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ARCHER, CATHRO

& ASSOCIATES (1981) LIMITED

GEOLOGICAL BRANCH CONSULTING GEOLOGICAL ENGINEERS' REPORT

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13,741

GEOLOGICAL AND GEOCHEMICAL REPORT

on the

RAVIOLI 85-1 GROUP (Ravioli 1,6,7,8,12 claims)

RAVIOLI 85-2 GROUP (Ravioli 2,3,4,15,17 claims)

RAVIOLI 85-3 GROUP (Ravioli 9,10,11,18 claims)

CARIBOO MINING DIVISION

Dates of Work: May 18 to July 20, 1984

NTS: 93A/3W and 93A/6W

Latitude: 52°15'N

Longitude: 120°29'W

NOVEMBER, 1984

for

ROCKRIDGE MINING CORPORATION

J.F. Carne, B.A., M.Sc.

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INTRODUCTION

The 333 unit Ravioli property was staked to cover a copper-gold zone known as the Takom zone, and geochemical and geophysical anomalies surrounding the Takom zone and a second copper-gold occurrence on the Megabuck property.

The 1984 field program consisted of grid soil sampling to extend work done in 1983, geological mapping of these areas and minor sampling of drill core. Work was carried out from May 18 to July 20 and a total of 1,218 soil and silt samples were collected for analysis, and 3.2 km of line were cut.

The Ravioli property consists of 19 claim blocks with record data as follows:

| <u>CLAIM NAME</u> | <u>NTS</u> | <u>RECORD #</u> | <u>NO. UNITS</u> | <u>RECORD DATE</u> |
|-------------------|------------|-----------------|----------------------|--------------------|
| | | | 333 | |
| | (93A) | | | |
| Ravioli 1 | 6W | 4783(4) | 20 | April 25, 1983 |
| 2 | 6W | 4784(4) | 6 | " |
| 3 | 3W | 4785(4) | 20 | " |
| 4 | 3W | 4786(4) | 20 | " |
| 5 | 6W | 4832(5) | 16 | May 17, 1983 |
| 6 | 6W | 4833(5) | 16 | " |
| 7 | 6W | 4834(5) | 20 | " |
| 8 | 6W | 4835(5) | 20 | " |
| 9 | 6W | 4836(5) | 20 | " |
| 10 | 6W | 4837(5) | 9 | " |
| 11 | 3W | 4838(5) | 20 | " |
| 12 | 6W | 4839(5) | 20 | " |
| 13 | 6W | 4840(5) | 20 | " |
| 14 | 6W | 4841(5) | 20 | " |
| 15 | 3W | 4842(5) | 14 | " |
| 16 | 3W | 4843(5) | 20 | " |
| 17 | 3W | 4844(5) | 20 | " |
| 18 | 6W | 4845(5) | 20 | " |
| 19 | 3W | 4999(7) | 12 | July 25, 1983 |

LOCATION AND ACCESS

The Ravioli 1-19 claims are located 50 km northeast of the town of Williams Lake and 3 to 14 km south of Horsefly, B.C. (see Figure 1). Numerous all weather roads and secondary four-wheel drive roads provide excellent access to most of the claim block.

The Ravioli claims area has subdued relief ranging from relatively gentle hills up to elevations of 1200 m down to low swampy areas at 850 m. Numerous lakes, many beaver dammed, dot the property and creeks tend to be of low gradient and do not cut to bedrock. Exposure of bedrock is limited to steeper hillsides, ridgetops and roadcuts. Lower areas are usually covered by extensive glacial till and alluvium. Last glacial movement appears to have been toward the northwest. The entire property lies below treeline.

HISTORY AND PREVIOUS WORK

The earliest known work in the area of the Ravioli claims includes geological mapping and an IP survey over the Wood property during 1966 and 1967 by Helicon Explorations Ltd. and Magnum Consolidated Mining Company. Between 1973 and 1977, Exploram Minerals Ltd. carried out exploration for porphyry copper deposits over much of the area now covered by the Ravioli claims. Exploram's work included I.P., magnetic and geochemical surveys and drilling of six diamond drill holes (AR Nos. 5548 and 5731). The area received little attention until 1983 when Placer Development Ltd. drilled 1247 m in 16 holes on the Megabuck property, which is central to the Ravioli claims, and Archer, Cathro & Associates (1981) Limited conducted geological mapping and grid geochemical sampling on the Ravioli claims.

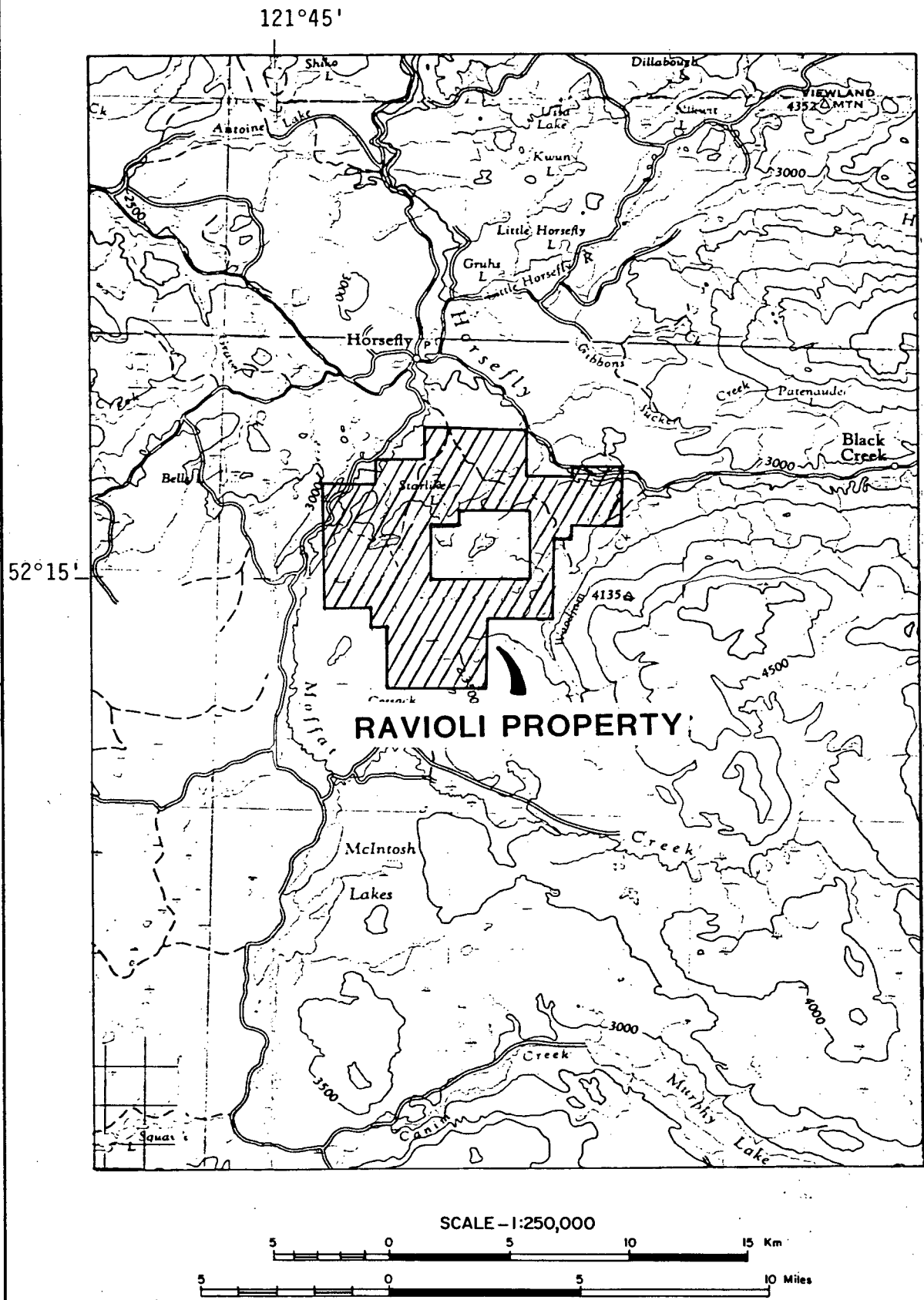


Figure 1 - Ravioli Property - Location Map

REGIONAL GEOLOGY

The Quesnel Trough subdivision of Central British Columbia is typified by Upper Triassic to Lower Jurassic volcanic, volcanoclastic and sedimentary rocks. These include augite porphyry, basaltic to andesitic flows, breccias and tuffs, and greywacke, siltstone, argillite and lesser limestone. These rocks are currently referred to as the Quesnel River Group by the Geological Survey of Canada. Small, probably synvolcanic, high level plutons of monzonite to diorite to syenite composition occur within the volcanic section and significant gold-copper mineralization has been found peripheral to these intrusions elsewhere in the Quesnel Trough.

