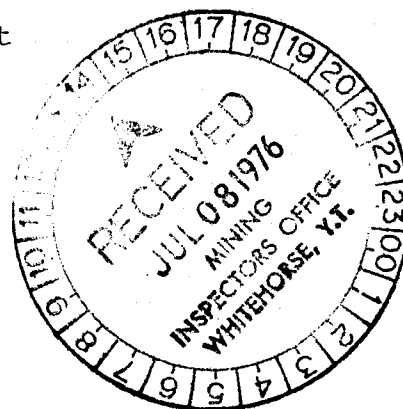


PY MINERAL CLAIM GROUP

Report on 1975 Field Work  
(Geology, Geochemistry, Geophysics)

Watson Lake Mining District

Yukon Territory



N.T.S. 105-C-1

Longitude: 130°08' W

Latitude: 61°09' N

Field Work Carried out within the Period

June - September, 1975

By:

T. J. Adamson

CYPRUS ANVIL MINING CORPORATION

February, 1976

010122



This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of \$20,051.48

~~Resident Geologist or~~  
Resident Mining Engineer

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

B.R. BAXTER  
Supervising Mining Recorder

Commissioner of Yukon Territory

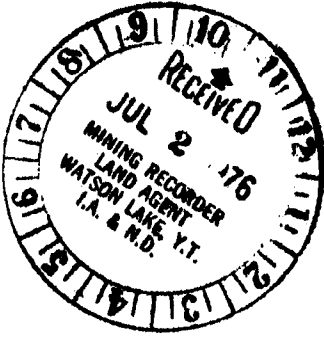


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LIST OF CLAIMS

Claim Name  
and Number

Grant Numbers

Recording Date

PY 1 - 24

Y84451 - Y84474

August 4, 1975

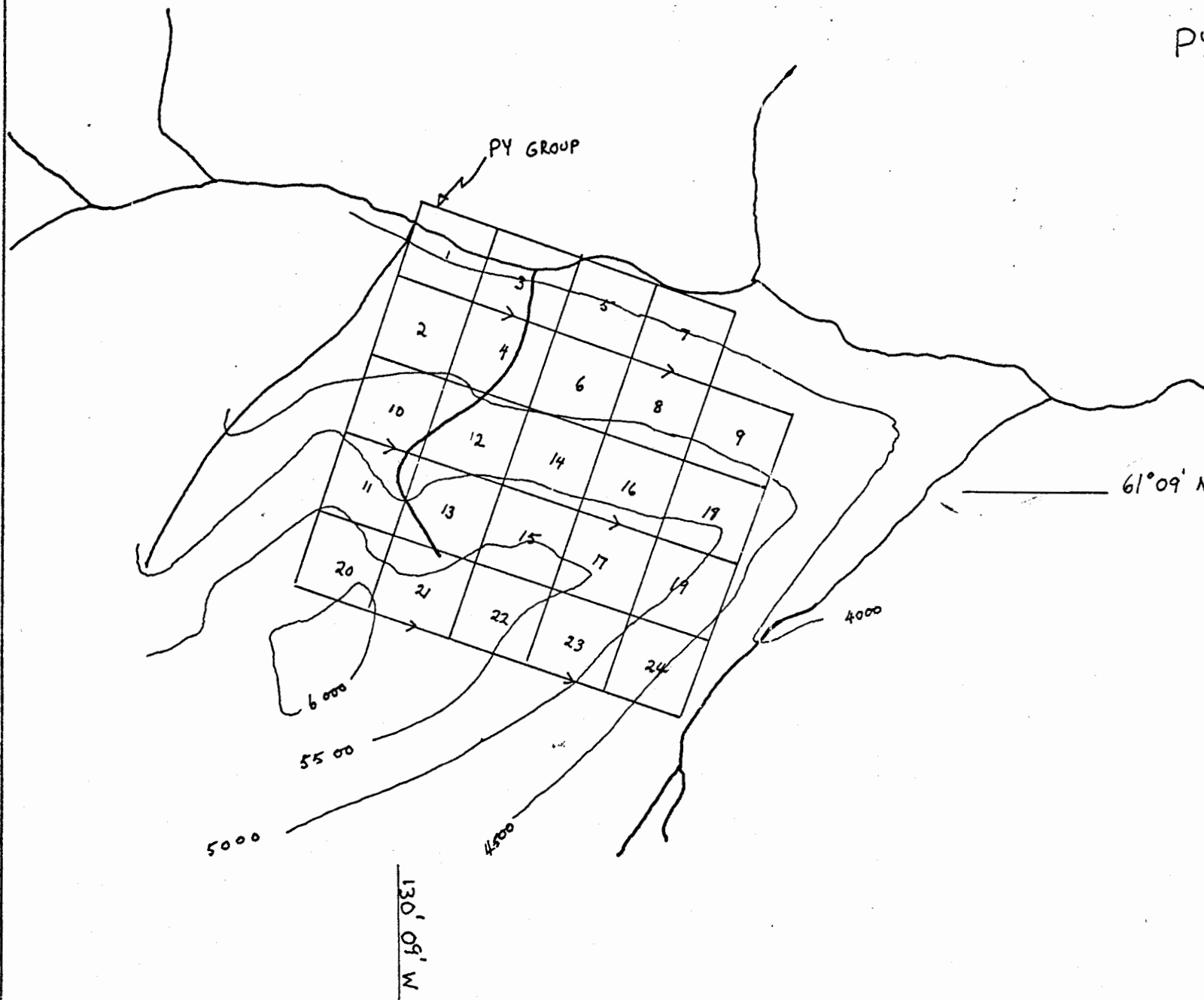
KEY MAP

PY #1-24 M.C. GROUP

NTS 105-6-1

WATSON LAKE M.D

1" : 1/2 MILE



Cyprus Anvil Mining Corporation

330, 355 Burrard Street      Telex 04508594  
Vancouver, British Columbia  
V6C 2G8  
Telephone (604) 687-2586

PY MINERAL CLAIM GROUP

Report on 1975 Field Work  
(Geology, Geochemistry, Geophysics)

INTRODUCTION

The Py Group was staked in July, 1975. Prior to the 1975 field season, attention was drawn to the area by a reconnaissance silt sample that yielded a highly anomalous (1,000 ppm) result for copper. Subsequent prospecting led to the discovery, in an area of limited bedrock exposure, of a number of conformable horizons, each up to