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ASSESSMENT REPORT  
GEOCHEMICAL and GEOLOGICAL SURVEYS  
ON THE  
RAM, TUT and TOT CLAIMS

ATLIN MINING DIVISION  
NTS: 104K/01W AND 104K/08W

50° 17'N  
132° 21'W

Owned & Operated By:

North American Metals Corp.  
1500-700 West Pender Street,  
Vancouver, B.C.

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September 1993

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**GEOLOGICAL BRANCH**  
**ASSESSMENT REPORT**  
Notice of Work Approval #: SMI-92-0100786-57

23,046

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## **1.0 INTRODUCTION**

The RAM-TUT-TOT property consists of ten claims, staked between 1981 and 1989, which are 100% owned by North American Metals Corp. (NAMC). In 1992 NAMC was an 83% owned subsidiary of Homestake Canada Ltd. During 1992, Homestake Canada Ltd. was contracted by NAMC to conduct exploration work on the RAM-TUT-TOT property. Homestake's interest in NAMC was purchased by Wheaton River Minerals Ltd. in July 1993.

### **1.1 SCOPE OF REPORT**

This report summarizes the exploration program conducted during 1992. Much of the introductory section of this report is summarized from previous authors. All known reports on the RAM-TUT-TOT property are listed in section 6.0 of this report.

### **1.2 LOCATION, ACCESS AND PHYSIOGRAPHY**

The centre of the RAM-TUT-TOT property is located at 132° 21'W and 50° 17'N on NTS map sheet 104K/08W, approximately twelve kilometres north of the Golden Bear Mine and one hundred-thirty kilometres northwest of Telegraph Creek, B.C. (Figure 1). Although the two-wheel drive Golden Bear Mine road passes within ten kilometres of the southern edge of the property, access can be gained only by helicopter, usually from the Golden Bear Mine or Dease Lake.

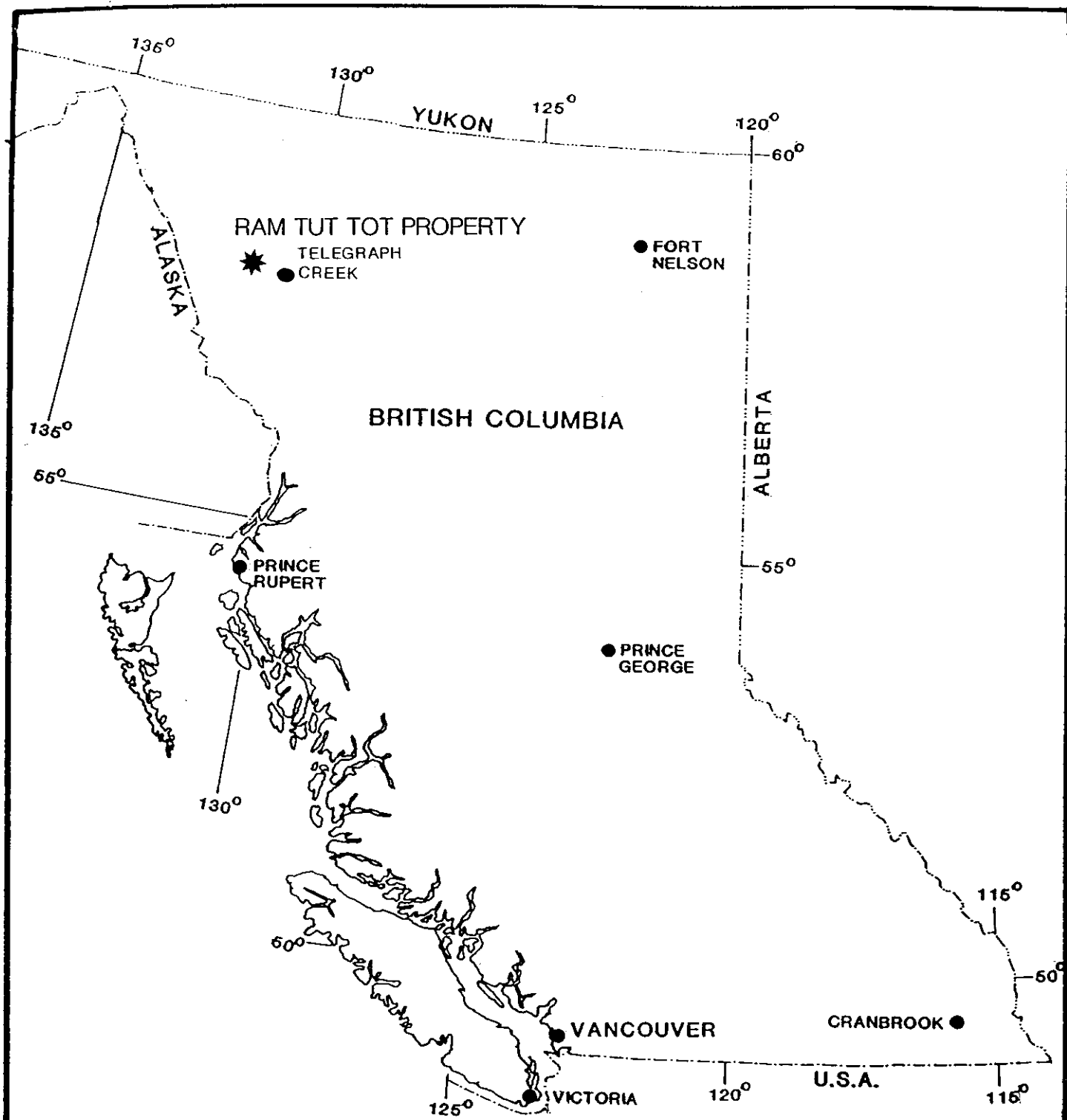
The RAM-TUT-TOT property lies within moderately rugged terrain with elevations ranging from 900 meters at Tatsamenie Lake to over 2300 meters in the southeast corner of the Tut 1 claim. Tree line occurs at approximately 1100 metres elevation, slopes are primarily talus covered, but soil horizons are developed below tree line. Little or no vegetation other than grass occurs above tree-line; while dense spruce, pine and poplar forest occur on the lower slopes. Glaciers and permanent snow are not abundant and only account for approximately 5% of the total claim area. The climate is typical for a northern mountainous area, abundant snow and freezing temperatures occur for eight months of the year. Snow melts slowly on the western and northern slopes and surface exploration can only be conducted between July and mid-September.

### **1.3 PROPERTY DEFINITION**

The property is comprised of ten claims totalling one hundred and seventy-eight units. All of the claims are located in the Atlin Mining Division and are recorded as listed in Table 1 and shown in Figure 2.

### **1.4 EXPLORATION HISTORY**

The TUT 1 to 4 claims were first staked in 1981 by Chevron Minerals Ltd. as a result of a reconnaissance exploration program in the southeastern Tulsequah

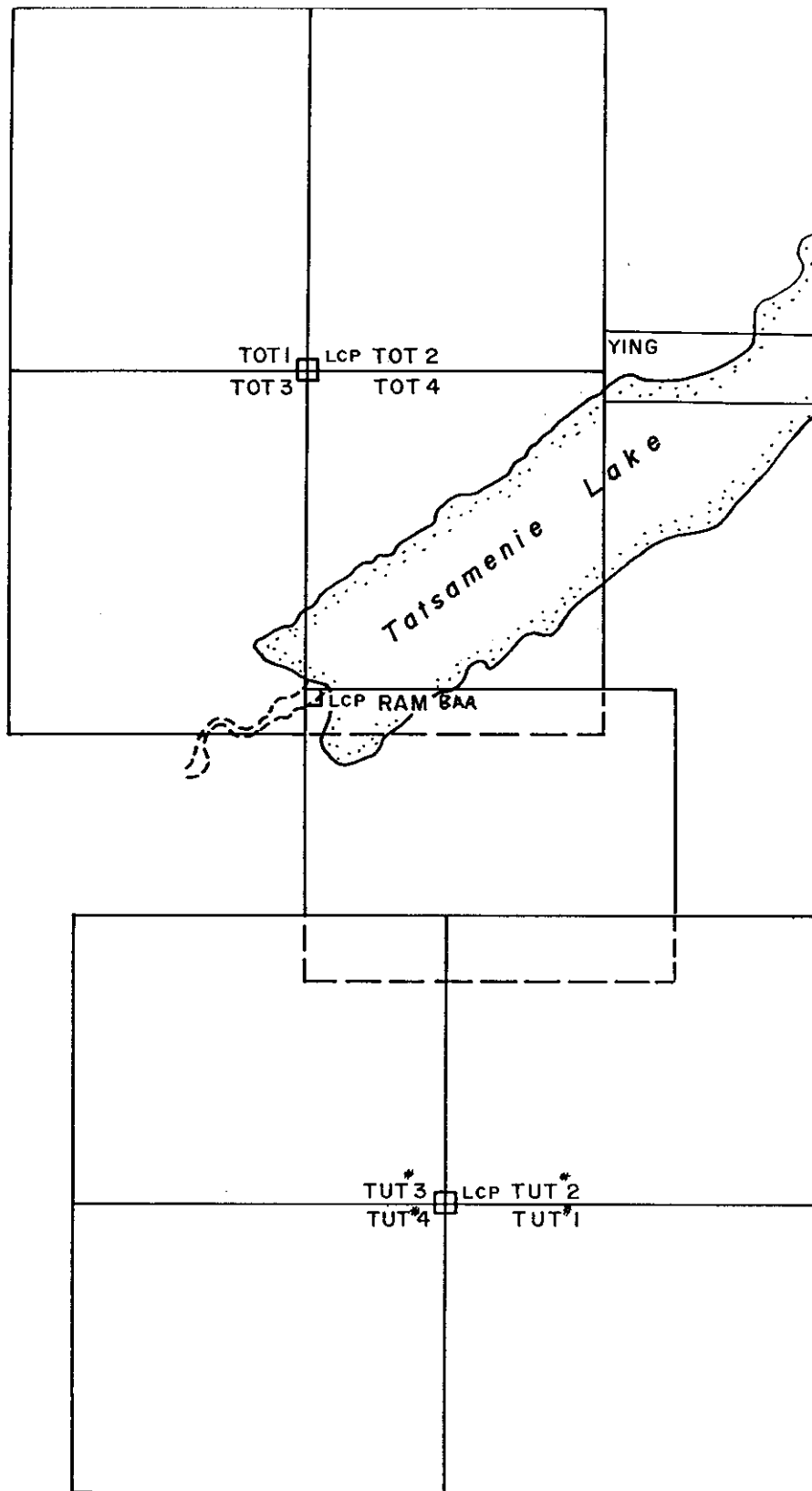


**NORTH AMERICAN METALS CORP.**

RAM TUT TOT PROPERTY  
British Columbia

**Property Location Map**

<b>DRAWN</b> KMc	<b>DATE</b>	<b>FILE CODE</b>	Figure 1
Revised _____			



NORTH AMERICAN METALS

**RAM, TOT, TUT  
CLAIM MAP**

FIGURE No. 2		PROJECT No. M-589	
DATE: 1985	REVISIONS	SCALE:	FILE No.
NTS No. 04 K			
COMPILED BY: G.W.			