The volcano-sedimentary sequence is intruded by the Lower Jurassic Takomkane Batholith, of granodiorite, quartz monzonite and quartz diorite composition, and local, small Jurassic to Cretaceous granodiorite to quartz monzonite bodies.

The mesozoic rocks are capped by remnants of Tertiary conglomerate, sandstone and shale and overlying plateau basalts. All the above units are relatively undeformed and unmetamorphosed.

PROPERTY GEOLOGY

Preliminary property mapping at a scale of 1:20,000 has delineated nine map units. Seven of these are subdivisions of the Quesnel River Group, while the other two are the Takomkane Batholith and Tertiary rocks. The geology, from work done in both 1983 and 1984, is presented on Figure 2.

Units 1 and 2 of the Quesnel River Group are dark green to maroon porphyritic rocks with 5 to 15 mm blocky augite crystals and 1 to 2 mm feldspar crystals in a finer-grained groundmass. Occasionally coarse pyroclastic to agglomeratic textures are visible on weathered surfaces. Thus, these rocks are at least, in part, extrusive. Elsewhere, more massive textures suggest a high level intrusive origin for the augite porphyry rocks.

Unit 3, welded latite tuff, is pale green to pink, and contains lapilli of fine-grained rock and maroon augite porphyry, flattened pumice grains and occasional fragments of vein quartz in a feldspar crystal tuff matrix. Pumice fragments up to 15 cm long have been observed.

Unit 4, epiclastic rocks, includes tuffaceous greywacke to siltstone, sometimes with a carbonate cement. These rocks are typically flaggy weathering, and feldspar crystals and lithic grains show evidence of reworking. Very rarely, some indications of bedding can be inferred.

Unit 5, bladed feldspar porphyry, is a very distinctive, blocky weathering rock with 20 to 40%, large (2 cm) plagioclase laths in an aphanitic dark grey groundmass. Scattered ovoid chlorite and epidote patches may be amygdules.

Unit 6, hornblende and pyroxene-bearing crystal lapilli tuff, is typified by pink feldspar crystals of plagioclase composition and lesser mafic crystals of both hornblende and pyroxene composition. Fragments vary from material similar to the matrix, although sometimes coarser grained and somewhat more intrusive-looking in texture, to fine-grained material. This unit has been mapped at the Megabuck showing where it has undergone intense K-feldspar alteration. It may, in fact, be the same as Unit 2.

Unit 7, hornfels zone, consists of fine-grained, blocky weathering, dark green rocks. Occasional small feldspar grains are visible but crystal margins are somewhat obscure. These rocks lie along the western margin of the Takomkane Batholith.

Unit 8, Takomkane Batholith, is composed of leucocratic, granitic-textured granodiorite to quartz diorite. Quartz content varies from 5 to 15% and hornblende content from 10 to 20%.

Unit 9, undivided Tertiary rocks, includes poorly consolidated conglomerate, sandstone, siltstone and shale overlain by vesicular, fine-grained basalt.

Copper-gold with minor molybdenum mineralization has been reported from the Takom zone, ground that is presently covered by the Ravioli 3 and 4 claims. Diamond drilling in 1974 and 1977, presumably testing geophysical anomalies for porphyry copper targets, intersected 10.7 m of mineralized volcanic rock grading 1.3 g/t Au and 0.13% Cu in Hole 74-3. Within that interval, a 1.5 m interval assayed .028% MoS₂. Although the drill core is stored on the property, the 10 m interval is missing and the nature of the mineralization is not known. Core that is present, however, is locally intensely veined by quartz and/or pyrite and/or epidote, sometimes with tourmaline on the vein edges, and zones within the fine-grained volcanic rocks are silicified or feldspathized.

One narrow, 3 cm wide, pyritic, brecciated quartz vein in Hole 77-1 assayed 53 ppb Au, 94 ppm Ag, 0.34% Cu, 0.5% Zn, 0.4% Pb, 1070 ppm As, 17,000 ppb Hg and 260 ppm Sb. Four other partially silicified or feldspathized intervals from Hole 77-1 were assayed with the following results:

| <u>Interval</u> | <u>Au(ppb)</u> | <u>Ag(ppm)</u> | <u>Cu(ppm)</u> | <u>As(ppm)</u> | <u>Hg(ppm)</u> | <u>Sb(ppm)</u> |
|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 90-100' | <1 | 0.1 | 55 | 20 | 100 | 8.2 |
| 100-110' | 10 | 26.0 | 424 | 85 | 1100 | 75.0 |
| 260-270' | 20 | 0.1 | 495 | 9 | 70 | 2.2 |
| 270-280' | 14 | 0.1 | 267 | 60 | 130 | 13.0 |
| 3 cm bx at 103.5' | 53 | 94.0 | 3380 | 1070 | 17000 | 260.0 |

The presence of high values for some of the trace elements commonly anomalous in epithermal precious metal deposits, narrow zones of quartz breccia and open space filling quartz veins suggest the possibility of structural control on a gold-silver bearing hydrothermal system which could localize high grade zones.

GEOCHEMICAL SURVEY

Sampling during 1984 expanded the grids already in place from the 1983 field season. Baselines were reflagged as necessary and new baselines were cut on grid "A" along 150W and 117N for a total of 3.2 km.

Soil samples were collected with a mattock at 50 m intervals along 100 m spaced crosslines between the surveyed tielines on grids "A" and "C" and the southwest corner of Grid "B". On the northeast part of Grid "B", lines were spaced at 200 m and samples at 100 m intervals. Where possible, "B" horizon soil was collected. In swampy areas samplers collected "A" horizon material or bog samples. These different sample types are noted on the maps. Sampling lines were roughly surveyed with compass and hip chain.

Samples were placed in brown paper envelopes, dried and packed for shipment to Chemex Labs Ltd. of North Vancouver, B.C., where all were geochemically analyzed for gold using neutron activation, copper and some for silver using atomic absorption. Copper, gold and silver results for the grid areas are illustrated on Figures 3 through 6.

Sampling on Grid "A" extended the weak (5 ppb) gold anomaly from the 1983 work only very slightly. Weakly anomalous copper values extend to the southwest from the old results but do not greatly enlarge the best part of the anomaly. In Figure 3, copper values have been contoured at 40 and 100 ppm and gold has been contoured at 5 ppb on Figure 4.

A few spotty high gold, copper and/or silver values scattered on the other grids are probably due to boulders within the till.

SUMMARY AND RECOMMENDATIONS

The 333 unit Ravioli property is underlain by Upper Triassic volcanic and sedimentary rocks which are in turn intruded by the Jurassic Takomkane Batholith and are overlain by Tertiary and Quaternary deposits.

The volcanic rocks are cut by narrow quartz-pyrite-epidote (\pm tourmaline) veinlets at the Takom zone where drilling in the 1970's intersected 10.7 m grading 1.3 g/t Au and 0.13% Cu, and lithochemical analyses have returned anomalous values of silver, antimony and mercury. These characteristics suggest potential for a structurally controlled epithermal gold deposit in this area. Further work in this area should include reanalysis of soil samples for other elements such as arsenic, lead, mercury and antimony, backhoe or excavator trenching if possible in the 8 m thick overburden, detailed geophysics for structural trends and drilling to delineate geology and metal zonation.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED



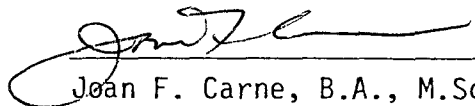
J.F. Carne, B.A., M.Sc.

/mc

STATEMENT OF QUALIFICATIONS

I, Joan F. Carne, with business address in Vancouver, British Columbia and residential address in Burnaby, British Columbia, hereby declare that:

1. I am a geologist employed by Archer, Cathro & Associates (1981) Limited, consulting geological engineers.
2. I graduated from Middlebury College, Vermont in 1974 with a B.A. in geology and from the University of British Columbia in 1979 with an M.Sc. in Geological Sciences.
3. I am a member of the Geological Association of Canada.
4. From 1977 to present, I have been actively engaged as a geologist in mineral exploration in Alaska, Washington, British Columbia and Yukon Territory.
5. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.