about 1 foot thick, of massive granular pyrite, occurring through a 20 foot thick section of rusty weathering quartz sericite schists, exposed in the anomalous creek. An assay sample of the massive pyritic material ran .98% zinc, .20% lead and .03% copper.

During the 1975 field season, a field exploration program was carried out to evaluate this area. Preliminary geological mapping was carried out at a scale of 1":400'. A grid was established in the area of interest over which soil, silt and rock geochemical samples were collected. An electromagnetic survey and an induced polarization survey were conducted in an area of anomalous geochemical responses.

LOCATION AND ACCESS

The Py Group is located on N.T.S. mapsheet 105-G-1, at 61°09' north latitude and 130°08' west longitude, and about 14 miles east-southeast of Fyre

... 2

**CYPRUS ANVIL**

Lake. Elevations on the property range from about 4,000 to 6,000 feet. The property spans the timberline. The Campbell Highway passes within 21 miles of the claim block at a point near Frances Lake. Access to the property is by helicopter, from either the Campbell Highway or from a small lake, suitable for float equipped fixed wing aircraft, located about 5 miles northeast of the property.

GEOLOGY (Figure 1)

The Py Group is situated within a belt of schistose and gneissic Proterozoic metasediments and metavolcanics. A number of stratabound, massive, pyritic sulfide deposits have previously been discovered in the Fyre Lake area, although none of these are of economic tonnage and grade.

