

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 92.03.20

ASSESSMENT REPORT 21460

MINING DIVISION: Liard

PROPERTY: Zinc

LOCATION: LAT 57 15 00 LONG 131 00 48

NTS 104G06E 104G03E

CLAIM(S): Zinc 2

OPERATOR(S): Trader Res.

AUTHOR(S): Vulimiri, M.R.

REPORT YEAR: 1991, 22 Pages

COMMODITIES

SEARCHED FOR: Copper, Lead, Zinc, Silver, Gold

KEYWORDS: Triassic, Andesitic volcanics, Quartz-carbonate veins, Chalcopyrite  
Galena, Sphalerite, Arsenopyrite

WORK

DONE: Prospecting

PROS 250.0 ha

|          |      |     |
|----------|------|-----|
| LOG NO:  | 0628 | RD. |
| ACTION:  |      |     |
| FILE NO: |      |     |

GEOLOGICAL AND PROSPECTING REPORT

ON THE

ZINC GROUP OF CLAIMS  
(Zinc 1, 2, 3 and 4)

GALORE CREEK AREA

Liard Mining Division

British Columbia

N.T.S. 104G 2W, 3E, 7W, 8E

(57 15' N. Lat., 131 34' W. Long.)

by

Mohan R. Vulimiri, M.S., FGAC

for

TRADER RESOURCE CORP.  
820-810 West Broadway Ave.  
Vancouver, B.C. V5Z 4C9

(Owners and Operators)

May 1991

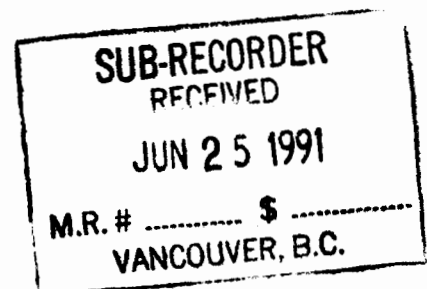


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**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**21,460**

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## Introduction

The Zinc 1 to 4 mineral claims were staked by John Mirko on March 20, 1990.

Field Work was carried out on the property by Mohan Vulimiri, geologist and John F. Mirko, prospector, during the period August to October, 1990.

The purpose of the field work was to evaluate the mineral occurrences on the property with respect to their structural control, modes of occurrence of mineralization and alteration and the type of mineralization. Minor geological mapping and prospecting were carried out on the claims.

## Location and Access

The Zinc claims are located on the headwaters of Schaft Creek, immediately west of Mt. Hickman, approximately 30 kilometres northeast of the Galore Creek deposit, 80 kilometres south of Telegraph Creek and 200 kilometres northwest of Smithers, in Northwestern British Columbia. The claims are centred on lat. 57 15' ; long. 131 00' (Figures 1, 2 & 4).

Access to the property is by helicopter from the Scud Airstrip, 45 kilometres to the west, and from the Bob Quin Airstrip, 30 kilometres to the east. Both airstrips can be accessed by fixed wing aircraft from Smithers. Bob Quin airstrip is located on Stewart-Cassiar Highway 37 and can be accessed by road all year.

## Topography and Climate

Topography is extremely rugged typical of the terrain in the Galore Creek area (Figure 4). The elevations range from 1100 metres in the Schaft Creek valley to over 2000 metres on Mt. Hickman. Extensive permanent snowfields and ice-fields cover much of the higher ground. Some of the creek valleys have precipitous sides making foot passage very difficult.

The weather is typical of the northern Coast Mountains with very heavy winter snowfall, with frequent avalanches and snowslides. The summer months are generally cool but very wet. Surface exploration can be carried out on the lower reaches of the property from the beginning of June to the middle of October, whereas on the higher reaches from about the beginning of August to end of September.

## Property and Claim Status

The Zinc Group of Claims were staked in March 1990. The claims are owned and operated by Trader Resource Corp. of Vancouver, B.C (Figure 2). Upon acceptance of this report, all claims will be in good standing until March 24, 1992.

The claims information is as follows:

| <u>Mineral Claim</u> | <u>Record No</u> | <u>Units</u> | <u>Record Date</u> | <u>Expiry Date</u> |
|----------------------|------------------|--------------|--------------------|--------------------|
| Zinc 1               | 7199             | 20           | March 24, 90       | March 24, 92       |
| Zinc 2               | 7200             | 20           | March 24, 90       | March 24, 92       |
| Zinc 3               | 7201             | 20           | March 24, 90       | March 24, 92       |
| Zinc 4               | 7202             | 20           | March 24, 90       | March 24, 92       |

## History and Previous Work

The first recorded mineral exploration in the Telegraph Creek-Stikine River area was carried out in 1861 with the discovery of placer gold just downstream from the village of Telegraph Creek.

During 1920's, 1930's and 1940's the area was intermittently explored for lode gold and base metal deposits. A few copper showings were discovered along the Stikine River.

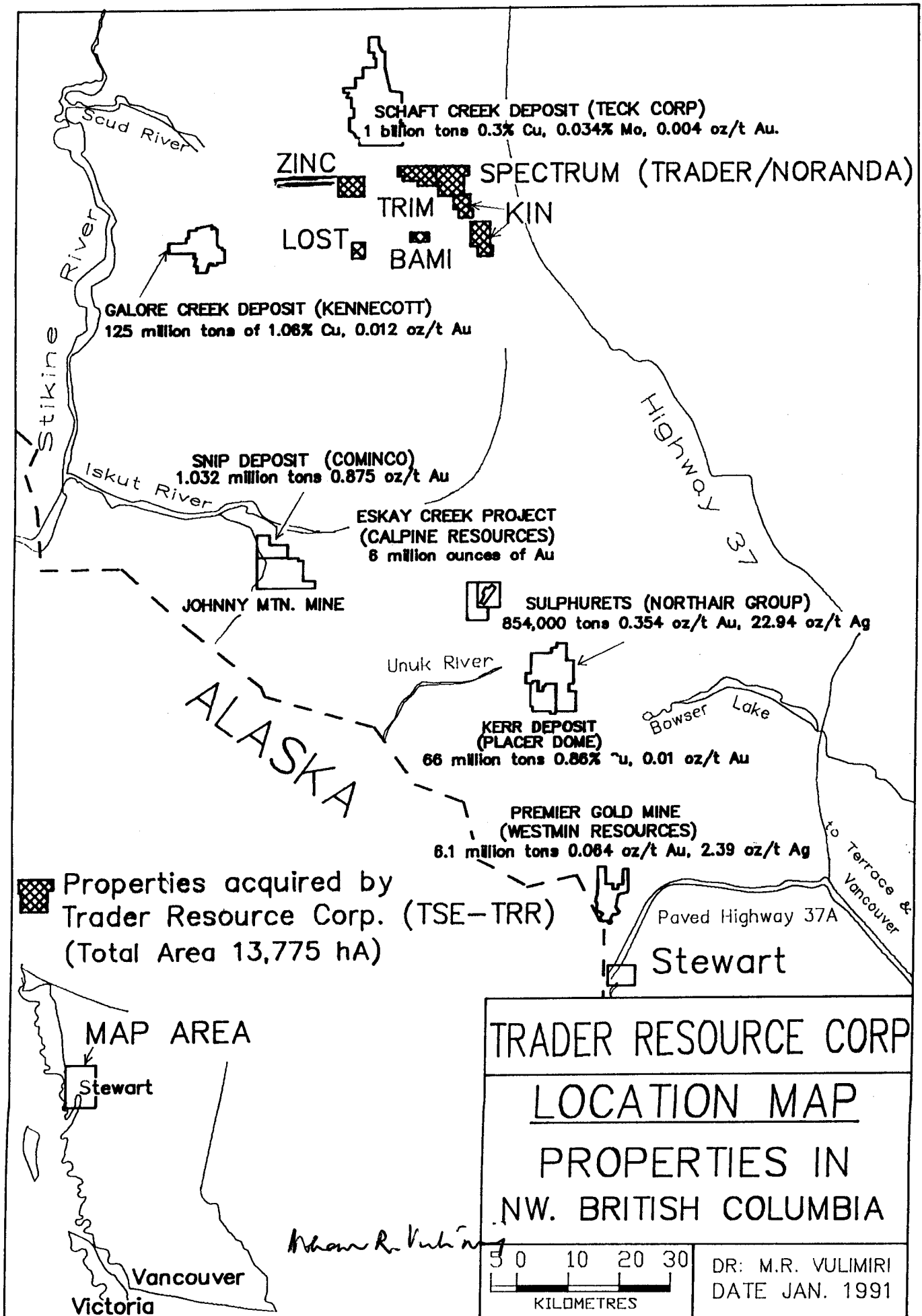
Exploration for porphyry copper and copper/molybdenum deposits has been carried intermittently over the last 30 years in the Mess Creek - Galore Creek area. Kennco Explorations discovered the Galore Creek syenite associated porphyry copper-gold deposit in the early 1960's and Hecla Explorations discovered the Schaft Creek porphyry Copper deposit in the mid 1960's.