Joan F. Carne, B.A., M.Sc.

STATEMENT OF COSTS

Wages

| | | |
|--|-----------------|------------|
| C. Main (supervisor) - 1 day @ \$400/day | \$ 400.00 | |
| June 21 - supervision | | |
| J. Carne (party chief) - 6 days @ \$300/day | 1,800.00 | |
| May 18-20,23, July 16,19 - mapping, supervision | | |
| I. Talbot (senior assistant) - 6 days @ \$127/day .. | 762.00 | |
| May 18-23 - sampling, linecutting | | |
| H. Eijgel (jr. assistant) - 13 days @ \$91/day | 1,183.00 | |
| May 18-23, June 21, 28, July 16-20 - sampling | | |
| M. Knight (jr. assistant) - 9 days @ \$91/day | 819.00 | |
| May 18-24, June 21,28 - linecutting, sampling | | |
| F. Hrdy (jr. assistant) - 14 days @ \$88/day | <u>1,232.00</u> | |
| May 18-24, June 21,28, July 16-20 - sampling | | |
| | | \$6,196.00 |

Room and Board

| | |
|-----------------------------|----------|
| 49 mandays @ \$45/day | 2,205.00 |
|-----------------------------|----------|

Transportation

| | |
|-----------------------------|----------|
| 49 mandays @ \$30/day | 1,470.00 |
|-----------------------------|----------|

Analysis

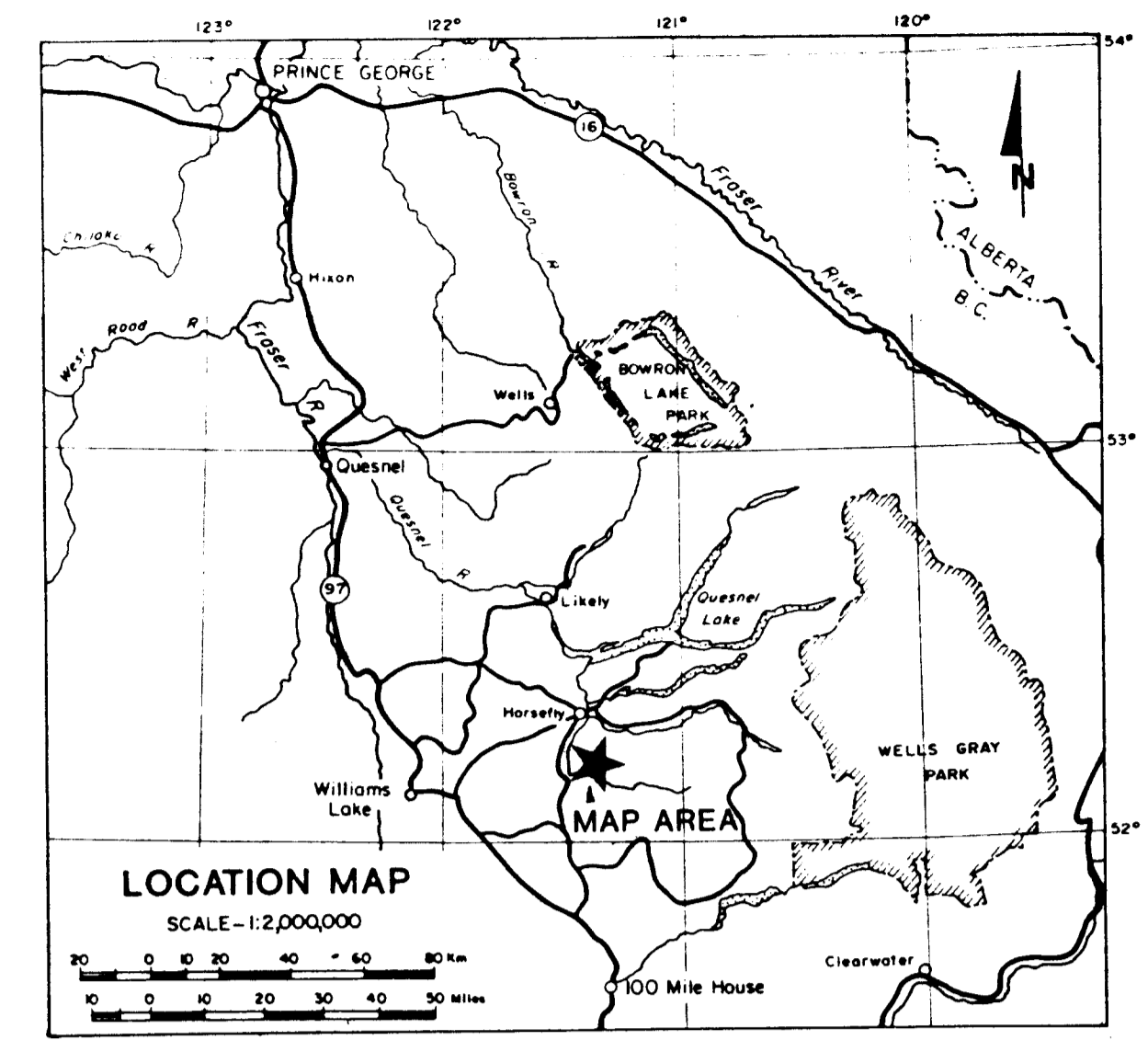
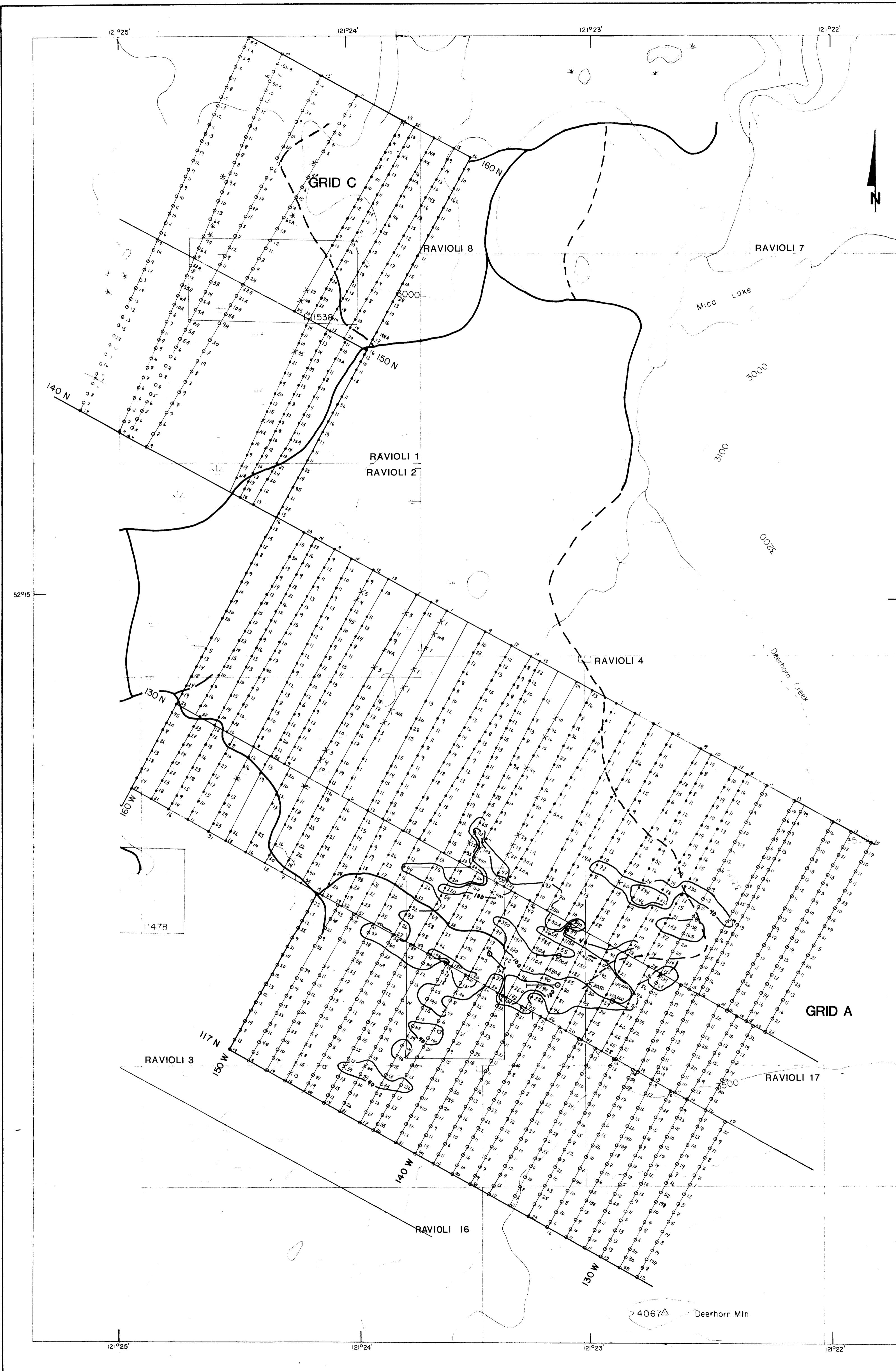
| | | |
|--|-----------------|----------|
| 600 soil and silt samples for Cu, Au (NAA) @ \$7.40 . | 4,440.00 | |
| 618 soil and silt samples for Cu, Ag, Au (NAA) @ \$8.12 | <u>5,018.16</u> | |
| | | 9,458.16 |