Approximately 10.9 miles of grid line were established on the Py claims. Outcrop is very scarce in the main area of interest in the central and northern grid area. Rock units encountered on the claims are summarized below:

TABLE OF GEOLOGIC FORMATIONS

- |   |   |
|---|---|
| 4 | Medium grained quartz feldspar augen schist; minor quartzite, quartz sericite schist, fine grained quartz biotite schist. |
| 3 | Sericite schist to quartz schist; white, often very sericitic and soft; minor massive pyrite lenses.                      |

TABLE OF GEOLOGIC FORMATIONS - (Cont'd)

- 2 Interbedded, massive to sericitic foliated, quartzite; fine grained quartz-feldspar augen schist; thin horizons, seen mainly as float and rubble, of fine grained, light colored, quartz-feldspar-sericite schist, often with quartz eyes; and very fine grained pyritic, dark (biotitic?) schist, both latter units with high rock geochemical values (copper and/or lead) and with occasional visible disseminated copper mineralization.
- 1 Clean fine to medium grained, massive quartzite; minor quartz sericite schist.

There are no distinctive marker horizons in the area. Differentiation into the above units is difficult. Unit 2 is an interbedded sequence of Units 1, 3 and 4 rock types.

The main area of interest on the claims is centered on a strong copper anomaly, in soils, in the central grid area. There is essentially no outcrop in the vicinity of the strongest geochemical responses. However, considerable angular float of light to dark grey, pyritic, fine grained, quartz-feldspar-sericite schist, often with quartz "eyes", and containing minor, fine grained, disseminated sooty chalcocite, has been found in the area of the highest soil geochemical values. Samples of this mineralized float have given assay and rock geochemical values of up to .24% copper (see Figure 1).

Subsequent prospecting in the southeast grid area, in the area of some

strong copper and lead values in soils, revealed some rubble and minor sub-outcrop of rusty, pyritic, fine grained, light to dark, siliceous schists, similar to the mineralized float seen in the central grid area. Rock geochemical analyses of this material gave moderately anomalous lead results (up to 210 ppm). The distribution of this geochemically anomalous float in the southern grid area suggests that its source is a number of thin, conformable horizons. These same horizons may be the source of the main copper anomaly in the central grid area, although this main copper anomaly does not have any significant, coincident anomalous lead values.

Within the grid area, the rocks exhibit one dominant foliation, striking at about  $060^{\circ}$  and dipping an average of  $20^{\circ}$  to the northwest.

#### GEOCHEMISTRY (Figures 2 and 3)

A total of 582 soil samples, 12 silt samples and 12 rock geochemical samples were collected on the Py claims during the 1975 field season. These samples were analysed at the Acme Analytical Laboratories Ltd. lab at Ross River, Y.T. (head office at 6455 Laurel Street, Burnaby, B.C.).

All samples were initially analysed for copper, lead and zinc, using a "total" extraction digestion. Soil and silt samples were dried and then screened. Rock samples were crushed, pulverized and screened. The minus 80 mesh fraction for each sample was retained for analysis. Sample digestion was in hot aqua regia, and analysis was by an atomic absorption procedure.

Sixty soil samples, from the area of the main copper anomaly, defined by the above analytical results, were re-analysed using a "readily extractable" (cold dilute hydrochloric acid) digestion.

The soil sample results from the Py grid sampling outlined a large, strong copper anomaly with many results greater than 1,000 ppm and a few samples in the order of 10,000 ppm. There is no outcrop exposure in the area of the highest copper values in the central grid area. These highest copper values do not have any coincident anomalous lead or zinc results. The highest copper values are associated with areas of swampy ground water seepages. The soil samples re-analysed for copper, using a cold dilute HCl extraction, were from a number of lines across the main, central, total extraction anomaly. These results defined a copper anomaly similar in plan to the total extraction results, but with the magnitude of the values about 20 - 30% lower. This suggests that it is possible that most of the copper in soils may have been transported some distance from its bedrock source, in the same state in ground waters. However, it is in the area of the highest soil geochemical values and groundwater seepages that angular float containing copper mineralization has been found.

