engineers of British Columbia, Registration No. 2120.
5. I made a preliminary examination of the Gem Group in the Ross River area, Yukon Territory, on the 27th and 28th of August 1976.
6. I nor any member of my firm have directly or indirectly received or expect to receive any interest direct or indirect in the property or securities of Yukon Revenue Mines Ltd.



J.J. Crowhurst, B.A.Sc., P.Eng.

Vancouver, Canada,
September 30, 1976.

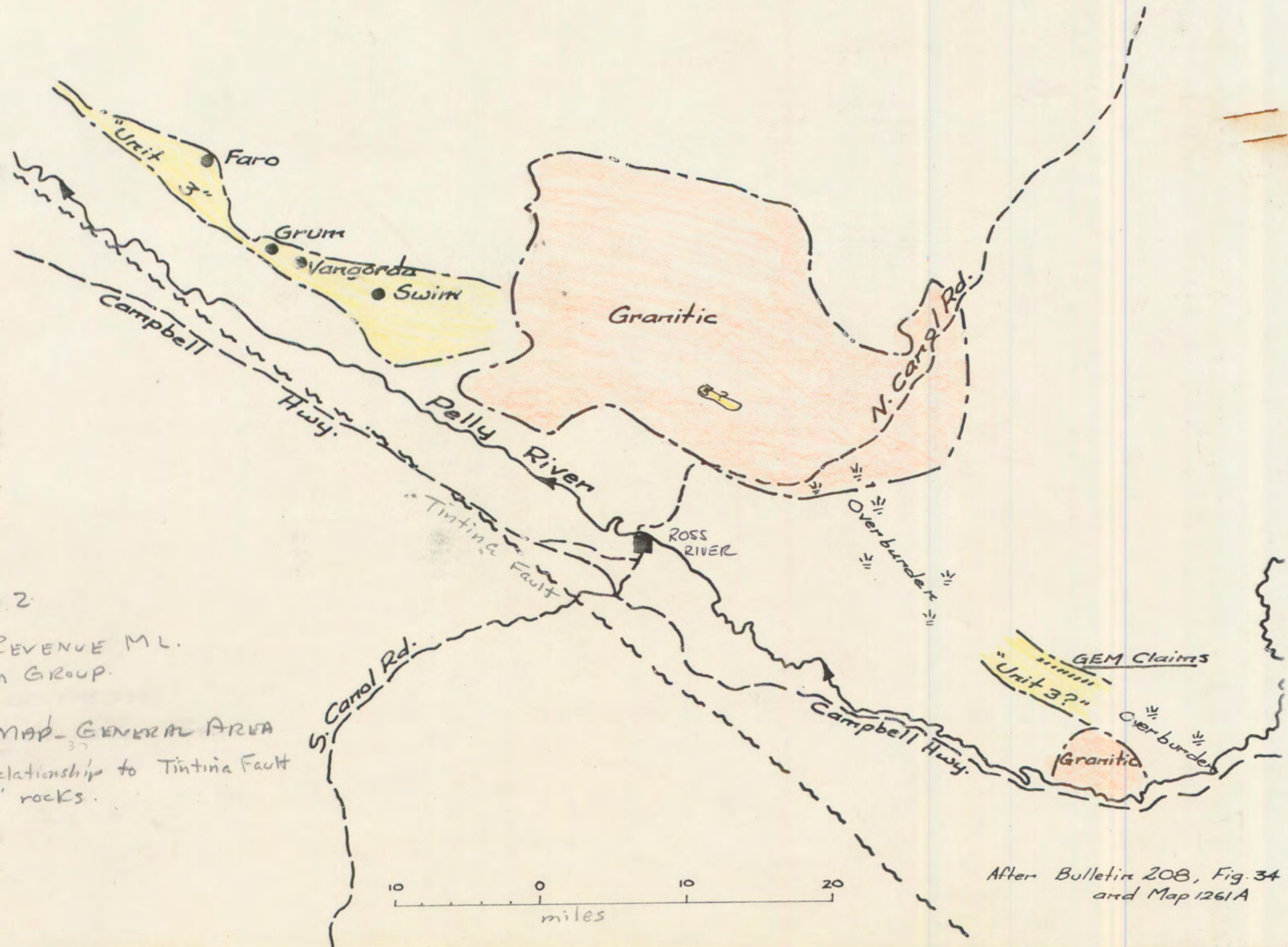


Fig. 2.
 YUKON REVENUE M.L.
 GEM GROUP.
 GEOLOGICAL MAP - GENERAL AREA
 Showing relationship to Tintina Fault
 + Unit "3" rocks.

