

830520

**GEOLOGICAL REPORT ON THE  
ANT, BING & SAMO PROPERTY(S)**

**ANT 2 TO 6, BING 1 & 4, and SAMO 1 TO 4 CLAIMS**

**NTS 104 K/8**

**Tatsamenie Lake Area  
Atlin Mining Division  
British Columbia**

**for**

**Premier Minerals Ltd.  
Suite 218, 470 Granville Street  
Vancouver, British Columbia, V6C 1V5**

**by**

**Bruce T. Evans, P.Geol.  
Calgary, Alberta  
September 25, 1996**

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## **1.0 INTRODUCTION**

At the request of Mr. W. Dynes of Premier Minerals Ltd., the author has prepared this report which summarizes the underlying geology and previous exploration work conducted on the Ant, Bing and Samo properties located in north central British Columbia. This report is based on information drawn from published references, periodicals, news releases, assessment reports and, from review of internal documents and maps. The author, while in the company of Mr. Dane Bridge, examined the property on August 19 and 20, 1996. In addition to the property examination the author has extensive experience of the local area gained while conducting exploration on neighboring properties.

This report summarizes the underlying geology and prior exploration activities and presents recommended exploration for the Ant, Bing and Samo properties.

## **2.0 Location and Access**

The Ant, Bing and Samo ("ABS") properties are located 100 kilometres northwest of Telegraph Creek in the Atlin Mining Division, British Columbia. The properties are located on NTS map sheet 104 K/8. The properties straddle the north and south portions of Tatsamenie Lake. The properties are located on sub-alpine to alpine terrain at an approximate elevation of 1400 metres.

Access to the property is by float equipped fixed wing aircraft from either Atlin, Dease Lake or Telegraph Creek to Tatsamenie Lake. Alternatively, access is via the 130 kilometre Telegraph Creek to the Golden Bear Gold Mine access road to a point 15 kilometres south of the properties. From there, a helicopter is used for final access to the property. All materials to support an exploration program can be expedited from either Atlin or Dease Lake.

## **3.0 Property Description and Ownership**

The property(s) consist of three groups of claims; Ant, Bing and Samo. The claims are all located and recorded within the Atlin Mining Division of British Columbia.

Under the terms of an option agreement dated September 16, 1996, Premier Minerals Ltd. will acquire an 80% undivided interest in the property from the current owner Inukshuk Capital Limited. To acquire the 80% interest, Premier must complete a series of cash and share payments to Inukshuk and complete \$1,000,000 in exploration expenditures on the property by December 31, 1998. At the end of the option period the property ownership will be Premier Minerals Ltd. 80% and Inukshuk Capital Ltd. 20%, with Inukshuk additionally retaining a 3% royalty on future production from the property.

Table 1 below provides a detail listing of claim information.

**TABLE 1 - Ant, Bing and Samo Properties - Detail Claim Listing**

<b>Group</b>	<b>Claim</b>	<b>Record No.</b>	<b>Record Date</b>	<b>Claim Size (Units)</b>	<b>Anniversary</b>
Ant	Ant 2	337339	June 24/95	20	June 24/97
	Ant 3	337338	June 24/95	20	June 24/97
	Ant 4	337342	June 24/95	18	June 24/97
	Ant 5	337343	June 28/95	12	June 28/97
	Ant 6	337344	June 28/95	18	June 28/97
	Bing	Bing 1	337340	July 1/95	12
Bing 4		337341	July 1/95	12	July 1/97
Samo	Samo 1	337327	June 28/95	20	June 28/97
	Samo 2	337328	June 30/95	20	June 30/97
	Samo 3	337329	June 30/95	15	June 30/97
	Samo 4	337330	June 30/95	15	June 30/97
<b>TOTAL</b>				<b>182</b>	

#### **4.0 PHYSIOGRAPHY AND CLIMATE**

Much of the property(s) area lies within a high alpine and sub-alpine terrain on the western flank of the Talhtan plateau. Tatsamenie Lake is generally ice free from mid-May to early November. The climate of the area is bordering on the wet coastal zones and the drier interior. Rainfall and snowfalls are moderate with weather conditions being highly variable and fast developing.