In the southern portion of the grid, anomalous copper results do not have the extremely high magnitude as seen in the central grid area. In this area, also, there are a number of anomalous lead results in soils. These anomalous lead values are not uniformly coincident with the anomalous copper values. Outcrop and sub-outcrop is relatively abundant in this area. Areas of anomalous copper-lead, and copper soil values are generally coincident, with outcrop or float, of rusty weathering pyrite quartz-sericite schist and pyritic quartz eye-feldspar schist. Rock geochemical analyses of the above rocks gave results slightly anomalous in copper and moderately anomalous in lead.

Zinc values, for soils, silts and rocks, are low and uniform throughout

the area.

## GEOPHYSICS

### 1. Ground Electromagnetic Survey (Figure 4)

A total of 17,900' of line was surveyed using the Crone J.E.M. dual frequency electromagnetic unit. The survey was run using the horizontal loop configuration. Readings were taken on only the 1,800 c.p.s. frequency, and with a coil spread of 200'.

The E.M. survey did not define any significant conductive zones. All profiles are of a flat nature with occasional single station relief not exceeding -3 or +3 degrees resultant dip angle.

### 2. Induced Polarization Survey

During September, 1975, an induced polarization survey was conducted on the Py claims by Peter E. Walcott and Associates Ltd. of Vancouver, B.C. Approximately 37,000' or seven miles of grid line were I.P. surveyed. A complete discussion of I.P. results is given in a separate report by Peter E. Walcott.

The results of the I.P. survey are summarized as follows:

- (a) most of the survey areas appeared to exhibit anomalous frequency effects,
- (b) complex zones of higher frequency occurred within the above area,
- (c) the strongest responses in these zones were generally obtained on the smaller separations; the causative sources probably do not extend beyond 200 feet in depth,

- (d) the stronger zones in the central and northwestern part of the survey area showed fair correlation with the copper soil anomaly in that area,
- (e) no response was obtained over the copper anomaly in the southeastern part of the grid.

As a result, Peter E. Walcott concludes that the causative sources of the anomalous frequency effects are most probably sulfides in unit 2 with the stronger responses caused by small stratabound concentrations of the same. He therefore recommends that the data be further studied in conjunction with the known geology to determine if further work should be done on the property balancing the facts that:

1. the I.P. response is presumably not solely due to economic sulfides, and
2. no I.P. response was obtained over the rusty pyritic mineralized suboutcroppings causing the copper soil anomaly area in the southeastern portion of the grid.

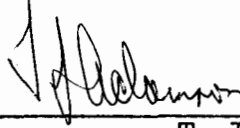
#### CONCLUSIONS AND RECOMMENDATIONS

No additional work is planned on the Py claims at this time. However, current work will be filed to keep the claims in good standing for as long as possible.

Work to date suggests that the causative source of anomalous geochemical and geophysical responses in the area is most likely stratabound concentrations of sulfides of probably too limited extent to be economically

significant. However, the almost total lack of bedrock exposure in the area of interest precludes a definitive evaluation of this area until such time as a small diamond drilling program is carried out.

