

GEOLOGICAL AND GEOCHEMICAL REPORT

WE GROUP

N. T. S. 94 F - 13  
Lat. 57° 54' N Long. 125° 37' W

by:  
W. Roberts  
CYPRUS ANVIL MINING CORPORATION  
for  
UNITED MINERAL SERVICES LTD. Mar. 15/78

GEOLOGICAL AND GEOCHEMICAL REPORT

WE GROUP

Gataga Lakes Area

Omineca Mining District

N. T. S.      94 F - 13

Latitude:            57<sup>0</sup> 54' N

Longitude:           125<sup>0</sup> 37' W

by

W. ROBERTS

CYPRUS ANVIL MINING CORPORATION

for

UNITED MINERAL SERVICES LTD.

Work Done During the Period      July 4, 1977 - July 8, 1977

March 15, 1978

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GEOLOGICAL AND GEOCHEMICAL REPORT

WE GROUP

INTRODUCTION

The WE number 1 and 2 claims were staked by United Mineral Services Ltd. in the spring of 1977 to cover several large limonitic gossans along a south flowing tributary of Weissener Creek. Preliminary assessment of the property, undertaken by Cyprus Anvil Mining Corporation, consisted of geologic mapping, prospecting, and geochemical silt and soil sampling.

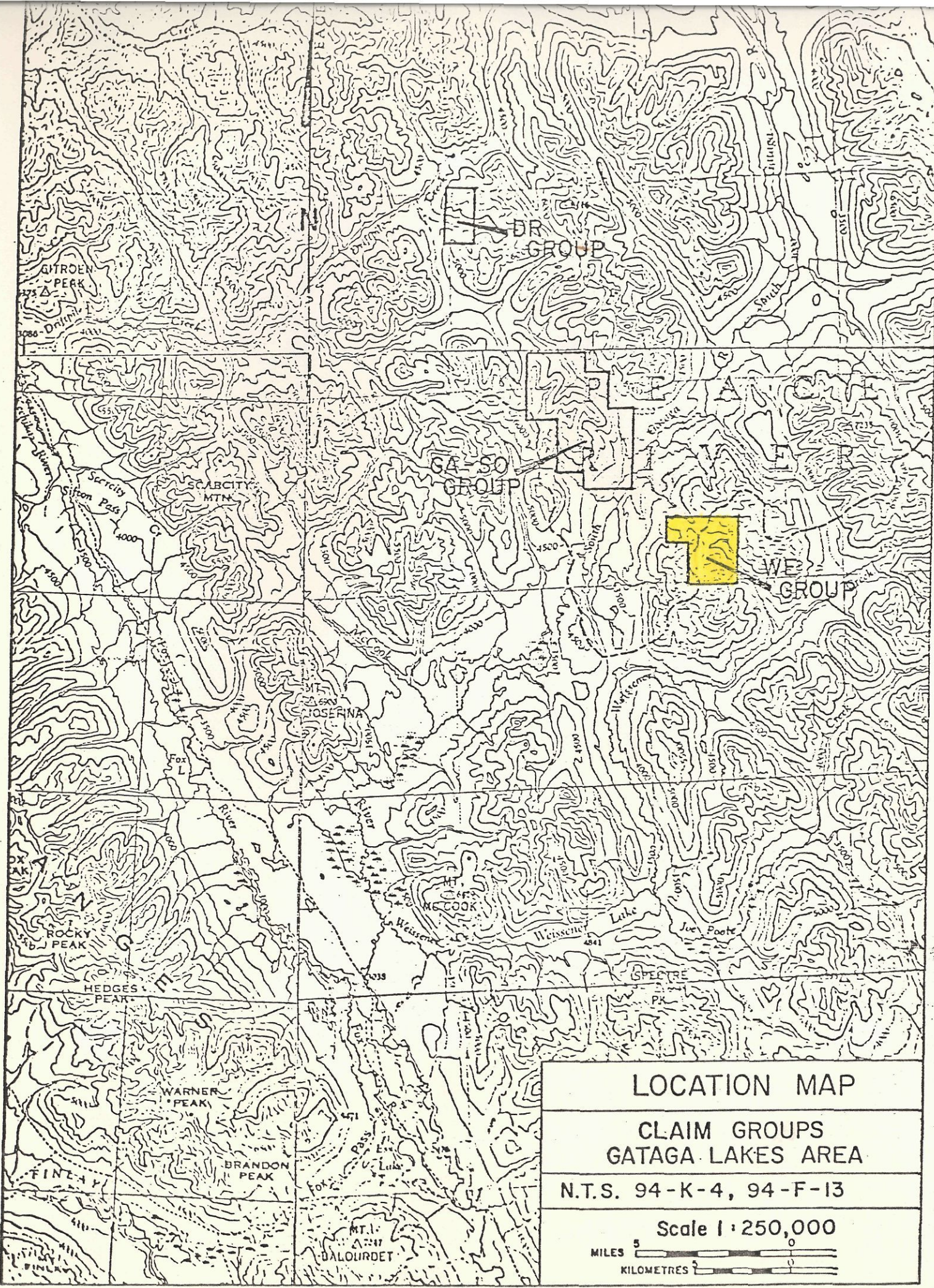
LOCATION AND ACCESS

The claim group covers the headwaters of a southerly flowing tributary of Weissener Creek. The Legal Post is located at longitude 125° 37' W and latitude 57° 54' N. The centre of the claim group is roughly 17 kilometers northeast of the eastern end of Weissener Lake and 22 kilometers east of the north end of Quentin Lake.