map area (104K). The property was expanded with the addition of the Tot 1-4 claims in 1983. The Ram Baa claim was staked in 1989. The Ying claim was staked in 1987 to hold tenure in the area of the Chevron 1987 Tatsamenie Lake Base Camp.

**TABLE 1: Summary of Claim Status.**

CLAIM	RECORD	Units	RECORD DATE	EXPIRY DATE
Ram Baa	202950	15	Oct. 2, 1989	Oct. 2, 1993
Tut #1	201846	20	Mar. 5, 1981	Mar. 5, 1996
Tut #2	201847	20	Mar. 5, 1981	Mar. 5, 1996
Tut #3	201848	20	Mar. 5, 1981	Mar. 5, 1996
Tut #4	201849	20	Mar. 5, 1981	Mar. 5, 1996
Tot 1	202022	20	July 4, 1983	July 4, 1993
Tot 2	202023	20	July 4, 1983	July 4, 1993
Tot 3	202024	20	July 4, 1983	July 4, 1993
Tot 4	202025	20	July 4, 1983	July 4, 1993
Ying	202400	3	July 3, 1987	July 3, 1993

Chevron completed a program of mapping and rock sampling on the property in 1982 (Shannon, 1982; Brown and Shannon, 1982) and followed up with a more thorough program of detailed geological mapping, rock and soil sampling, and minor trenching in 1983 (Brown and Walton, 1983). Further trenching and sampling was completed during 1984 (Bruaset, 1984). During 1985, a student from the University of British Columbia completed a study of the albitized unit on the Tut claims (Hewgill, 1985a,b). In 1987, Chevron conducted a 674m diamond drill program to test the silicified limestone contact mineralization on the Tut claims, and a narrow shear zone on the Tot 4 claim.

During 1990 Chevron and Armeno Resources Inc. entered into an option agreement. Between July and September 1990, Armeno completed a VLF-EM survey and drilled 437 metres in four diamond drill holes to further evaluate the silicified limestone mineralization on the Tut claims. A geological compilation and a more thorough discussion of all previous work on the property can be found in the report by Armeno Resources (Allen, 1990).

North American Metals Corp. acquired 100% interest in the property, as part of the Asset Sale Agreement between Chevron and NAMC, prior to the 1992 field season.

### 1.5 WORK COMPLETED DURING 1992

The field crew arrived in Dease Lake on June 26 and moved field gear and supplies to the Golden Bear Mine Camp between June 27 and 29. The crew mobilized to the RAM-TUT-TOT property on June 30. During the period July 1 to July 18, 1992 work was completed over several target areas on the RAM-TUT-TOT property.

Four known mineralized zones (silicified limestone contact zone, two antimony showings and the shear zone on the Tot claims) were briefly re-evaluated to determine size potential; the source of the Au, Ag, Sb, As talus/soil anomalies was explored. Several new showings were discovered and evaluated, and are discussed in section 4 of this report.

During the fieldwork a total of 14 soil samples, 171 talus fine and talus coarse samples, and 218 rock samples were collected from the various target areas on the RAM-TUT-TOT property (Table 2). Three hundred and sixty nine samples were analyzed (not all samples collected were analyzed; 17 samples were duplicates) at International Plasma Laboratories (IPL); 4 samples were analyzed at the Golden Bear Mine Assay Lab. The talus coarse samples were prepared by IPL in the same manner as rock samples due the coarse nature of the material. All assay results are listed in Appendix I; sample locations are plotted on the geochemistry map (Figure 6-in pocket).

**TABLE 2: Summary of work performed on each claim.**

CLAIM	TALUS Samples Obtained	ROCK Samples Obtained	GEOCHEMICAL Sampling Man-Days	GEOLOGICAL Mapping Man-Days
Ram Baa	30	15	5	5.5
Tut 1	0	7	0	1
Tut 2	126	103	14.5	8
Tut 3	0	0	0	0
Tut 4	0	0	0.5	0.5
Tot 1	9	5	1	1
Tot 2	0	0	0	1
Tot 3	17	37	3	3
Tot 4	3	4	1	1
Ying	0	0	0	0



Geological mapping was conducted at 1:10 000 scale over approximately 30 square kilometres in areas not previously mapped and at 1:5000 scale over approximately 15 square kilometres in several areas of mineral showings. A previously existing grid was re-established over a total of 2.5 line kilometres to facilitate mapping and geochemical sampling near the Limestone Contact Zone.

All 1993 mapping and sampling has been compiled at 1:10 000 scale for the purpose of this report (Figures 5 and 6). The sample number system utilized incorporates the sampler's initials (JH, DM, JR or DH), followed by the traverse number, then the actual sample number. Not all samples obtained were analyzed geochemically, many samples were taken for a representative rock suite.

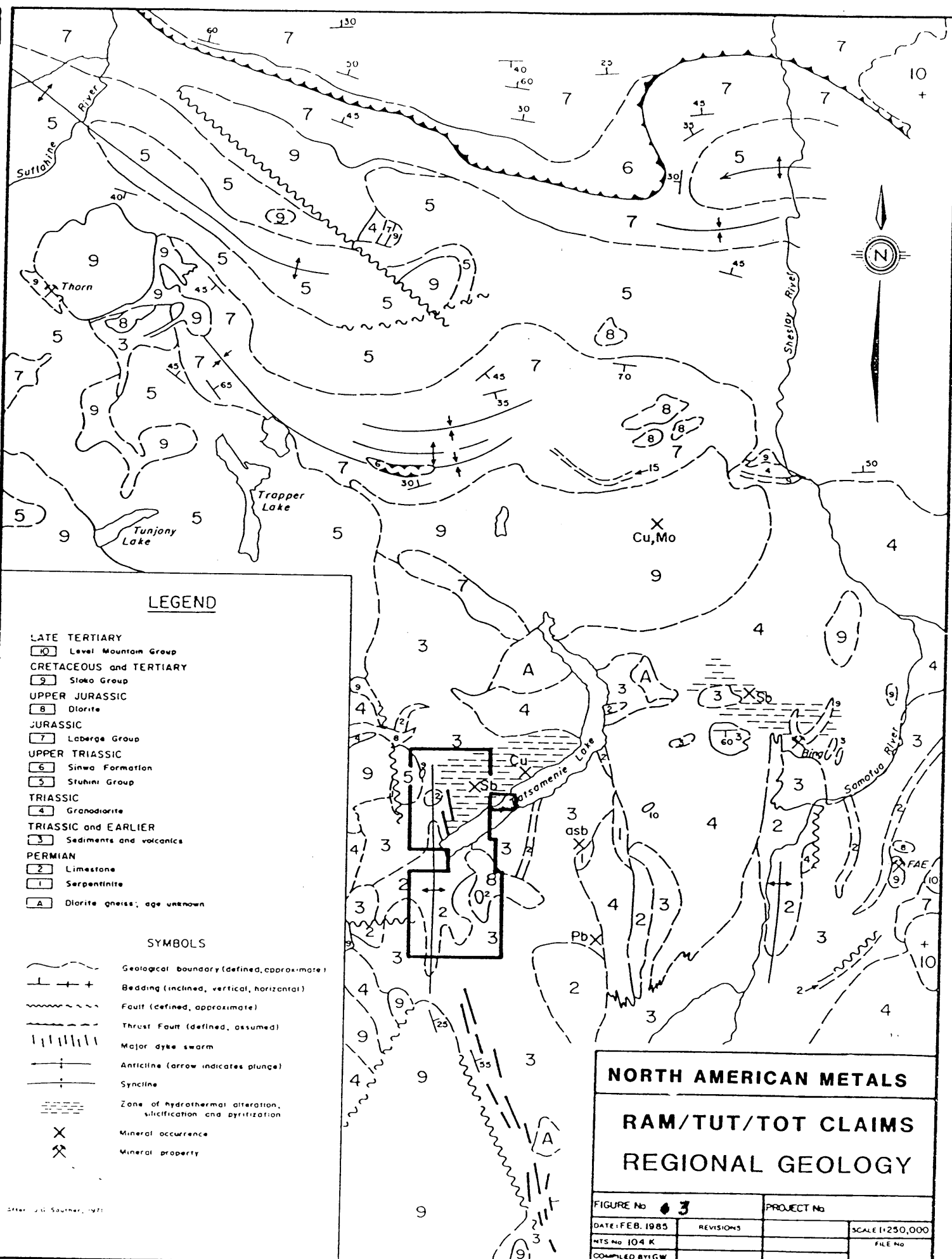
## **2.0 REGIONAL GEOLOGY**

The regional geology in this area has been documented by Souther (1970) and recently by Bradford and Brown (1993). An alteration, mineralization and structural study of the Tatsamenie - Golden Bear Area was completed by Oliver (1990). A geochronological study of the Tatsamenie Lake area was also completed by Oliver and Gabites (1993).