| | |
|---|-----------------|
| Report Preparation - 15% of field costs | <u>2,899.37</u> |
|---|-----------------|

\$22,228.53

These costs are apportioned to the three groups on the basis of percentage of work on each group as follows:

| | |
|--|--------------------|
| Ravioli 85-1 Group - 31.4% - \$ 6,984.36 | |
| Ravioli 85-2 Group - 54.1% - 12,019.00 | |
| Ravioli 85-3 Group - 14.5% - <u>3,225.17</u> | |
| | <u>\$22,228.53</u> |



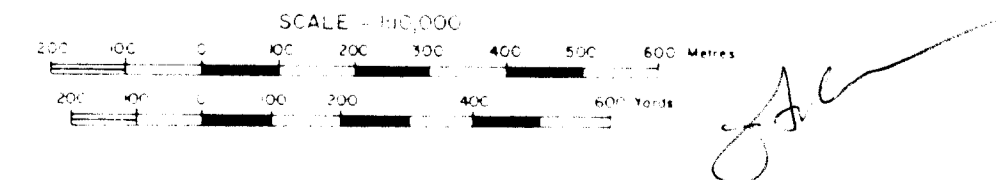
- LEGEND
- 1983 soil sample - ppm Cu
 - 1984 soil sample - ppm Cu
 - × Bog sample - ppm Cu
 - "A" horizon soil sample - ppm Cu
 - No result available
 - Copper contours - 40 and 100 ppm
 - Cut line
 - Sampling line
 - Road
 - ♀ Old drill hole locations
- For grid location see Figure 2

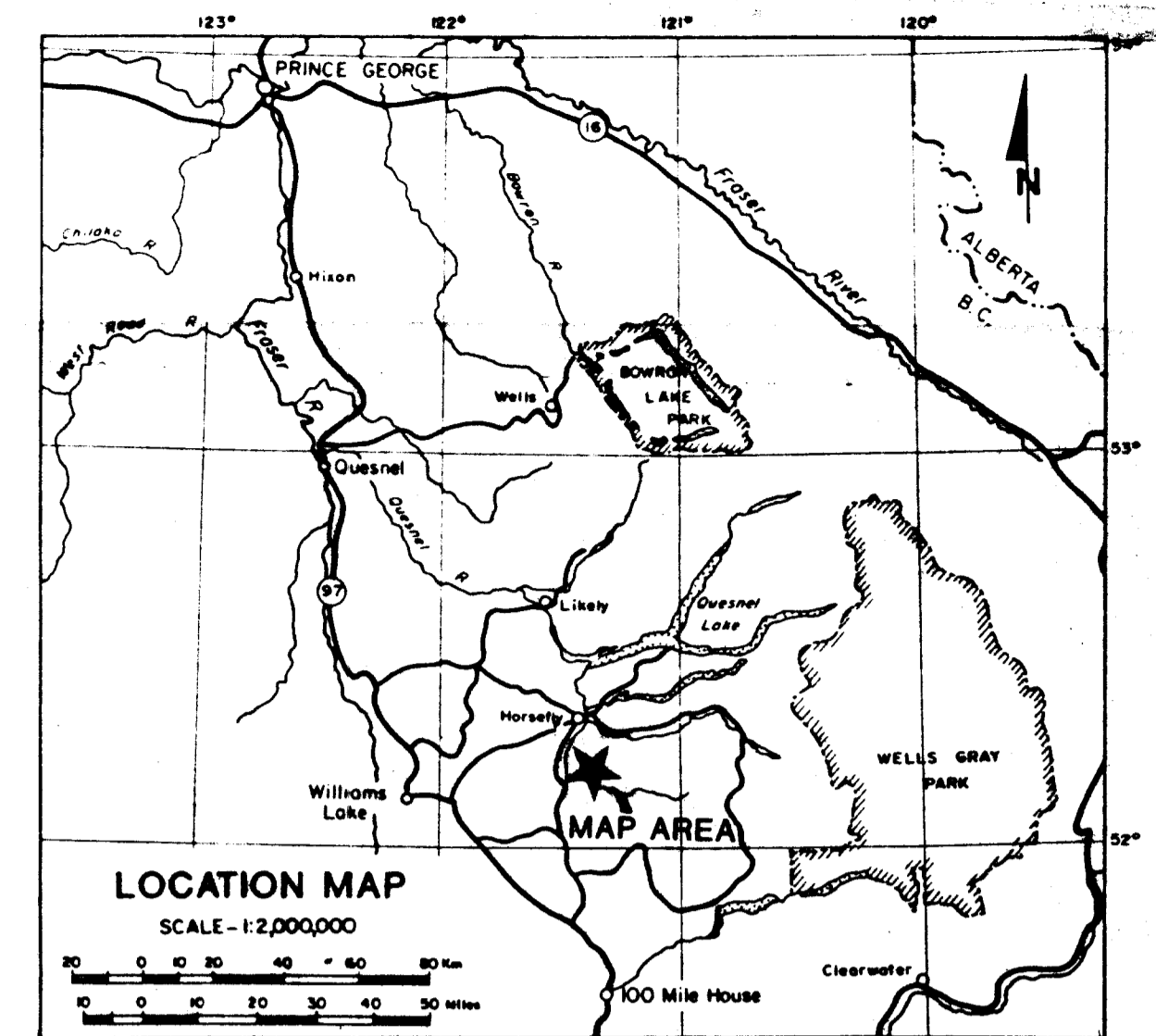
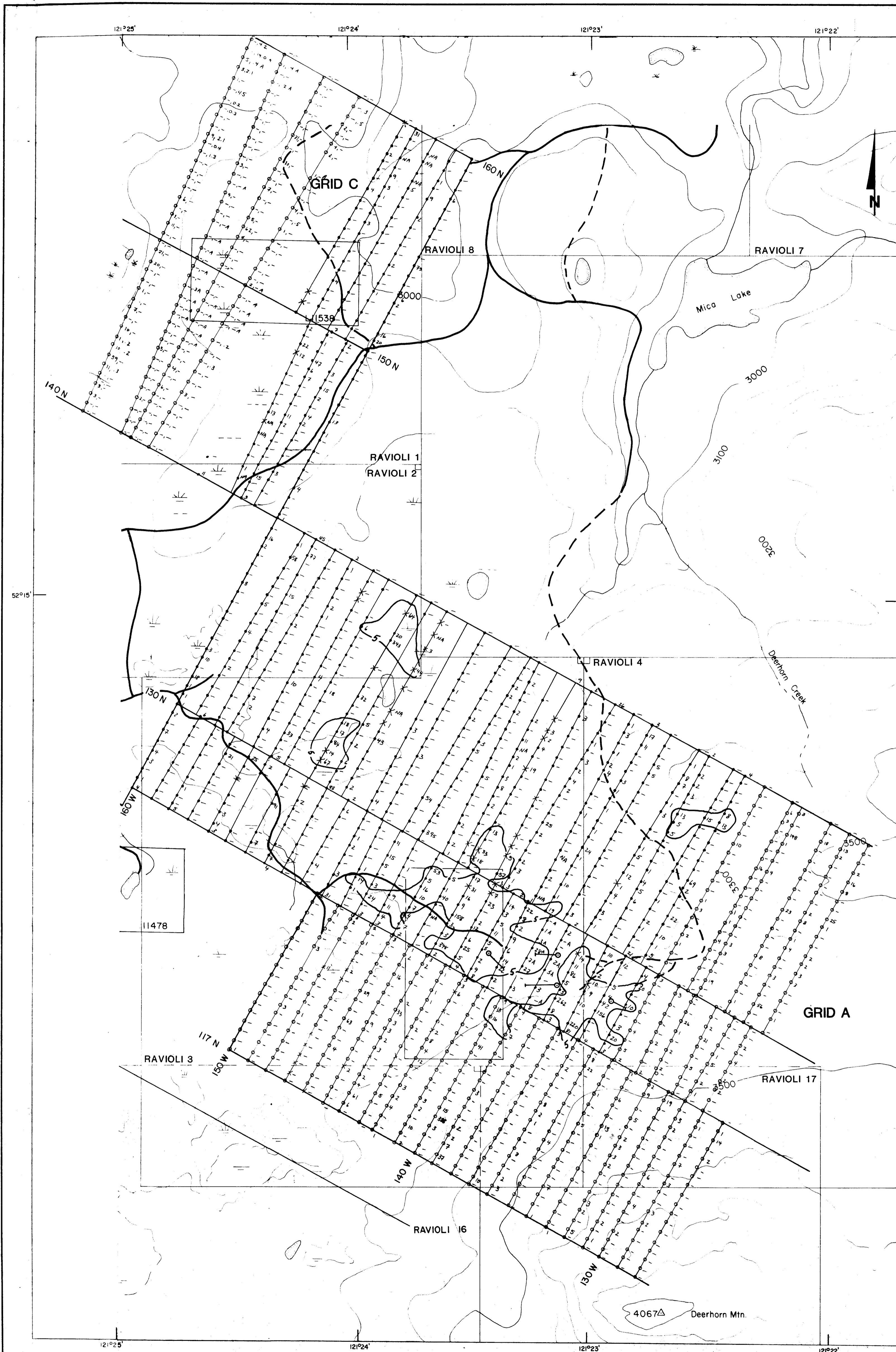
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Figure 3
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
COPPER GEOCHEMISTRY
GRIDS A AND C
RAVIOLI CLAIMS