After Bulletin 208, Fig. 34
 and Map 1261A

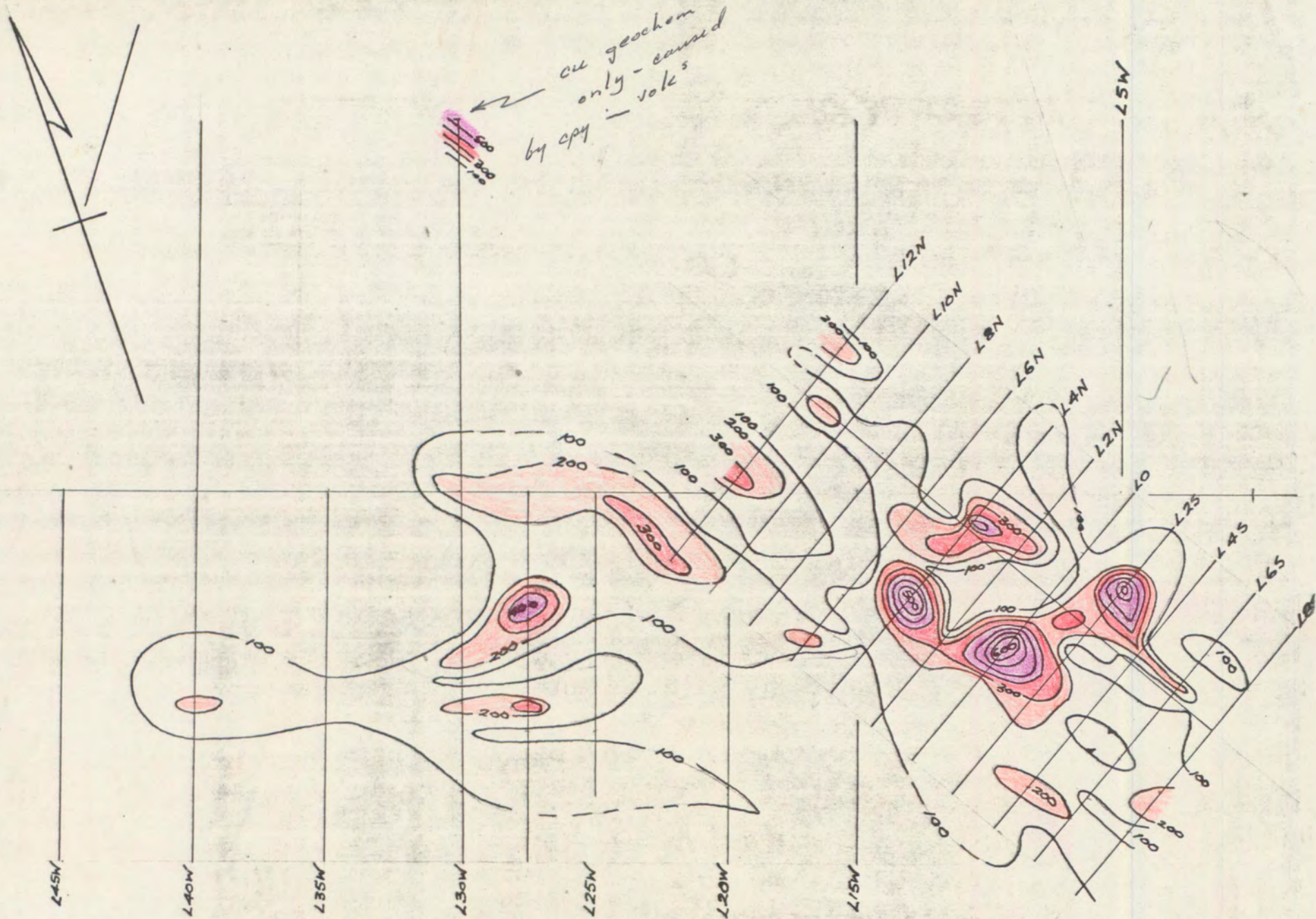


FIG 5.