The RAM-TUT-TOT property lies within the Stikine terrane, a composite terrane comprised of Paleozoic, Triassic and Jurassic island arc rocks (Figure 4). Basement rocks of the Stikine terrane are known as the Stikine Assemblage and include Devonian to Permian limestones, argillites, cherts and a variety of volcanic and epiclastic rocks. These rocks are strongly deformed and stratigraphic relationships are not well understood. Rocks younger than Permian lack diagnostic fossils and as such can only be defined as pre-Upper Triassic in age. The Stikine Assemblage is overlain by Upper Triassic oceanic arc rocks of the Stuhini Group both of which are crosscut by Upper Triassic and Jurassic intrusive rocks of intermediate to felsic composition. Early Tertiary intermediate to felsic subaerial volcanics, intrusives and derived sediments of the Sloko Group unconformably overlie pre-Upper Triassic and Triassic rocks. The youngest rocks in the area are basaltic flows and pyroclastics of the late Tertiary Level Mountain Group and Hearts Peak Formation. These volcanoclastics overlie glacial till and are, in part, of Pleistocene age.

## **3.0 PROPERTY GEOLOGY**

The RAM-TUT-TOT property is predominantly underlain by a tightly folded package of clastic, carbonate and volcanic rocks of the pre-Upper Triassic Stikine Terrane which is overlain by a thick succession of less deformed and weakly chloritic volcanoclastics of the Upper Triassic Stuhini Group. These lithologies are locally cut



**LEGEND**

- LATE TERTIARY
  - 10 Level Mountain Group
- CRETACEOUS and TERTIARY
  - 9 Sloko Group
- UPPER JURASSIC
  - 8 Diorite
- JURASSIC
  - 7 Laberge Group
- UPPER TRIASSIC
  - 6 Sinwa Formation
  - 5 Stuhini Group
- TRIASSIC
  - 4 Granodiorite
- TRIASSIC and EARLIER
  - 3 Sediments and volcanics
- PERMIAN
  - 2 Limestone
  - 1 Serpentinite
- A Diorite gneiss; age unknown

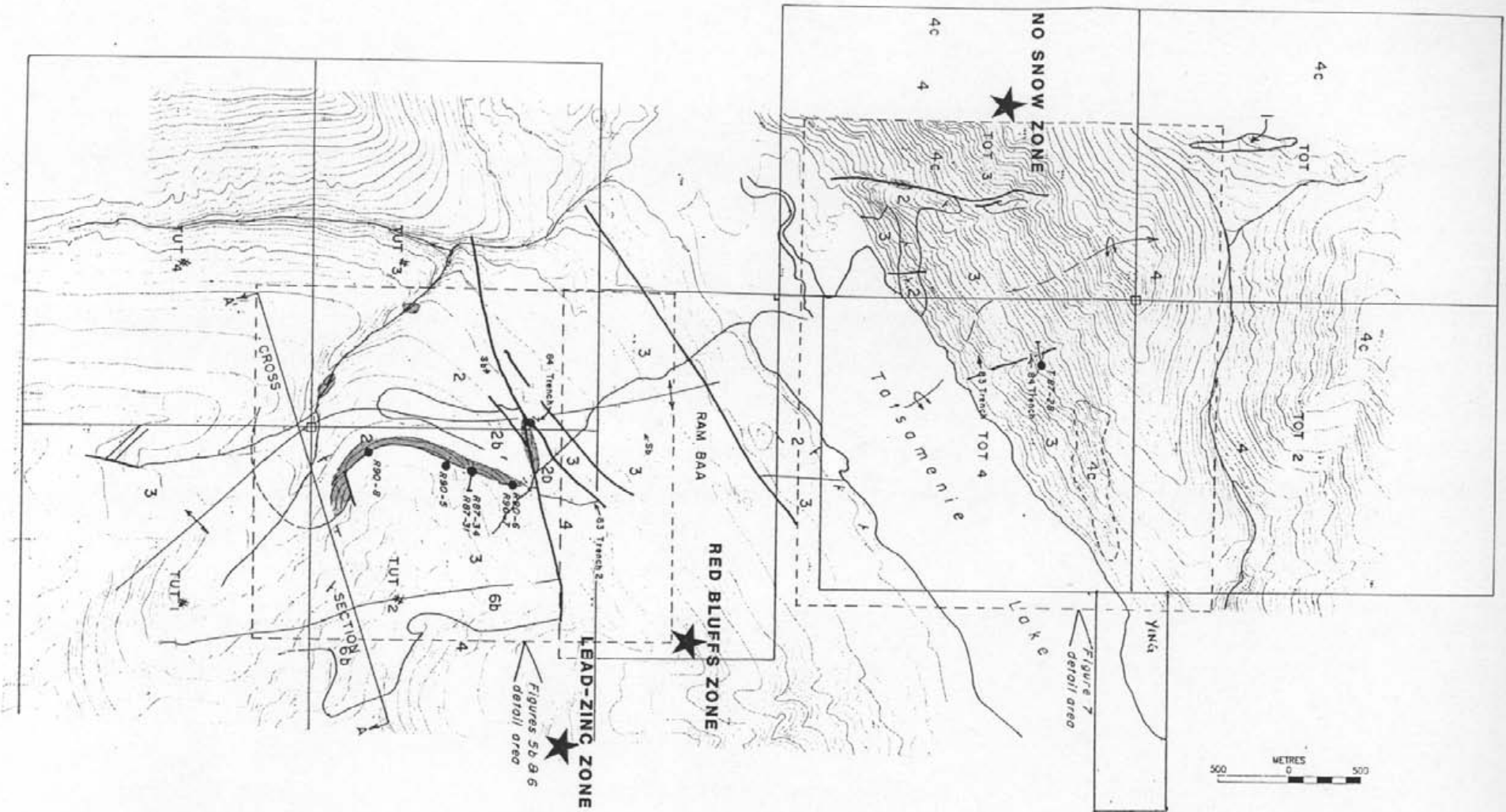
**SYMBOLS**

- Geological boundary (defined, approximate)
- Bedding (inclined, vertical, horizontal)
- Fault (defined, approximate)
- Thrust Fault (defined, assumed)
- Major dyke swarm
- Anticline (arrow indicates plunge)
- Syncline
- Zone of hydrothermal alteration, silicification and pyritization
- Mineral occurrence
- Mineral property

**NORTH AMERICAN METALS  
RAM/TUT/TOT CLAIMS  
REGIONAL GEOLOGY**

FIGURE No. 3		PROJECT No.	
DATE: FEB. 1985	REVISIONS	SCALE 1:250,000	
NTS No. 104 K		FILE No.	
COMPILED BY GW			

After J.G. Southern, 1971



- JURASSIC - CRETACEOUS  
6 Diorite; 6b albite
- TRIASSIC  
5 Foliated diorite
- PRE-UPPER TRIASSIC  
4 Intermediate to mafic volcanics  
3 Phyllite
- PALEOZOIC  
2 Limestone; 2a carbonaceous limestone  
1 Ultramafic

### LEGEND

- Silicified zone  
D Dolomitic alteration  
C Carbonate alteration  
— Fault  
+ Antiform

- - - Geological contact; defined, inferred  
/ Bedding attitude  
● Drill hole site, hole number  
┌ Legal corner post, claim boundary  
Topographic contours; contour interval: 25 metres

ARMENO RESOURCES INC.  
RAM-TOT-TUT PROPERTY  
ATLUN MINING DIVISION - BRITISH COLUMBIA  
SUMMARY  
GEOLOGICAL MAP

by diorites to quartz-diorite intrusions of Triassic age, and plagioclase  $\pm$  hornblende porphyritic dykes and fine-grained aphanitic rhyolite dykes of the Tertiary Sloko Group.

A detailed description of each lithology is given below. Lithologic descriptions correspond to stratigraphy documented in the legend for Figures 3, 4 and 5.

### *Unknown Age*

#### Ultramafic (Unit 1)

The only outcrop of this unit on the property is a thin fault-bounded lozenge on the Tot 1 claim. This unit is seen in several other locations between Tatsamenie Lake and the Golden Bear Mine, usually at higher elevations. It is always fault-bounded and in thrust contact with younger Stikine Assemblage rocks. The ultramafic unit is strongly altered to serpentine  $\pm$  carbonate  $\pm$  talc, but small, isolated pods of remnant acicular actinolite needle-texture occur within the unit. Despite intense, pervasive alteration, this unit is strongly magnetic.

### *Permian*

#### Limestone (Unit 2)

This unit has an estimated thickness of 1000m and consists of well bedded white and grey silicified limestone and dolomitic limestone. Bedding attitudes are typically shallow to moderate easterly dips. The limestone outcrops in several locations on the property, usually in topographically low areas, but is faulted higher into stratigraphy on the south side of the lake. The limestone contact zone mineralization occurs at the top of this unit. It is believed that mineralizing fluids migrated upwards through faults and fractures in the limestone, depositing gold, arsenic and antimony mineralization along bedding planes (manto-style) below the relatively impermeable pre-Upper Triassic unit. Several samples were obtained in 1992 for fossil identification by the BC Geological Survey Branch. These samples confirmed the Permian age of the limestones (Bradford & Brown, 1993).