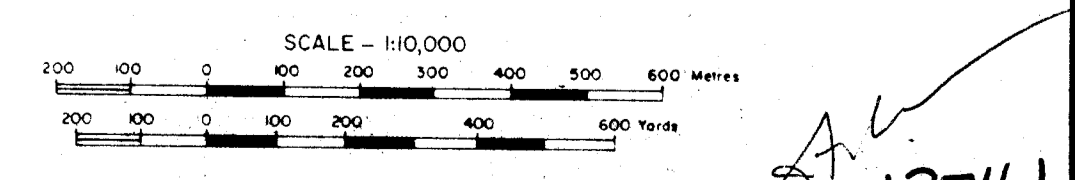
ROCKRIDGE MINING CORPORATION



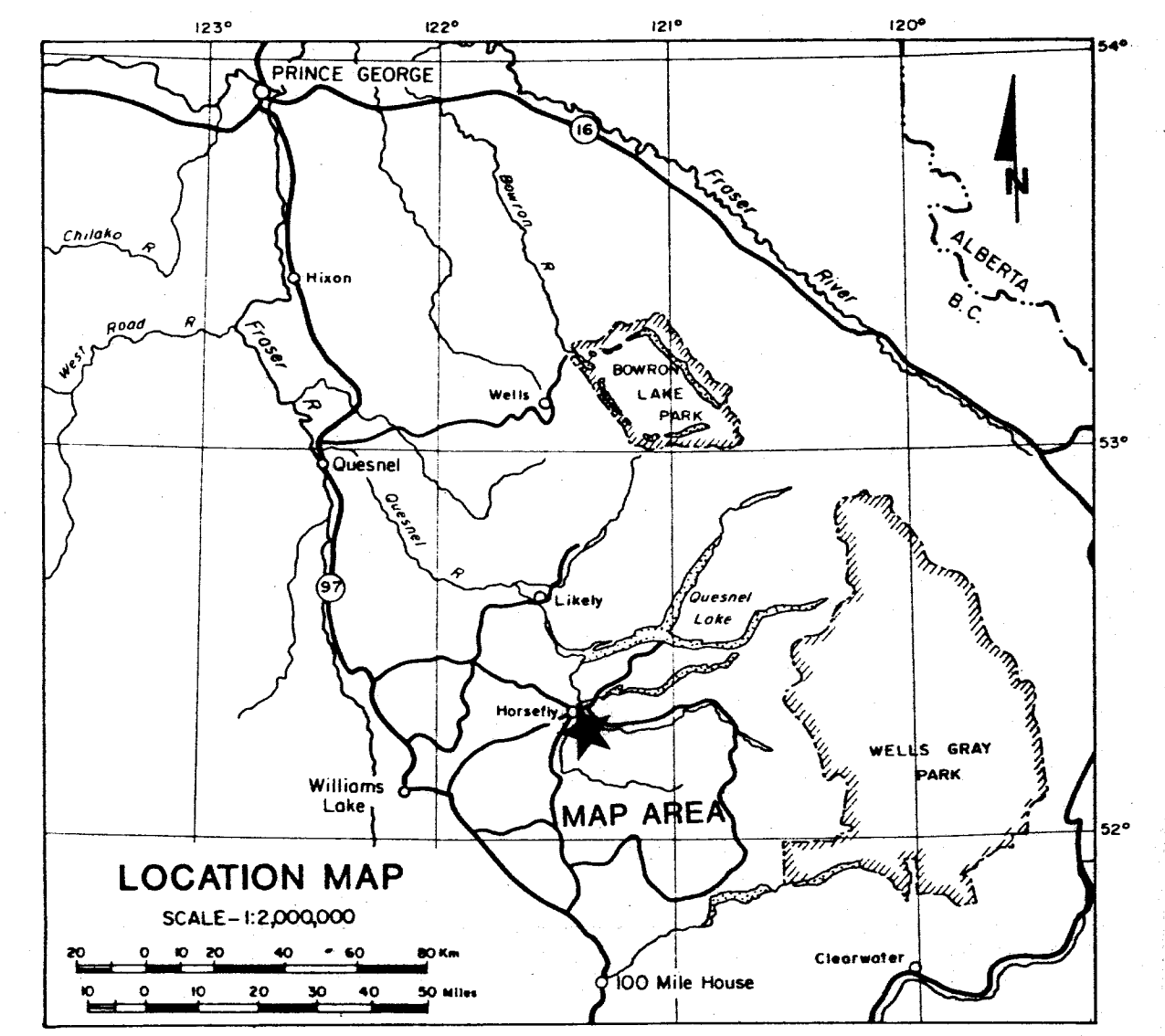
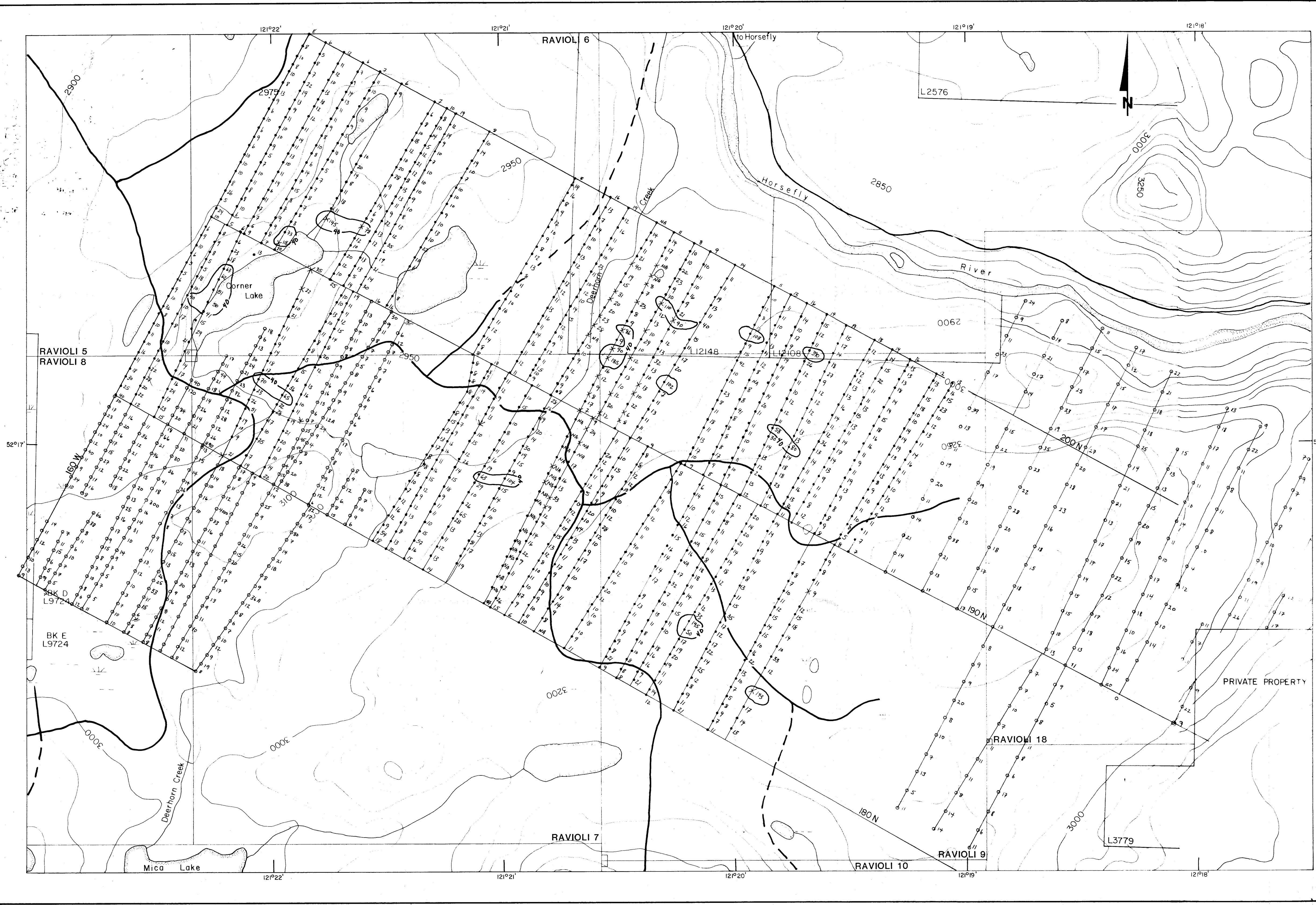