Continental Gold Corp. staked the area as the Galena claims in 1988 and subsequently carried out prospecting and minor mapping with the discovery of several base metal showings.

## Regional Geology

The Telegraph Creek Map Sheet (NTS 104 G) was mapped by J.G. Souther of the Geological Survey of Canada during the period 1956 to 1969 (GSC Paper 71-44 and Figure 3).

According to Souther, the More Creek area is underlain by various sedimentary and mainly andesitic volcanic rocks of Triassic and Jurassic age (map units 5, 7, 8, 9 and 13). These rocks are intruded by granitic and syenitic plutons and rhyolite dykes of Triassic and/or Cretaceous age (map units 17 and 20). Immediately to the west of the Zinc Claims is the Hickman



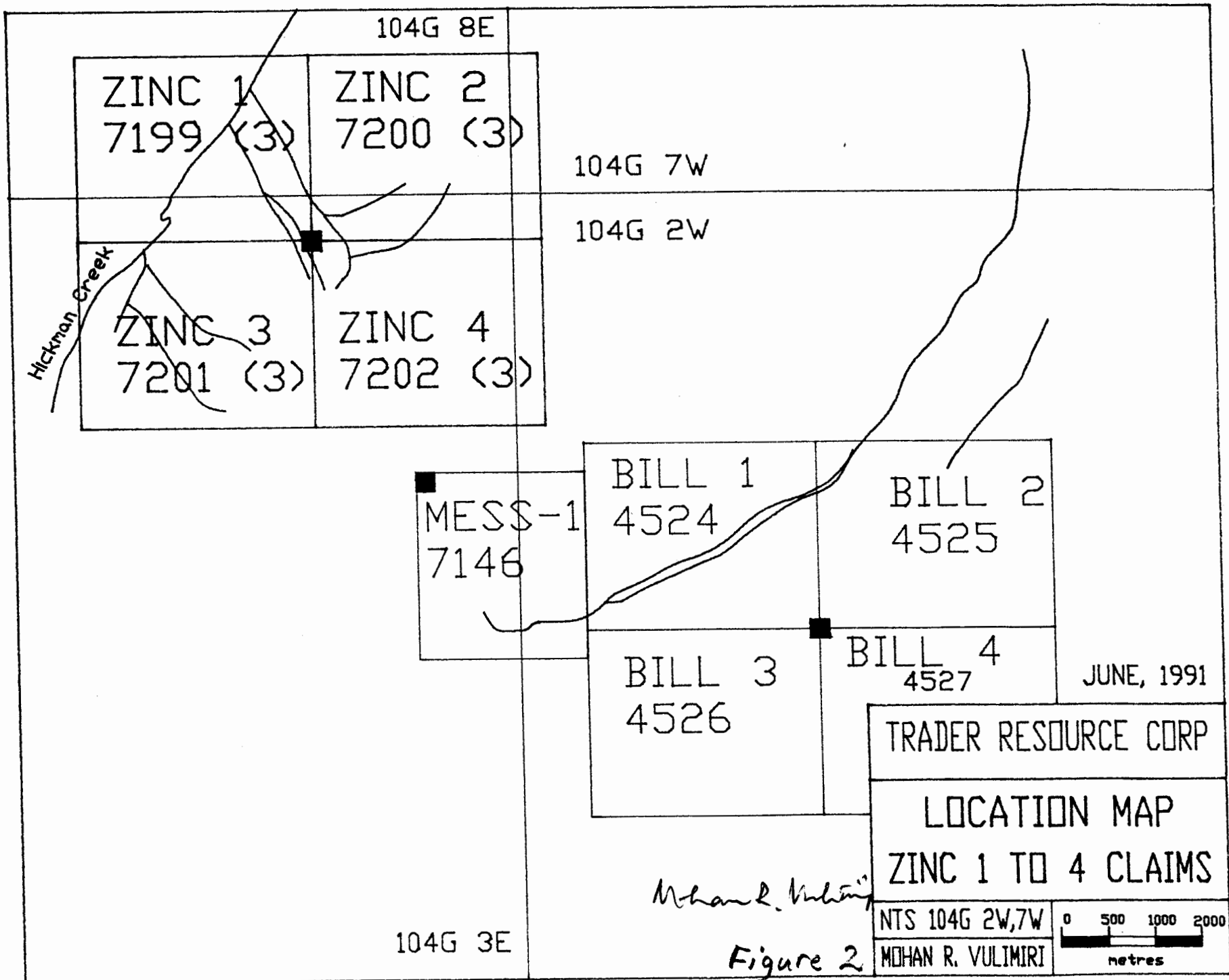
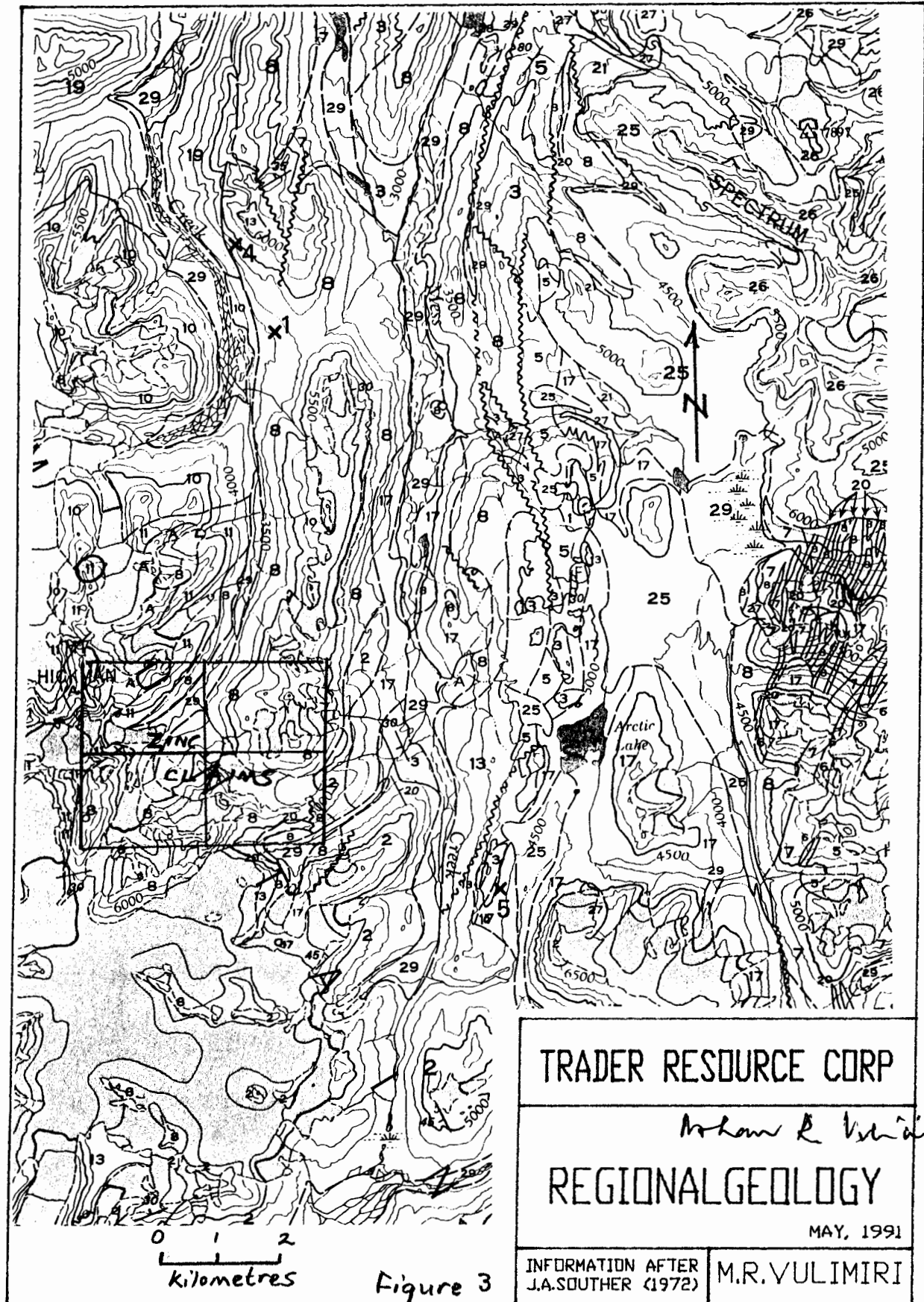