### *Pre-Upper Triassic - Stikine Assemblage*

#### Mafic to Intermediate Volcaniclastics and Siltstones (Unit 3)

The pre-Upper Triassic stratigraphic package is highly complex due to intense alteration and deformation. This package consists of 100-200 metres of well-bedded siltstone, overlain by approximately 800 metres of poorly-bedded volcaniclastics and minor interbedded clastic units. The overall package is estimated to be 1000 metres thick, however folding and faulting may have artificially increased the thickness. Bedding attitudes are typically moderate to steeply easterly dips. Alteration intensity varies with deformation intensity except along margins of intrusive bodies. Most of the rocks within this stratigraphic package

typically exhibit a well-developed, penetrative fabric relative to either the Permian limestone or Triassic Stuhini volcanics. Most of this package has a phyllitic texture which consists of primarily sericite, chlorite and quartz mineral assemblage.

The volcanic rocks consist primarily of fine-grained mafic to intermediate ash tuffs with occasional coarser-grained fragmentals. These rocks are medium to pale green and are intensely chloritized and silicified. Very fine-grained euhedral pyrite and specular hematite are common and occur disseminated throughout these volcanics. Within the mafic volcanoclastic package there is a distinctive felsic volcanoclastic unit approximately 200 metres thick. This unit is mapped on the north shore of Tatsamenie Lake (Tot 4 claim) and on the western and northern sides of Misty Mtn (Tut 1,2 and Ram Baa claims). The felsic pyroclastics are poorly-bedded, poorly-sorted, interbedded calcareous sediments and have gradational contacts along strike and above and below the unit with the mafic pyroclastic unit.

The felsic unit on the north shore of Tatsamenie Lake was sampled in 1990 to obtain a geochronological age date (Oliver, 1993). The age of the felsic unit based on U-Pb isotopes in zircons is determined to be between  $307 \pm 2$  Ma and  $316.5 \pm 5$  Ma (Oliver, 1993). Oliver has stated that these volcanics can be correlated to the felsic volcanoclastics which underlie the Permian limestones regionally and therefore, were emplaced on top of the Permian section by a south verging thrust fault (Oliver, 1993). If this theory is true, then unit 3 (pre-Upper Triassic phyllites and volcanoclastics) is actually pre-Permian and thrust over the limestones. It would be this thrust fault that was the target of the 1987 drill program. Sufficient evidence does not exist to confirm or disprove this theory, however the relative positions of units, as seen in Plate 2, and the deformation intensity of phyllite-volcanoclastic package indicates this theory is quite probable.

#### *Upper Triassic - Stuhini Group*

##### **Mafic to Intermediate Volcanoclastics (Unit 4)**

The volcanoclastic rocks of the Stuhini Group appear to be andesitic in composition based on work by other authors (Bradford & Brown, 1993; Oliver 1990, 1993) and based on thin section analyses from other NAMC properties in the area. Textures vary from fine-grained ash tuff to coarse crystal-lithic tuff and coarse-grained, augite porphyritic flows. This unit is typically medium to dark green, unfoliated and weakly chloritized with primary textures and mineralogy well preserved. Trace amounts of fine-grained, euhedral pyrite are disseminated throughout the volcanoclastics. Iron carbonate alteration occurs locally as fracture

controlled veins or weak to moderate replacement of the pyroclastic matrix. Elsewhere in the Tatsamenie area, the Stuhini volcanics are intensely carbonate altered over areas as large as 14 square kilometres (Oliver 1990), forming impressive reddish-orange gossanous cliffs.

Bedding attitudes are usually shallow dipping towards the southeast. The contact with the underlying Stikine Assemblage phyllites is assumed to be unconformable and erosional, based on relative bedding angles in the underlying unit. Fine-grained mafic sills intrude the Stikine Assemblage and the Stuhini volcanics on the Tut claims. These sills are weakly altered, undeformed and appear to be genetically and temporally related to the Stuhini volcanism.

### *Jurassic*

#### Diorite (Unit 6a)

This unit outcrops in several locations on the RAM-TUT-TOT property and is typically coarse-grained hornblende  $\pm$  plagioclase porphyritic in a plagioclase matrix. The diorite is unaltered, unfoliated and postdates Stuhini volcanoclastic rocks. Narrow zones of intense, pervasive iron carbonate alteration are common near intrusive contacts.

#### Albitite (Unit 6b)

This unit only outcrops on the Tut 2 claim. It is considered to be the sodium-metasomatized equivalent of the adjacent Jurassic diorite (Hewgill, 1985a and b) and resulted from a degassing of volatiles during a late magmatic phase.

### *Tertiary - Cretaceous*

#### Sloko Group Intermediate to Felsic Rocks (Unit 7)

This unit only outcrops in one location on the Tot claims. A Sloko dike intrudes along the faulted margin of the ultramafic unit and crosscuts the Stuhini volcanics along strike. They are light buff-grey, unfoliated, plagioclase and hornblende porphyritic.

### *Late Tertiary - Recent*

#### Level Mountain Group; Basalt (Unit 8)

This unit is only seen in a topographic depression along a ridge between two mountains in the western portion of the Tot 1 claim. These basalts are red in colour due to extensive oxidation forming hematite, local pods of green epidote are common. The texture varies from vesicular to massive. The unit does not actually outcrop, only weathered talus and rubble remain.

## 4.0 DETAILED DISCUSSION OF MINERALIZED AREAS

The following section highlights new showings, or mineralized areas discovered on the property during 1992. The zones are either of very limited strike potential or contain weak or erratic gold values. The location of each area is indicated on Figure 5 and 1992 field data is shown on Figures 5 and 6.

### 4.1 RED BLUFFS ZONE

#### 4.1.1 Geology and Mineralization

The Red Bluffs are located at the eastern edge of the property (Figure 5) and are comprised of alternating beds of fine-grained ash tuff and pyritic ± hematitic tuffaceous units of Stuhini age. It is unknown whether these sulphides are syndepositional (related to a reducing environment during deposition of volcanoclastics) or a result of late-stage hydrothermal alteration related to the albite alteration of the nearby Jurassic diorite.

#### 4.1.2 Geochemistry

Twenty-two talus coarse samples were obtained downslope from the Red Bluffs, all samples returned less than 20ppb gold. Six rock samples were obtained from different pyritic "beds" (JH11- 80,81,82,83; JH13-91,93), gold was not detected in any of the samples.

#### 4.1.3 Recommendations

No further work is recommended on this zone.

### 4.2 NO SNOW ZONE

#### 4.2.1 Geology and Mineralization

The zone is hosted within Stikine Assemblage argillites and mafic volcanics on the Tot 3 claim (Figure 5). The rocks are strongly foliated and phyllitic with variable dips. The No Snow zone consists of five or six fracture controlled veins and silicified zones, 0.5 to 3m in width in a gully and exposed for 250-350 metres. Dusty and wispy grey to whitish pyrite is the only sulphide in a matrix of brecciated quartz veins and wallrock rehealed by light grey chalcedony. Wallrock alteration consists primarily of silicification and weak to moderate iron carbonate.

#### 4.2.2 Geochemistry

Four samples (DM2- 28,29,30,31) were collected from pyrite-rich zones; all samples were assayed at the Golden Bear Minesite Lab and failed to yield any significant gold. The results for gold were as follows: 0.24,0.38,0.07, 0.14 gpt.

#### 4.2.3 Recommendations

No further work is recommended on this zone.

### 4.3 LEAD-ZINC SHOWING

#### 4.3.1 Geology and Mineralization

The Lead-Zinc showing is located at the toe of a glacier below Misty Mountain on the Tut 2 claim. Two parallel 5-10cm wide massive sulphide veins which contain 2-8cm cores of 80% coarse-grained euhedral pyrite, chalcopyrite, galena and sphalerite. The sulphide veins are hosted within very fine-grained microcrystalline quartz veins in highly fractured and silicified limestones. Similar to the silicified limestone contact zone drilled in 1987 and 1990.

These veins are of limited strike extent and are extremely narrow; there is little potential for a deposit of significant size.

#### 4.3.2 Geochemistry

Three samples were taken from this vicinity:

DM8-77 Grab of 10cm wide massive sulphide core of quartz vein; contains: 533 ppb Au, 53.5 ppm Ag, 153 ppm Cu, 4752 ppm Pb, 2673 ppm Zn, 697 ppm As.

DM8-78 Same as above, contains: 737 ppb Au, 45.5 ppm Ag, 291 ppm Cu, 7485 ppm Pb, 9401 ppm Zn, 1178 ppm As.

DM8-79 Grab from a 50cm wide zone of intense silicification contains 10cm core of pyritic clay gouge, within silicified and brecciated limestone, and carries: 1190ppb Au, 13.5 ppm Ag, 125 ppm Cu, 1350 ppm Pb, 1294 ppm Zn, 1134 ppm As.

#### 4.3.3 Recommendations

No further work is recommended on this zone.

### 4.4 TUT CLAIMS

#### 4.4.1 Geology and Mineralization

A small multi-element anomaly (Au > 50ppb, Ag > 1ppm, As > 250ppm, Sb > 25ppm) was outlined by talus fine and soil sampling on the 1982 and 1983 grids. Many of the targets which were later sampled and drilled between 1984 and 1990 were located topographically below anomalous samples. During 1992, prospecting and remapping in the areas of outcrop and talus immediately above the anomalous soil grid was completed in order to locate the possible source for gold.

The stratigraphy immediately above the silicified limestone consists of siltstone, phyllite and variably altered and deformed mafic volcanics of



the Stikine Assemblage. Trace amounts of disseminated pyrite occur throughout the claims within all rock types. Abundant quartz ± carbonate ± chlorite veins or sweats occur within the phyllitic unit, typically with only trace sulphides but occasional, semi-massive blebs of pyrite occur within the quartz veins.

Other areas of the Tut claims were evaluated and no significant mineralization was noted.

#### 4.4.2 Geochemistry

Forty-three samples (from traverses JH9-, DM4-, DH9, JR11-) were taken while prospecting outcrop and boulders above the mineralized limestone and the soil anomaly. Only two samples returned >20ppb gold; sample DM4-51 was a silicified and brecciated limestone boulder located 5m upslope from a silicified limestone outcrop which contained 431 ppb gold, while sample JH9-71 from an outcrop of similar material returned 142 ppb gold.