YUKON REVENUE MINES LTD.

GEM 1-16 105G-13,14

Copper Geochemistry

1"=500'

July 1976

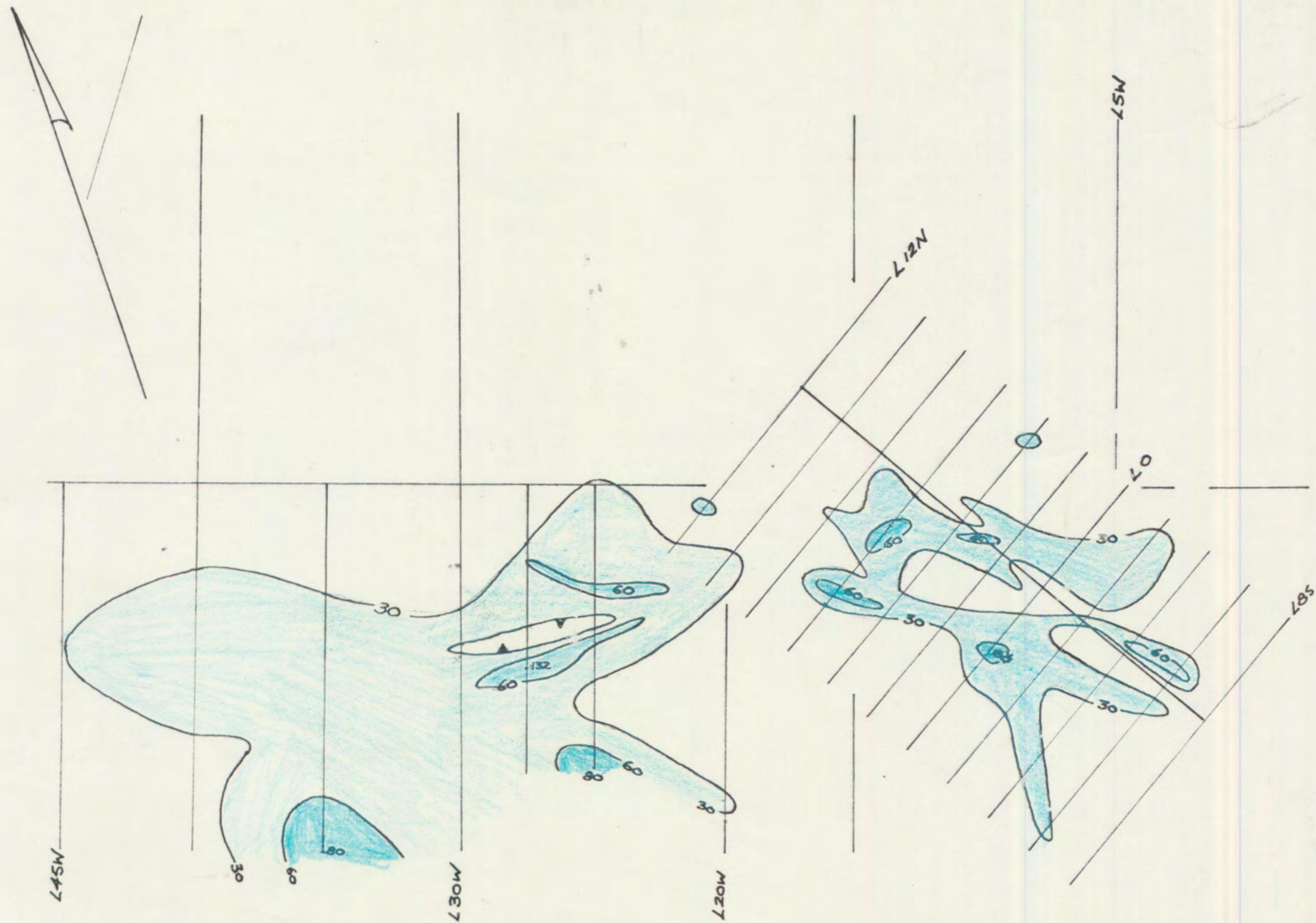
RAG