Respectfully submitted,



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T. J. ADAMSON

TJA/cb

May, 1976

List of Personnel

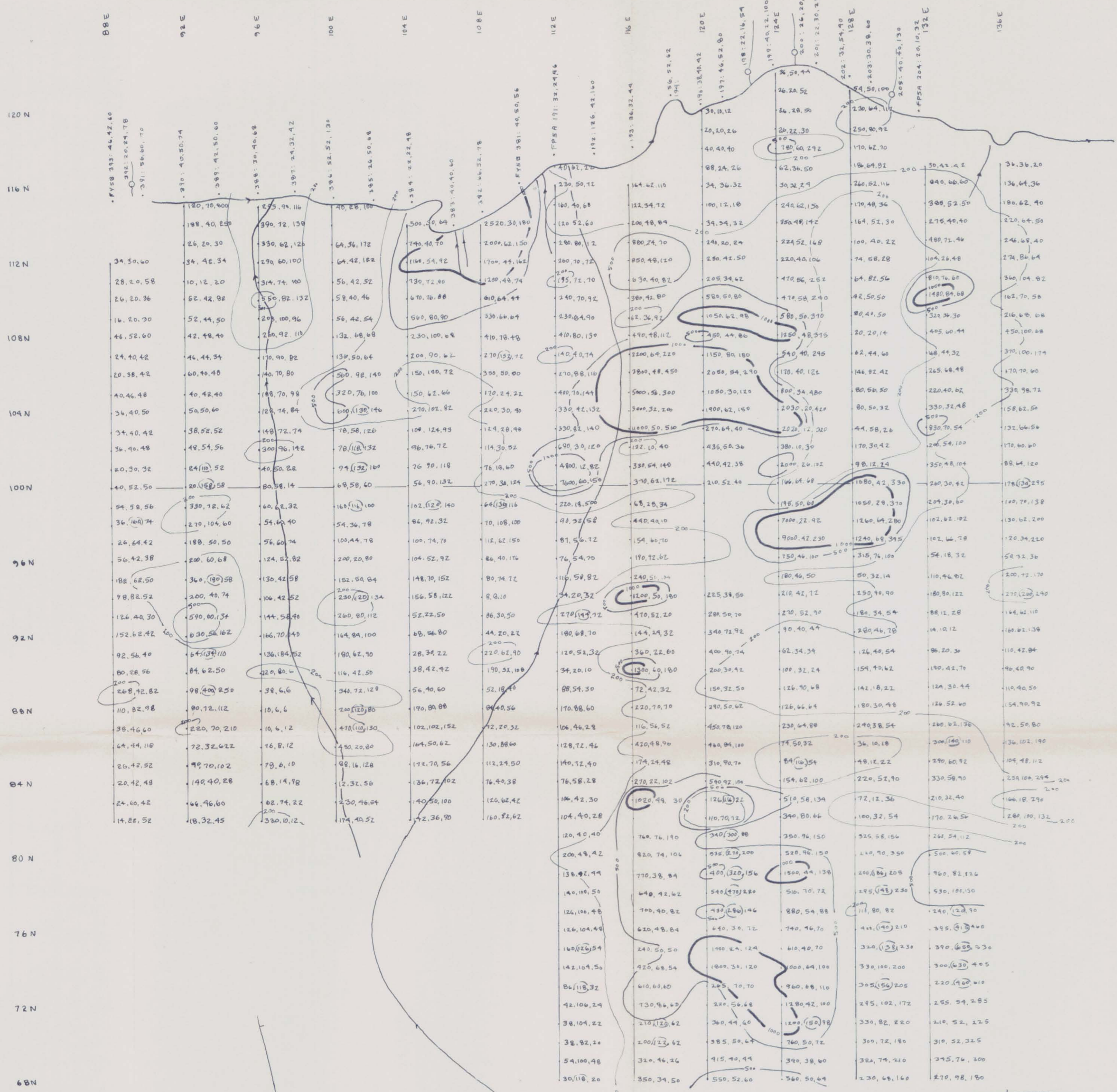
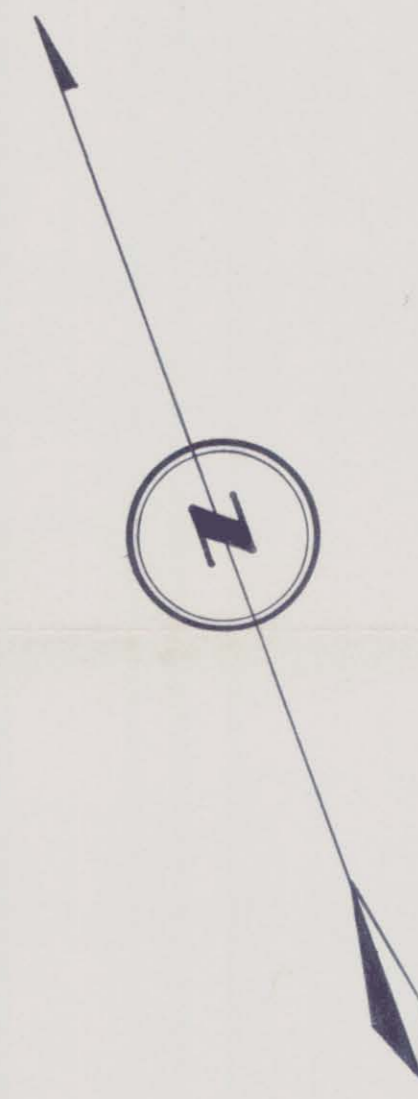
T. J. Adamson	Vancouver, B.C.	Geologist
H. Abercrombie	Vancouver, B.C.	Sampler
K. Akhurst	Vancouver, B.C.	Sampler
I. Campbell	Vancouver, B.C.	Cook