One hundred and twenty one talus fine samples were taken from ridges, above the soil anomaly in order to locate a source of mineralization. The sampling began at the albitized diorite and samples were taken every 50m along several ridges, until silicified limestone was encountered. Ten samples returned values > 50ppb gold. Eight samples returned between 50 and 100 ppb gold and were located within or immediately downslope from the albitized diorite. Two other samples were located within 100% phyllite ± quartz vein talus and returned 222 and 635 ppb gold. The latter two samples correspond with a small, known, isolated gold-only anomaly.

Only five rock samples on the Tut claims returned any significant gold mineralization, the remainder typically contained <100 ppb gold, with a few samples >400 ppb gold. The following samples are the highlights of the Tut claims:

- JH2-019      1485 ppb gold, high grade material from 1m wide quartz stockwork zone within the albitized diorite with extremely limited strike potential, Tut 2 claim.
  
- JH5-40        2005 ppb gold, high grade sample from massive sulphide lens in a narrow Sloko dike containing fragments of albitized diorite. Also anomalous in Pb, Zn, As, Sb. Tut 2 claim.
  
- DM5-58        4330 ppb gold, from a 1.5m wide quartz stockwork ±

chlorite ± sericite alteration zone within phyllite unit. Tut 2 Claim.

DM7-67 2160 ppb gold, 1m chip across quartz stockwork and silicified breccia within limestone unit, Ram claim.

DM8-79 1190 ppb gold, 50cm wide zone of intense silicification with 10cm core of pyritic clay gouge.

#### 4.4.3 Recommendations

The only work that is recommended in this area consists of a few days to map and prospect along the albitized diorite/Stuhini volcanic contact in the glacial bowl on the north face of Misty Mtn (Plate 3). Erratic, gold mineralization occurs within silicified, sulphidized and albitized zones near the albitized diorite elsewhere on the Tut claims. Due to extreme topography in the bowl above the glacier, this area has only had a cursory evaluation. Late in the summer would probably be the best time to attempt this work.

### **4.5 TOT CLAIMS**

#### 4.5.1 Geology and Mineralization

The Tot claims are underlain by all rock types previously documented. Reconnaissance traverses across most of the claims did not locate any significant mineralization. Several areas with anomalous samples taken over the years were re-evaluated for their potential to host a large tonnage deposit. The shear zone trenched in 1983-84 and drilled in 1987 is of limited strike potential, at less than 100m. Other discrete areas of chalcopyrite or sphalerite mineralization are typically fracture coatings associated with quartz veining or silicification. Much of the pre-Upper Triassic rocks on the claims have very gossanous weathered surfaces this is due to intense, pervasive iron carbonate alteration.

#### 4.5.2 Geochemistry

Numerous talus fine samples and rock samples were obtained over areas of intense carbonate alteration, so prevalent on the Tot claims. The only samples which contained significantly anomalous elements are as follows:

DM1-001 Talus fine sample from intense ankeritic altered Stuhini tuffs. Sample is from the ridge line, and is therefore locally derived. The sample contained 152 ppb Au. Several other talus samples along strike and down slope did not contain any detectable levels of gold.

- DM1-003 A chip sample across a 15cm bull-white quartz vein with azurite, malachite and chalcopyrite exposed in a 1984 trench along the ridge. Sample contained 591 ppb Au, 3886 ppm Cu.
- DM1-006 Grab sample of sulphide rich material within a strongly carbonatized shear zone. The sulphidization (2-5% sphalerite and tr-2% pyrite) occurs within two narrow, discrete zones with a 2m wide alteration halo. The sample contained no gold or silver, 15111 ppm Zn, 1803 ppm As, 339 ppm Sb, 405 ppm Hg and 38.1 ppm Cd.
- JH6-048 Grab samples of talus/float, quartz-carbonate vein within  
JH6-049 intensely carbonate-altered, chloritic schist. Less than 1% of the float is sulphidized (3% azurite & malachite). The samples contained 468 and 915 ppm Cu respectively. Talus fine samples downslope (DH6-083) and upslope (DH6-084,85) contained negligible amounts of either Cu or Au. Source for these float samples is probably the area of sample DM1-006.
- JH8-060 Sample -060 is a high-grade grab sample of quartz  
JH8-061 -carbonate vein within phyllite, sample -061 is a 2m wide chip through silicified phyllitic wallrock. The samples contain trace amounts of pyrite, arsenopyrite and returned 495 and 839 ppb As respectively.
- DH6-080 Talus fine sample just below top of ridge within carbonate altered Stuhini volcanoclastics. The sample contained 133 ppb Au and 132 ppm Cu.

#### 4.5.3 Recommendations

No further work is recommended in this area.

## 5.0 SUMMARY AND CONCLUSIONS

The RAM-TUT-TOT property is located 100 kilometres northwest of Telegraph Creek and consists of one-hundred seventy eight units held by NAMC. Access to the property is by helicopter or fixed-wing float plane to Tatsamenie Lake. A restricted access two-wheel drive road passes within 10 kilometres of the south edge of the property at the Golden Bear Minesite. Four original claims were staked in 1981, following the discovery of anomalous gold values in talus fine samples along the slopes above Tatsamenie Lake. Six other claims were staked between 1983 and 1989. Following acceptance of this assessment report, this claims will be in good standing until July and October 1994, and March 1996.

Work during 1992 was designed to evaluate the size potential of known showings, to locate the source of the multi-element geochemical anomaly on the Tut claims, to evaluate several anomalous samples near the Tot LCP, and to locate any other potentially sizeable mineralization. Gold appears to be very erratic as seen in drill core and prospecting over eleven years. The best results from 7 diamond drill holes which tested the Silicified Limestone Contact "Manto" style mineralization (the best target with respect to size potential on the property) includes 1.1 gpt gold over 4.0m and 2.4 gpt gold over 1.6m from drill holes 90-7 and 87-34 respectively.

Several other showings were evaluated and show erratic and low grade (< 1gpt gold) mineralization over very narrow widths.

The only work that is recommended on this property consists of mapping and prospecting the alteration, mineralization along the contact of the albitized diorite and the volcaniclastic units in the Misty Glacier Bowl area.

## 6.0 BIBLIOGRAPHY AND SELECTED REFERENCES

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**APPENDIX I**

**(1992 Geochemical Assay Certificates)**















Solon Street  
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 Phone (604) 879-7878  
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iPL Report: 9200535 T Homestake Canada Ltd.  
 Project: 3134 Ram-Tut-Tot