Strongly glaciated U-shaped valleys rise to peaks which exceed 2000 metres in elevation. Most of the properties are readily traversed on foot without need for special training or equipment to compensate for terrain. Movement above treeline is effortless with movement below treeline becoming more difficult with increasing vegetation. Vegetation increases rapidly below treeline and consists of cedar, fir, spruce, aspen and devils club.

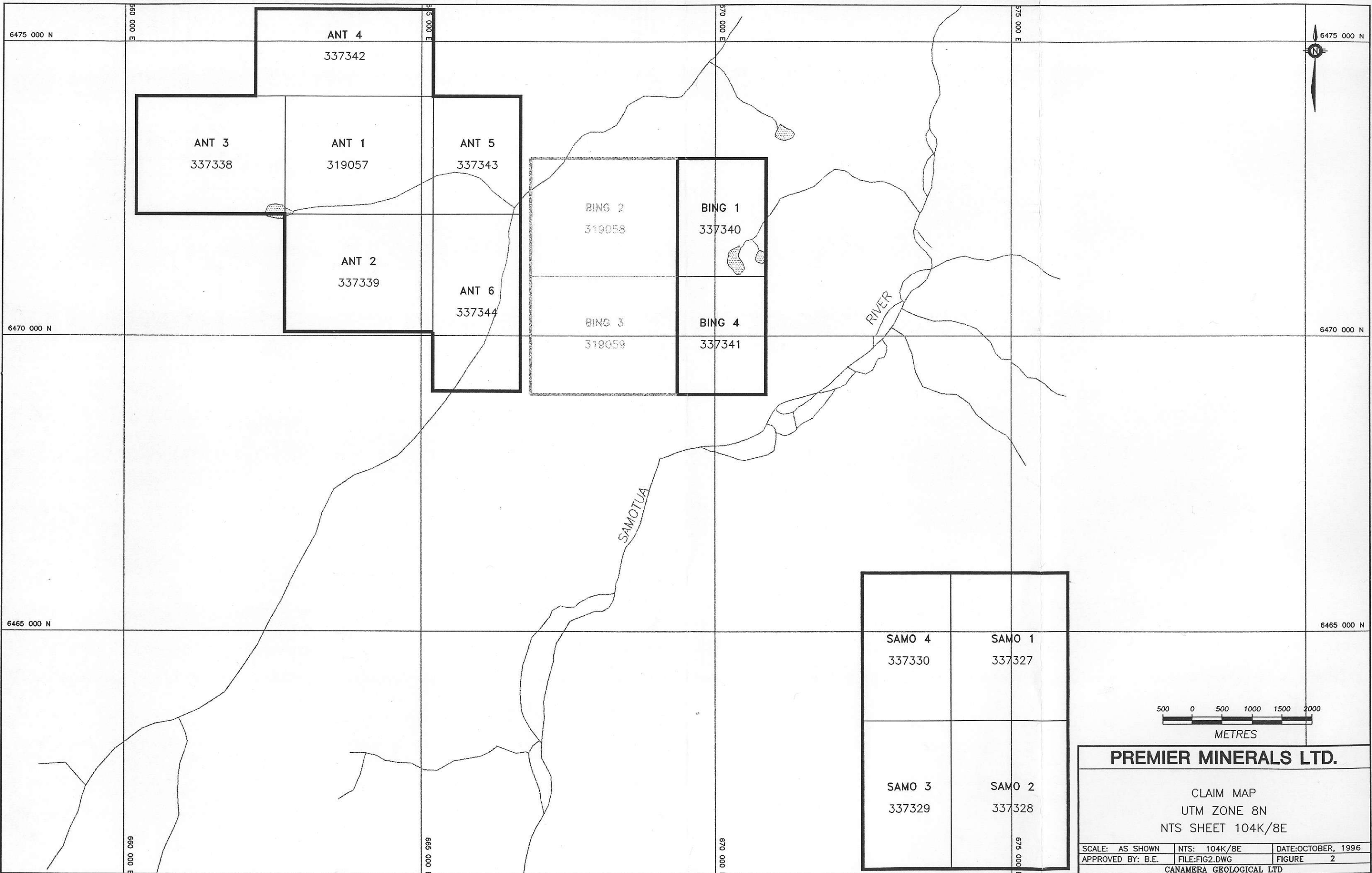
Field work in the project area is possible between June until the end of October.