Field work on this claim group was conducted with a helicopter supported program based at Gnip Gnop or Central Gataga Lake. Access into the region was provided by fixed wing aircraft from either Watson Lake or Mackenzie.

REGIONAL GEOLOGY

A narrow sinuous northwest trending belt of Upper Devonian to Mississippian black clastics has been outlined during a recent mapping program by the Geological Survey of Canada. This unit unconformably overlies Ordovician to



LOCATION MAP

CLAIM GROUPS  
GATAGA LAKES AREA

N.T.S. 94-K-4, 94-F-13

Scale 1:250,000



Devonian interbedded shale and carbonate and is overlain by a thrust sheet of Kechika Group limestone, dolomite and calcareous grey shale.

This belt of black clastics stretches from Braid Creek, on map sheet 94-L-1, through Gataga Lakes to the Kwadacha River, a distance of roughly 50 kilometers. Three distinct units comprising the Upper Devonian section and various facies changes occurring within individual units are apparent throughout the length of the belt.

The Gunsteel Formation, the central unit of the black clastic succession, is host to several barite deposits and the potentially economic barite hosted massive sulphide deposit at Driftpile Creek.

TABLE OF GEOLOGICAL FORMATIONS

UPPER DEVONIAN -  
MISSISSIPPIAN

Imperial Group

DM<sub>IM</sub> - irregular and craggy, dark brown to grey weathering, black to brown shale with beds of brown siltstone and polymictic conglomerate.

