



A REPORT OF A GEOCHEMICAL SURVEY
ON THE KING CLAIMS

Watson Lake Mining Division
Yukon Territory



Located 100 km north of Watson Lake
Latitude: 60°58' N
Longitude: 128°54' W
Claim Sheet 105-A-15



BY

Gregg A. Jilson
CYPRUS ANVIL MINING CORPORATION

October 1980

090682

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

\$ 3,000.00

[Handwritten Signature]

Resident Geologist or
Resident Mining Engineer

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

[Handwritten Signature]

B. R. MAXTER
Supervising Mining Recorder

Commissioner of Yukon Territory



Located 100 km north of Watson Lake
Latitude: 60° 28' N
Longitude: 128° 54' W
Claim Sheet 105-A-12



BY
Gregg A. Gilson
CYPRUS ANVIL MINING CORPORATION

October 1980
090882

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A REPORT OF A GEOCHEMICAL SURVEY
ON THE KING CLAIMS

INTRODUCTION

From August 8 to August 20, 1980 a geochemical survey was carried out over a portion of the King claims, Watson Lake Mining District, Yukon. The property is a Tungsten prospect within late Hadrynian and early Paleozoic pelitic schists and calc silicates intruded by mid Cretaceous granodiorite. The geochemical survey outlined no significant anomalies though one small Tungsten anomaly should be prospected. No further work is warranted on most of the area surveyed, however the grid should be extended to cover the remainder of the granodiorite metasediment contact on and just north of the property.

LOCATION AND ACCESS

The King claims are located 10 km northwest of Mt. Murray immediately north of the Nahanni Range Road (Highway No. 10), in Watson Lake Mining Division, Southeastern Yukon. The claims are in the northwest corner of claim sheet 105-A-15, the latitude and longitude of the center of the block is 60°58' N 128°54' W.

Access to the claim block is by all weather highway to King Creek from Watson Lake, 120 road km (100 air km) to the south and by foot or helicopter from there. Helicopters are available for charter in Watson Lake.

CYPRUS ANVIL

HISTORY

The King (1-8) claims were staked on August 17, 1979 and recorded on August 21, 1979 presumably to cover a magnetite bearing skarn exposed in a creek flowing north through the eastern portion of the claim block. The showing had been staked previously as the Richard claims in 1970.

CLAIMS

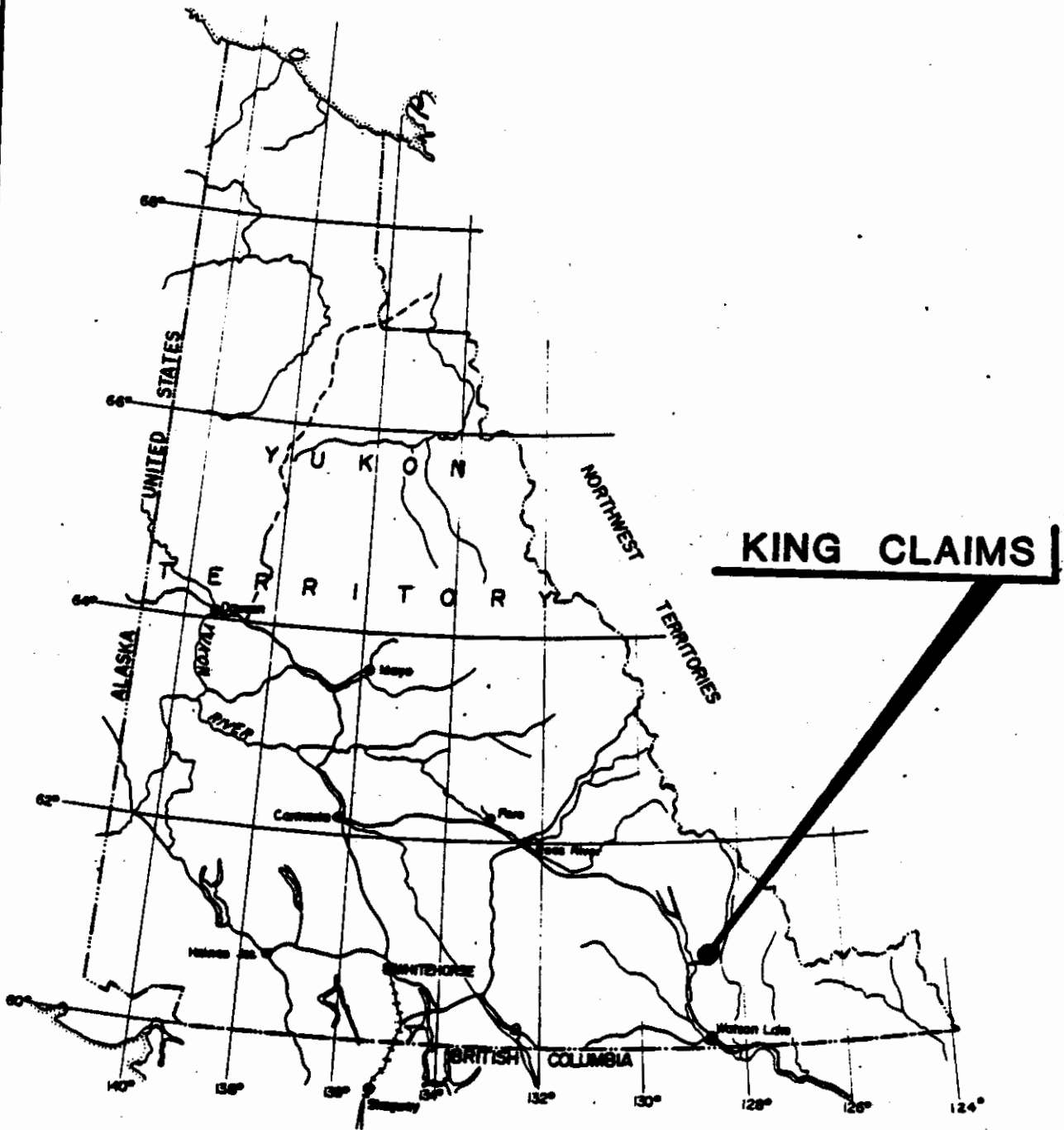
The King claims consist of 30 full sized mineral claims registered with the Mining Recorder in Watson Lake.

| <u>Claim Name</u> | <u>Record Number</u> | <u>Record Date</u> | <u>Expiry Date</u> | <u>Claim Years Requested</u> |
|----------------------|----------------------|--------------------|--------------------|------------------------------|
| King 1-8 inclusive | YA45379-86 inclusive | Aug. 21/79 | Aug. 21/80 | 1 |
| King 9-16 inclusive | YA54475-82 inclusive | Apr. 14/80 | Apr. 14/81 | 1 |
| King 17-24 inclusive | YA54467-74 inclusive | Apr. 14/80 | Apr. 14/81 | 1 |
| King 25-30 inclusive | YA54483-88 inclusive | Apr. 16/80 | Apr. 16/81 | 1 |

This report is in support of applications for certificates of work amounting to one year on each claim which were filed with the Mining Recorder in Watson Lake on August 19, 1980.