Figure 2





LEGEND

- CENOZOIC**
- QUATERNARY**  
PLEISTOCENE AND RECENT
- 29 Fluvialite gravel; sand, silt; glacial outwash, till, alpine moraine and colluvium
  - 28 Hot-spring deposit, tufa, aragonite
  - 27 Olivine basalt, related pyroclastic rocks and loose tephra; younger than some of 29
- TERTIARY AND QUATERNARY**  
UPPER TERTIARY AND PLEISTOCENE
- 26 Rhyolite and dacite flows, lava domes, pyroclastic rocks and related subvolcanic intrusions; minor basalt
  - 25 Basalt, olivine basalt, dacite, related pyroclastic rocks and subvolcanic intrusions; minor rhyolite; in part younger than some 26
- CRETACEOUS AND TERTIARY**  
UPPER CRETACEOUS AND LOWER TERTIARY
- SLOKO GROUP**
- 24 Light green, purple and white rhyolite, trachyte and dacite flows, pyroclastic rocks and derived sediments
  - 22 23 Biotite leucogranite, subvolcanic stocks, dykes and sills
  - 23 Porphyritic biotite andesite, lava domes, flows and (?) sills
- SUSTUT GROUP**
- 21 Chert-pebble conglomerate, granite-boulder conglomerate, quartzose sandstone, arkose, siltstone, carbonaceous shale and minor coal
  - 20 Felsite, quartz-feldspar porphyry, pyritiferous felsite, orbicular rhyolite; in part equivalent to 22
  - 19 Medium-to coarse-grained, pink biotite-hornblende quartz monzonite
- JURASSIC AND/OR CRETACEOUS**  
POST-UPPER TRIASSIC PRE-TERTIARY
- 18 Hornblende diorite
  - 17 Granodiorite, quartz diorite; minor diorite, leucogranite and migmatite
- JURASSIC**  
MIDDLE (?) AND UPPER JURASSIC
- BOWSER GROUP**
- 16 Chert-pebble conglomerate, grit, greywacke, subgreywacke, siltstone and shale; may include some 13
- MIDDLE JURASSIC**
- 15 Basalt, pillow lava, tuff-breccia, derived volcaniclastic rocks and related subvolcanic intrusions
- LOWER AND MIDDLE JURASSIC**
- 14 Shale, minor siltstone, siliceous and calcareous siltstone, greywacke and ironstone
- LOWER JURASSIC**
- 13 Conglomerate, polymictic conglomerate; granite-boulder conglomerate, grit, greywacke, siltstone; basaltic and andesitic volcanic rocks, peperites, pillow-breccia and derived volcaniclastic rocks
- TRIASSIC AND JURASSIC**  
POST-UPPER TRIASSIC PRE-LOWER JURASSIC
- 12 Syenite, orthoclase porphyry, monzonite, pyroxenite