In: Jul 24, 1992  
 Out: Jul 28, 1992

70 Rock  
 Page 2 of 2

Section 1 of 1  
 Certified BC Assayer *[Signature]*  
 David Chiu

Sample Name	Au	Ag	Cu	Pb	Zn	As	Sb	Hg	Mo	Tl	Bi	Cd	Co	Ni	Ba	W	Cr	V	Mn	La	Sr	Zr	Sc	Ti	Al	Ca	Fe	Mg	K	Na	P	
	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	
R92-DM2-018	R	< 0.1	2	3	20	<	6	4	4	<	<	0.2	27	70	207	<	42	83	1578	<	60	1	9	<	0.28	13%	6.09	5.56	0.07	0.02	0.02	
R92-DM2-019	R	< 0.1	37	<	34	43	11	4	3	<	<	<	28	90	105	<	148	86	1023	5	87	1	19	<	0.52	8.52	4.53	4.70	0.08	0.02	0.06	
R92-DM2-020	R	13	0.9	24	7	9	34	<	<	41	<	<	29	47	125	<	81	100	165	<	30	2	5	0.02	0.82	0.32	15%	0.44	0.14	0.03	0.02	
R92-DM2-021	R	< 0.3	37	2	26	22	7	4	2	<	<	<	54	80	167	<	153	82	472	<	54	1	8	0.06	1.52	3.39	3.26	2.55	0.02	0.03	0.07	
R92-DM2-022	R	< 0.2	44	<	35	<	10	<	3	<	<	<	25	112	374	<	213	100	1014	2	95	1	14	0.01	1.42	6.78	4.02	4.69	0.09	0.03	0.05	
R92-DM2-023	R	< 0.1	41	<	23	<	13	4	4	<	<	0.2	34	240	28	<	428	96	1637	2	137	1	15	0.01	0.72	8.78	3.62	4.95	<	0.02	0.04	
R92-DM2-024	R	< 0.3	48	<	61	8	19	4	3	<	<	<	31	110	57	<	101	135	1157	13	23	2	18	0.01	0.80	7.62	5.85	0.56	0.05	0.01	0.16	
R92-DM2-025	R	<	<	124	<	38	<	<	1	<	<	<	30	29	37	<	61	111	477	<	22	2	9	0.09	1.48	1.21	3.45	1.66	0.10	0.08	0.09	
R92-DM2-026	R	<	<	130	4	29	13	<	<	4	<	<	31	34	17	<	36	100	281	<	25	2	9	0.10	1.21	0.50	5.53	0.93	0.07	0.07	0.08	
R92-DM2-027	R	42	<	44	2	27	133	22	4	5	<	<	18	62	21	<	139	65	543	<	60	1	11	<	0.37	5.08	2.65	2.73	0.04	0.02	0.03	
R92-DM3-032	R	<	<	23	2	20	21	5	<	2	<	<	16	41	63	<	98	45	551	4	4	1	8	<	0.29	0.67	1.77	0.06	0.05	0.01	0.02	
R92-DM3-033	R	17	<	26	2	15	244	13	<	42	<	<	0.1	11	30	81	<	85	23	74	<	7	1	2	<	0.38	0.05	1.19	0.03	0.03	0.02	0.02
R92-DM3-034	R	<	<	60	<	36	25	32	<	30	<	<	0.1	12	16	9	<	31	78	341	<	3	4	16	<	0.50	0.08	3.95	0.09	0.15	0.02	0.06
R92-DM3-035	R	< 0.1	90	4	87	102	<	<	4	<	<	<	21	27	14	<	19	109	1798	2	7	1	19	<	0.52	0.58	7.62	0.57	0.15	0.04	0.07	
R92-DM3-036	R	16	0.2	168	12	72	252	76	<	4	<	<	34	50	12	<	36	95	876	2	6	1	17	<	0.66	0.41	7.29	0.20	0.12	0.02	0.12	
R92-DM3-037	R	5	0.2	183	11	92	62	87	5	35	<	<	52	83	9	<	36	153	2200	3	7	2	24	<	0.62	0.59	11%	0.43	0.06	0.02	0.12	
R92-DM3-038	R	<	<	51	<	39	<	7	<	3	<	<	35	173	18	<	120	121	5212	3	44	2	24	<	0.55	4.06	11%	2.35	0.13	0.02	0.05	
R92-DM3-039	R	<	<	60	2	33	563	46	6	8	<	0.2	19	55	7	<	71	39	284	<	12	1	10	<	0.55	0.42	3.00	0.17	0.08	0.02	0.08	
R92-DM3-040	R	<	<	49	<	34	3813	325	145	19	<	<	12	21	16	<	50	85	433	<	30	1	11	<	0.49	2.14	4.63	0.84	0.02	0.02	0.05	
R92-DM3-041	R	8	<	55	<	31	159	38	<	68	<	<	21	56	86	<	132	31	358	<	41	<	5	<	0.31	1.01	4.00	0.19	0.05	0.01	0.03	
R92-JH6-047	R	<	<	73	<	68	<	12	<	4	<	3	<	23	48	357	<	99	175	1319	3	38	2	19	0.01	2.72	2.90	5.19	4.02	0.08	0.05	0.10
R92-JH6-048	R	<	0.6	468	2	45	55	135	11	2	<	<	0.3	5	14	20	<	34	33	786	<	27	3	9	<	0.42	7.28	1.55	4.23	0.23	0.03	0.04
R92-JH6-049	R	6	1.3	915	4	29	140	254	16	5	<	<	0.5	3	10	18	<	70	13	1077	<	44	2	3	<	0.19	10%	0.99	6.55	0.05	0.02	0.01
R92-JH7-052	R	<	<	4	6	13	12	11	3	4	<	<	0.5	44	676	10	<	349	5	416	<	11	1	3	<	0.04	0.15	2.55	1%	<	0.02	<
R92-JH8-058	R	<	<	61	<	39	27	12	<	4	<	<	<	23	69	93	<	107	96	1060	3	85	1	20	<	0.59	6.90	3.89	4.04	0.08	0.02	0.08
R92-JH8-059	R	<	0.2	57	4	15	<	7	<	20	<	<	49	78	212	<	164	85	224	3	30	2	8	0.08	1.33	0.67	5.25	2.11	0.10	0.08	0.08	
R92-JH8-060	R	<	<	139	2	42	495	23	4	2	<	<	22	40	10	<	31	85	550	<	40	2	15	<	0.78	4.14	3.70	2.15	0.10	0.02	0.10	
R92-JH8-061	R	<	0.4	134	<	53	839	56	4	3	<	<	19	32	21	<	22	55	835	<	49	1	9	<	0.54	6.07	4.66	2.27	0.09	0.02	0.06	
R92-JH8-062	R	<	<	38	<	26	40	18	4	4	<	<	0.1	9	36	7	5	23	52	1152	<	227	1	8	<	0.31	13%	2.82	8.40	0.08	0.02	0.02
R92-R8-072	R	<	0.2	36	3	7	29	12	<	5	<	<	7	12	39	<	24	9	2550	5	170	4	6	<	0.37	17%	1.76	0.46	0.05	0.02	0.05	
R92-R9-073	R	<	<	82	<	88	23	8	<	6	<	<	25	34	11	<	22	116	3768	4	15	2	16	<	0.66	1.60	11%	1.47	0.12	0.02	0.10	

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 International Plasma Lab Ltd 2036 Columbia St. Vancouver BC V5Y 3E1 Ph:604/879-7878 Fax:604/879-7898

iPL Report: 9200562 T Homestake Canada Ltd.  
Project: 3134 Ram-Tut-Tot Ship=03

In: Jul 30, 1992  
Out: Aug 04, 1992  
144 Rock

Page 1 of 4  
Section 1 of 1  
Certified BC Assayer David Chiu

Table with 29 columns: Sample Name, Au, Ag, Cu, Pb, Zn, As, Sb, Hg, Mo, Tl, Bi, Cd, Co, Ni, Ba, W, Cr, V, Mn, La, Sr, Zr, Sc, Ti, Al, Ca, Fe, Mg, K, Na, P. Rows include various sample IDs like R92-R 3-020 to R92-DM 4-47.

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IPL Report: 9200562 T Homestake Canada Ltd.  
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In: Jul 30, 1992  
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144 Rock

Page 4 of 4

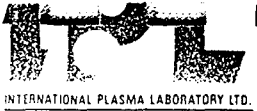
Section 1 of 1  
Certified BC Assayer

*[Signature]*  
David Chiu

Sample Name	Au	Ag	Cu	Pb	Zn	As	Sb	Hg	Mo	Tl	Bi	Cd	Co	Ni	Ba	W	Cr	V	Mn	La	Sr	Zr	Sc	Ti	Al	Ca	Fe	Mg	K	Na	P
	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%
R92-JH 9- 71	R 142	1.1	7	39	245	261	14	<	8	<	<	2.6	7	11	35	<	98	7	122	3	7	1	2	<	0.27	0.22	1.93	0.13	0.21	0.01	0.01
R92-JH10- 73	R <	0.3	2	4	722	32	<	<	3	<	3	0.4	2	3	207	<	112	2	236	19	13	1	<	0.01	0.16	0.50	1.93	0.03	0.10	0.05	<
R92-JH10- 74	R <	<	8	3	63	324	6	<	3	<	<	0.1	1	2	77	<	94	<	123	25	3	1	<	<	0.24	0.05	1.31	0.02	0.14	0.03	<
R92-JH10- 75	R 48	0.1	12	14	52	244	6	<	2	<	<	0.2	2	3	118	<	104	<	247	11	10	1	<	<	0.22	0.40	1.60	0.10	0.16	0.02	<
R92-JH10- 76	R 5	<	18	2	13	50	7	<	3	<	<	<	3	5	33	<	117	2	182	26	27	1	<	<	0.24	1.02	2.67	0.04	0.14	0.04	<
R92-JH11- 77	R <	<	<	17	38	530	9	<	13	<	<	<	24	34	3	<	80	74	480	2	46	2	7	<	0.66	4.22	3.95	1.95	0.02	0.05	0.06
R92-JH11- 79	R <	<	138	<	46	50	13	<	3	<	<	<	20	10	31	<	29	153	372	<	56	1	6	0.10	2.44	0.94	5.24	1.23	0.05	0.23	0.
R92-JH11- 80	R <	0.1	47	17	33	102	14	<	6	<	<	<	14	57	31	<	74	45	155	5	52	5	5	0.14	2.11	0.83	3.39	0.81	0.38	0.16	0.
R92-JH11- 81	R <	0.2	234	5	61	155	22	<	5	<	<	<	51	66	50	<	107	101	420	<	65	2	7	0.04	2.73	1.31	5.49	0.70	0.52	0.10	0.14
R92-JH11- 82	R <	<	40	4	20	130	26	<	3	<	<	<	15	25	53	<	86	79	301	2	39	2	6	0.03	2.82	1.14	4.18	0.74	0.12	0.18	0.16
R92-JH11- 83	R <	<	191	18	65	<	29	<	3	<	<	<	32	47	21	<	137	220	395	2	118	1	5	0.02	7.67	3.73	6.34	0.92	0.09	0.41	0.10
R92-JH12- 84	R <	0.2	22	9	42	14	41	<	2	<	<	<	10	15	64	<	66	59	268	<	44	1	7	0.14	3.78	1.24	3.64	2.11	1.18	0.30	0.09
R92-JH12- 85	R <	0.2	11	10	83	20	67	<	2	<	<	<	9	8	47	<	106	30	190	<	27	1	3	0.07	2.06	0.78	2.37	1.19	0.43	0.17	0.03
R92-JH12- 87	R 14	<	9	51	35	624	39	<	2	<	3	<	12	13	20	<	81	49	117	2	69	1	7	0.08	4.18	2.23	3.02	1.07	0.47	0.28	0.04
R92-JR10- 74	R <	<	11	<	13	6	7	<	2	<	<	<	2	5	121	<	198	2	147	5	34	1	<	<	0.18	0.75	0.65	0.48	0.07	0.03	<
R92-JR10- 77a	R <	0.3	6	12	113	22	6	<	5	<	<	<	7	9	269	<	112	44	883	11	78	1	4	0.03	0.71	4.37	2.11	1.50	0.29	0.04	0.03
R92-JR10- 77b	R <	<	3	2	13	<	<	<	3	<	<	<	2	2	1249	<	70	<	91	40	64	3	1	<	0.17	0.43	0.61	0.21	0.02	0.09	<
R92-JR10- 77c	R <	<	4	<	13	<	5	<	1	<	<	<	3	5	39	<	212	9	174	<	25	<	1	<	0.12	1.17	0.73	0.45	<	0.02	<
R92-JR10- 78	R <	0.7	1065	4	179	<	5	<	5	<	<	<	25	25	347	<	51	164	435	<	23	2	5	0.23	2.28	1.16	4.13	2.56	1.51	0.07	0.22
R92-JR10- 78b	R <	<	18	11	258	63	8	<	3	<	<	<	25	28	126	<	61	142	1467	4	92	1	15	0.04	1.89	4.85	5.50	2.74	0.33	0.03	0.11
R92-JR10- 79	R <	<	5	2	29	15	<	<	4	<	<	<	1	3	402	<	108	2	106	19	9	1	<	<	0.17	0.05	1.21	0.02	0.11	0.04	<
R92-JR10- 80	R <	<	48	3	113	<	11	<	3	<	<	<	27	172	916	<	166	70	1041	4	116	2	11	0.04	1.95	4.07	4.26	4.30	0.45	0.03	0.19
R92-JR11- 81	R 6	0.2	51	<	13	354	36	<	8	<	<	<	14	53	40	<	103	118	462	2	29	1	9	0.01	1.09	4.64	2.86	1.04	0.04	0.07	0.09
R92-JR11- 82	R 18	0.5	54	2	26	139	33	<	5	<	<	<	20	17	3	<	68	52	453	3	33	1	7	<	0.74	2.13	3.98	0.97	0.03	0.07	0.08
R92-JR11- 83	R <	0.3	288	<	11	102	16	<	4	<	<	<	24	23	10	<	71	43	328	3	80	1	7	<	0.67	4.38	3.36	1.76	0.04	0.04	0.05
R92-JH13- 91	R 6	<	208	<	39	40	9	<	5	<	<	<	25	14	25	<	49	154	252	2	28	2	4	0.09	1.42	1.13	5.19	0.66	0.11	0.17	0.
R92-JH13- 93	R <	0.2	101	<	26	10	6	<	2	<	<	<	19	8	56	<	32	175	119	3	16	1	6	0.14	1.19	0.62	4.57	0.98	0.20	0.12	0.14