#### **5.0 GEOLOGY**

##### **5.1 Regional Geology**

The Tatsamenie Lake area occupies the northern flank of the Stikine Arch. Within the Stikine Arch, and throughout the project area, Triassic age felsic intrusions are strongly foliated and deformed and form the basement to all other intrusive and supracrustal rock sequences.





ANT 4  
337342

ANT 3  
337338

ANT 1  
319057

ANT 5  
337343

ANT 2  
337339

ANT 6  
337344

BING 2  
319058

BING 1  
337340

BING 3  
319059

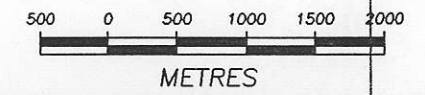
BING 4  
337341

SAMO 4  
337330

SAMO 1  
337327

SAMO 3  
337329

SAMO 2  
337328



**PREMIER MINERALS LTD.**

CLAIM MAP  
UTM ZONE 8N  
NTS SHEET 104K/8E

SCALE: AS SHOWN	NTS: 104K/8E	DATE: OCTOBER, 1996
APPROVED BY: B.E.	FILE: FIG2.DWG	FIGURE 2

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Triassic intrusions are overlain by an assemblage of Upper Paleozoic limestones and cherts which are conformably overlain by pre-upper Triassic mafic volcanics and volcanoclastic rocks. Pre-Upper Triassic rocks are unconformably overlain by a weakly deformed sequence of Middle Triassic volcanic rocks which likely correlate to the Stuhini Group. These relatively undeformed flows and pyroclastic sequences are well exposed on the north shore of Tatsamenie Lake.

Most of the rocks in the project area are north-south striking and sub-vertical dipping. The strike relationships are sometimes compromised across hinge areas of major fold structures, with east-west orientations being observed.

Supracrustal rocks have been subject to three major deformational episodes. Deformation is exemplified in the formation of tight isoclinal, typically north plunging folds. These folds are subsequently rotated into east-west positions by a broader upright fold event which was formed sometime later than the mid-Triassic. Metamorphic grades throughout the area are typically low generally sub-greenschist to low greenschist.

Major north trending wrench faults and east-west trending extensional faults cut all but the youngest intrusive phases. Of these fault systems, one is known to be mineralized, that which hosts the Golden Bear Gold Deposit.

At a regional scale, map sheet 104 K hosts several precious metal occurrences and one producing gold mine (Golden Bear). Several porphyry prospects are located on sheet 104 K. Most of these are associated with diorite to quartz monzonite stocks which are suggested to be Cretaceous in age (Souther, 1971). These mineralized systems appear to best conform to a calc-alkaline, copper-molybdenum model.

## **5.2 Property Geology**

### **5.2.1 Ant Property**

The Ant Property overlies a sequence of Triassic to Tertiary aged intrusives which cross cut Middle and Lower Triassic mafic volcanic rocks. Quartz monzonite and hornblende diorite stocks are strongly propylitically and potassically altered. Porphyry style mineralization and alteration occur over an area of approximately 1800 by 700 metres (Oliver, J.; 1991). A Tertiary epithermal system is superimposed across the earlier porphyry event and locally enriched in precious metals.

Mineralized intrusions of both Cretaceous and Tertiary ages are partly localized and emplaced within east-west and north-northeast trending fault systems. The Ant property has several strong structural trends. Across the property, bedding within the supracrustal rocks trends 072 degrees and dips either moderately northwest or is sub-vertical.