GEOLOGY

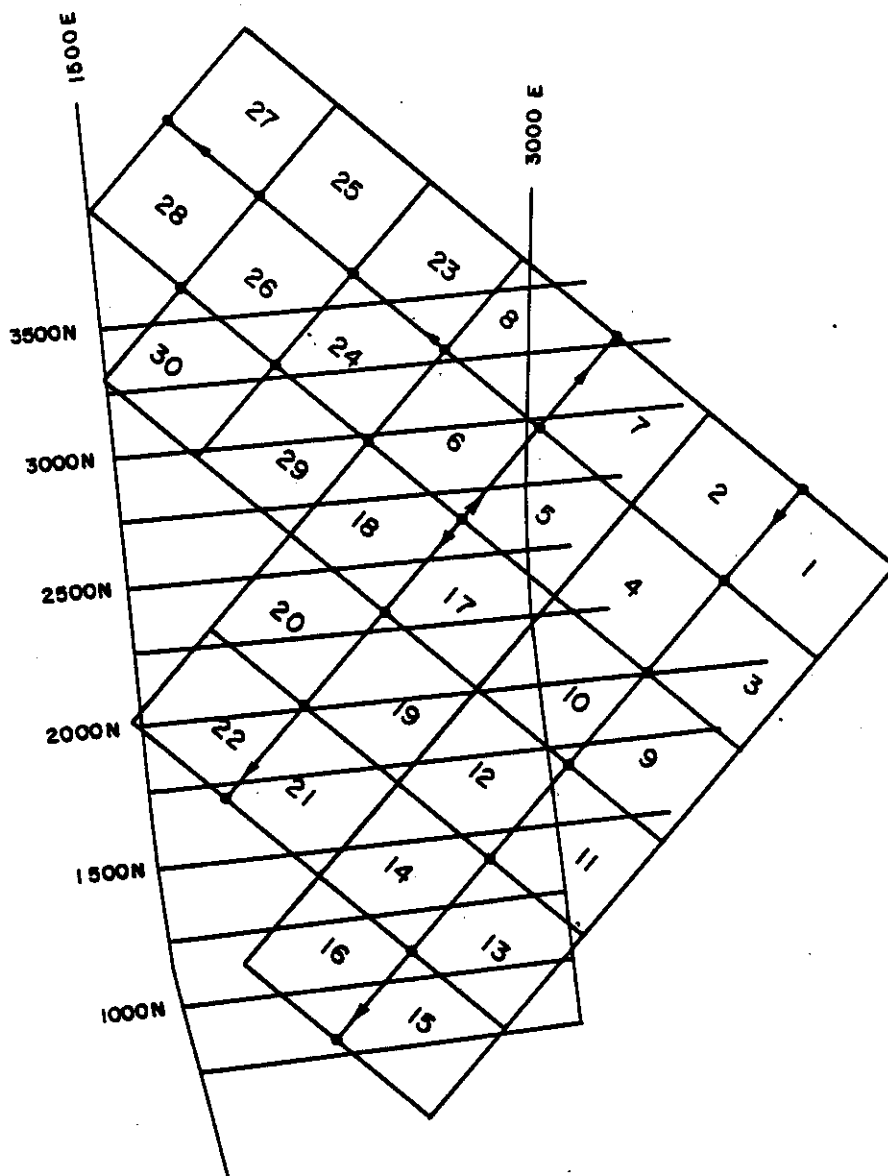
The property is underlain by a regionally metamorphosed sequence of lower Paleozoic and probably late Hadrynian sedimentary rocks intruded by a mid Cretaceous granodiorite batholith.



**CYPRUS ANVIL MINING CORPORATION
LOCATION MAP**

YUKON
SCALE · 1" = 100 MILES

FIGURE 1



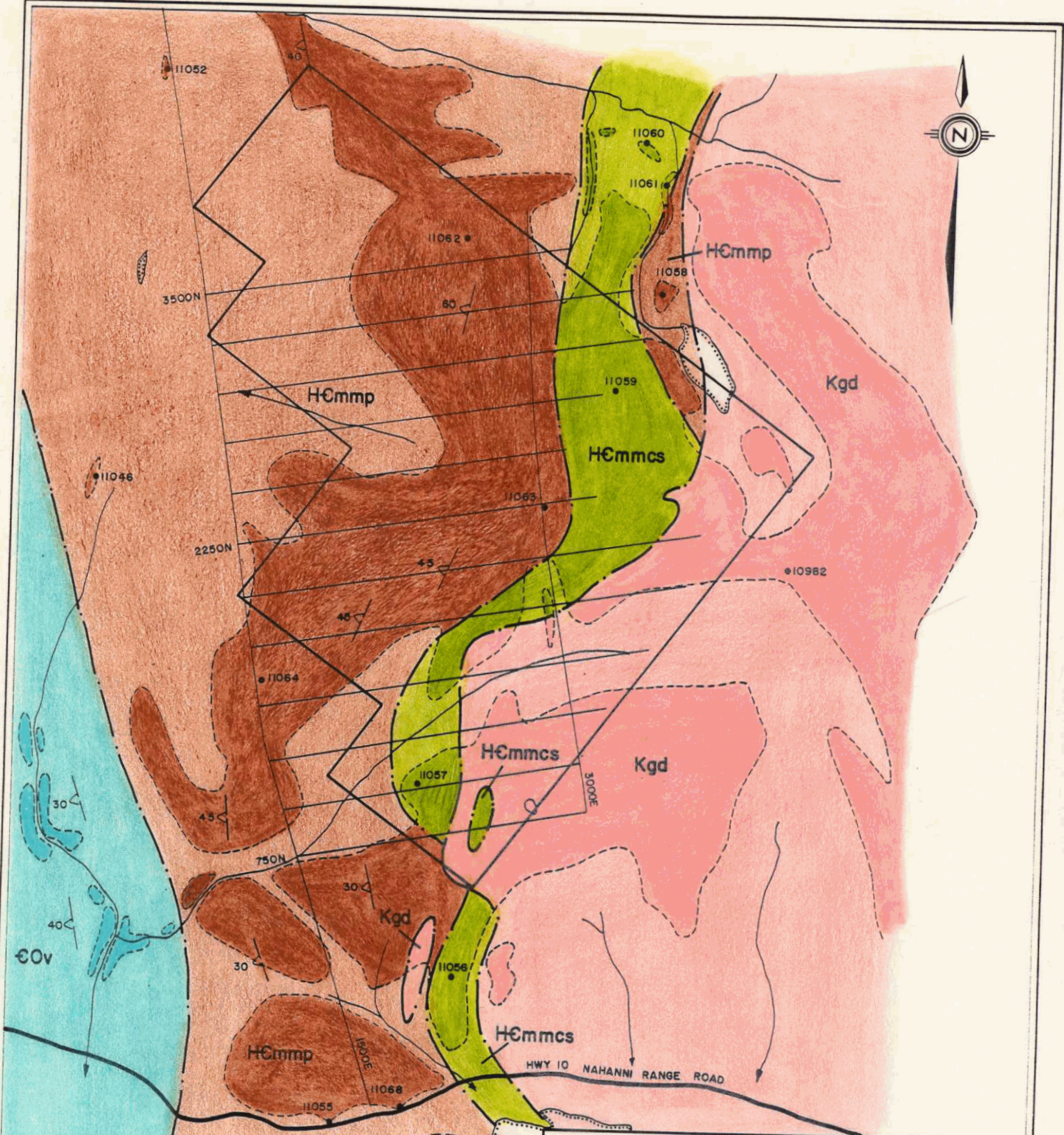
| | |
|---------------------------------|---------------------|
| CYPRUS ANVIL MINING CORPORATION | |
| KING CLAIMS | |
| WATSON LAKE M.D.-Y.T. | |
| CLAIM & GRID MAP | |
| NTS: 105-A-15 | DATE: OCTOBER, 1960 |
| SURVEY BY: | |
| DRAWN BY: GJ/r.mf. | FIGURE 2 |

The metasedimentary package consists of two units: non calcareous pelitic schists and calc silicate schists. The pelites are grey brown, biotite + muscovite ± andalusite schists with lesser quartz and feldspar rich psammitic schist and minor thin quartzite beds. The calc silicates are dominantly thinly banded, light green, cream and purplish brown rocks representing alternations of siliceous pelite and calcareous pelite. The calc silicates are commonly non calcareous but minor light grey marble and silicated marble is widespread, in these marbles small masses rich in pinkish brown coarse garnet are common.