Contractors

Line-cutting Contractor:

Eastern Associates Ltd.  
Whitehorse, Y.T.





CYPRUS ANVIL  
MINING CORPORATION  
PY GROUP

SOIL SAMPLE VALUES  
COPPER CONTOURS

SOIL SAMPLE SITE  
(Cu, Pb, Zn ppm)

CONTOUR INTERVALS:

- 200 ppm Cu
- 500 ppm Cu
- 1000 ppm Cu

N.T.S. 105G-1

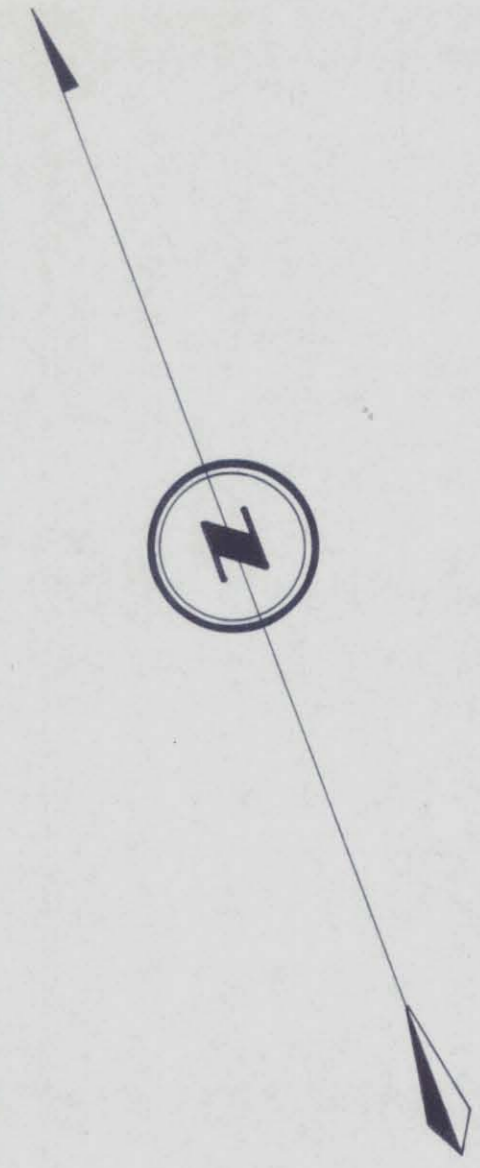
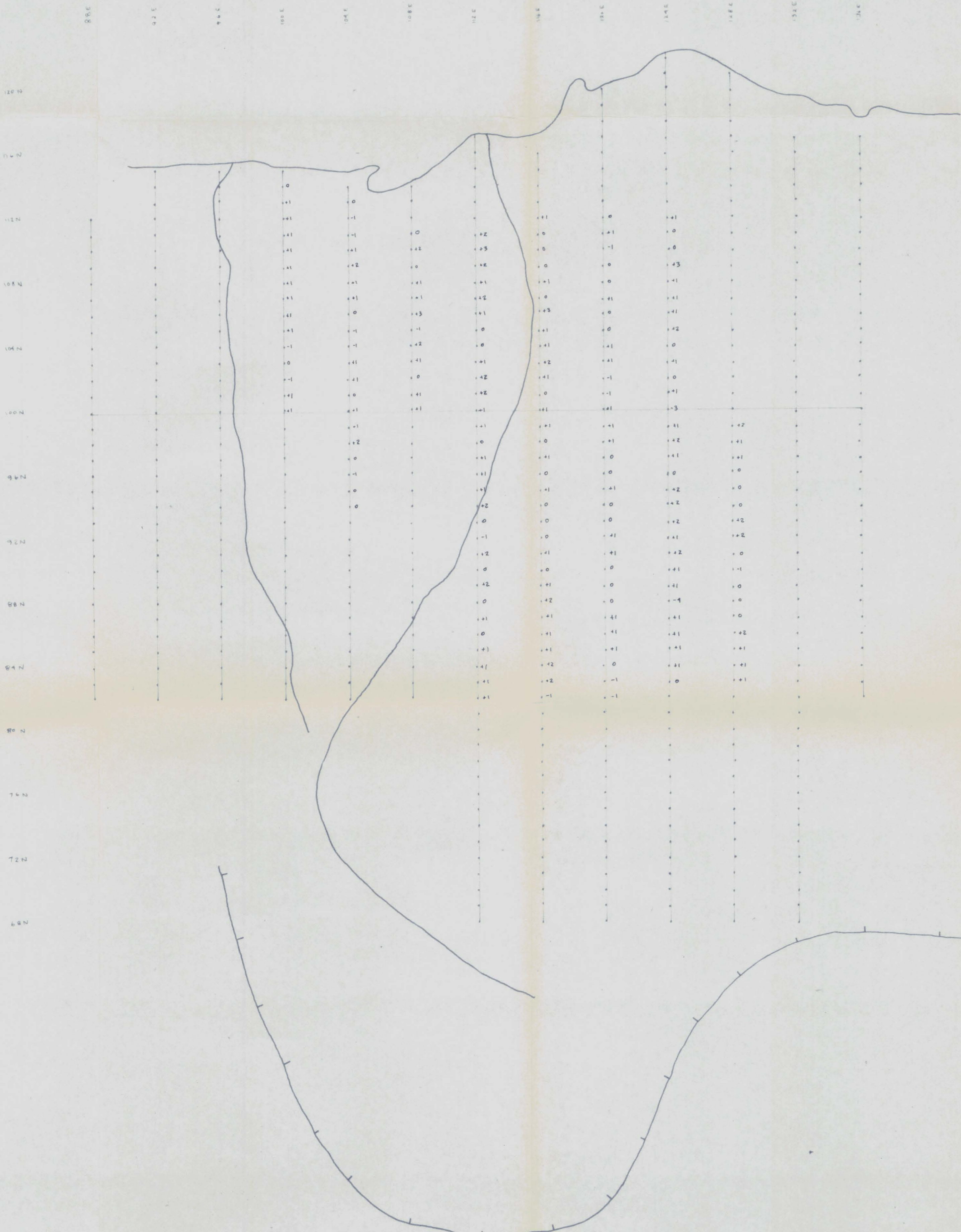
SCALE: 1" = 400'