Major brittle fault structures cut across all rock units on the property. The largest of these trends east-west and is interpreted to extend for at least 15 kilometres. Two other fault sets are noted on the property, one which strikes 026 degrees and dips steeply southeast



and the second which strikes 135 degrees and is steeply southwest dipping. All of the fault sets are noted to assist in the localization of the following:

1. east-northeast trending feldspar porphyritic dykes and precious metal mineralization associated with these dykes and;
2. northwest trending, fracture controlled porphyry related, copper-molybdenum mineralization.

Most of the altered intrusive and volcanic rock phases have the fracture density common to porphyry mineralized environments (Oliver, J.; 1991; Hendrick and Titley; 1982). Joint patterns have been mapped as fairly diffuse with the joint surfaces often coated with pyrite and malachite. The joint surfaces may also have siliceous and potassic alteration selvages.

### **5.2.2 Bing Property**

The Bing property overlies a mineralized intrusive suite of foliated hornblende diorites, quartz monzonite and lesser feldspar porphyritic dykes. Dioritic mafic volcanics form a thin veneer across intrusive rocks. Triassic volcanic rocks and chemical sediments crop out across the southern half of the property.

Porphyry style copper-molybdenum mineralization has developed locally within quartz monzonite and hornblende diorites. Shear hosted silver-lead-zinc veins have been noted in a series of north-south trending structural zones across the west and northern portions of the property.

The dominant structural trend on the Bing property is north-south. This tectonic fabric reflects the north-south distribution of volcanic roof pendants and the predominance of north-south structural zones. Where volcanic rocks are better preserved, on the northern and southern reaches of the property, rocks strike east and north-east and dip south at moderate angles.

### **5.2.3 Samo Property**

The Samo property is underlain predominantly by Permian and pre-upper Triassic limestone, clastic sediments and volcanic rock which have been intruded by two igneous events. The first intrusive was a diorite stock of upper Jurassic age. The second intrusive was a Cretaceous and Tertiary Sloko Group of felsic volcanic flows, intrusives and pyroclastics. Jurassic Takwahoni Formation sediments cap the Pre-Upper Triassic package in the southeastern portion of the property. Late Tertiary and Pleistocene Hearts Peak Formation felsic flows and pyroclastic rocks and Level Mountain basalt flows cap the older rocks on the east side of the property.

The most distinct alteration feature on the property is a pervasive iron carbonate alteration zone that weathers to a bright orange colour and appears to be controlled by a northerly striking and westerly dipping structure. The alteration extends from the southwest end of

“Vermillion Ridge” along the ridge and to the north end across “Tag Creek”. Silicification is most prominent as a hornfels zone proximal to the intrusive bodies. In addition to the hornfels zones, a distinct east-west zone of cryptocrystalline quartz crosses Fae Creek. The silicified zone comprises brecciated cherts and/or rhyolites healed by chalcedony and quartz, disseminated and massively banded or bedded pyrite, shear zones and complex folding which includes an overturned antiform cored by limestone. The silicified zone hosts weak gold and silver mineralization.

Porphyry style copper and molybdenum mineralization has been known to occur with the Sloko Group quartz feldspar porphyry stock since the 1960's. Quartz stockwork in clay alteration zones within the quartz feldspar porphyry also host silver and weak gold mineralization.

At several locations on the Samo property, weak gold and silver mineralization has been observed in sulphide bearing quartz veins (Freeze, J.C.; 1988).