Granitoid rocks on the property are medium grained equigranular biotite granodiorite which is homogenous, generally unfoliated and free of inclusions. Contacts are sharp and discordant. A slight protoclastic foliation crudely parallel to the contacts is seen locally. The granodiorite is almost everywhere very fresh but near its contact slight chloritization of biotite and overall bleaching especially along fractures is locally developed.

The metamorphic package attained amphibolite facies conditions throughout the claim block. There is a tendency toward increased metamorphic effect near the granitic rocks, however this does not indicate a contact metamorphic event, only that the granitic rocks occupy the core of a structural high which uplifts regional metamorphic rocks. The granitic and metamorphic events are probably both related to the same thermal regime however.

The calc silicate rocks are clearly regional metamorphic rocks and not the product of contact metasomatism though limited metasomatic skarn formation probably occurred forming the silicated marbles.



CYPRUS ANVIL MINING CORPORATION
KING CLAIMS
WATSON LAKE M.D.-Y.T.
GEOLOGICAL MAP



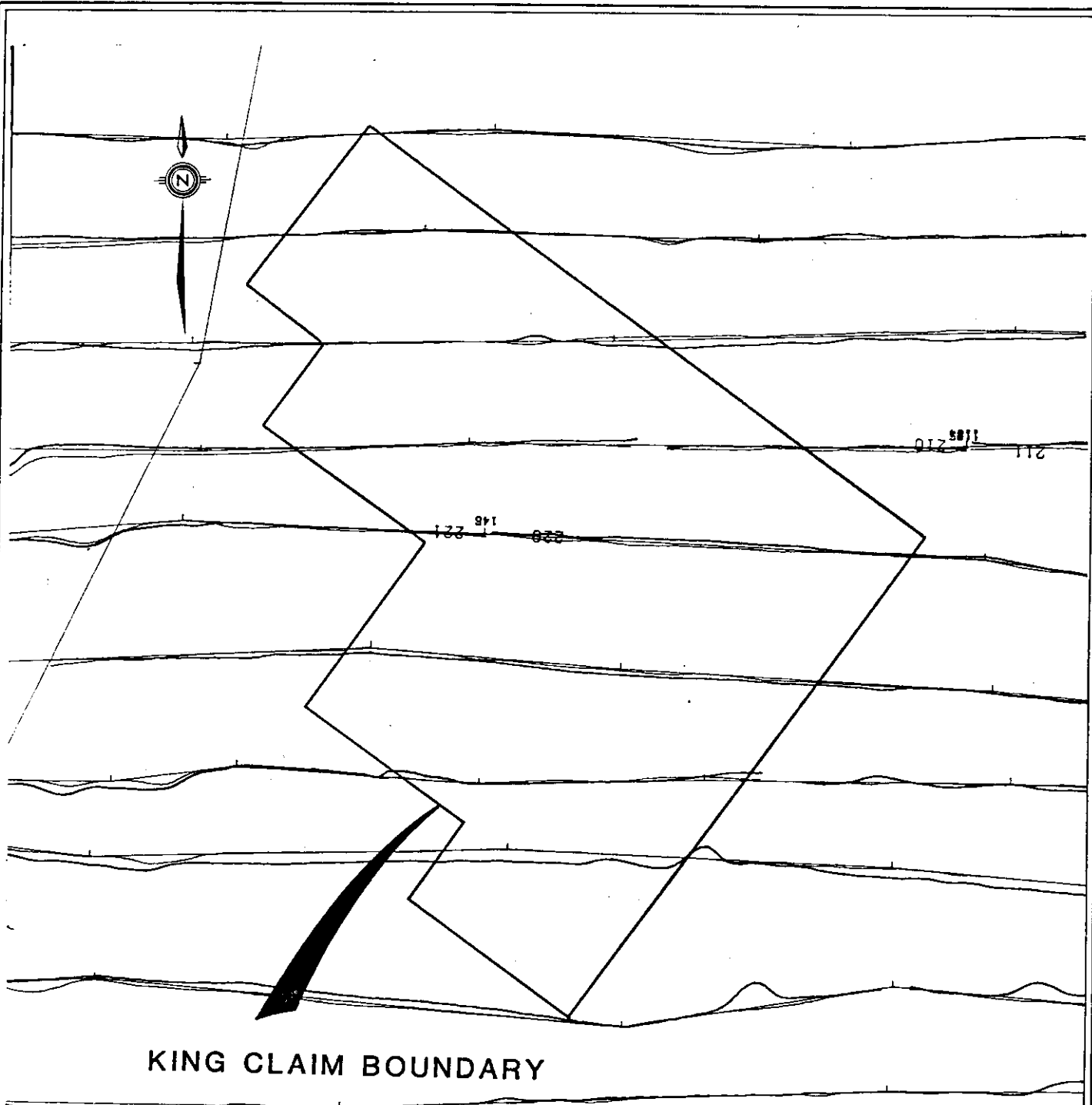
NTS: 105-A-15
 SURVEY BY:
 DRAWN BY: G.J./rwr, v.f.

DATE: OCTOBER, 1980
 FIGURE 3

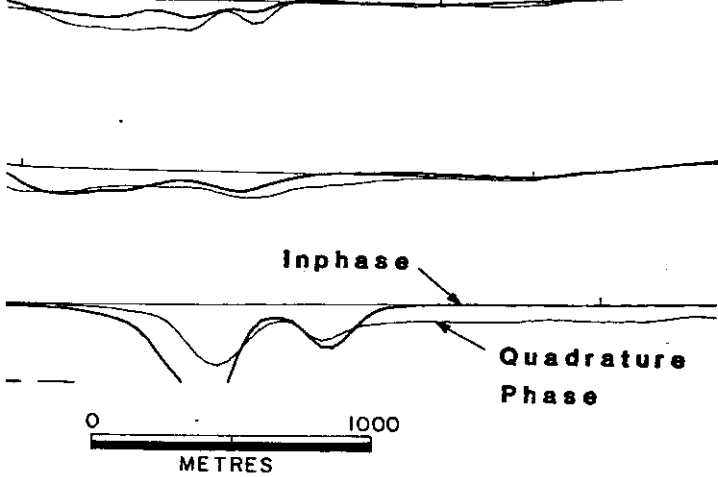
The metamorphic rocks have a complex internal geometry but a simple overall structure perhaps mainly due to lack of marker units. Most pelites have a nearly pervasive second period foliation (S_2) with only rare preservation of lithon structure. This foliation is locally seen folded into tight small scale third phase folds whose details are not understood. The large scale structure seems to be simply a westerly dipping slightly warped panel with S_2 foliation dips decreasing from 60° to 70° near the granitic rocks to 20° to 30° a few miles to the west. Unit boundaries seem to grossly parallel S_2 .