- MESOZOIC**
- TRIASSIC AND JURASSIC**  
POST-UPPER TRIASSIC PRE-LOWER JURASSIC
- 12 Syenite, orthoclase porphyry, monzonite, pyroxenite
- HICKMAN BATHOLITH**
- 10 11 10. Hornblende granodiorite, minor hornblende-quartz diorite 11. Hornblende, quartz diorite, hornblende-pyroxene diorite, amphibolite and pyroxene-bearing amphibolite
- TRIASSIC**  
UPPER TRIASSIC
- 9 Undifferentiated volcanic and sedimentary rocks (units 5 to 8 inclusive)
  - 8 Augite-andesite flows, pyroclastic rocks, derived volcaniclastic rocks and related subvolcanic intrusions; minor greywacke, siltstone and polymictic conglomerate
  - 7 Siltstone, thin-bedded siliceous siltstone, ribbon chert, calcareous and dolomitic siltstone, greywacke, volcanic conglomerate, and minor limestone
  - 6 Limestone, fetid argillaceous limestone, calcareous shale and reefold limestone; may be in part younger than some 7 and 8
  - 5 Greywacke, siltstone, shale; minor conglomerate, tuff and volcanic sandstone
- MIDDLE TRIASSIC**
- 4 Shale, concretionary black shale; minor calcareous shale and siltstone
- PERMIAN**  
MIDDLE AND UPPER PERMIAN
- 3 Limestone, thick-bedded mainly bioclastic limestone; minor siltstone, chert and tuff
- PERMIAN AND OLDER**
- 2 Phyllite, argillaceous quartzite, quartz-sericite schist, chlorite schist, greenstone, minor chert, schistose tuff and limestone
- MISSISSIPPIAN**
- 1 Limestone, crinoidal limestone, ferruginous limestone; maroon tuff, chert and phyllite
  - B Amphibolite, amphibolite gneiss; age unknown probably pre-Upper Jurassic
  - A Ultramafic rocks; peridotite, dunite, serpentinite; age unknown, probably pre-Lower Jurassic
- Geological boundary (defined and approximate, assumed) .....
- Bedding (horizontal, inclined, vertical, overturned) ..... + / x
- Anticline .....
- Syncline .....
- Fault (defined and approximate, assumed) .....
- Thrust fault, teeth on hanging-wall side (defined and approximate, assumed) .....
- Fossil locality .....
- Mineral property .....
- Glacier .....

TRADER RESOURCE CORP

LEGEND

REGIONAL GEOLOGY

MAY, 1991

INFORMATION AFTER  
J.A. SOUTHER (1972)

M.R. VULIMIRI

*M.R. Vulimiri*

Figure 3a

Batholith, mainly consisting of intrusive rocks of granodiorite to diorite composition. Basaltic rocks of the Mt. Edziza area of Tertiary and Quaternary age are the youngest rocks and are exposed to the west across Mess Creek.

Recent work by Read et al in the Forrest Kerr and Lower More Creek areas (GSC Open File 2094) suggests the Triassic and Jurassic sedimentary and volcanic rocks are part of the Stuhini Group.

The oldest rocks in the Schaft Creek - Mess Creek area are the limestone, phyllite and slate belonging to Permian and older age. The Permian limestone with interbedded chert, argillite and slate overlies the oldest rocks.

### Property Geology

The Zinc Group of claims are predominantly underlain by andesitic volcanic rocks trending mainly N20°E and appear to dip gently to the west (Figure 5). These andesitic rocks consist of pyritiferous augite-andesite flows, pyroclastic tuffs and breccias, related sub-volcanic intrusions, and volcanic derived sediments.

Extensive gossan zones were observed along the western slopes of the ridge trending north-south on the Zinc 2 Claim approximately two (2) kilometres to the northeast of the common Legal Corner Post of the Zinc Claims (Figure 5). These gossan zones appear to be related to intense weathering of pyritized andisitic volcanic rocks.

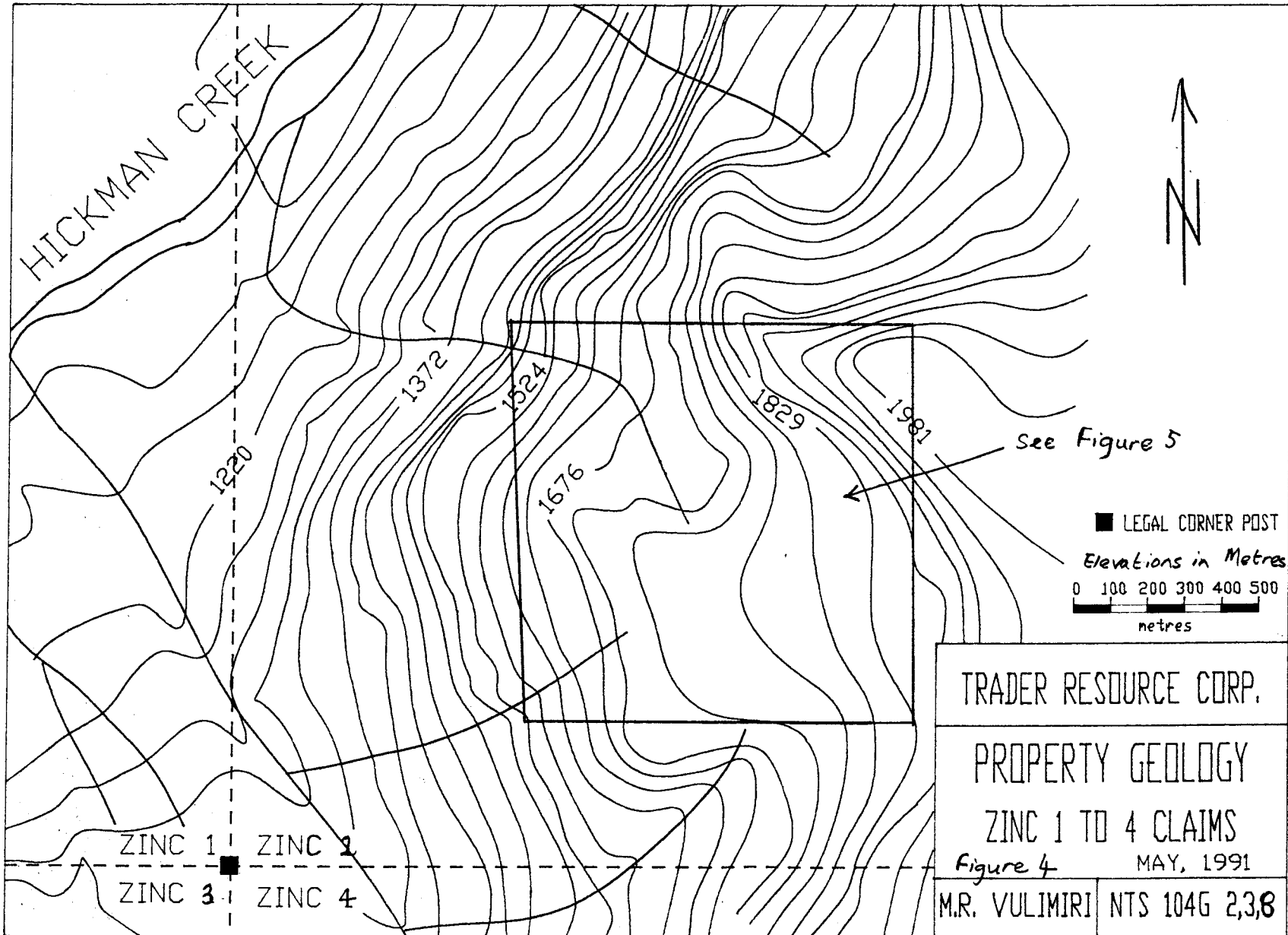
Numerous gossan zones were also observed in creek gullies draining to the east on the Zinc 4 Claim. These areas should be systematically prospected in the coming field season.