DM<sub>CO</sub> - blocky, buff to light grey weathering polymictic conglomerate.

~~~~~ unconformity ~~~~~

ORDOVICIAN, SILURIAN,  
DEVONIAN

OSD<sub>PD</sub> - light orange weathering, evenly and thin bedded, light grey platy dolomite, often sandy and graptolite bearing.

Road River Formation

OSD<sub>RR</sub> - black to silvery-blue weathering, black graphitic graptolitic shale with interbedded black chert.

## GEOLOGY

Silvery-grey weathering black graphitic shale interbedded with orange weathering platy dolomite occurs at the northeastern boundary of the claim group. The presence of graptolites in the dolomite indicate an Ordovician to Devonian age, thus this package of rocks is equivalent to the carbonate-shale facies along the eastern portion of the Selwyn Basin to the north.

A very thick succession of black to brown silty shale, siltstone, and conglomerate unconformably overlies the Road River Units. The entire claim group is underlain by this thick accumulation of flysch, termed the "Imperial Group". This unit is primarily composed of brown to black weathering silty shale with beds of brown siltstone and fine to medium grained conglomerate varying from 2 meters to over 100 meters in thickness. Thickness of individual conglomerate beds increases as one traverses up through the Upper Devonian to Mississippian section. Cross bedding, scour marks, and graded bedding indicate rapid deposition in a marine environment, possibly from turbidity currents into a deep water basin. The true thickness is difficult to determine due to many isoclinal folds but it is estimated that the Imperial Group is over 1,000 meters thick in this area.