Both the calc silicate and pelite units are assigned to the Mt. Mye formation, which is the lower part of the section in the Anvil Range, where it is assumed to be latest Proterozoic and lower Cambrian. The unit may be a facies equivalent of the fine grained upper portions of the Grit unit though it lacks the characteristic poorly sorted quartz feldspar sandstones and red, green and maroon shales of that unit. It is however too metamorphosed here to be certain that at least the green shales were not originally present. Alternatively the Mt. Mye formation may be a fine clastic unit overlying the Grit unit. Here as in the Anvil Range the Mt. Mye formation is overlain by calcareous pelites of the Vangorda formation which is a facies equivalent of Rabbitkettle formation and some older rocks and probably ranges from lower Cambrian to lower or middle Ordovician.

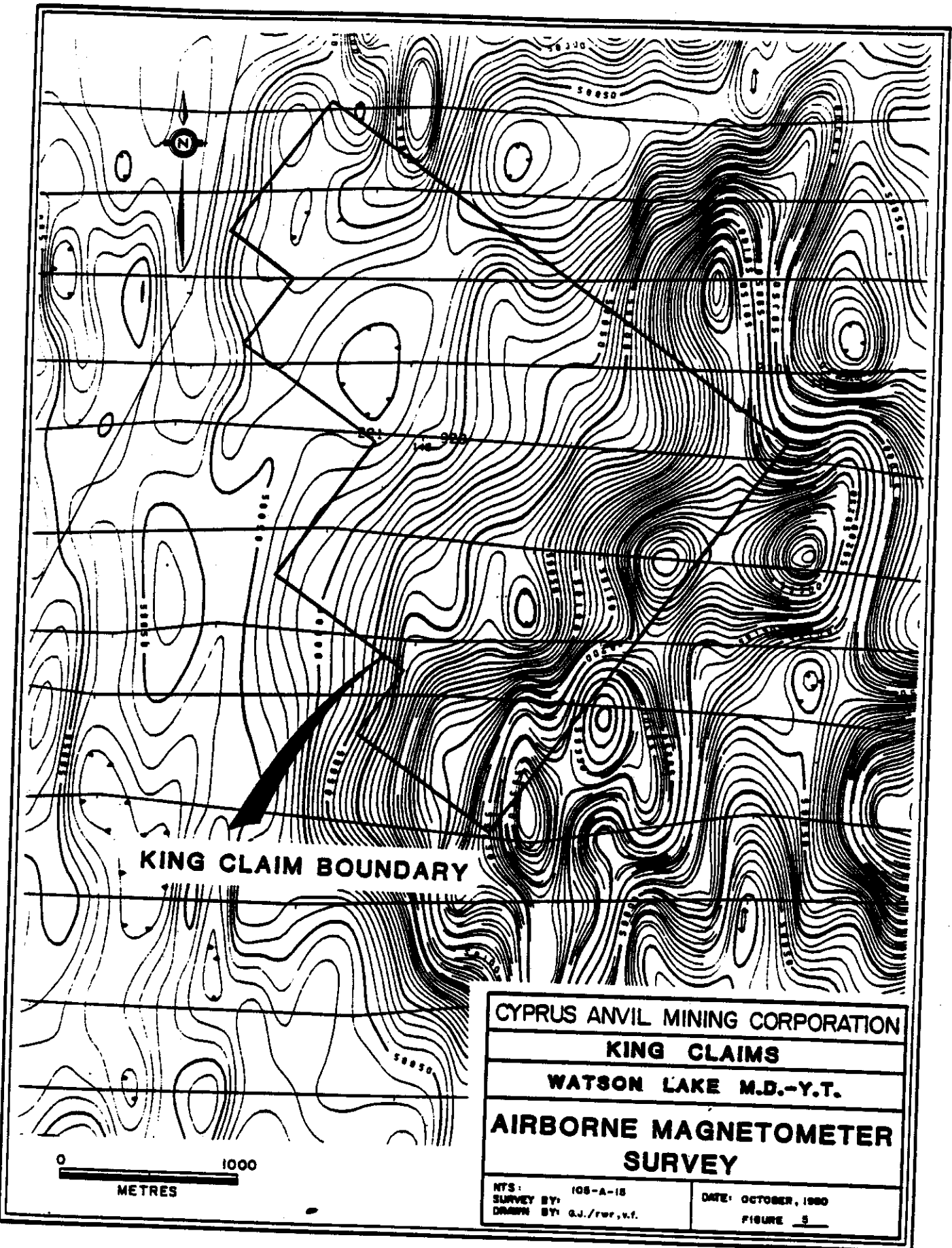
The correlation of the calc silicate unit is uncertain as it is lithologically identical to the Vangorda formation in areas of amphibolite facies metamorphism. The two alternatives are that the unit is an infold of Vangorda formation or that it is a band within the Mt. Mye formation. The latter possibility



KING CLAIM BOUNDARY



| | |
|------------------------------------|---------------------|
| CYPRUS ANVIL MINING CORPORATION | |
| KING CLAIMS | |
| WATSON LAKE M.D.-Y.T. | |
| AIRBORNE ELECTROMAGNETIC SURVEY | |
| NTS: 105-A-15 | DATE: OCTOBER, 1980 |
| SURVEY BY: | FIGURE 4 |
| DRAWN BY: G.J./rwr,v.f. | |



KING CLAIM BOUNDARY

CYPRUS ANVIL MINING CORPORATION
KING CLAIMS
WATSON LAKE M.D.-Y.T.
AIRBORNE MAGNETOMETER
SURVEY

NTS: 100-A-15
SURVEY BY:
DRAWN BY: G.J./rwr,v.f.

DATE: OCTOBER, 1960
FIGURE 5

is favored since this unit has been traced as a thin band for ten miles and is probably present further north in the vicinity of Mt. Billings.

Sulfide mineralization seen during mapping is limited to traces of pyrite associated with minor chloritization along fractures in the grandiorite and small amounts of pyrrhotite with traces of chalcopyrite in the calc silicates. The latter sulfides are typical of those found in any of the calc silicate units of southeastern Yukon. In a stream draining northerly from a small lake northeast of the claim block, up to several percent pyrite and pyrrhotite with lesser magnetite was seen in purplish brown siliceous phyllite lenses in calc silicates. Pods of massive magnetite are reported but were not seen during the brief visit to the part of the outcrop furthest downstream.

GEOCHEMICAL SURVEY

Methods and Procedures

Samples were collected at 60 meter intervals along lines spaced 250 meters apart. The samples were collected from the B horizon where possible though in practice this was not always achieved. The samples were dug with a mattock and placed in a wet strength kraft paper bag. The samples were partially air dried in camp at the prevailing outside temperature then shipped to the Vancouver laboratory of Acme Analytical Ltd.