DECEMBER 5, 1975

T.J. ADAMSON

N.B. Pb values 710 ppm





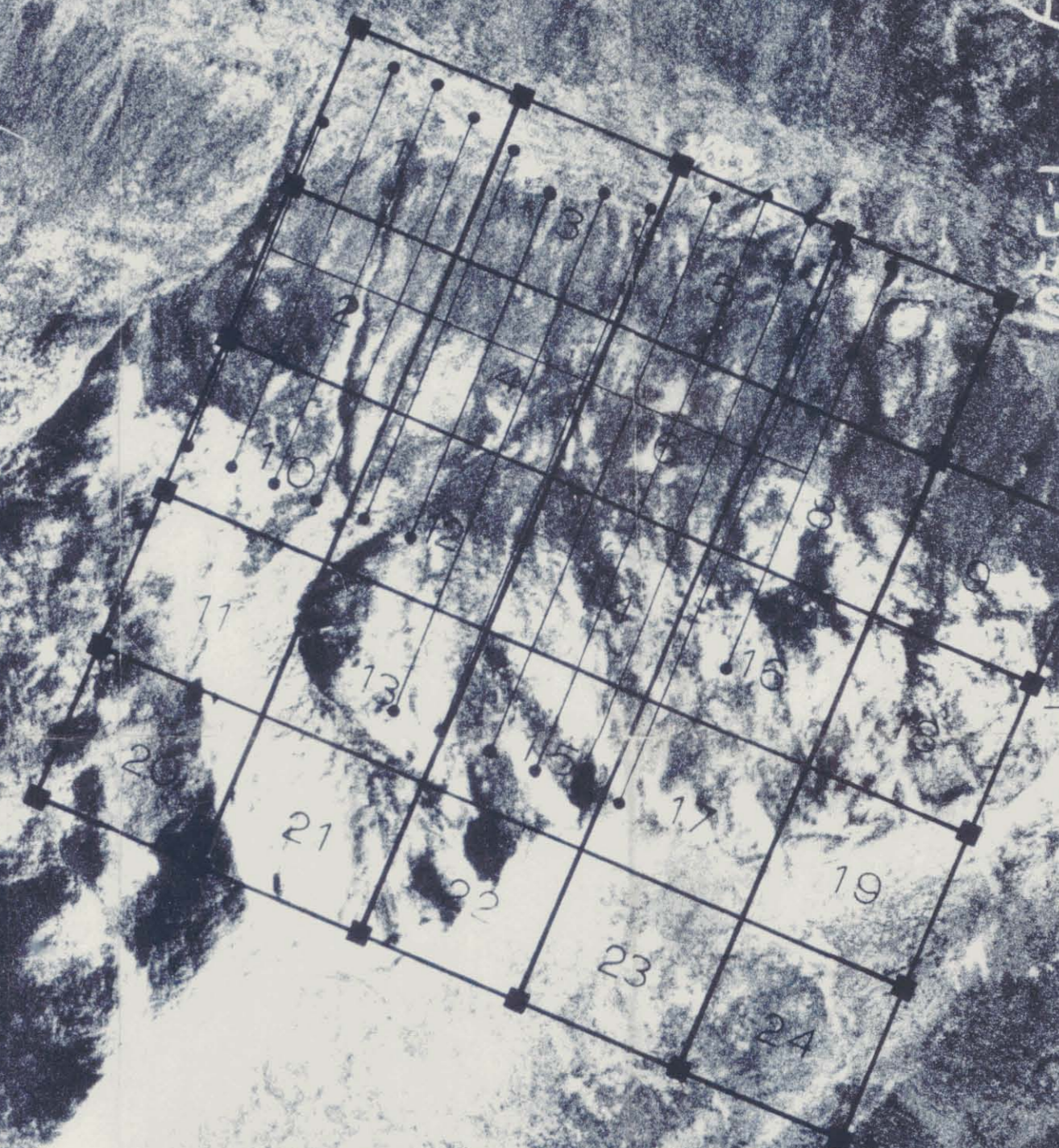
CYPRUS ANVIL  
 MINING CORPORATION

PY GROUP N.T.S. 105G-1  
 CRONE J.E.M.

RESULTANT VALUES  
 (1800 C.P.S.)

SCALE: 1" = 400'

A12343-39  
1056-1



+

+

+

+

+

61°08'30"  
130°11'

CYPRUS ANVIL MINING CORP  
BY GROUP  
NTS 1056-1

SCALE 1" = 1320'  
● CLAIM POINT  
— CLAIM LINES  
— GEOCHEM SAMPLE SITE