Siliceous black shale or the Gunsteel Formation, host for stratiform barite or barite-lead-zinc deposits in the Gataga area, does not occur within the WE Group boundary.

Prospecting in and around the large limonitic gossans failed to locate massive sulphide mineralization. Several boulders of conglomerate float with disseminated pyrite were found in this area suggesting that the gossans may have formed from circulating ground waters leaching through this pyritic unit.

## GEOCHEMICAL SURVEYS

During the 1977 season, approximately 145 silt and soil samples were taken on the WE Group. Silt samples were collected from active stream sediment of major streams and tributaries within the claim group. Two lines of



contour soils were established in the area of interest. Sample spacing was approximately 50 meters. All soils were taken by experienced soil samplers, students with 2 to 3 years field experience, from the "B" horizon.

All samples were packaged in Kraft sample bags and sent by aircraft to the Acme Analytical Laboratory in Ross River, Yukon. The samples were then dried, sieved to -80 mesh, weighed to half a gram, digested in perchloric acid and analysed by atomic absorption for copper, lead and zinc. Sample results were then sent back to the field and plotted in parts per million on the accompanying 1cm = 120m or 1" = 1,000' topographic maps.

Little geochemical response was obtained from the sampling program. The west branch of the main stream draining through a thick succession of fine-grained conglomerate and black silty shale is slightly anomalous in copper. This anomaly was not considered to be significant, thus prospecting and other follow-up surveys were not conducted. Samples taken in and above several large limonitic gossans yielded very low metal values. Values up to 2,000ppm zinc in streams draining areas of black shale are not considered to be significant. The high zinc response is probably due to Eh and pH conditions of the secondary environment.

#### CONCLUSIONS AND RECOMMENDATIONS

The large limonitic orange gossans on the We Group, formed by iron-rich ground water emanating at the break in slope, lack significant copper, lead, and zinc values. Two contour soil lines, limited prospecting and geologic mapping also failed to locate any potential economic base metal mineralization. The host unit for stratiform barite-lead-zinc mineralization does not occur on the WE Group. No further work is recommended.

Respectfully submitted,

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WAYNE J. ROBERTS  
CYPRUS ANVIL MINING CORPORATION

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DATE

March 15, 1978.

STATEMENT OF QUALIFICATIONS

I, WAYNE J. ROBERTS, with business address in Vancouver, British Columbia, and residential address in Coquitlam, British Columbia, hereby certify that:

- 1) I graduated from the University of British Columbia in 1968 with a BSc majoring in Geology.
- 2) From 1968 to the present I have been actively engaged as a geologist in mineral exploration in British Columbia and the Yukon Territory.
- 3) I am a Fellow of the Geological Association of Canada.