At Acme Analytical Laboratories Ltd. the samples were dried at 75°C and sieved to -80 mesh. For analysis of Cu, Pb, Zn and Mo a 0.50 gram portion of the sample was digested with dilute aqua regia in a boiling water bath

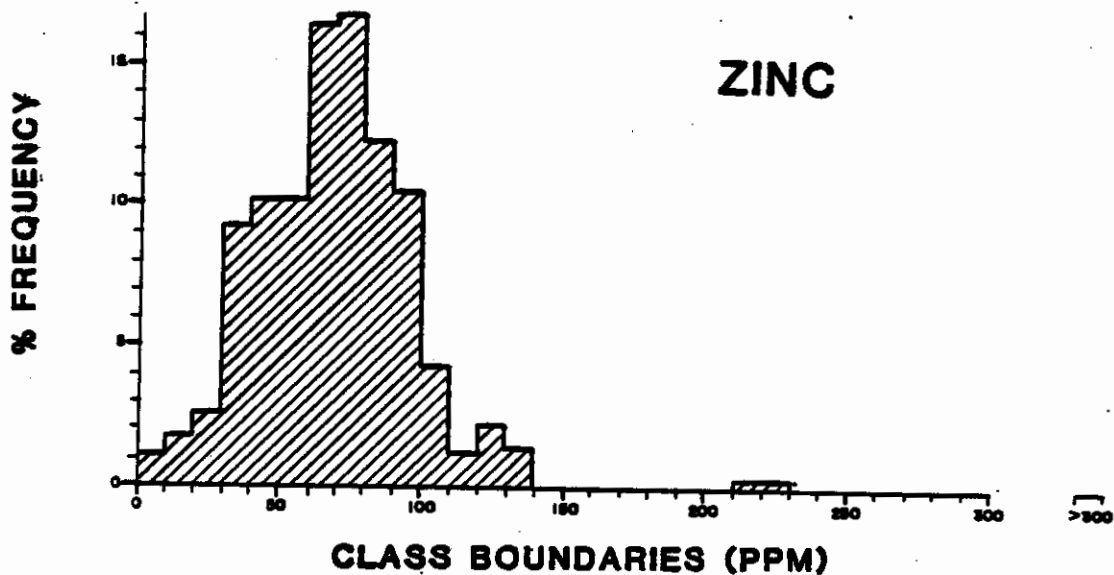
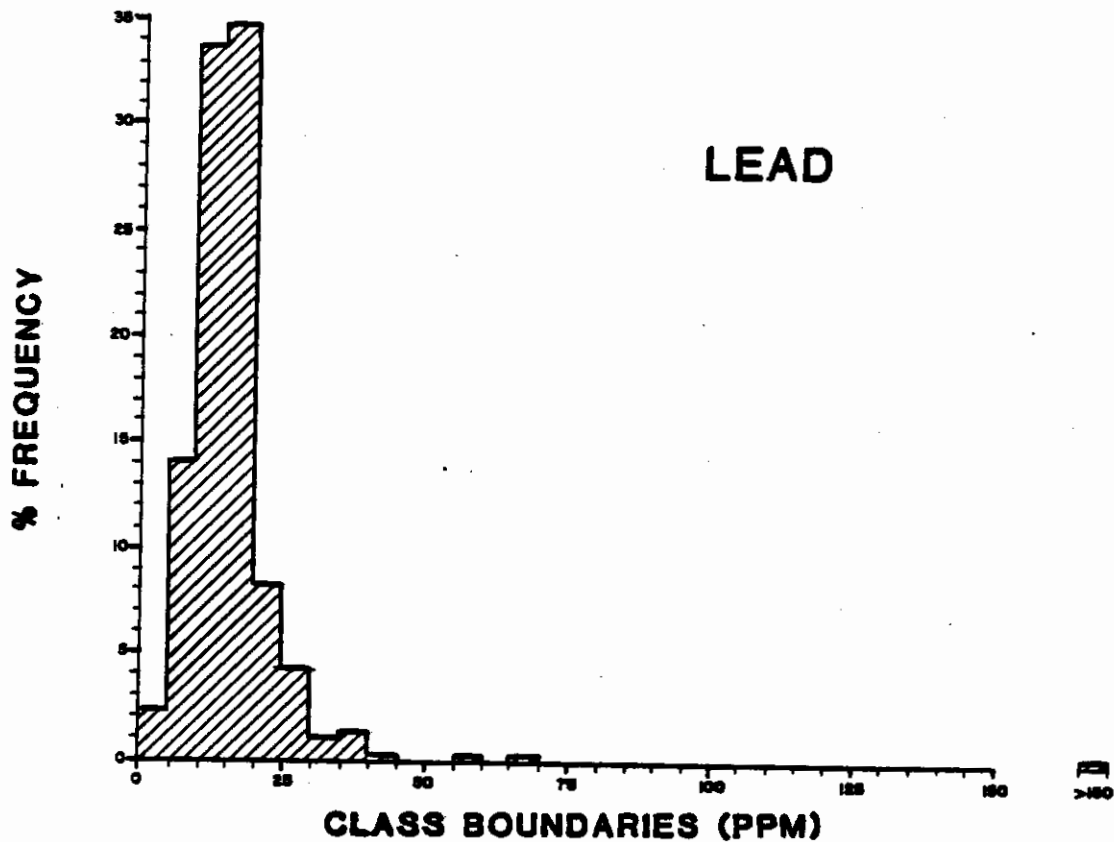
and diluted to 10 ml with demineralized water. All the above elements were determined from this solution by atomic absorption spectrometry.

For W, a 1.00 gram sample was fused with a KCl, KNO₃ and Na₂CO₃ flux in a test-tube. The fused sample was then leached with 10 ml of water. An aliquot is used to develop a complex with SnCl₂, KSCN and HCl which was extracted by n-tributylphosphate and carbon tetrachloride. Some samples were also determined by induced coupled plasma emission spectrograph on the leached water solution. For Sn a 1.0 gram sample was fused with ammonium iodide in a test-tube and the decomposed iodine leached with dilute hydrochloric acid. An aliquot was used for extraction with MIBK and Sn was determined by atomic absorption.

RESULTS

The results of the geochemical survey are plotted on Plates 1, 2, 3 and 4 in the pocket at the end of the report. The values are summarized in histogram form in figures 6 and 7.

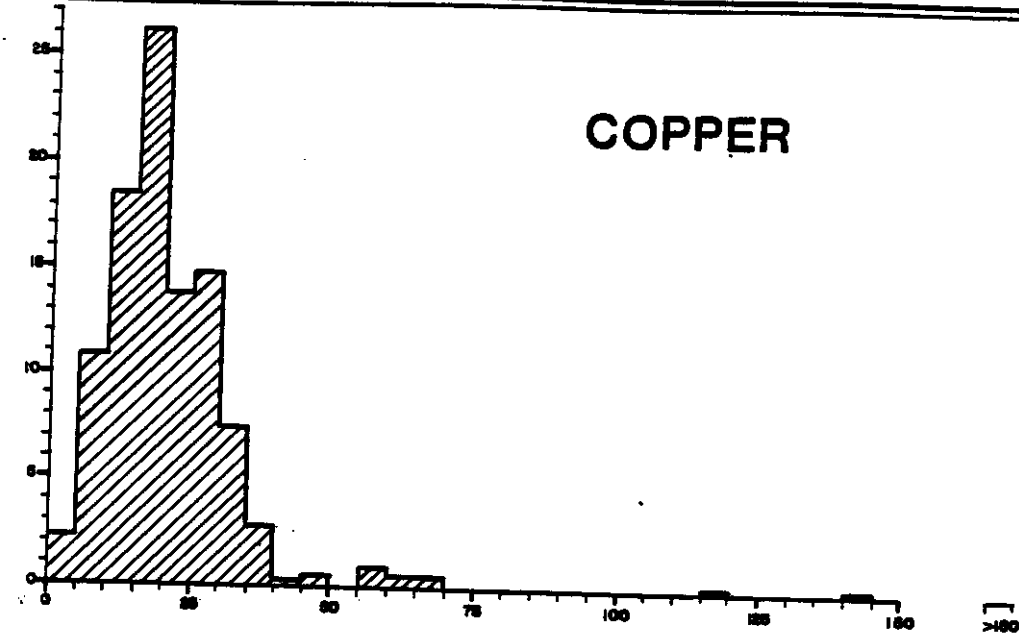
There are several small, scattered, very weak Cu, Pb and Zn anomalies in a belt through the central portion of the grid but none of these are sufficiently large or intense to suggest the presence of mineralization of economic interest. This belt is crudely parallel to the contact between granodiorite and metasediments. Much of the area is underlain by calc silicates but some by pelites are included. Within the belt is a small but intense Tungsten anomaly centered at L10+00 N at 22+20 E with weak coincident Cu, Pb, Zn response; again the small size limits interest.



