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GEOLOGY AND GEOCHEMISTRY
OF NORTHERN PART OF R.T. AGREEMENT AREA

N.T.S. 105-F-14

By:

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ATLAS EXPLORATIONS LIMITED

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330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B.C.

GEOLOGY AND GEOCHEMISTRY OF NORTHERN PART OF R.T. AGREEMENT AREA

INTRODUCTION

Field work during 1969, was accomplished by a two-man crew operating from weekly fly-camps. In all, 5 camp set-ups (Camps 1 to 4, and Camp 6), located approximately 4 miles apart, allowed coverage of an area of about 94 sq. miles in the vicinity of Fox Mountain.

The crew consisted of a prospector (G. Lishy) and a sampler (C. Ollie, later replaced by J. Ollie). Each week, the prospector sent a geological sketch, a summary of prospecting, and a number of rock specimens to Ross River for compilation; the sampler submitted silt-samples to the Ross River geochemical lab for analysis.

REGIONAL GEOLOGY

The northeast part of the area comprises a thick sequence of Paleozoic sediments, which dip gently eastwards at about 35° . They have been uplifted to the west by a quartz-monzonite batholith. Running parallel to the contact, which strikes at about $N55^{\circ}W$, a large number of leucocratic sills have invaded the sedimentary sequence, for up to 5 miles away.

A sedimentary wedge exposed on the Cab Group, probably links up with the main unit to the south.

For a Table of Formations, see Figure 1.

PROSPECTING

Two areas of mineralization were outlined. One extends for about 4½ miles along the sedimentary-intrusive contact, and consists of gossaned quartzose schists, skarn, and occasionally massive pyrrhotite. Four grab samples were selected from this area (Fig. 1) to be assayed by Coast Eldridge of Vancouver for Cu, Pb, Zn, Mo, WO₃. Only one, from the "DOG" area, produced an interesting result viz 1.66% WO₃. This sample was made up from 18 chips collected over an unknown area, and consisted of skarn, massive pyrrhotite with thin chalcopyrite veinlets, and scheelite disseminations.

The second area of mineralization occurs about 1½ miles east of Camp 2 (Fig. 2), as a low conical hill, surrounded on all sides by limestone. One sample was selected for assay, which produced 9.33% Pb and 8.98% Zn. The sample was made up from 11 chips collected over an unknown area, and consisted of a gossaned, fine-grained, leucocratic, igneous rock, intimately associated with brecciated limestone.

GEOCHEMISTRY

The two mineralized areas picked up through prospecting were confirmed by stream silt sampling (Fig. 2).

All samples were analyzed for Cu, Pb, Zn, Mn, WO₃. WO₃ values should be considered as approximate, as the geochem lab at Ross River had only just been set up for this type of analysis.

Both Pb and WO₃ show up well in the two mineralized areas, but Zn is lacking. No Cu values were obtained at all.

CONCLUSIONS AND RECOMMENDATIONS

Two mineralized areas were located, one carrying good WO_3 values, and the other good Pb and Zn values. Examination of both should be undertaken by a geologist in late spring 1970, to assess dimensions of the mineralized zones and to collect systematic samples across them. This could be accomplished in one full day if the geologist were supported by a helicopter, and accompanied by the prospector (G. Lishy). Decisions regarding staking or further examination should be based on the geologist's report.

SUGGESTIONS

A. For most of this program (July), the camp was not equipped with a radio, resulting in several adverse factors:

- (1) Anticipation of food requirements - duplication, wastage and dissatisfied crew.
- (2) No check on progress in the field.

Therefore a radio is essential, and the crew should be properly instructed on how to use it.

- B. A few minutes during camp moves was all the time available for discussing the past week's work. A helicopter should be available for one full day, once a week, to affect the camp move, and allow the geologist to immediately examine any interesting prospects.
- C. When the prospect area is close to Ross River, the crew should be taken out once a month, to wash and reorganize.

Respectfully submitted,

December, 1969

J. M. Bremner

FIGURE 1

105 - K/4

105 - K/3

62°00'