### Mineralization and Alteration

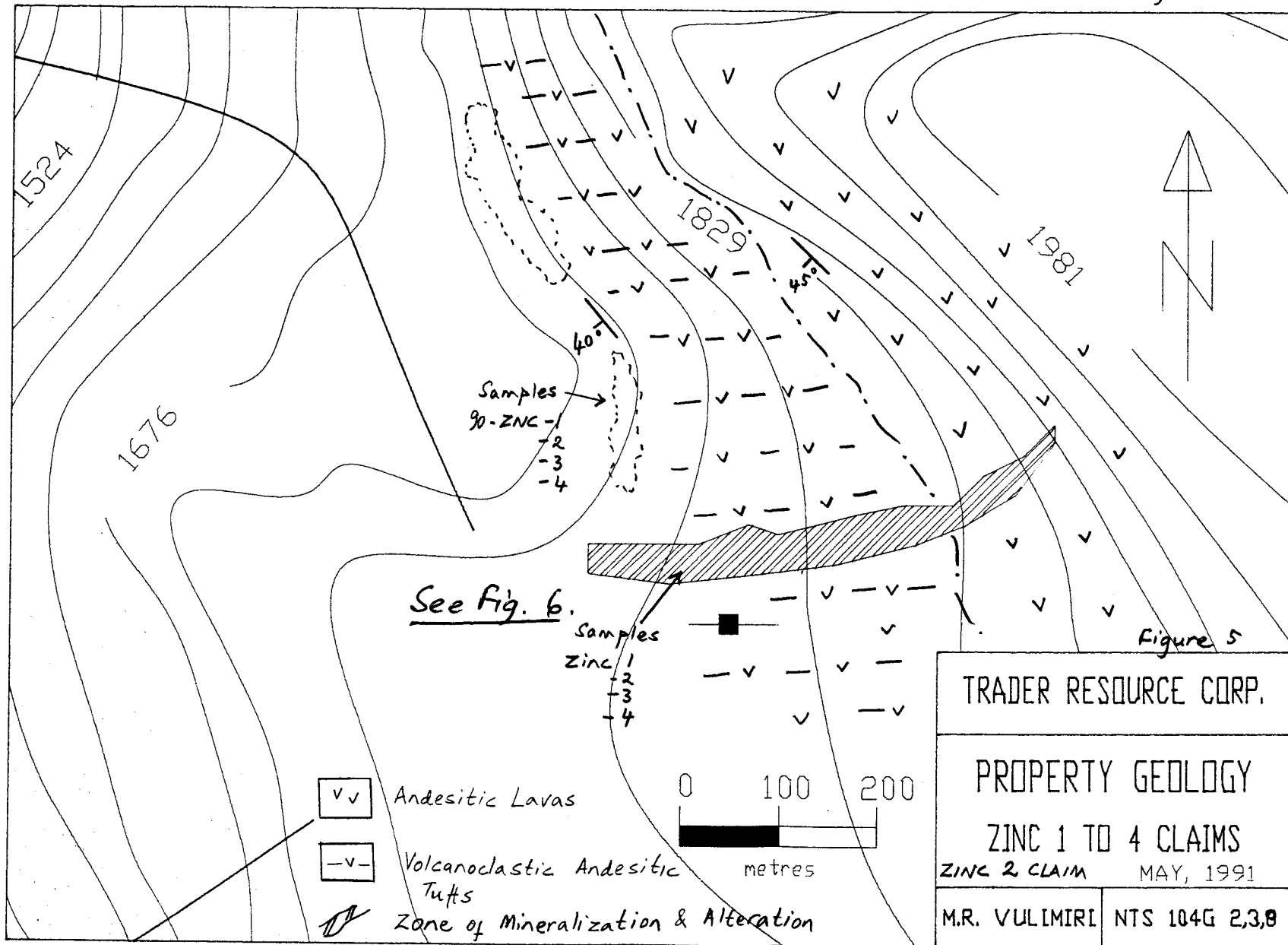
Extensive malachite staining and gossan zones were observed on steep cliffs on the western slopes of a ridge trending north-south approximately 2 kilometres north-east of the common Legal Corner Post (Figure 4 & 5).

Steep dipping 30 cm to 60 cm wide quartz-carbonate veins are present on these slopes. The veins trend approximately east-west. The mineralization is polymetallic and consists of chalcopyrite, sphalerite, galena and arsenopyrite with significant gold and silver values (Figure 6).

Values of up to 2.1% copper, 2.6% lead, 3.9% zinc, 6.5% arsenic, 215 ppm silver (215 grams/tonne) and 640 ppb (0.6