| | |
|---|-------------------------------------|
| CYPRUS ANVIL MINING CORPORATION | |
| KING CLAIMS | |
| WATSON LAKE M.D.-Y.T. | |
| HISTOGRAMS Pb & Zn | |
| NTS: 105-A-18 SURVEY BY: DRAWN BY: v.f. | DATE: OCTOBER, 1960 FIGURE 6 |

COPPER

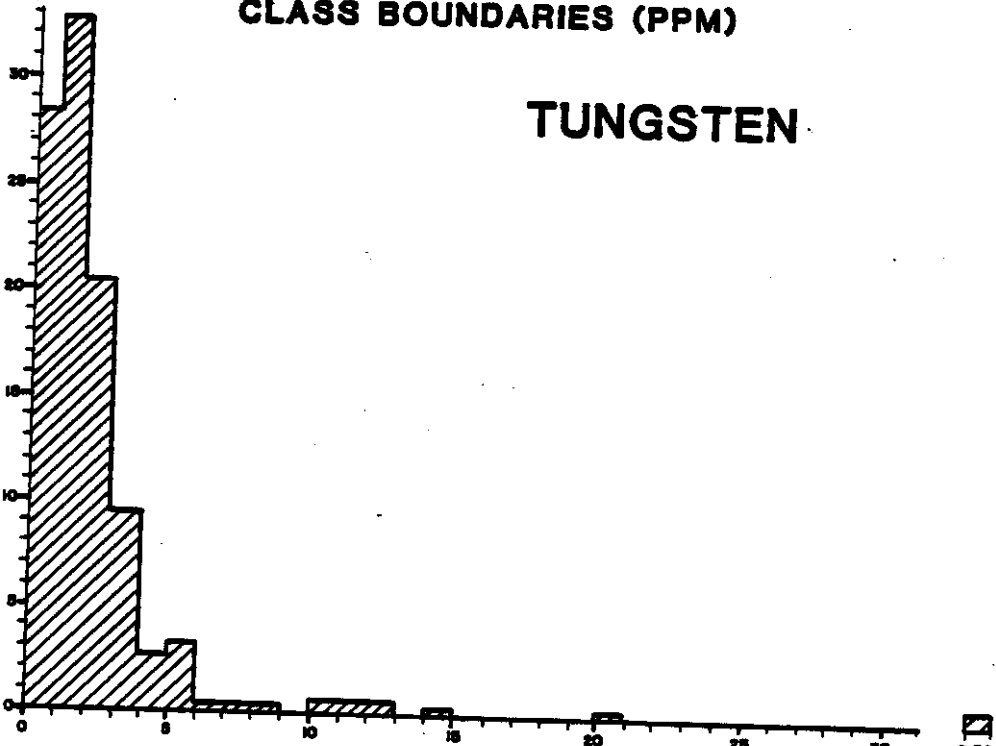
% FREQUENCY



CLASS BOUNDARIES (PPM)

TUNGSTEN

% FREQUENCY



CLASS BOUNDARIES (PPM)

| | |
|---------------------------------|--------------------|
| CYPRUS ANVIL MINING CORPORATION | |
| KING CLAIMS | |
| WATSON LAKE M.D.-Y.T. | |
| HISTOGRAMS Cu & W | |
| NTS: 100-A-B | DATE: OCTOBER 1980 |
| SURVEY BY: | FIGURE 7 |
| DRAWN BY: v.j. | |

Interpretation

The approximate location of the granodiorite/metasediment contact is plotted on Plates 1-4. The association of the distribution pattern of any of the metals with this contact is not particularly striking, but the combination of Cu, Pb and Zn highs clearly forms a trend bearing at least a spatial relation to the intrusive contact. Higher copper values show a strong relationship to the calc silicate unit and doubtless reflect the common traces of chalcopyrite accompanying the minor pyrrhotite seen in that unit here and elsewhere. The values here are not usual for soil results over other areas of calc silicates. The higher copper values in the northeast perhaps reflect the more abundant pyrrhotite mineralization seen north of the grid. This relation of soil geochemical values to the intrusive contact may indicate that small pods of $Cu^{\pm}Pb^{\pm}Zn^{\pm}W$ replacement mineralization are present probably within the silicated marbles of the calc silicate unit but none is sufficiently large to create a soil anomaly of interest. Unfortunately throughout the strike length of the calc silicate unit on as well as north and south of the property, large marble units that might be receptive hosts to attractive skarn deposits are absent.


The aeromagnetic map (Figure 5) shows no large masses of pyrrhotite are present in the calc silicate unit though there is a small bulge on the flank of a large positive anomaly near the high W value on Line 10+00 N, and a similar weak response over the area of best pyrrhotite + magnetite mineralization northeast of the grid.

The fact that soil results reflect the geology shows that metal contents of the bedrock are indicated by soil analyses and further that no large accumulations of Cu, Pb, Zn, Mo, W or Sn are present near the surface in the area surveyed. The results can further be interpreted to suggest that during intrusion of the batholith contact metasomatic processes did occur but the property is limited by the fact that large receptive marble units do not occur in the units adjacent to the granodiorite contact.

Conclusions and Recommendations

The area of high Tungsten values at 10+00 N 22+20 E should be prospected to uncover the cause of these strongly anomalous results. The grid should be extended to the North and East to cover the metasediments and especially the intrusive contact near the area of best sulfide mineralization in the creek draining the northeast portion of the claim block. No further work is warranted on the remainder of the claim block.

Respectfully submitted,



G. A. Jilson

October 1980

LIST OF PERSONNEL

| | | |
|--------------|--------------|--|
| G. A. Jilson | Geologist | 409-1111 Pacific Street Vancouver, B.C. |
| R. Power | Soil Sampler | 1969 Kings Avenue West Vancouver, B.C. |
| D. Brett | Soil Sampler | 460 East 10th Avenue Vancouver, B.C. |

Contractors

Liftair International Ltd.

Hangar No. 25, McCall Field
Calgary, Alberta

Acme Analytical Laboratories Ltd.

852 East Hastings Street

Vancouver, B.C.