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 International Plasma Lab Ltd. 2036 Columbia St. Vancouver BC V5Y 3E1 Ph:604/879-7878 Fax:604/879-7898





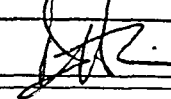
2036 Columbia Street  
Vancouver, B.C.  
Canada V5Y 3E1  
Phone (604) 879-7878  
Fax (604) 879-7898

iPL Report: 9200537 T Homestake Canada Ltd.  
Project: 3134 Ram-Tut-Tot

In: Jul 24, 1992  
Out: Jul 28, 1992

1 Pulp Page 1 of 1

Section 1 of 1  
Certified BC Assayer

  
David Chiu

Sample Name	Zn
	%
R92-DM1-006 P	1.90

Min Limit 0.01  
Max Reported\* 100.00  
Method Assay  
--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate  
International Plasma Lab Ltd. 2036 Columbia St. Vancouver BC V5Y 3E1 Ph:604/879-7878 Fax:604/879-7898

CHARGE TO

PROJECT CODE: 000100  
DEPARTMENT: 34

PAGE \_\_\_\_\_ OF \_\_\_\_\_

# NORTH AMERICAN METALS CORP. ROCK SAMPLE ASSAY REPORT SHEET

SAMPLER: HOMESTAKE - D.M.

AREA NAME: \_\_\_\_\_

ASSAYER: [Signature]

DATE: July 12/92 MAP #: \_\_\_\_\_

#	SAMPLE TAG NUMBER	SAMPLE DESCRIPTION AND AREA	SAMPLE WIDTH (m)	ROCK TYPE	AU G/T	AG G/T	SULPHUR %
1	R92-DM2-029	} No Snow Zone			0.24	0.6	
2	R92-DM2-028				0.38	0.8	
3	R92-DM2-030				0.07	0.4	
4	R92-DM2-031				0.14	0.8	
5							
6							
7							
8							
9							
10							
11							
12							
13	NOTE FOR						
14	ASSAY LAB: PLEASE SET ASIDE PULPS FOR THESE						
15	SAMPLES AND NOTIFY JENNIFER SMITH						
16	FOR PICK UP.						
17							
18							
19							
20							
21	copy sent to RMB						
22							
23							
24							
25							

**APPENDIX II**  
**(1992 Analytical Methods)**

## ANALYTICAL METHODS

### INTERNATIONAL PLASMA LABORATORIES LTD. (1992)

#### 30 Element Induced Coupled Argon Plasma (ICP)

A 0.500 gram sample is digested with 3 ml 3-1-2 HCl-HNO<sub>3</sub>-H<sub>2</sub>O at 95° Celsius for one hour and is diluted with 10 ml 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.

\*\* Au analysis by Fire Assay/ICP from 10 gram sample.

**APPENDIX III**  
**(1992 Traverse Summary)**

**TRAVERSE SUMMARY -RAM TUT TOT PROPERTY (1992)**

TRAVERSE	DATE	AREA	Man days per Claim								RAMBAA	YING	SAMPLE NUMBERS	NUMBER ANALYZED
			TOT1	TOT2	TOT3	TOT4	TUT1	TUT2	TUT3	TUT4				
JH-1	July 2,1992	Red Bluffs								0.5		0.5	001-014	7
JH-2	July 3,1992	Albite-Limestone								1			015-023	6
JH-4	July 6,1992	Albite-Limestone								1			028-037	7
JH-5	July 7,1992	Albite-Limestone								1			038-046	9
JH-6	July 9,1992	Tot Shear		0.5		0.5							047-049	3
JH-7	July 10,1992	NW Tot	1										050-057	1
JH-8	July 11,1992	Tot Drainage			1								058-062	5
JH-9	July 13,1992	Albite-Limestone								1			063-071	10
JH-10	July 14,1992	Albite-Limestone								1			072-076	4
JH-11	July 15,1992	Albite-Limestone									1		077-083	6
JH-12	July 16,1992	Ram Baa Claim									1		084-089	3
JH-13	July 17,1992	Red Bluffs								0.5		0.5	090-093	2
DH-1	July 3,1992	Red Bluffs								0.5		0.5	001-005	7
DH-2	July 4,1992	Red Bluffs								0.5		0.5	005-014	9
DH-3	July 5,1992	Albite-Limestone								1			015-030	16
DH-4	July 6,1992	Albite-Limestone								1			031-057	27
DH-5	July 7,1992	Albite-Limestone								1			058-079	22
DH-6	July 9,1992	Tot Shear		0.5		0.5							080-085	6
DH-7	July 10,1992	NW Tot	1										086-095	10
DH-8	July 11,1992	Tot Drainage			1								096-101	6
DH-9	July 13,1992	Albite-Limestone								1			102-115	14
DH-10	July 14,1992	Albite-Limestone								1			116-127	12
DH-11	July 15,1992	Albite-Limestone								1			128-131	4
	July 16,1992	Ram Baa Claim									1			
DH-12	July 17,1992	Red Bluffs								0.5		0.5	132-141	10
JR-1	July 3,1992	Red Bluffs								0.5		0.5	001-010	10
JR-2	July 4,1992	Red Bluffs								0.5		0.5	011-019	12
JR-3	July 5,1992	Albite-Limestone								1			020-034	16
JR-4	July 6,1992	Albite-Limestone								1			035-054	20
JR-5	July 7,1992	Albite-Limestone								1			055-071	24
JR-8	July 8,1992	Tot Ridge			1								072	1
JR-9	July 10,1992	No Snow Zone			1								073	1
JR-10	July 11,1992	Albite-Limestone								1			074-080	8
JR-11	July 13,1992	Albite-Limestone								1			081-083	3
	July 14,1992	SW Tut					0.5		0.5					
	July 15,1992	Albite-Limestone									1			
	July 16,1992	Ram claim									1			
	July 17,1992	Lead-Zinc Showing							1					
DM-1	July 9,1992	Tot Ridge				1							001-015	15
DM-2	July 10,1992	No Snow Zone			1								016-031	16
DM-3	July 11,1992	No Snow Zone			1								032-041	10
DM-4	July 13,1992	Albite-Limestone								1			042-053	12
DM-5	July 14,1992	SW Tut					0.5		0.5				054-061	8
DM-6	July 15,1992	Albite-Limestone									1		062-065	4
DM-7	July 16,1992	Ram claim									1		066-072	7
DM-8	July 17,1992	Lead-Zinc Showing							1				073-081	9

SUBTOTAL

2    1    6    2    1    22.5    0    1    10.5    0

373

**APPENDIX IV**

(Statement of Qualifications)

## STATEMENT OF QUALIFICATIONS

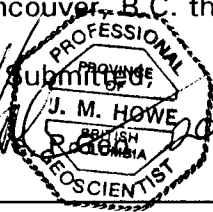
I, Jane M. Howe, with a residence address of 10356 Skagit Drive, Delta, B.C., V4C 2K9 do hereby certify that:

- I am a member of the Association of Professional Engineers and Geoscientists of British Columbia.
- I am a graduate of the University of Waterloo at Waterloo, Ontario with a Bachelor of Science Degree in Geology (1985).
- I have practiced my profession as a Geologist in Ontario, Northwest Territories and British Columbia since 1985.
- I am presently employed as a Contract Geologist by Homestake Canada Inc. of 1000-700 West Pender Street, Vancouver, B.C.
- The work described in this report is based on fieldwork conducted during July 1992 in which I supervised. I am the co-author of this report.
- I have no direct or indirect financial interest in any company known by me to have an interest in the mineral properties described in this report, nor do I expect to receive any such interest.

Dated at Vancouver, B.C. this 27 day of September, 1993 .