*Mean R. Vulimiri*



Moham R. Vulimiri

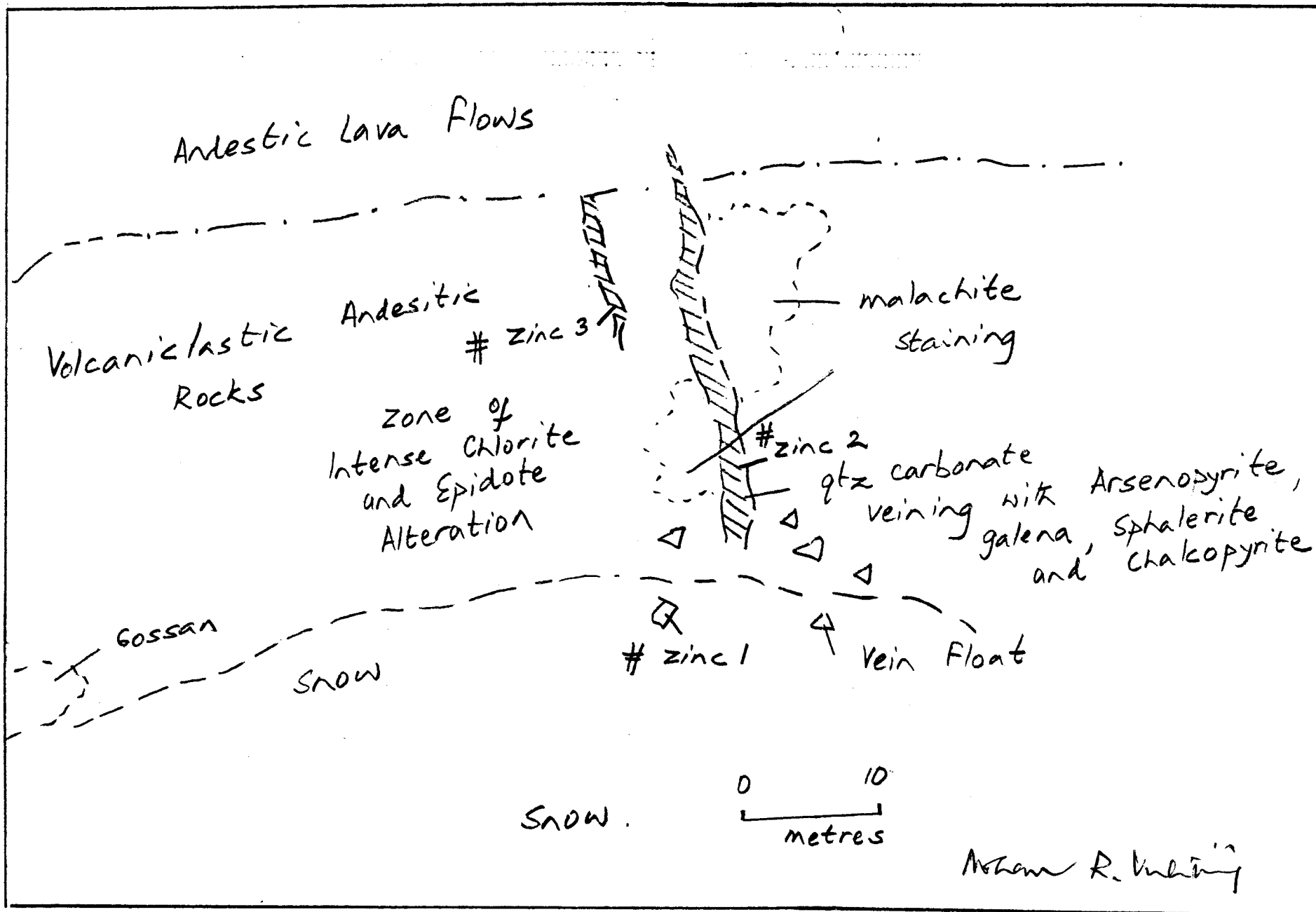


Fig 6. Cross Sectional view looking East.

grams/tonne) gold were obtained in grab samples of vein material.

Four gossan zone samples did not return any significant values (Figure 4). Detailed assay data is given in the appendix.

The wall rocks exhibit chlorite and epidote alteration with up to 10's of metres wide. These zones also carry numerous narrow calcite stringers (Figure 6).

Several other mineral occurrences were documented by geologists working for Continental Gold Corp. These showings were well documented in a report by Dawson (1989).

#### Geochemical ICP and Atomic Absorption Analyses

The rock samples collected from the mineral showing and the gossan zones were shipped to Rossbacher Labs of Burnaby, B.C. and Acme Labs of Vancouver, B.C. These samples were analyzed for 30 elements by Induced Coupled Plasma method and atomic absorption. Gold analyses is by acid leach AA finish.

#### Potential with Recommendations

Geological data, and mapping to date on the property suggests that mineralized zones with significant base metal and precious metal values are present. These are present in quartz-calcite veins in east-west trending shear zones.

Several gossanous pyrite-rich zones have been located on the property, but the showings were not systematically investigated. A few grab samples did not return any significant values.

The shear zone-controlled mineralization on the Zinc Property appears to be geochemically zoned with respect to lead, zinc, copper and arsenic, as well as silver and gold.

In view of this, the following systematic exploration program is recommended to properly evaluate the property.

The program should consist of intensive prospecting, litho-geochemical sampling, contour and grid soil sampling, geological mapping, hand trenching of any mineralized showings, geophysical VLF and magnetometer surveys.

Prospecting and sampling of all gossanous and altered areas should be carried out. Contour soil sampling at 150 metre intervals and grid soil sampling at 50 metre intervals should be performed in overburden covered areas. Geological mapping with prospecting on a scale of 1:5000 should be performed over the entire property. Magnetometer and VLF surveys may define and

delineate the structural controls and extensions of mineralization.

Trenching, sampling and detailed geological mapping should be carried out on the mineralized showings discovered to date.

*Michael R. Vukobratovic*  
*May 30, 1991*

CERTIFICATE OF EXPENDITURES

The following expenditures were incurred on the Zinc Property.

Zinc 1, 2, 3 and 4 Claims - 80 units

Wages (August 14, 15 and October 8, 1990)

|   |           |
|---|-----------|
| M. R. Vulimiri 1.5 days at \$350.00/day |           |
| 1 day travel                            | \$ 875.00 |

|                                 |           |
|---------------------------------|-----------|
| J. Mirko 2 days at \$250.00/day |           |
| 1 day travel                    | \$ 750.00 |

Transportation

|   |            |
|---|------------|
| Helicopter: 4.6 hrs. at \$702./hr incl. fuel) | \$ 3229.00 |
| Mob. and Demob.                               | \$ 1500.00 |

Room and Board

|   |            |
|---|------------|
| 5.5 man-days at \$140/man-day (Galore Camp) | \$ 1400.00 |
|---|------------|

|                               |           |
|-------------------------------|-----------|
| <u>Equipment and Supplies</u> | \$ 150.00 |
|-------------------------------|-----------|

Geochemical Analyses and Assays

|                                 |          |
|---------------------------------|----------|
| 7 rocks at \$14.25/sample (ICP) | \$ 99.75 |
|---------------------------------|----------|

|                     |          |
|---------------------|----------|
| Shipping of samples | \$ 10.00 |
|---------------------|----------|

|                 |           |
|-----------------|-----------|
| Report 1.5 days | \$ 525.00 |
|-----------------|-----------|

|                                    |           |
|------------------------------------|-----------|
| Drafting, Typing and Computer Time | \$ 400.00 |
|------------------------------------|-----------|

|                                       |                   |
|---------------------------------------|-------------------|
| Total Expenditures on the Zinc Claims | <u>\$ 8308.75</u> |
|---------------------------------------|-------------------|



## REFERENCES

- Read, P.B. et al, 1989: Open File Map on the Forrest Kerr and Lower More Creek Areas, Northwestern British Columbia. Geological Open File Report No. 2094.
- Sawyer, J.B.P., 1980: Geological, Geochemical and Geophysical Report on the More Creek Property, an Assessment Report for Edziza Resources.
- Souther, J.G., 1972: Telegraph Creek Map Area, British Columbia (Report and Map 11-1971), Geological Survey of Canada Paper 71-44
- Dawson, G.J., 1989: Prospecting Report, Galena Claims

CERTIFICATE OF QUALIFICATIONS

I, Mohan R. Vulimiri, hereby certify that:

I am a Consulting Geologist, with business address at 822 East 12th Street, North Vancouver, B.C. V7L 2L1.

I am a graduate of Indian Institute of Technology, Kharagpur, India with a B.Sc. Honours in Geological Sciences.

I received a Master of Science degree in Economic Geology from the University of Washington, Seattle, U.S.A.

I am a Member of Society of Economic Geologists, Member of Society of Mining Engineers and a Fellow of the Geological Association of Canada.

I have practised my profession as a Geologist since 1970, and in responsible positions since 1974, in British Columbia, Yukon, Saskatchewan, Washington, Idaho and South Western U.S.A.

I have personally carried out and supervised the field work on the Zinc Property conducted during August and October, 1990.