STATEMENT OF COSTSSalaries and Wages

\$1500.00

Samplers 2 x 14 @ \$50.00 per day

Geologists 1 x 1 @ \$100.00 per day

Camp Costs

28 man days @ \$20.00 per day

\$560.00

Geochemical Analyses

\$2745.92

104 samples @ \$2.38 each

104 samples @ \$5.50 each

280 samples @ \$6.88 each

Rotary Wing

\$1627.50

Lift Air # 04326 8 Aug./79 3.0 hours \$315 + \$20.00 /hour

Frontier # 06230 16 Aug./80 0.5 hours \$390 + \$20.00 /hour

Frontier # 07037 22 Aug./80 1.0 hours \$390 + \$20.00 /hour

TOTAL SURVEY COST \$6433.42

Cyprus Anvil Mining Corporation

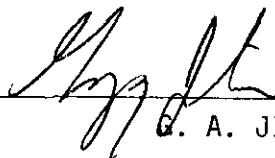
330, 355 Burrard Street
Vancouver, British Columbia
V6C 2G8
Telephone (604) 687-2586

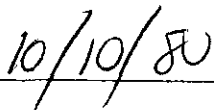
Telex 04508594

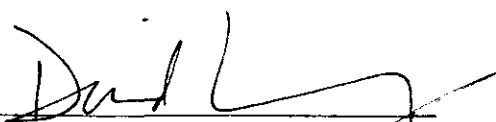
Appendix III

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

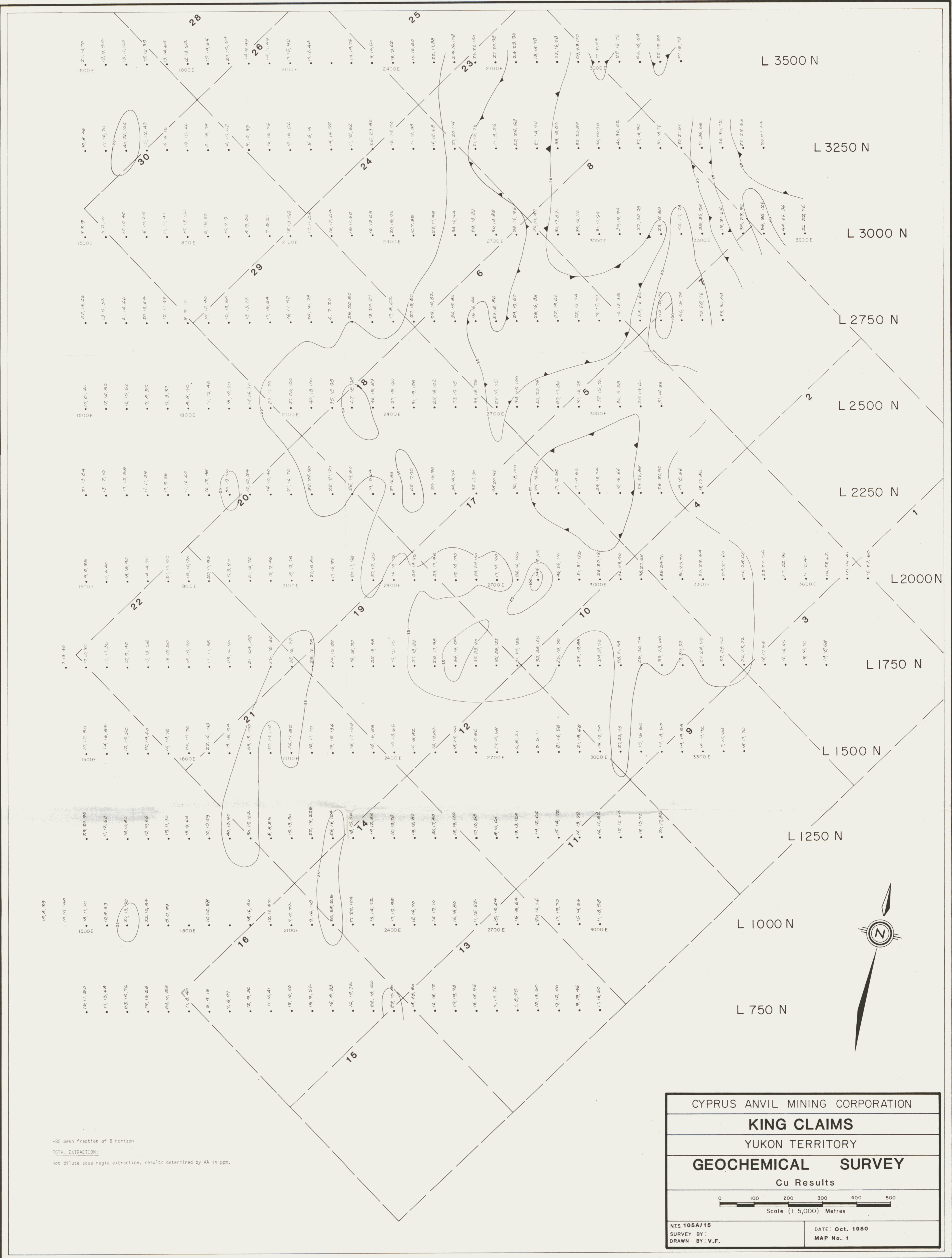
I, G. A. Jilson, Geologist, Cyprus Anvil Mining Corporation, of Vancouver, British Columbia, do hereby state that, to the best of my knowledge and belief, the statement of costs presented in this report (A Report Of A Geochemical Survey On The King Claims) is both correct and true. I am a member in good standing of the Geological Association of Canada.


G. A. JILSON


(Date)