Respectfully Submitted

*J. M. Howe*  
Jane M. Howe, P. Eng. 20211



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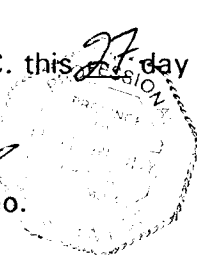
I, Douglas G. Reddy, with a residence address of 8330 Sheaves Road, Delta, B.C., V4C 3X1 do hereby certify that:

- I am a member of the Association of Professional Engineers and Geoscientists of British Columbia.
- I am a graduate of the University of British Columbia, Vancouver with a Bachelor of Science Degree in Geology (1986) and a Master of Science Degree in Geology (1989).
- I have practiced my profession as a Geologist in British Columbia, Yukon Territory and Chile since 1986.
- I am currently a Consulting Geologist to North American Metals Corp. at 1500-700 West Pender Street, Vancouver, B.C.
- The work described in this report has been compiled by me, I am the co-author of this report.
- I have no direct or indirect financial interest in any company known by me to have an interest in the mineral properties described in this report, nor do I expect to receive any such interest.

Dated at Vancouver, B.C. this 27 day of September, 1993 .

Respectfully Submitted

*Douglas G. Reddy*  
Douglas G. Reddy, P. Geo.





**APPENDIX V**

(Statement of Expenditures)

## STATEMENT OF EXPENDITURES

Table 3. Statement of expenditures.

### NORTH AMERICAN METALS CORP. July 3, 1992 to December 31, 1992.

RAM-TUT-TOT PROPERTY  
JULY 3, 1992 TO DECEMBER 31, 1992

DATE OF ISSUE: June 18, 1993

ACCOUNT DESCRIPTION	CODE	TOTAL	PERCENTAGE
LABOUR & SUPERVISION*	015	9580	38.27%
ASSAYING/GEOCHEMISTRY	105	4895	19.55%
CONSULTANTS	135	0	0.00%
TRAVEL	215	3412	13.63%
COMMUNICATION	225	595	2.38%
MAPS	235	59	0.24%
OTHER	295	71	0.28%
CLAIM COSTS	325	0	0.00%
FIELD MATERIALS	420	0	0.00%
CAMP COSTS	425	124	0.50%
AIR SUPPORT*	480	4896	19.56%
RENTAL EQUIPMENT*	525	1016	4.06%
DATA PROCESSING COSTS	910	385	1.54%
MANAGEMENT/ADMIN FEES	930	0	0.00%
<b>FINAL TOTAL (actual)</b>		<b>\$25,033</b>	<b>100%</b>

\* THESE CATEGORIES ARE DETAILED ON THE TABLES ON THE SIDE.

#### APPORTIONMENT OF COSTS

RAM-TUT GROUP	\$8,000
RAM-YING GROUP	\$8,600
<b>TOTAL REQUIRED</b>	<b>\$16,600</b>

ASSESSMENT FILED \$25,033

EXCESS TO PAC ACCOUNT \$8,433

#### LABOUR & SUPERVISION (015)

	FIELD DAYS	RATE /DAY	TOTAL
REGIONAL GEOLOGIST(July 3)	1	380.00	380.00
PROJECT GEOLOGIST(July 3-18)	16.0	200.00	3200.00
GEOLOGIST(July 9-18)	10	200.00	2000.00
2 ASSISTANTS(July 3-18)	32	100.00	3200.00
GEOLOGIST(REPORT PREP.)	4	200.00	800.00
			<b>\$9,580.00</b>

#### ASSAYING - GEOCHEMISTRY (105)

	# SAMPLE	RATE /SAMPL	TOTAL
ROCK/TALUS/SOIL PREP.	369	3.25	1199.25
Au Fire Assay (AAS 20g)	369	6.00	2214.00
30 element I.C.P. ANALYSES (AqR)	369	4.00	1476.00
special zinc analyses	1	5.85	5.85
(International Plasma Laboratories)			<b>\$4,889.25</b>

#### AIR SUPPORT (480)

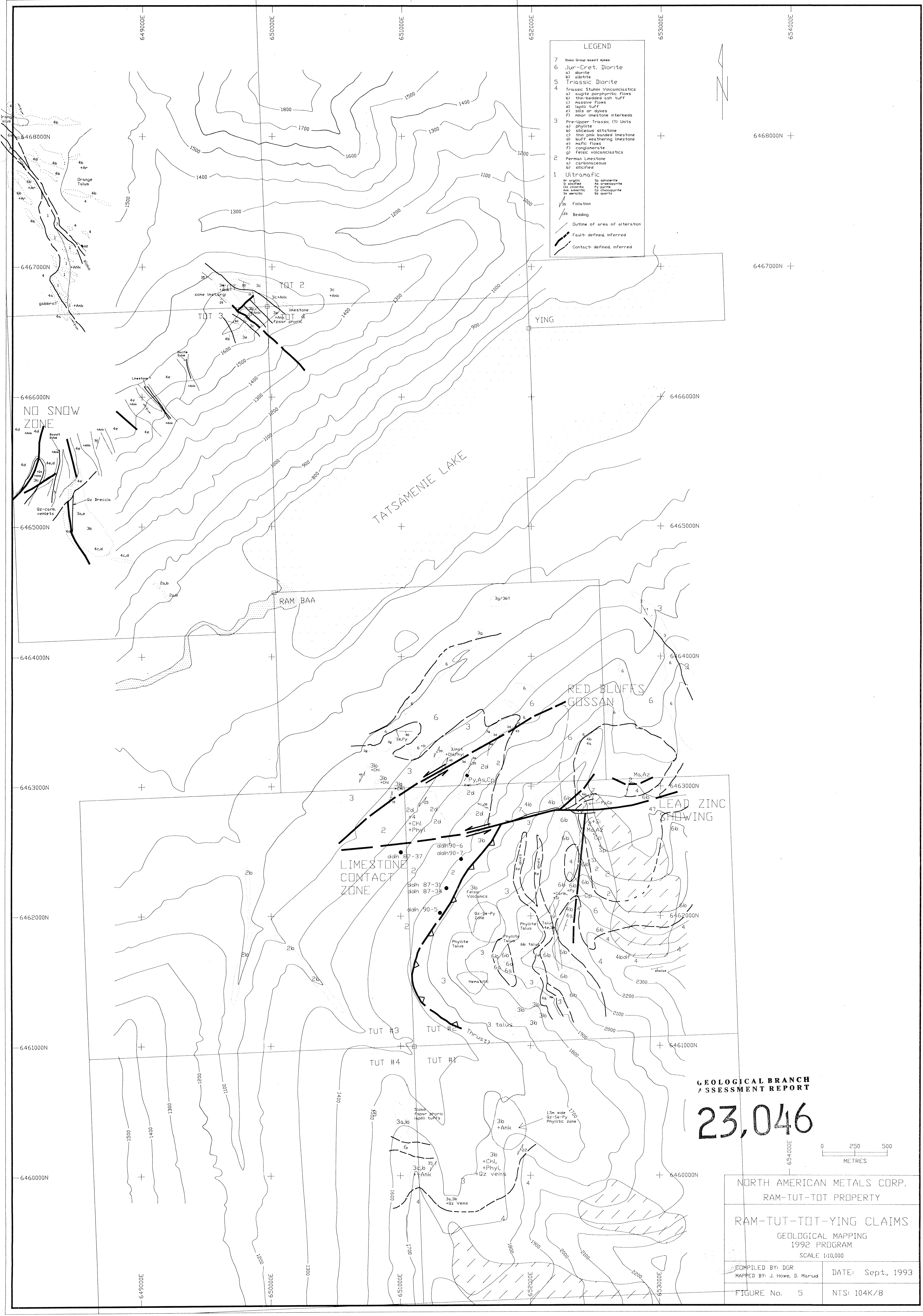
	# HOURS	RATE /HOUR	TOTAL
HELICOPTER(July 3-18)	8.0	612.00	4896.00
(FUEL NOT INCLUDED)			
TRANS NORTH AIR			<b>\$4,896.00</b>

#### RENTAL EQUIPMENT (525)

	# MONTHS	RATE /MONTH	TOTAL
RADIOS & sbx11(July)	1	680.00	680.00
MIRCOSCOPE(July)	1	100.00	100.00
GENERATOR(July)	1	150.00	150.00
MISC.(July)			86.00
			<b>\$1,016.00</b>

#### DATA PROCESSING COST (910)

	# MONTHS	RATE /MONTH	TOTAL
REPORT PREP.	1	100.00	100.00
DATA REDUCTION(CONSULTANT)	1	285.00	285.00
			<b>\$385.00</b>



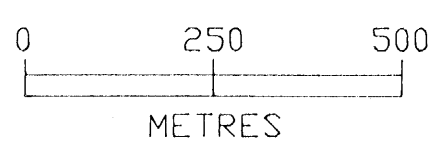
**LEGEND**

- 7 Stone Group basalt dykes
- 6 Jur-Cret. Diorite
  - a) diorite
  - b) diorite
- 5 Triassic Diorite
- 4 Triassic Stuhni Volcanoclastics
  - a) augite porphyritic flows
  - b) thin-bedded ash tuff
  - c) massive flows
  - d) lapilli tuff
  - e) silt or dykes
  - f) minor limestone interbeds
- 3 Pre-Upper Triassic (?) Units
  - a) phyllite
  - b) siliceous siltstone
  - c) thin pink banded limestone
  - d) buff weathering limestone
  - e) mafic flows
  - f) conglomerate
  - g) felsic volcanoclastics
- 2 Permian Limestone
  - a) carbonaceous
  - b) silicified
- 1 Ultramafic
  - a) amphibole
  - b) olivine
  - c) hornblende
  - d) clinopyroxene
  - e) orthopyroxene
  - f) pyroxene
  - g) quartz

/ Foliation  
 // Bedding  
 --- Outline of area of alteration  
 - - - Fault: defined, inferred  
 - - - Contact: defined, inferred

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**23,046**



NORTH AMERICAN METALS CORP. RAM-TUT-TOT PROPERTY	
RAM-TUT-TOT-YING CLAIMS GEOLOGICAL MAPPING 1992 PROGRAM SCALE 1:10,000	
COMPILED BY: DGR MAPPED BY: J. Howe, D. Marud	DATE: Sept., 1993
FIGURE No. 5	NTS: 104K/8