- LEGEND
- 1983 soil sample - ppb Au — denotes less than 1 ppb
 - 1984 soil sample - ppb Au
 - ¹¹ 1984 soil sample - ppb Au, ppm Ag
 - ×³ Bog sample - ppb Au
 - △^A "A" horizon soil sample - ppb Au
 - ⊖ No result available
 - ⊕ 5 ppb gold contour
 - Cut line
 - Sampling line
 - Road
 - ⊕ Old drill hole locations
- For grid location see Figure 2

Figure 4
 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
GOLD AND SILVER GEOCHEMISTRY
 GRIDS A AND C
 RAVIOLI CLAIMS
 ROCKRIDGE MINING CORPORATION



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LOCATION MAP
SCALE - 1:2,000,000

LEGEND

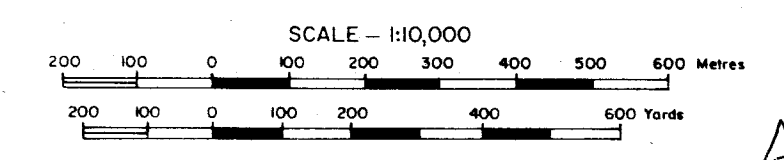
- 1983 soil sample - ppm Cu
- 1984 soil sample - ppm Cu
- x 10 Bog sample - ppm Cu
- "A" horizon soil sample - ppm Cu
- NR No result available
- Copper contours - 40 and 100 ppm
- Cut line
- Sampling line
- Road

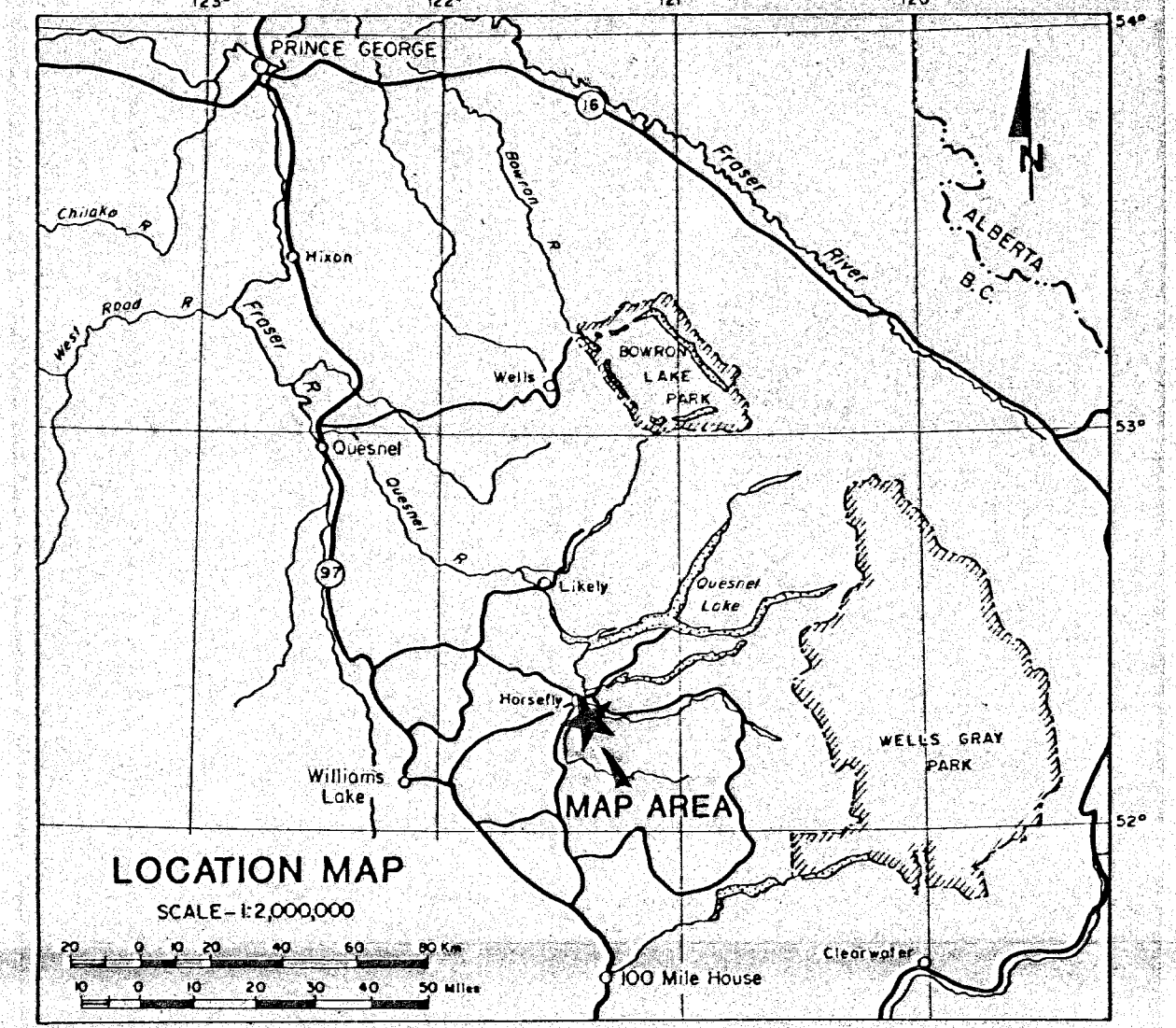
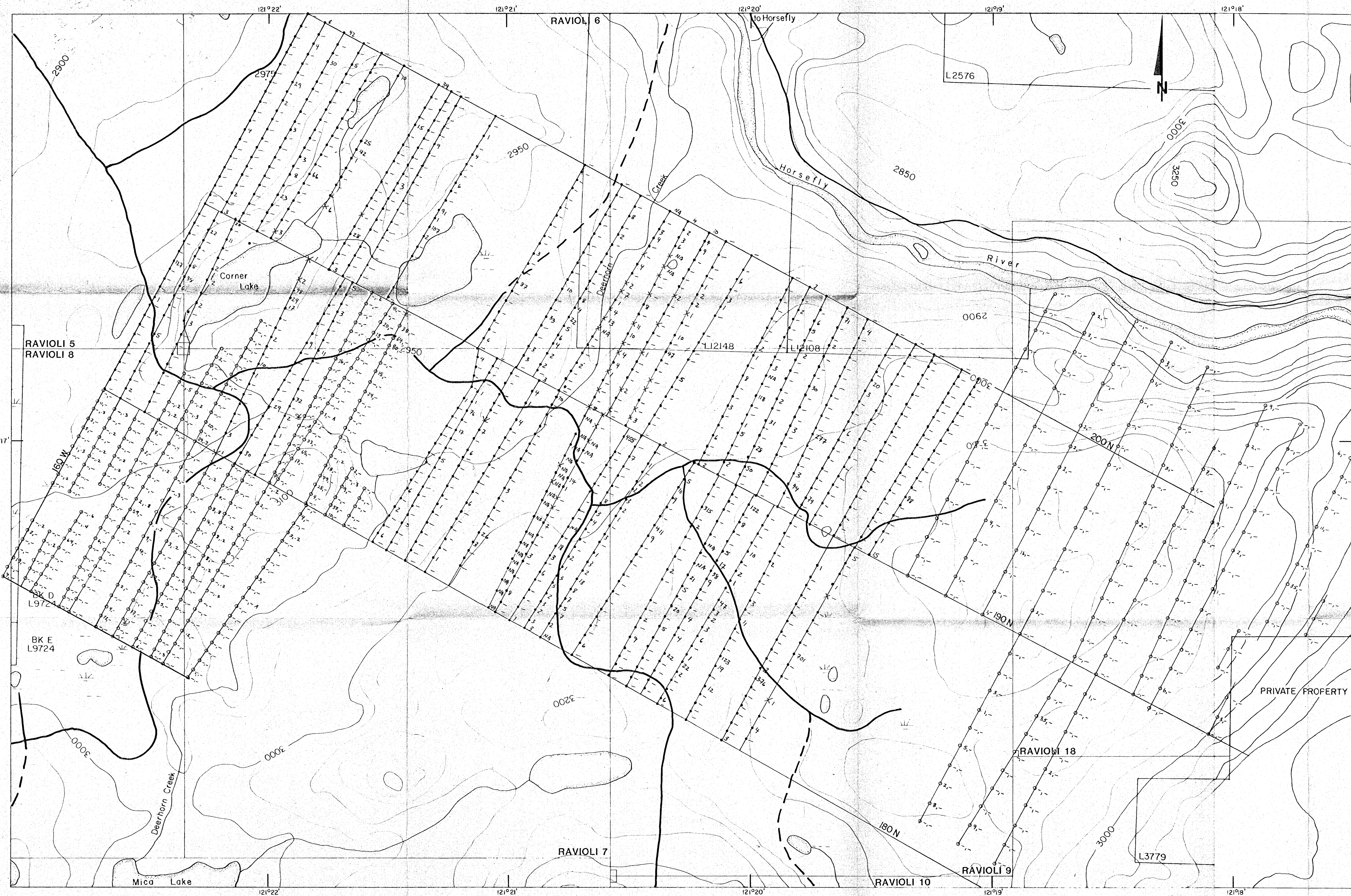
For grid location see Figure 2