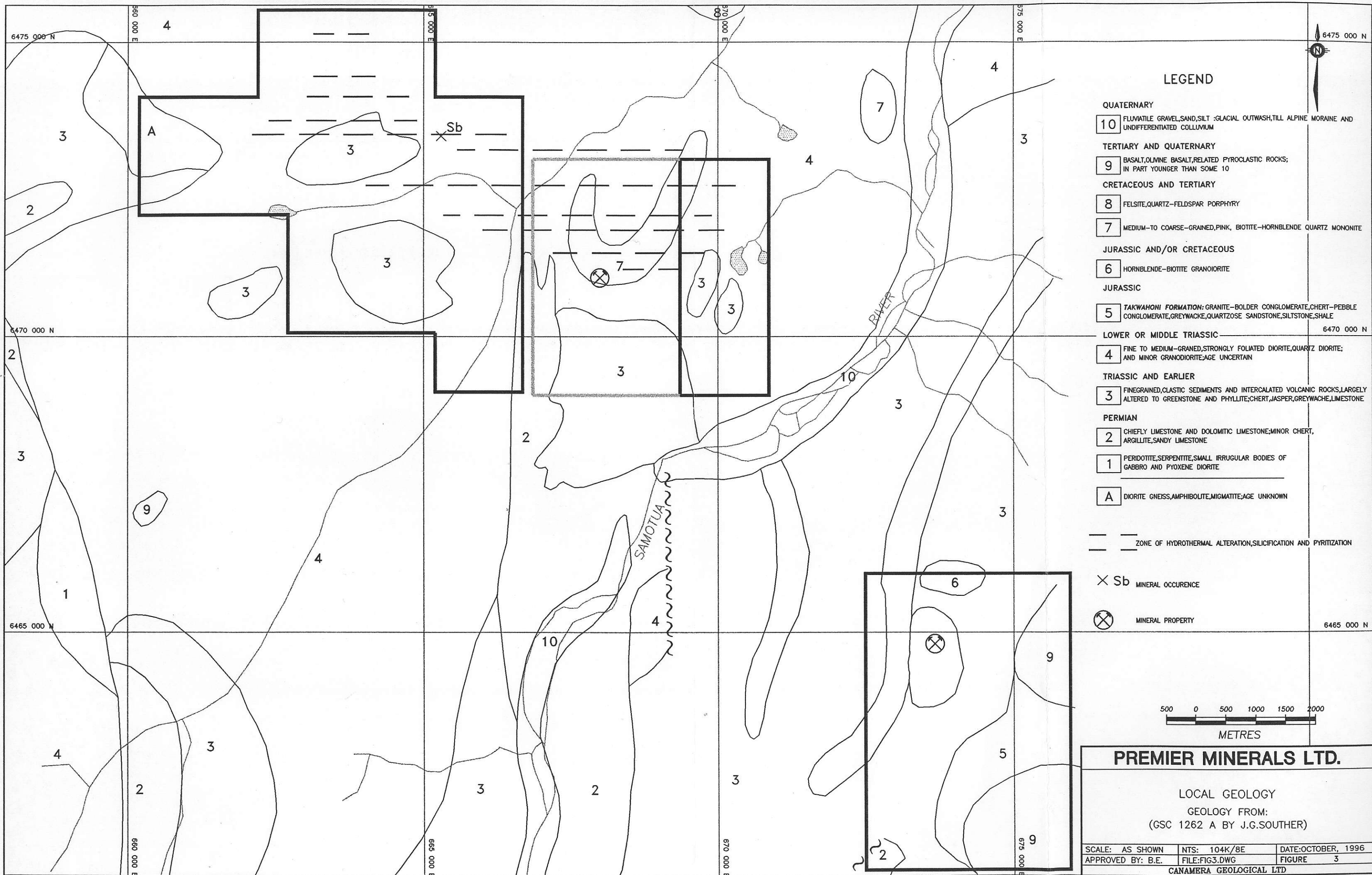
## **6.0 Previous Exploration**

### **6.1 Ant Property**

Exploration of the Ant Property area has been conducted intermittently since 1964. The eastern portions of the property were contained within a property originally explored by Newmont in 1964. During this period, limited prospecting and sampling was conducted.

During the period of 1970 to 1977, the Ant property area was covered by mineral claims held by three different groups; Skyline Explorations, Brinex and Rio Tinto. Between these years, geological mapping, geochemical sampling and geophysics were conducted over the property and were successful at outlining a large alteration zone that possessed anomalous values in copper, molybdenum, silver and gold. During 1977 Rio Tinto completed two diamond drill holes on the property with no significant results being reported.