Dated at Vancouver, B.C., this 5th day of June 1991.

*Mohan R. Vulimiri*

-----  
Mohan R. Vulimiri, M.S. FGAC

APPENDIX 1  
Description of Rock Samples

| <u>Sample No.</u> | <u>Description of Rock Samples</u>   |
|-------------------|--|
| Zinc 1            | quartz-calcite vein with chalcopyrite, arsenopyrite, minor galena, sphalerite, and silver values.    |
| Zinc 2            | quartz-calcite vein with arsenopyrite, sphalerite, galena, minor chalcopyrite and minor gold values. |
| Zinc 3            | quartz-carbonate-limonite vein with minor chalcopyrite, galena, and arsenopyrite.                    |
| 90-ZNC-1          | Gossan sample  |
| 90-ZNC-2          | Gossan sample  |
| 90-ZNC-3          | Gossan sample  |
| 90-ZNC-4          | Gossan sample  |

APPENDIX 2  
Geochemical ICP and Atomic Absorption Analyses

ROSSBACHER LABORATORY LTD.

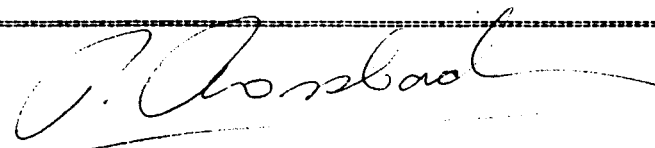
2225 S. Springer Ave., Burnaby,  
British Columbia, Can. V5B 3M1  
Ph: (604)299-6910 Fax: 299-6252

CERTIFICATE OF ANALYSIS

TO : ALASKA FERN MINES,  
822 EAST 12TH ST.,  
NORTH VANCOUVER, B.C.  
PROJECT : SPEC  
TYPE OF ANALYSIS : ICP

CERTIFICATE # : 90447  
INVOICE # : 10558  
DATE ENTERED : 90-09-14  
FILE NAME : AFM90447  
PAGE # : 1

| PRE<br>FIL | SAMPLE NAME | PPM<br>MO | PPM<br>CU | PPM<br>PB   | PPM<br>ZN | PPM<br>AG | PPM<br>NI  | PPM<br>CO | PPM<br>MN | I<br>FE | PPM<br>AS | PPM<br>U | PPM<br>AU | PPM<br>HG | PPM<br>SR | PPM<br>CD | PPM<br>SB | PPM<br>BI | PPM<br>V | I<br>CA | I<br>P   | PPM<br>LA | PPM<br>CR | I<br>MG | PPM<br>BA | I<br>TI | PPM<br>B | I<br>AL | I<br>NA | I<br>SI | PPM<br>W | PPM<br>BE | PPM<br>Au | PPB<br>AA |
|------------|-------------|-----------|-----------|-------------|-----------|-----------|------------|-----------|-----------|---------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|----------|-----------|-----------|---------|-----------|---------|----------|---------|---------|---------|----------|-----------|-----------|-----------|
| A          | BUTTE 1     | 27 75260  | 1854      | 906 279.9   | 65        | 24        | 543 8.52   | 9         | 5         | ND      | ND        | 264      | 25        | 16        | 266       | 163 1.73  | 0.20      | 24        | 55       | 1.22    | 47 0.32  | 90        | 1.13      | 0.01    | 0.01      | 29      | 1        | 140     |         |         |          |           |           |           |
| A          | BUTTE 2     | 3 10890   | 38        | 118 16.6    | 6         | 3         | 293 1.73   | 20        | 5         | ND      | ND        | 195      | 3         | 14        | 37        | 251 2.53  | 0.05      | 18        | 48       | 0.08    | 28 0.08  | 15        | 0.14      | 0.01    | 0.01      | 10      | 6        | 30      |         |         |          |           |           |           |
| A          | PUP 1       | 2 22430   | 53        | 643 28.0    | 75        | 27        | 494 4.41   | 28        | 5         | ND      | ND        | 365      | 27        | 12        | 16        | 135 3.94  | 0.27      | 15        | 20       | 1.18    | 122 0.20 | 36        | 0.77      | 0.02    | 0.01      | 16      | 4        | 30      |         |         |          |           |           |           |
| A          | PUP 2       | 2 6078    | 59        | 231 7.5     | 80        | 15        | 615 3.01   | 29        | 5         | ND      | ND        | 405      | 9         | 10        | 24        | 135 5.54  | 0.22      | 15        | 21       | 1.34    | 426 0.24 | 15        | 0.86      | 0.03    | 0.01      | 14      | 4        | 5       |         |         |          |           |           |           |
| A          | SP 1        | 2 7844    | 127       | 93 4.9      | 8         | 3         | 287 2.00   | 11        | 5         | ND      | ND        | 100      | 1         | 9         | 45        | 376 0.91  | 0.02      | 10        | 15       | 0.17    | 40 0.12  | 10        | 0.23      | 0.01    | 0.01      | 6       | 7        | 5       |         |         |          |           |           |           |
| A          | SP 6        | 3 763     | 21        | 11 3.8      | 11        | 3         | 145 0.38   | 18        | 5         | ND      | ND        | 75       | 1         | 7         | 37        | 16 0.58   | 0.03      | 5         | 52       | 0.03    | 33 0.01  | 5         | 0.03      | 0.01    | 0.01      | 1       | 1        | 5       |         |         |          |           |           |           |
| A          | SP 13       | 49 61010  | 387       | 664 99.2    | 9         | 9         | 425 6.56   | 8         | 5         | ND      | ND        | 665      | 25        | 11        | 35        | 71 2.84   | 0.04      | 19        | 1        | 0.26    | 40 0.13  | 50        | 0.63      | 0.01    | 0.01      | 17      | 1        | 100     |         |         |          |           |           |           |
| A          | SP 16       | 2 3042    | 12        | 71 4.8      | 108       | 12        | 337 2.06   | 22        | 5         | ND      | ND        | 478      | 2         | 5         | 12        | 88 2.40   | 0.23      | 11        | 6        | 0.69    | 30 0.28  | 5         | 1.58      | 0.01    | 0.01      | 5       | 2        | 5       |         |         |          |           |           |           |
| A          | SP 25       | 3 18160   | 13        | 583 7.6     | 82        | 42        | 353 4.12   | 8         | 5         | ND      | ND        | 39       | 5         | 4         | 8         | 178 0.32  | 0.24      | 20        | 26       | 2.25    | 67 0.10  | 5         | 1.79      | 0.01    | 0.01      | 6       | 4        | 5       |         |         |          |           |           |           |
| A          | SP 25A      | 5 2793    | 37        | 103 2.9     | 21        | 15        | 1029 4.05  | 18        | 5         | ND      | ND        | 147      | 2         | 8         | 14        | 295 3.20  | 0.10      | 24        | 1        | 0.87    | 224 0.08 | 5         | 1.14      | 0.01    | 0.01      | 9       | 6        | 5       |         |         |          |           |           |           |
| A          | SP 27       | 2 2674    | 234       | 333 2.0     | 40        | 15        | 896 4.27   | 18        | 5         | ND      | ND        | 267      | 4         | 2         | 3         | 232 2.03  | 0.20      | 19        | 9        | 1.27    | 87 0.16  | 5         | 1.43      | 0.02    | 0.01      | 3       | 6        | 5       |         |         |          |           |           |           |
| A          | SP 28       | 2 4444    | 78        | 107 4.3     | 12        | 14        | 309 2.35   | 12        | 5         | ND      | ND        | 147      | 1         | 5         | 14        | 141 0.70  | 0.14      | 19        | 10       | 0.55    | 95 0.06  | 5         | 0.83      | 0.01    | 0.01      | 1       | 3        | 5       |         |         |          |           |           |           |
| A          | SPAR 1      | 32 78010  | 765       | 979 331.4   | 35        | 14        | 568 8.22   | 9         | 5         | ND      | ND        | 549      | 39        | 8         | 177       | 164 2.81  | 0.09      | 14        | 4        | 0.76    | 36 0.31  | 70        | 0.80      | 0.01    | 0.01      | 19      | 1        | 200     |         |         |          |           |           |           |
| A          | SPAR 2      | 5 34440   | 242       | 382 24.4    | 2         | 2         | 355 3.31   | 9         | 5         | ND      | ND        | 142      | 5         | 5         | 10        | 242 2.15  | 0.04      | 20        | 3        | 0.02    | 25 0.07  | 30        | 0.13      | 0.01    | 0.01      | 5       | 5        | 30      |         |         |          |           |           |           |
| A          | SPAR 3      | 2 12680   | 54        | 133 11.6    | 6         | 2         | 377 2.11   | 15        | 5         | ND      | ND        | 201      | 1         | 4         | 38        | 431 2.04  | 0.02      | 25        | 18       | 0.17    | 30 0.11  | 15        | 0.20      | 0.01    | 0.01      | 2       | 9        | 30      |         |         |          |           |           |           |
| A          | SPHALER 1   | 424 65270 | 12653     | 51130 304.0 | 157       | 236       | 1281 8.30  | 10        | 5         | ND      | ND        | 168      | 612       | 69        | 583       | 244 5.95  | 0.01      | 9         | 1        | 0.50    | 18 0.10  | 65        | 0.93      | 0.01    | 0.02      | N/A     | 2        | 60      |         |         |          |           |           |           |
| A          | VIEW 1      | 7 3780    | 35        | 457 3.5     | 212       | 29        | 840 4.40   | 22        | 5         | ND      | ND        | 172      | 5         | 2         | 5         | 154 3.07  | 0.22      | 12        | 52       | 2.35    | 75 0.34  | 10        | 2.36      | 0.01    | 0.01      | 4       | 3        | 650     |         |         |          |           |           |           |
| A          | VIEW 2      | 4 5771    | 58        | 217 7.8     | 179       | 23        | 911 4.16   | 22        | 5         | ND      | ND        | 140      | 3         | 2         | 12        | 234 4.36  | 0.34      | 22        | 29       | 1.33    | 65 0.28  | 10        | 1.65      | 0.01    | 0.01      | 5       | 5        | 430     |         |         |          |           |           |           |
| A          | ZINC 1      | 15 21680  | 1094      | 4398 215.7  | 145       | 27        | 2924 7.51  | 5075      | 5         | ND      | 18        | 39       | 55        | 3383      | 2         | 37 3.94   | 0.06      | 6         | 1        | 2.20    | 21 0.01  | 120       | 0.36      | 0.01    | 0.01      | 12      | 1        | 20      |         |         |          |           |           |           |
| A          | ZINC 2      | 13 1786   | 26484     | 39440 90.7  | 54        | 17        | 3741 10.48 | 65467     | 5         | 10      | 12        | 77       | 654       | 243       | 2         | 20 8.86   | 0.01      | 8         | 1        | 4.06    | 21 0.01  | 195       | 0.21      | 0.01    | 0.01      | N/A     | 2        | 690     |         |         |          |           |           |           |
| A          | ZINC 3      | 3 3594    | 1182      | 679 28.5    | 9         | 4         | 115 2.25   | 2369      | 5         | ND      | ND        | 2        | 9         | 20        | 21        | 16 0.09   | 0.01      | 1         | 30       | 0.13    | 26 0.01  | 35        | 0.31      | 0.01    | 0.01      | 1       | 1        | 40      |         |         |          |           |           |           |