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Figure 5
ARCHER, CATHRO & ASSOCIATES (198) LIMITED
13.741
COPPER GEOCHEMISTRY
GRID B
RAVIOLI CLAIMS

ROCKRIDGE MINING CORPORATION





- LEGEND**
- ⁵ 1983 soil sample - ppb Au denotes less than 1 ppb
 - ³ 1984 soil sample - ppb Au
 - ² 1984 soil sample - ppb Au, ppm Ag
 - ² Bog sample - ppb Au
 - ^{5A} "A" horizon soil sample - ppb Au
 - ^{NA} No result available
 - Cut line
 - Sampling line
 - Road

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For grid location see Figure 13.741

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GOLD AND SILVER GEOCHEMISTRY

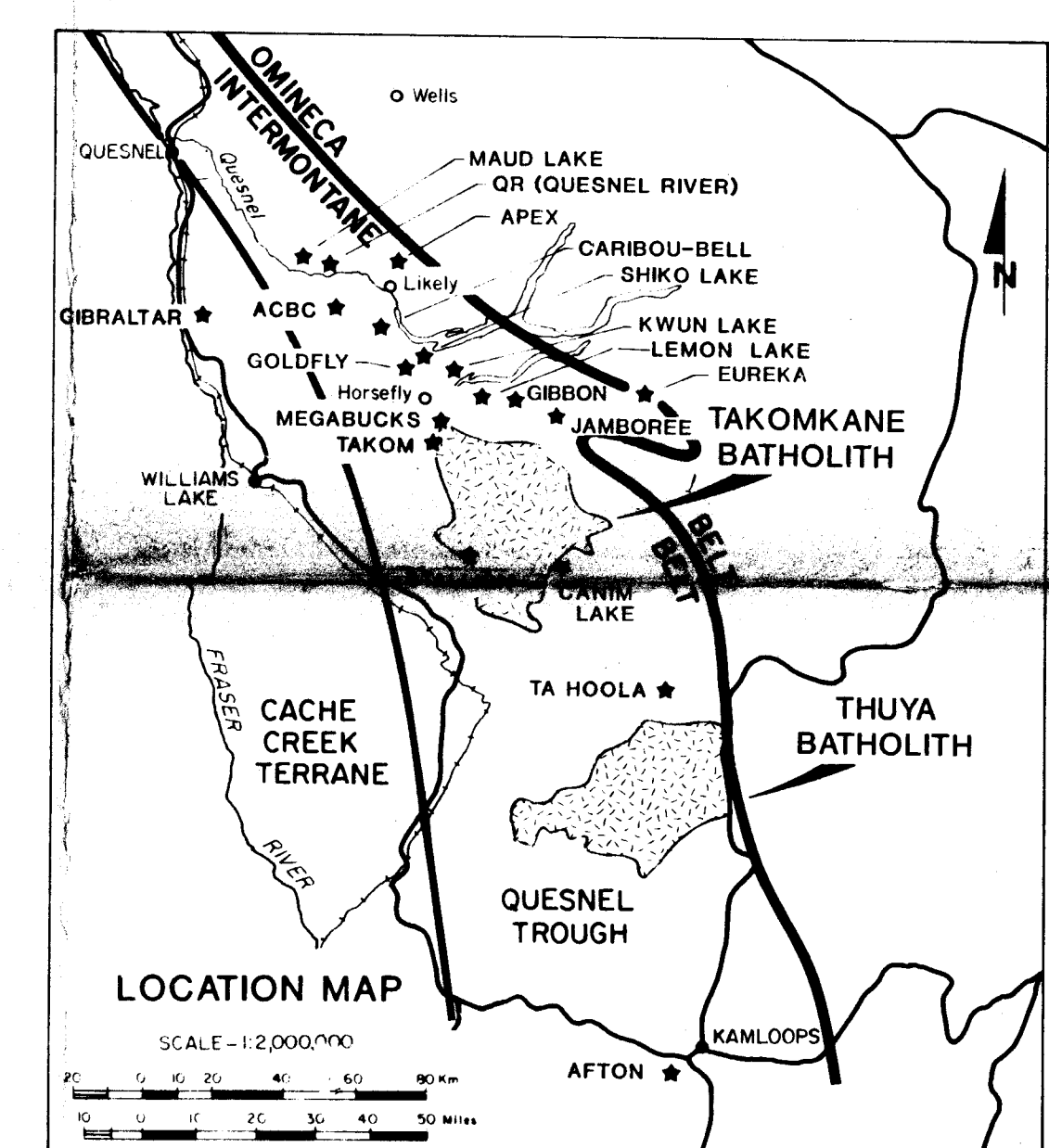
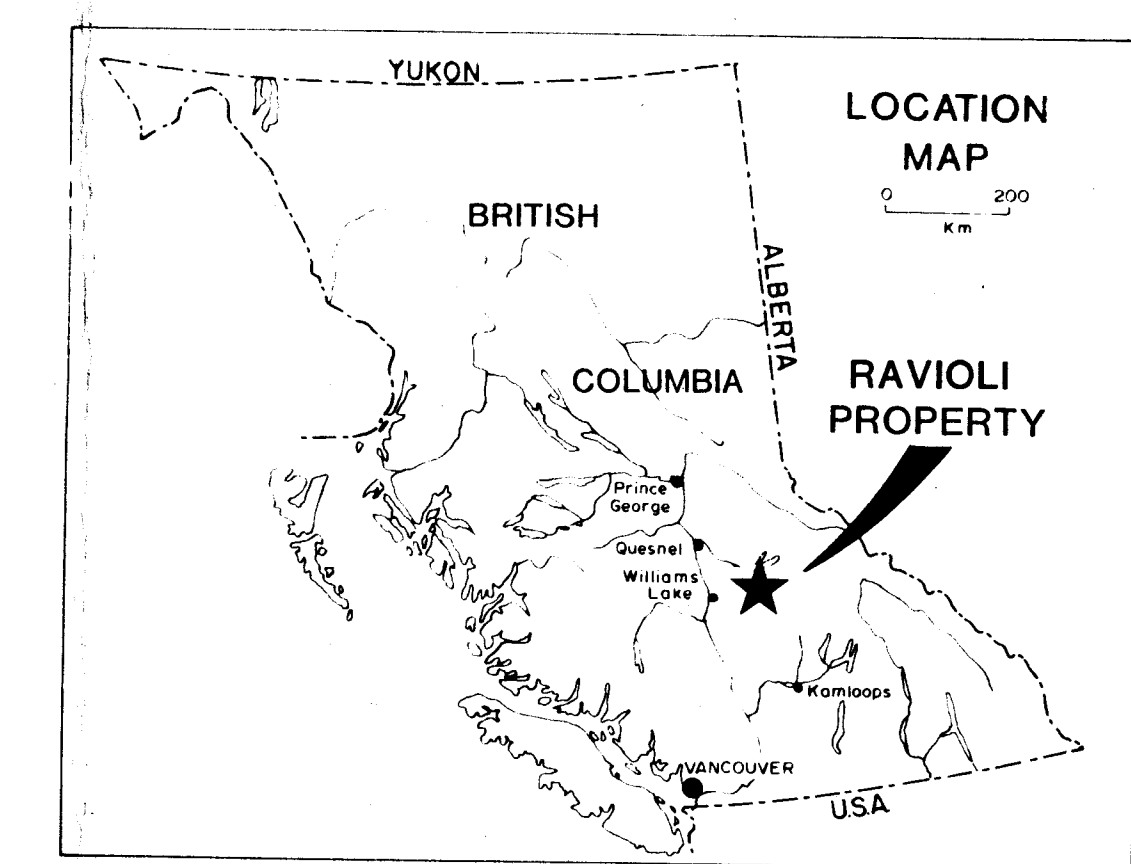
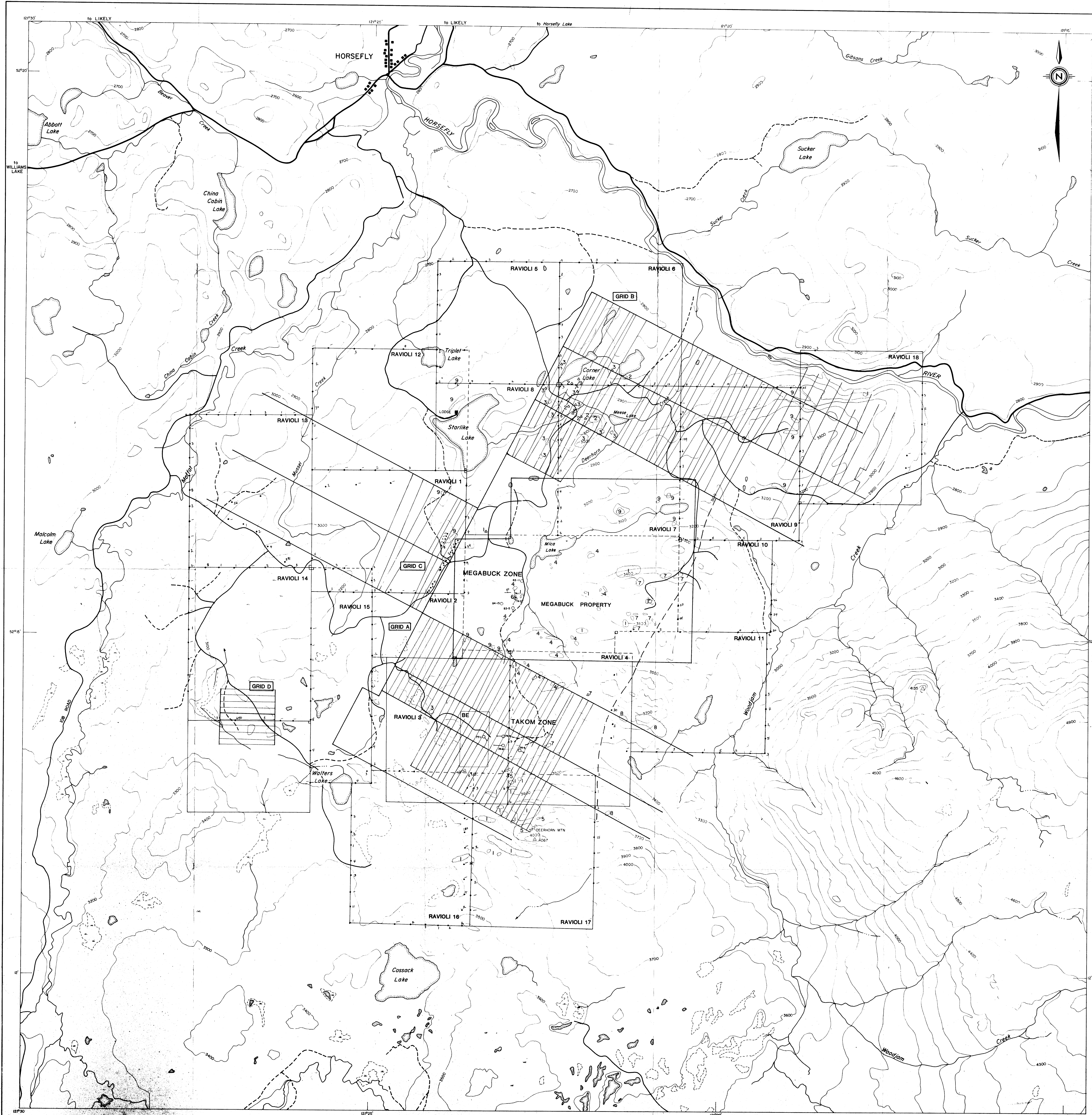
**GRID B
RAVIOLI CLAIMS**

ROCKRIDGE MINING CORPORATION

SCALE - 1:10,000

200 100 0 100 200 300 400 500 600 Metres
200 100 0 100 200 300 400 500 600 Yards

ATL



LEGEND

- Cretaceous to Tertiary
 - 9 Olivine basalts; conglomerate, sandstone and shale
 - Lower Jurassic
 - 8 Takomkane Batholith
 - Upper Triassic to Lower Jurassic - Quesnel River Group
 - 7 Hornfels zone
 - 6 Hornblende and pyroxene crystal lapilli tuff
 - 5 Bladed feldspar porphyry
 - 4 Epiclastic rocks - tuffaceous siltstone to greywacke
 - 3 Welded latite tuffs
 - 2 Maroon augite porphyry
 - 1 Dark green augite porphyry, locally pyroclastic
 - Limit of outcrop
 - 74 Boulder
 - Soil geochem lines
 - Cut lines
 - Claim boundaries - LCP's located by topographic maps
- * soil sample - ppb Au (- denotes values less than one)
 * silt sample - ppb Au

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Figure 2
 ARCHER, CATIRO & ASSOCIATES (1981) LIMITED
**GEOLOGY, CLAIMS LOCATION,
 GRID LOCATION AND REGIONAL
 GOLD GEOCHEMISTRY**
RAVIOLI CLAIMS
ROCKRIDGE MINING CORPORATION