During 1990, J. Oliver, on behalf of Waterford Resources, completed geological mapping of the property and a prospecting style litho-geochemical sampling program over the property. A total of 315 rock samples were collected on the Ant Property. Gold assays of the samples collected from the Ant Property ranged in value from trace to 5.2 ppm.. Gold mineralization found at the Ant property was associated with feldspar porphyritic dykes and their encompassing alteration zones and in association with zones of strong fracturing and copper mineralization within the interpreted main porphyritic system. A small ground geophysical program consisting of magnetics and VLF was conducted over the previously reported alteration and mineralization zone. The geophysical survey was too small in scale to provide conclusive data but did detect a strong east-west conductor most likely associated with an east-west fault.



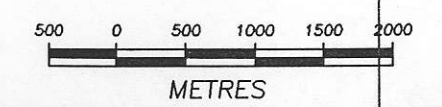
**LEGEND**

- QUATERNARY**
- 10 FLUVIATILE GRAVEL, SAND, SILT; GLACIAL OUTWASH, TILL, ALPINE MORAINES AND UNDIFFERENTIATED COLLUVIUM
- TERTIARY AND QUATERNARY**
- 9 BASALT, OLIVINE BASALT, RELATED PYROCLASTIC ROCKS; IN PART YOUNGER THAN SOME 10
- CRETACEOUS AND TERTIARY**
- 8 FELSITE, QUARTZ-FELDSPAR PORPHYRY
- 7 MEDIUM-TO COARSE-GRAINED, PINK, BIOTITE-HORNBLende QUARTZ MONONITE
- JURASSIC AND/OR CRETACEOUS**
- 6 HORNBLende-BIOTITE GRANODIORITE
- JURASSIC**
- 5 TAKWAHONI FORMATION: GRANITE-BOLDER CONGLOMERATE, CHERT-PEBBLE CONGLOMERATE, GREYWACHE, QUARTZOSE SANDSTONE, SILTSTONE, SHALE
- LOWER OR MIDDLE TRIASSIC**
- 4 FINE TO MEDIUM-GRAINED, STRONGLY FOLIATED DIORITE, QUARTZ DIORITE; AND MINOR GRANODIORITE; AGE UNCERTAIN
- TRIASSIC AND EARLIER**
- 3 FINEGRAINED, CLASTIC SEDIMENTS AND INTERCALATED VOLCANIC ROCKS, LARGELY ALTERED TO GREENSTONE AND PHYLLITE; CHERT, JASPER, GREYWACHE, LIMESTONE
- PERMIAN**
- 2 CHIEFLY LIMESTONE AND DOLOMITIC LIMESTONE; MINOR CHERT, ARGILLITE, SANDY LIMESTONE
- 1 PERIDOTITE, SERPENTITE, SMALL IRRUGULAR BODIES OF GABBRO AND PYOXENE DIORITE
- A DIORITE GNEISS, AMPHIBOLITE, MIGMATITE; AGE UNKNOWN

--- ZONE OF HYDROTHERMAL ALTERATION, SILICIFICATION AND PYRITIZATION

× Sb MINERAL OCCURENCE

⊗ MINERAL PROPERTY



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LOCAL GEOLOGY  
 GEOLOGY FROM:  
 (GSC 1262 A BY J.G.SOUTHER)

SCALE: AS SHOWN	NTS: 104K/8E	DATE: OCTOBER, 1996
APPROVED BY: B.E.	FILE: FG3.DWG	FIGURE 3

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## **6.2 Bing Property**

Field mapping of the property was first conducted between 1958 and 1960 (Souther; 1971). Data from Souther's findings suggested that present on the property area was disseminated copper and molybdenum mineralization associated with silicified and potassically altered zones within a foliated diorite. The alteration assemblage was further related to the emplacement of younger feldspar porphyritic dykes and sills.