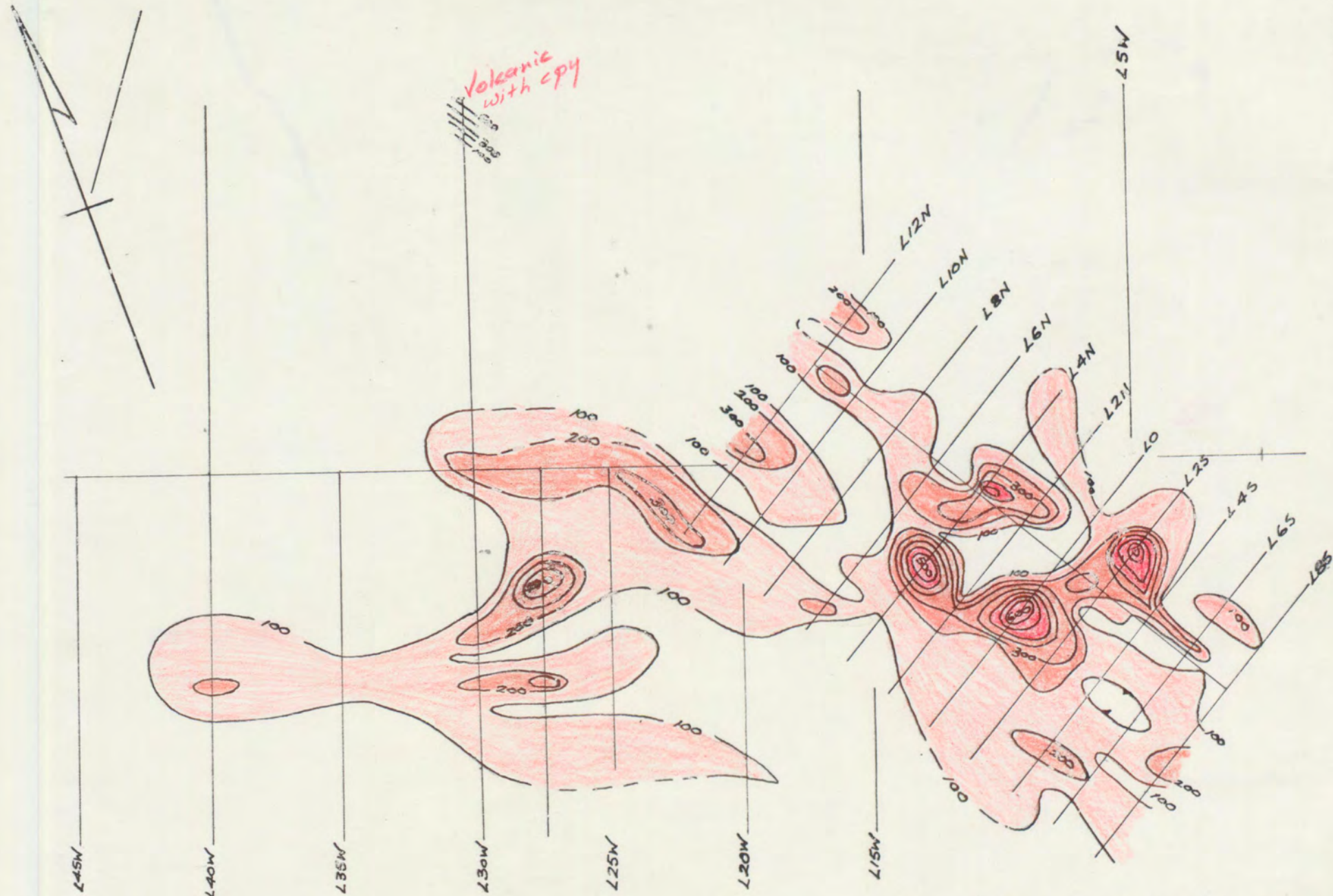
Zr 150 to 300 PPM
 Zn 300 plus ppm

Fig 7

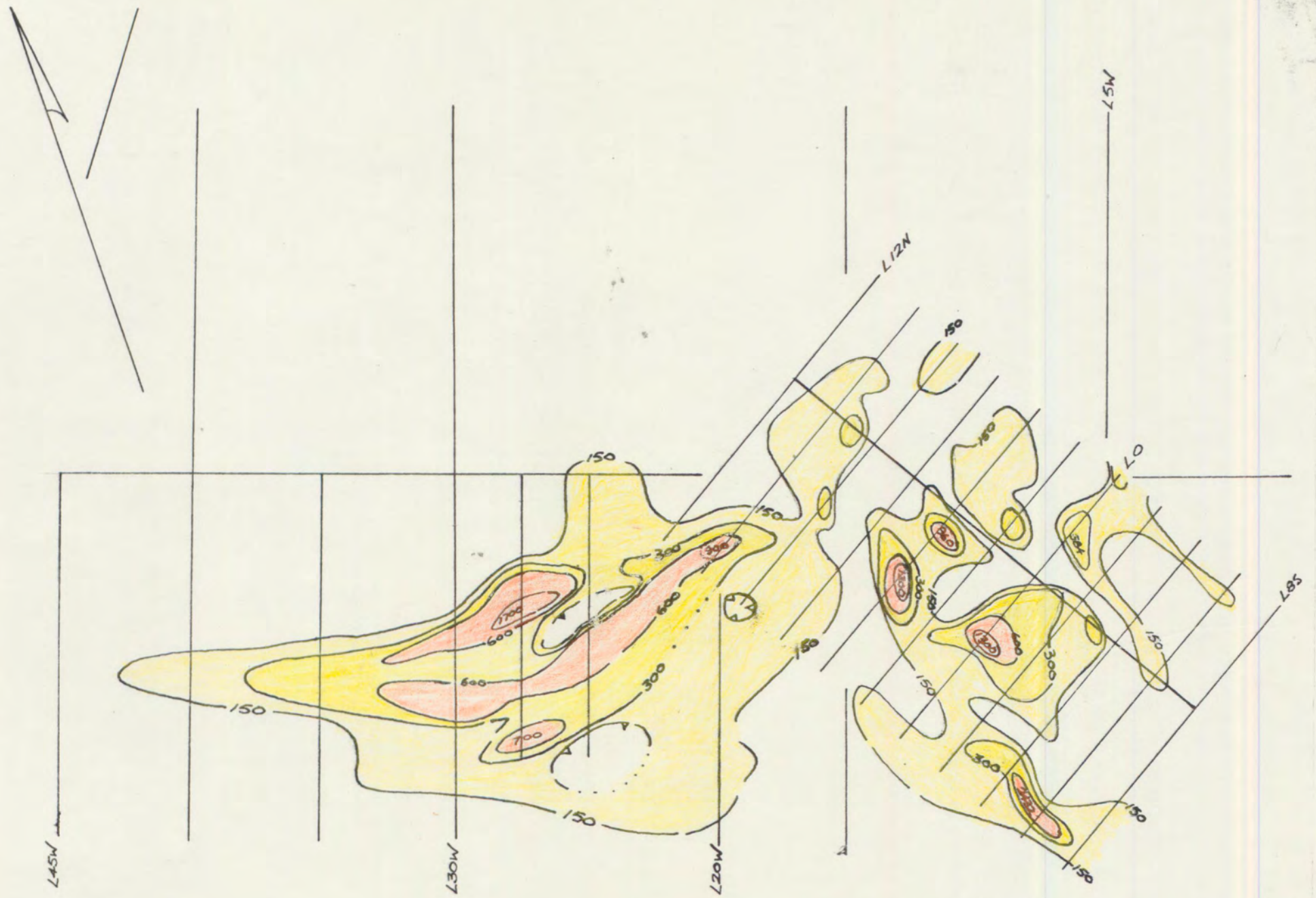
YUKON REVENUE MINES LTD.
 GEM 1-16 105G-13,14
 Zinc Geochemistry
 1"=500'
 July 1976
 RAG



YUKON REVENUE MINES LTD.
 GEM 1-16 105G-13, 14
 Lead Geochemistry
 1"=500' July 1976