ACME ANALYTICAL LABORATORIES LTD.

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**GEOCHEMICAL ANALYSIS CERTIFICATE**

**T.V.W. Engineering** File # 90-6207

Box 820, 810 W. Broadway, Vancouver BC V5Z 4C9

| SAMPLE#  | Mo  | Cu  | Pb  | Zn  | Ag  | Ni  | Co  | Mn  | Fe   | As  | U   | Au  | Th  | Sr  | Cd  | Sb  | Bi  | V   | Ca   | P    | La  | Cr  | Mg   | Ba  | Ti  | B   | Al   | Na  | K   | W   | AU* |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|-----|-----|------|-----|-----|-----|------|-----|-----|-----|-----|
|          | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | %    | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | %    | %    | ppm | ppm | %    | ppm | %   | ppm | %    | %   | %   | ppm | ppb |
| 90-ZNC-1 | 1   | 66  | 18  | 58  | .4  | 314 | 27  | 634 | 4.90 | 51  | 5   | ND  | 1   | 90  | .2  | 2   | 2   | 90  | 2.51 | .125 | 2   | 460 | 5.38 | 67  | .13 | 9   | 1.76 | .03 | .09 | 1   | 7   |
| 90-ZNC-2 | 1   | 63  | 2   | 39  | .1  | 35  | 16  | 603 | 5.43 | 14  | 5   | ND  | 1   | 42  | .2  | 5   | 2   | 134 | 1.38 | .098 | 4   | 96  | 1.42 | 43  | .17 | 16  | 1.33 | .06 | .08 | 1   | 5   |
| 90-ZNC-3 | 1   | 73  | 2   | 44  | .1  | 32  | 18  | 771 | 7.17 | 12  | 5   | ND  | 1   | 58  | .2  | 5   | 2   | 159 | 1.82 | .095 | 5   | 114 | 1.38 | 58  | .20 | 16  | 1.50 | .09 | .11 | 1   | 5   |
| 90-ZNC-4 | 1   | 55  | 12  | 68  | .2  | 240 | 23  | 521 | 3.69 | 64  | 5   | ND  | 1   | 72  | .2  | 7   | 2   | 83  | 2.41 | .124 | 3   | 433 | 4.03 | 67  | .11 | 5   | 1.34 | .02 | .05 | 1   | 8   |

*Sample wt. lb*  
27  
21  
30  
19

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: STREAM SED AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: NOV 28 1990

DATE REPORT MAILED: *Dec 6/90*

SIGNED BY: *D. Toye* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

*split 300 gms  
Sieve -20 mesh  
pulverize - to -100 mesh.*