Newmont explored the property area between 1964 and 1966, during which time work consisting of ground and airborne geophysical surveys, geochemical surveys, geological mapping and diamond drilling was completed. Newmont's observations were that porphyry style mineralization was present on the property and that its location was preferential to the location of the feldspar porphyritic dykes. Assays of drill core returned sporadic values in mineralized sections that ranged between 0.1% and 1.2% copper and between 0.01% and 0.1% molybdenum.

Tahltan Holdings acquired the property in 1987 and later optioned the property to Waterford Resources. During this period reconnaissance mapping and sampling were completed. During the 1990 field season a small scale program consisting of the following was completed: the re-logging of the 1966 Newmont drill holes; ground geophysics consisting of 15.3 kilometres of VLF and magnetic surveys; localized geological mapping; and the collection of 43 reconnaissance soil geochemical samples. Analyses of the soil samples indicated two areas which contain anomalous copper values that ranged between 1000 and 3000 ppm copper. In addition to porphyry style mineralization, higher grade shear hosted mineralization has been found in the Moly Creek area. Grab samples from shear hosted narrow veins which trend northeast have returned assays as high as 6.89 grams per tonne gold, >100 grams per tonne silver, 17.9% lead, and >20% zinc. The higher grade mineralization is typically associated with discontinuous veins measuring 0.15 metres wide. Similar style mineralization to the Moly Creek showing is located 600 metres to the south at Chalco Creek.

## **6.3 Samo Property**

During 1963 Kennco Explorations Limited delineated low grade disseminations of chalcopyrite and molybdenite in a silicified fracture zone in the area of the Samo property. The mineralized zone was mapped as occurring on the southern margin of a quartz monzonite porphyry intruding Pre-Upper Triassic sediments and volcanics. A copper bearing magnetite rich skarn was also mapped along the northern contact of the same intrusive body. The property area was held by Kennco until 1986.

During 1982 Chevron Canada Resources Limited conducted exploration over what are now the Samo claims. Chevron conducted geological mapping and geochemical sampling. During this program Chevron defined a large area of iron carbonate alteration.

During 1988 Wexford Resources Inc. conducted a program over the Tag claims (which cover the current area covered by the Samo Property). The 1988 program consisted of geological mapping at a scale of 1:10,000 and rock, talus and stream sediment geochemical sampling. The 1988 program confirmed the presence of the widespread iron carbonate alteration zone previously mapped by Chevron. Two areas of alteration and mineralization were defined. The first zone in the area of Porphyry Creek was typified by a quartz stockwork within a clay alteration zone within a feldspar porphyry. Assays of rock samples collected from the Porphyry Creek showing ranged as high as 140 ppb gold and 7.25 ounces per ton silver.