YUKON REVENUE MINES LTD.
 GEM 1-16 105G-13,14
 Copper Geochemistry
 1"=500' July 1976



YUKON REVENUE MINES LTD.
 GEM 1-16 105G-13,14
 Zinc Geochemistry
 1"=500' July 1976

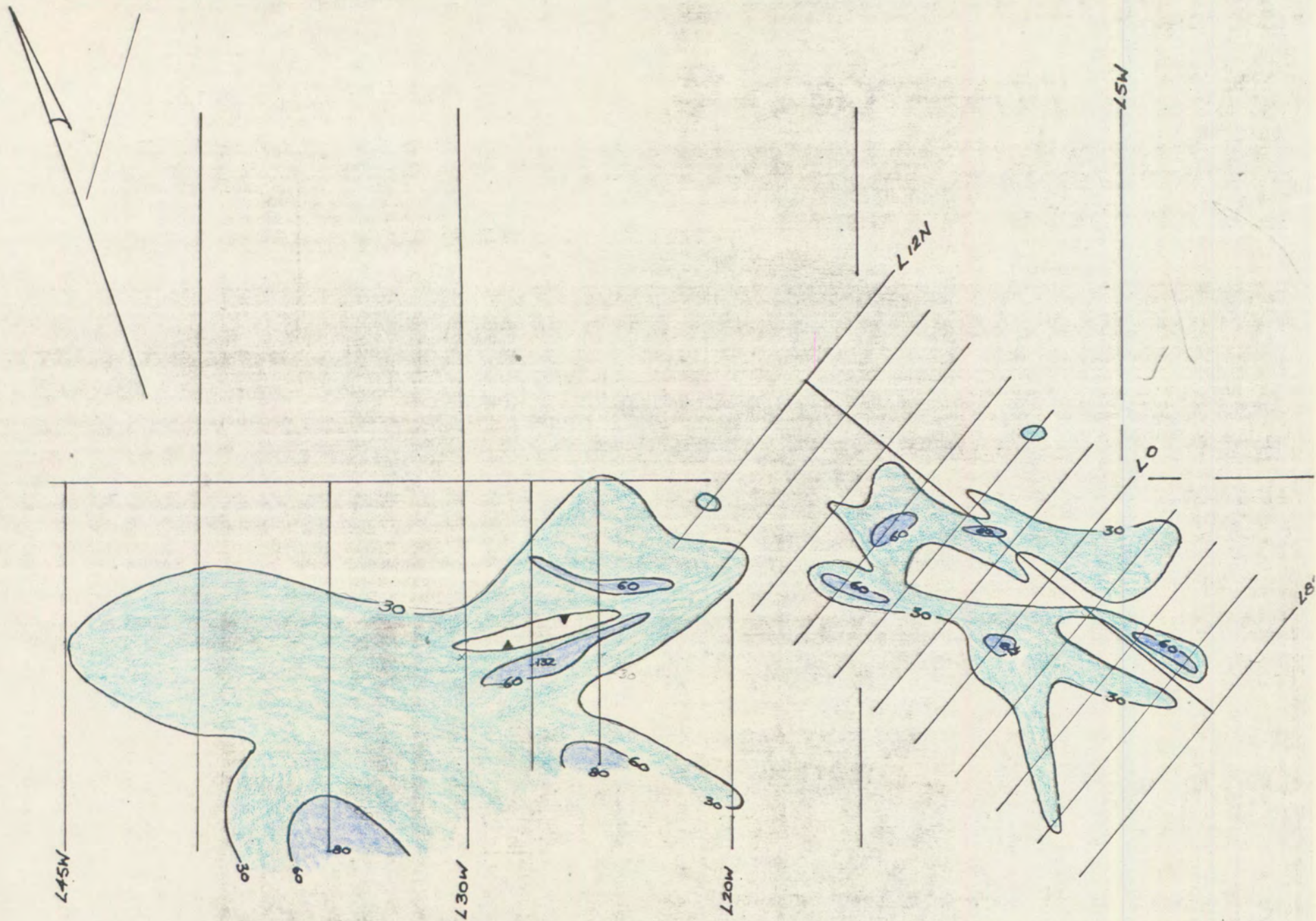


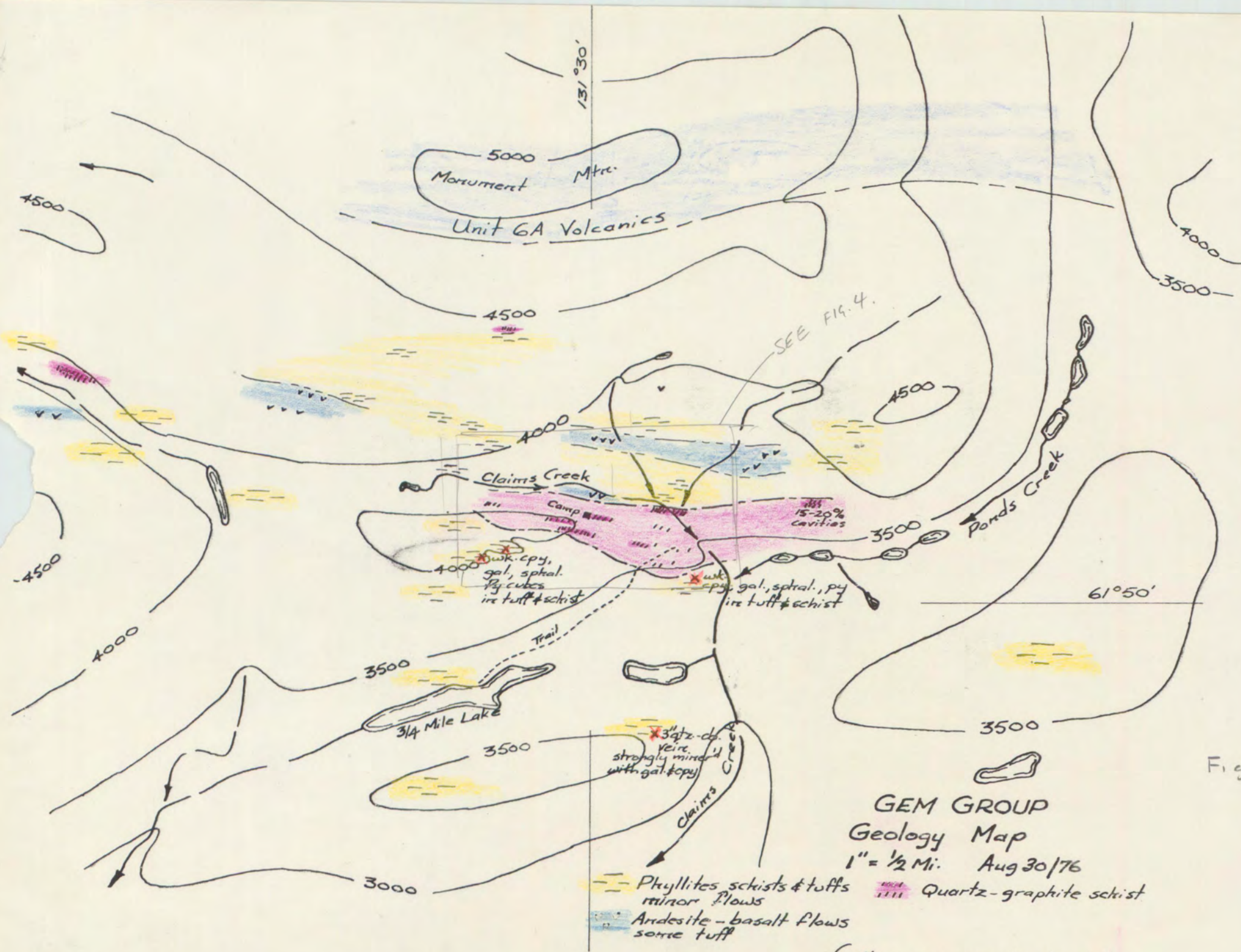
FIG 6

YUKON REVENUE MINES LTD.
GEM 1-16 105G-13,14

Lead Geochemistry

1"=500'