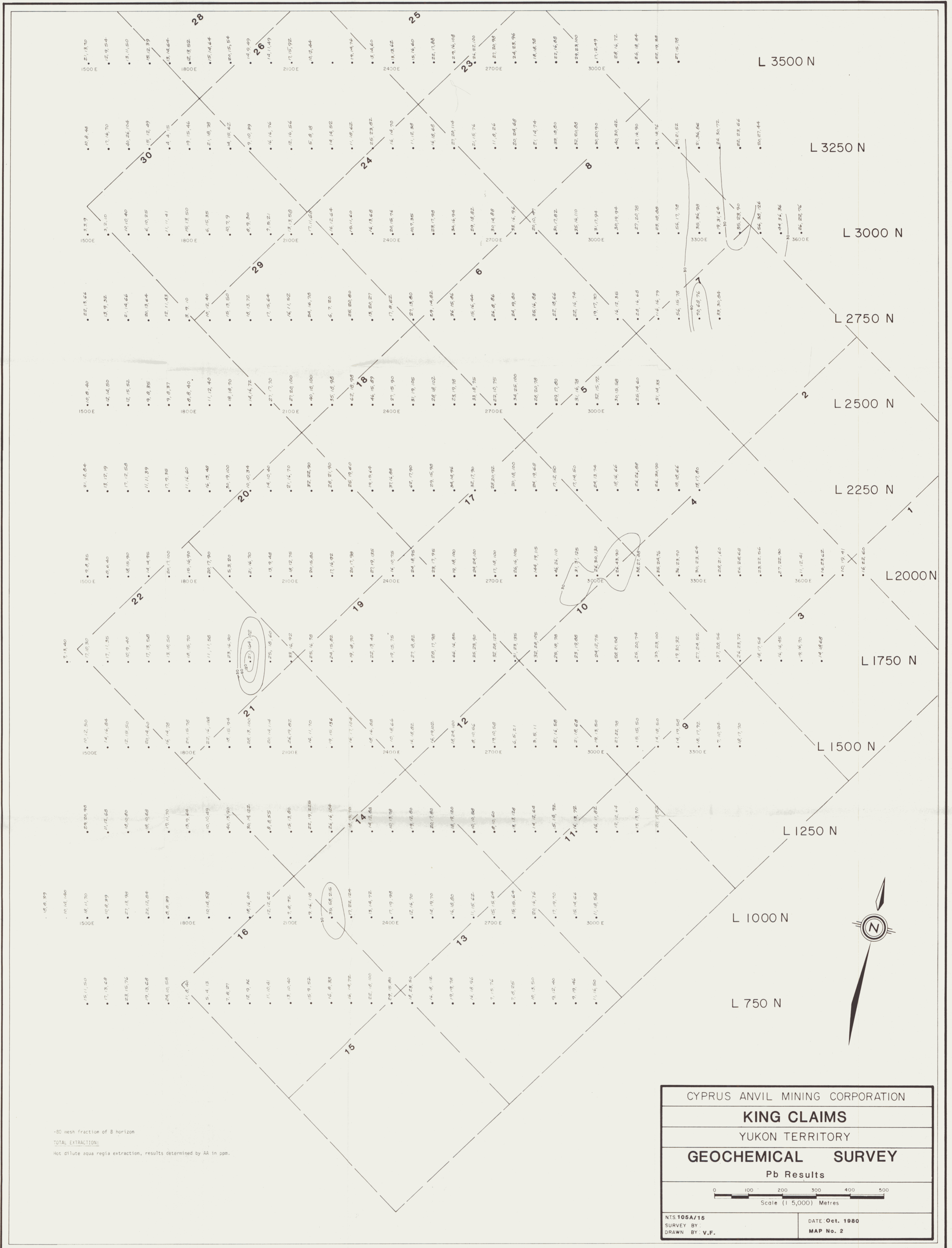

Notary Public in and for the
Province of British Columbia

CYPRUS ANVIL



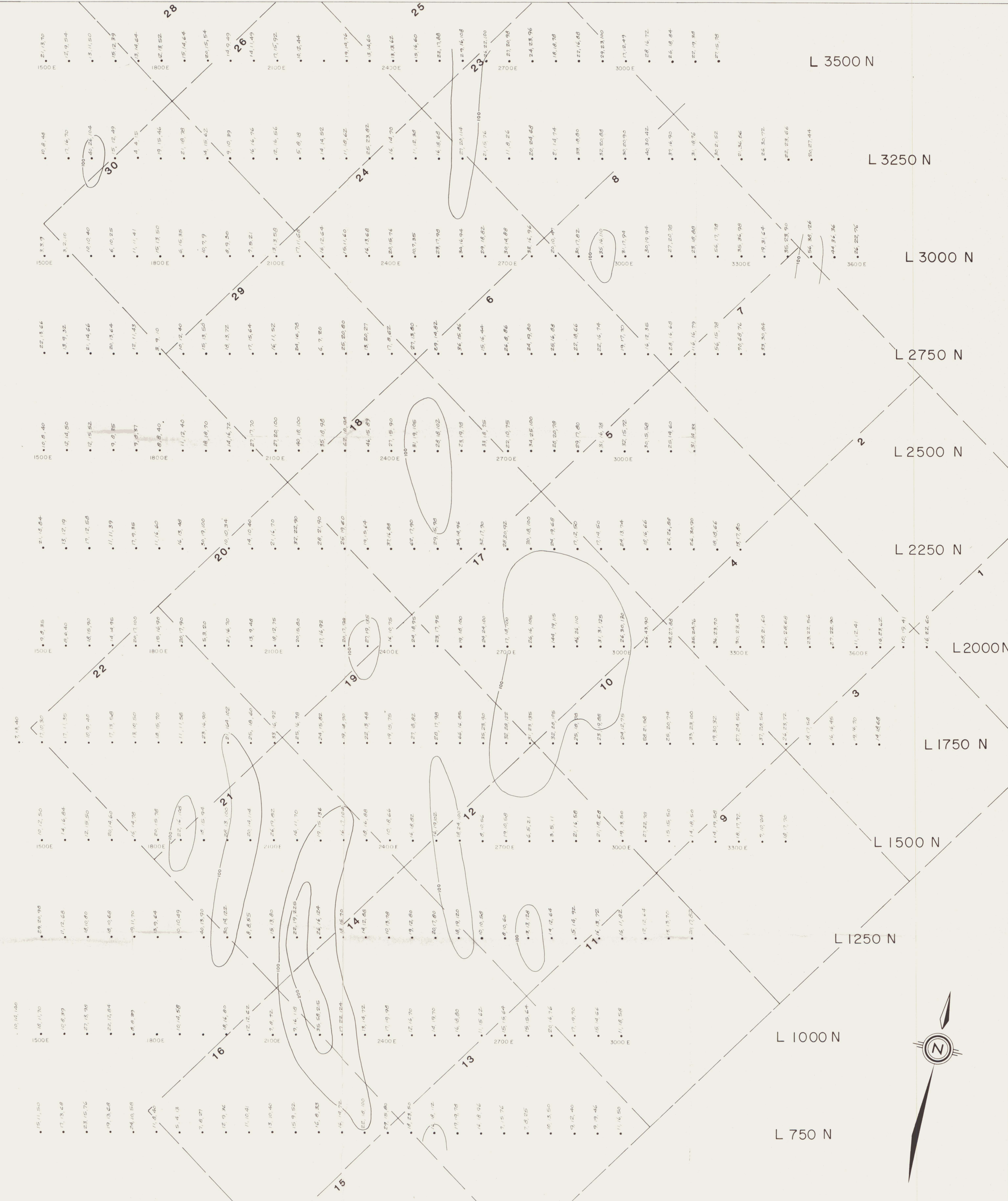
-80 mesh fraction of B horizon
 TOTAL EXTRACTION:
 Hot dilute aqua regia extraction, results determined by AA in ppm.

| | |
|---|------------------------------|
| CYPRUS ANVIL MINING CORPORATION | |
| KING CLAIMS | |
| YUKON TERRITORY | |
| GEOCHEMICAL SURVEY | |
| Cu Results | |
| Scale (1 5,000) Metres | |
| NTS 105A/16 SURVEY BY: DRAWN BY: V.F. | DATE: Oct. 1980 MAP No. 1 |



-80 mesh fraction of B horizon
 TOTAL EXTRACTION:
 Hot dilute aqua regia extraction, results determined by AA in ppm.

| | |
|---------------------------------|-----------------|
| CYPRUS ANVIL MINING CORPORATION | |
| KING CLAIMS | |
| YUKON TERRITORY | |
| GEOCHEMICAL SURVEY | |
| Pb Results | |
| Scale (1 5,000) Metres | |
| NTS 105A/15 | DATE: Oct. 1980 |
| SURVEY BY: | MAP No. 2 |
| DRAWN BY: V.F. | |



-80 mesh fraction of B horizon
 TOTAL EXTRACTION:
 Hot dilute aqua regia extraction, results determined by AA in ppm.

| | |
|---|------------------------------|
| CYPRUS ANVIL MINING CORPORATION | |
| KING CLAIMS | |
| YUKON TERRITORY | |
| GEOCHEMICAL SURVEY | |
| Zn Results | |
| <p>Scale (1:5,000) Metres</p> | |
| NTS 105A/15 SURVEY BY: DRAWN BY: V.F. | DATE: Oct. 1980 MAP No. 3 |



-80 mesh fraction of B horizon
 TOTAL EXTRACTION:
 Mo Hot dilute aqua regia extraction, results determined by AA in ppm
 Sn Antimony iodide fusion, dilute HCL leach, MIBX extraction, results by AA.
 W Fusion with KCl KNO₃ & Na₂CO₃, water leach, organic extraction of complexed W.
 Results by ICP emission spectrophotometer.
 Contours in W

| | |
|---------------------------------|----------------|
| CYPRUS ANVIL MINING CORPORATION | |
| KING CLAIMS | |
| YUKON TERRITORY | |
| GEOCHEMICAL SURVEY | |
| Mo-W-Sn Results | |
| Scale (1:5,000) Metres | |
| NTS. 105A/15 | DATE Oct. 1980 |
| SURVEY BY: | MAP No. 4 |
| DRAWN BY: V.F. | |