- 4) I personally participated in the field work on the WE Group and have interpreted all data resulting from this work.

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WAYNE J. ROBERTS

SUMMARY OF COSTSCYPRUS ANVIL MINING CORPORATIONWE Claim Expenditure Summary  
to October 31, 1978

|                                 |             |
|---------------------------------|-------------|
| Salaries and Wages              | \$ 791.00   |
| Assays and Geochemical Analysis | 319.50      |
| Camp Maintenance                | 363.52      |
| Fuel                            | 126.83      |
| Rotary Wing                     | 1,616.00    |
| Fixed Wing                      | 1,247.08    |
| Miscellaneous Transportation    | 45.65       |
|                                 | <hr/>       |
|                                 | \$ 4,509.58 |
| Administration 10%              | 450.96      |
|                                 | <hr/>       |
| TOTAL EXPENDITURE               | \$ 4,960.54 |
|                                 | <hr/> <hr/> |

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

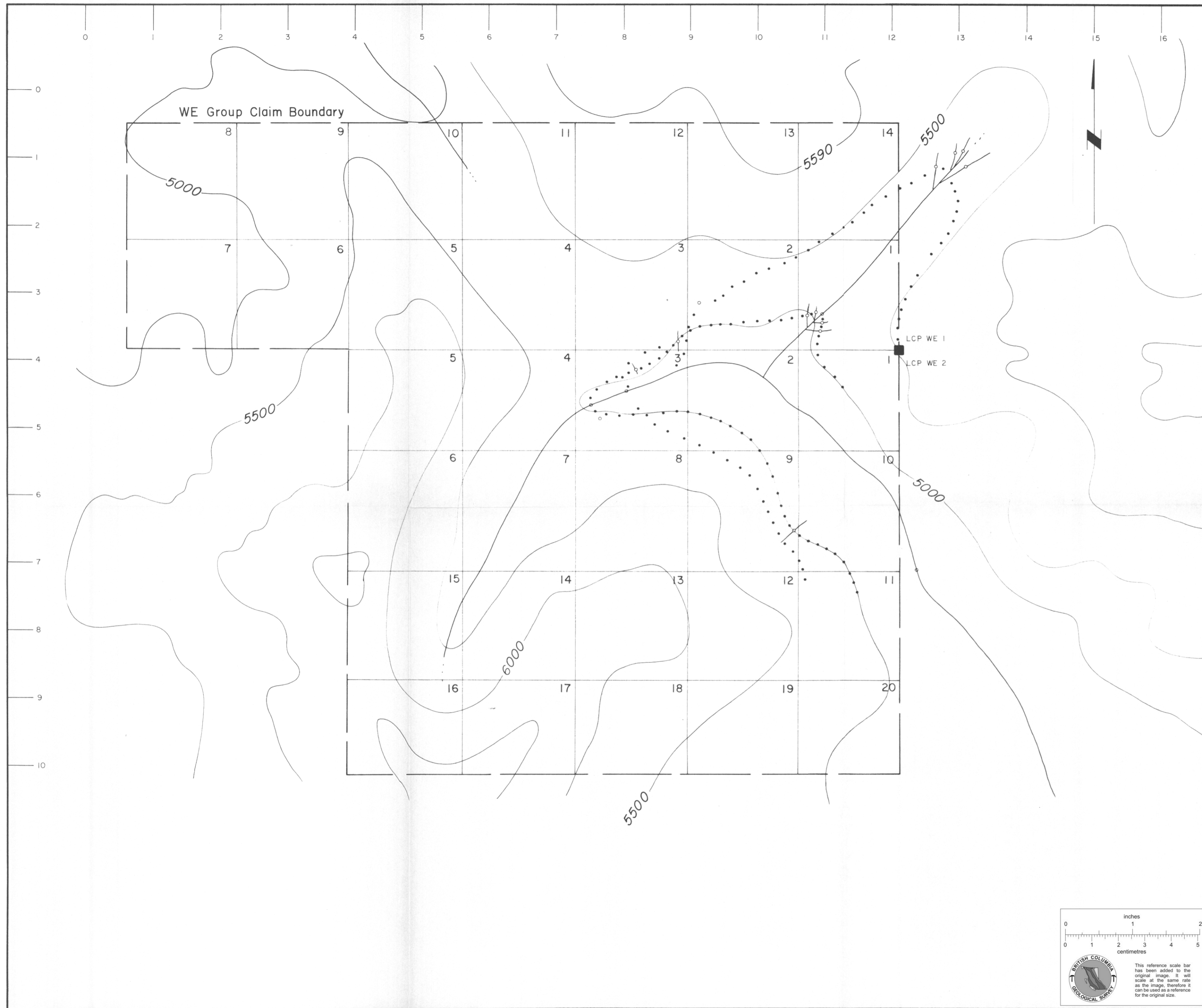
I, WAYNE J. ROBERTS, Geologist, Cyprus Anvil Mining Corporation, of Vancouver, British Columbia, do hereby state that, to the best of my knowledge and belief the Statement of Costs in this report (GEOLOGICAL AND GEOCHEMICAL REPORT, WE GROUP) is a true account of expenditures incurred from exploration on the WE property.

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WAYNE J. ROBERTS

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DATE.