July 1976
RAG



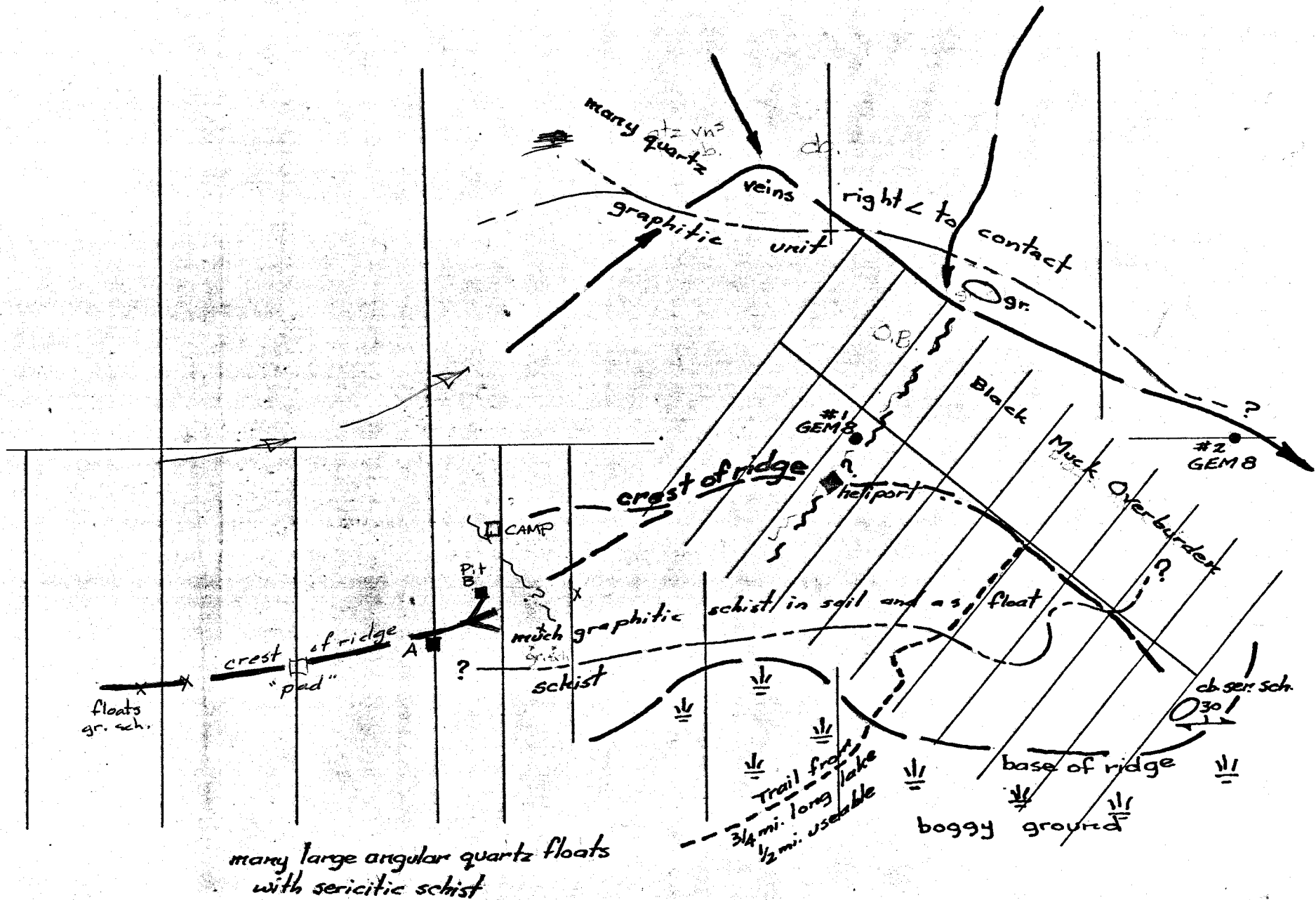
GEM GROUP
Geology Map

1" = 1/2 Mi. Aug 30/76

- - - Phyllites schists & tuffs
minor flows
- Andesite-basalt flows
some tuff
- Quartz-graphite schist

(all names are local only)

Figure 3.



General information only