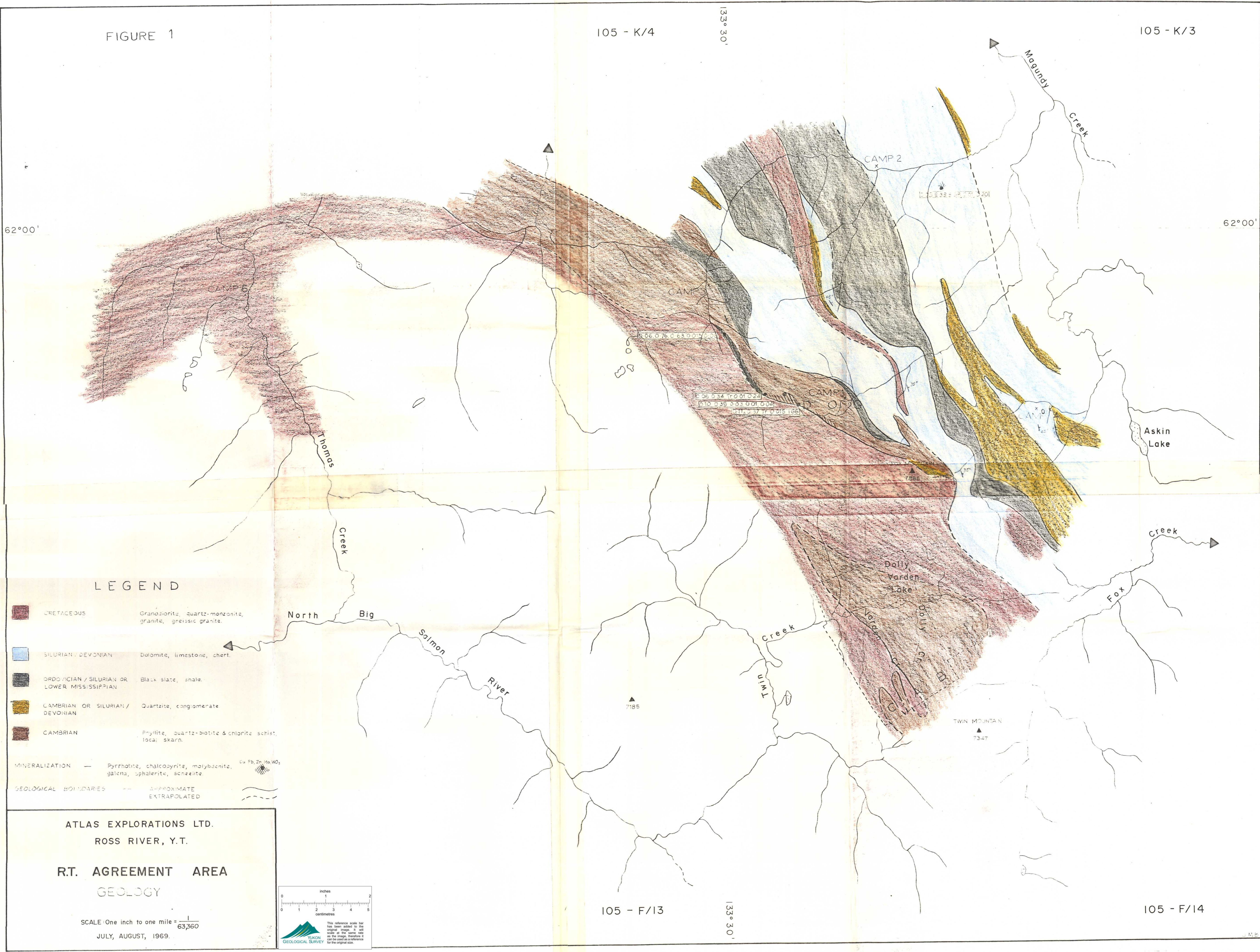
62°00'

133° 30'

133° 30'

105 - F/13

105 - F/14



LEGEND

- CRETACEOUS Granodiorite, quartz-monzonite, granite, gneissic granite.
- SILURIAN, DEVONIAN Dolomite, limestone, chert.
- ORDOVICIAN / SILURIAN OR LOWER MISSISSIPPIAN Black slate, shale.
- CAMBRIAN OR SILURIAN / DEVONIAN Quartzite, conglomerate.
- CAMBRIAN Phyllite, quartz-biotite & chlorite schist, local skarn.
- MINERALIZATION — Pyrrhotite, chalcocopyrite, molybdenite, galena, sphalerite, scheelite. Cu Pb Zn Mo WOs
- GEOLOGICAL BOUNDARIES - - - APPROXIMATE - - - - - EXTRAPOLATED

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 GEOLOGY

SCALE: One inch to one mile = $\frac{1}{63,360}$
 JULY, AUGUST, 1969.

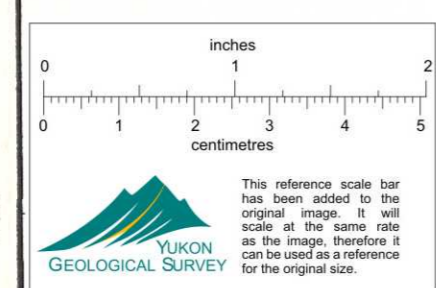


FIGURE 2

105 - K/4

105 - K/3

62°00'

62°00'

133°30'

133°30'

105 - F/13

105 - F/14

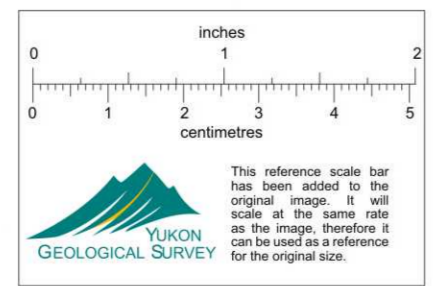


VALUES: ● Cu ● Pb ● Zn ● WO₃

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R.T. AGREEMENT AREA
GEOCHEMISTRY RESULTS

SCALE One inch to one mile = $\frac{1}{63,360}$
JULY, AUGUST, 1969.



J.M.B.