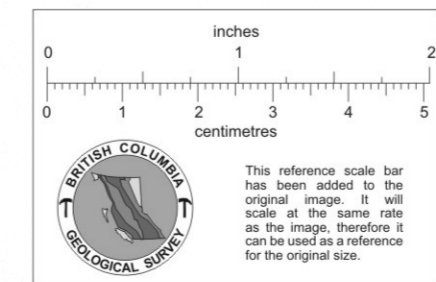


CYPRUS ANVIL MINING CORPORATION

GATAGA PROJECT

WE GROUP

CLAIM MAP



N T S  
94 F - 13  
DRAWN BY: C L CORY  
DATE: DECEMBER 1977

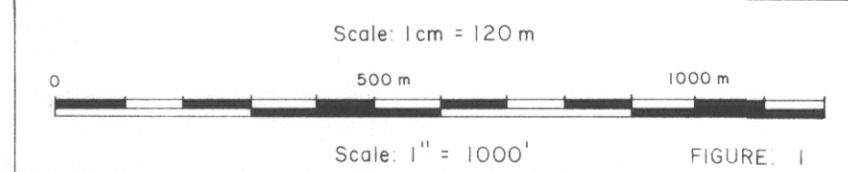
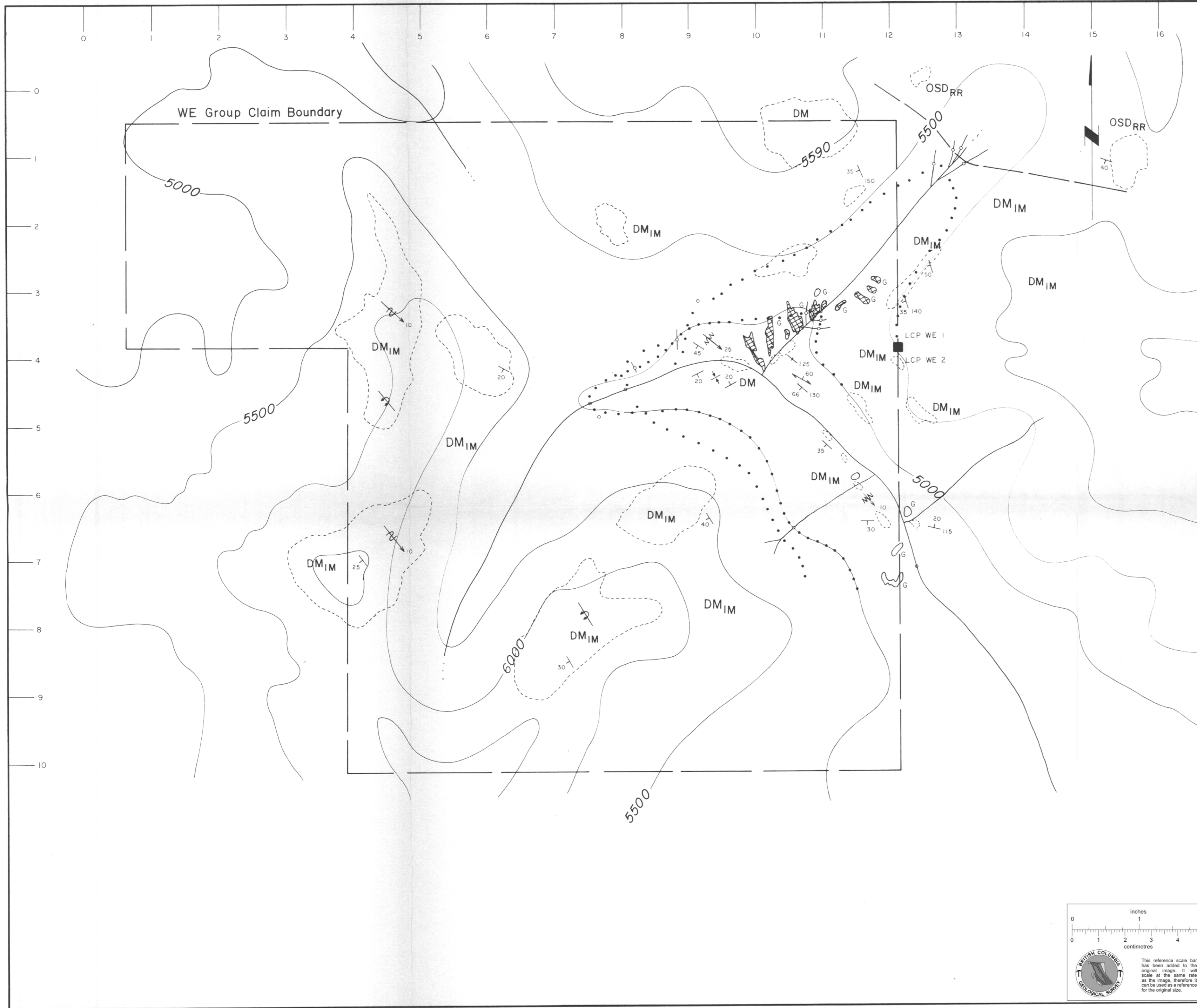


FIGURE 1



LEGEND

- DEVONIAN - MISSISSIPPIAN**
- IMPERIAL GROUP**
- DM<sub>IM</sub> IRREGULAR AND CRAGGY, DARK BROWN TO GREY WEATHERING, BLACK TO BROWN SHALE WITH BEDS OF BROWN SILTSTONE AND POLYMICTIC CONGLOMERATE
  - DM<sub>CG</sub> BLOCKY, BUFF TO LIGHT GREY WEATHERING POLYMICTIC CONGLOMERATE
- UNCONFORMITY
- ORDOVICIAN, SILURIAN, DEVONIAN**
- OSD<sub>PD</sub> LIGHT ORANGE WEATHERING, EVENLY AND THIN BEDDED, LIGHT GREY PLATY DOLOMITE, OFTEN SANDY AND GRAPTOLITE BEARING.
- ROAD RIVER FORMATION**
- OSD<sub>RR</sub> BLACK TO SILVERY - BLUE WEATHERING, BLACK GRAPHITIC GRAPTOLITIC SHALE WITH INTERBEDDED BLACK CHERT.

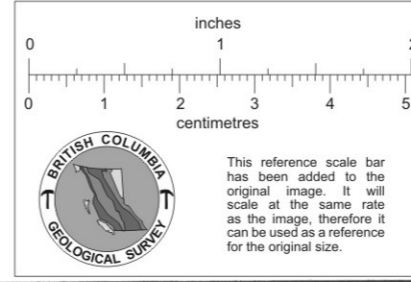
- LIMIT OF OUTCROP
- GEOLOGICAL CONTACTS, DEFINED, ASSUMED
- FAULTS, DEFINED, ASSUMED
- BEDDING
- FOLIATION
- ISOCLINAL FOLDS
- GOSSAN
- LEGAL CLAIM POSTS

CYPRUS ANVIL MINING CORPORATION

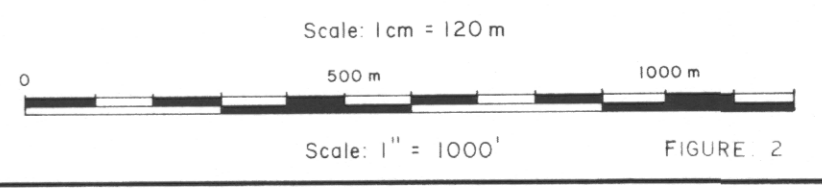
GATAGA PROJECT

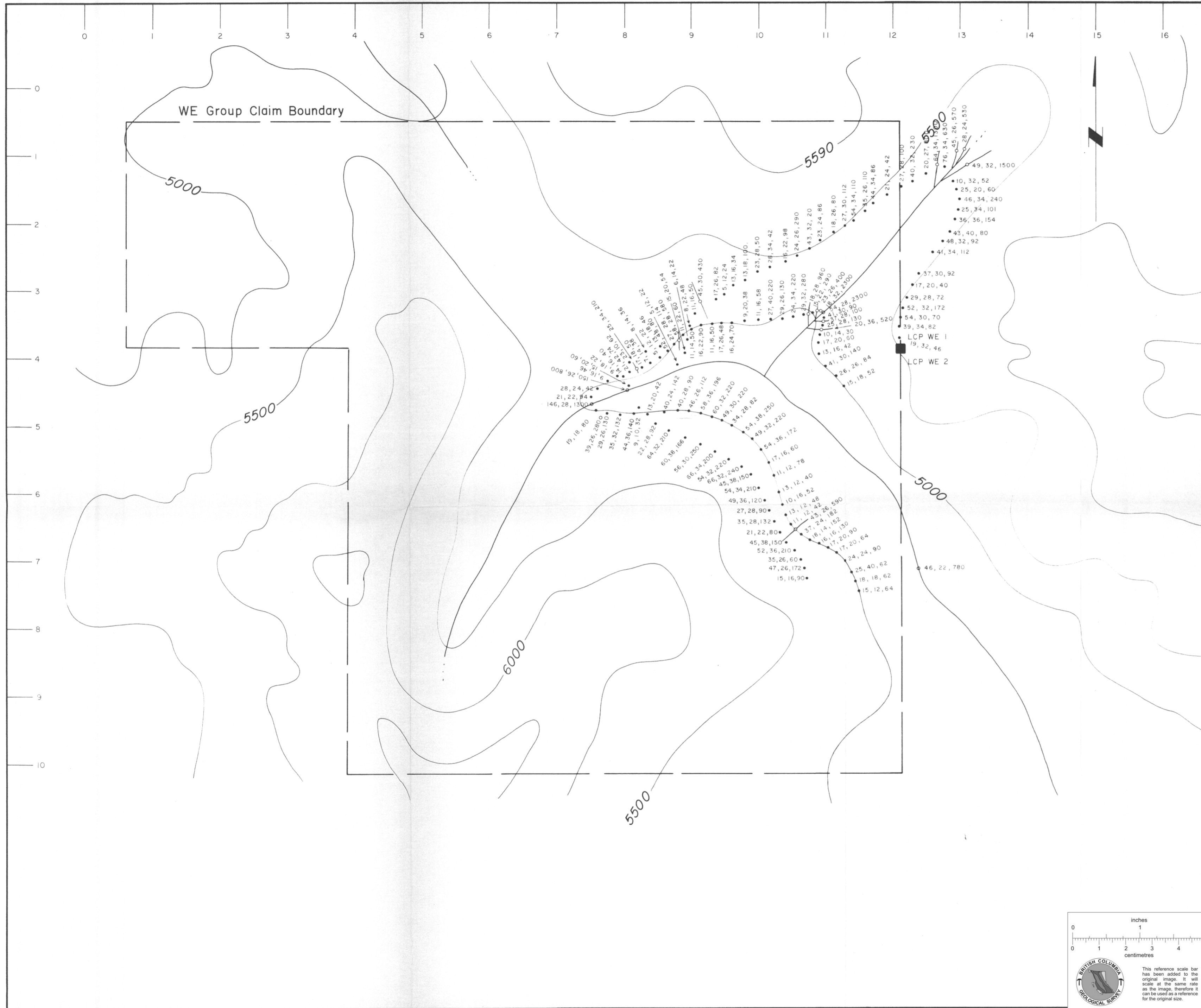
WE GROUP

GEOLOGY MAP



N.T.S.  
94F - 13  
GEOLOGY BY W. ROBERTS  
DRAWN BY C. L. CORY  
DATE, DECEMBER 1977





LEGEND

ALL VALUES IN PARTS PER MILLION (ppm)

• Copper, Lead, Zinc

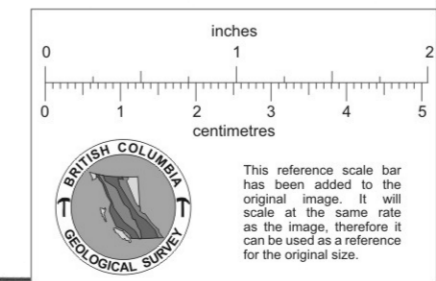
SAMPLED BY R BLATCHLEY  
B YOUNGMAN

CYPRUS ANVIL MINING CORPORATION

GATAGA PROJECT

WE GROUP

GEOCHEMICAL VALUES MAP



NTS  
94 F - 13

DRAWN BY C L CORY  
DATE: DECEMBER 1977