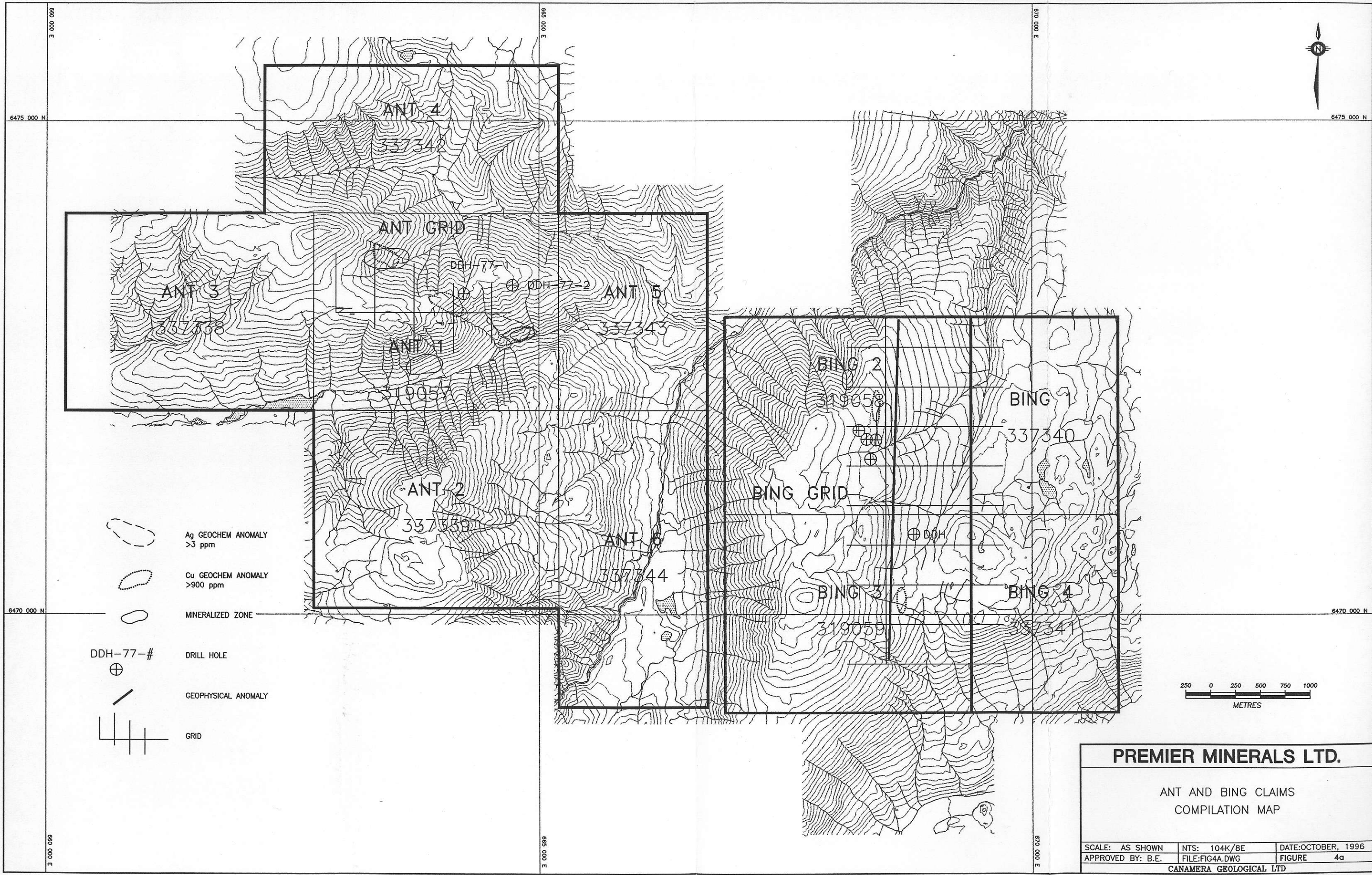
A second zone was defined in the Fac Creek area. The Fae Creek area was characterized by a siliceous zone within a silicified and dolomitized limestone. Within this zone, samples from narrow areas (<1.0 metre) returned assays up to 340 ppb gold, 485 ppm copper and 18.2 ppm silver. North of the Fae Creek showing, samples from a 0.15 metre wide galena and tetrahedrite bearing quartz vein within an iron carbonate alteration zone returned assays which ranged up to 6900 ppb gold, 10.35 ounces per ton silver, 2095 ppm copper, 2912 ppm zinc, 247 ppm antimony, 1300 ppb mercury and 864 ppm arsenic. Elsewhere on the property samples collected from alteration zones and narrow veins returned assays which range from trace to 2650 ppb gold and trace to 7.8 ppm silver.






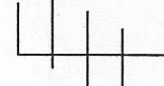
## **7.0 Conclusion and Recommendations**

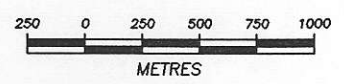
### **7.1 Ant Property**

A dioritic to quartz monzonite intrusive of Cretaceous age has been mapped on the Ant Property. The intrusive is strongly propylitically altered and exhibits porphyry copper and molybdenum style mineralization in association with potassic altered zones. The alteration zone has a surface area 1800m by 700m metres in size and has anomalous copper and silver soil geochemistry. Previous rock and drill core sampling has returned assays which range from 0.1% to 0.38% copper and 0.005 to 0.06% Molybdenum up to 3.4 grams per tonne silver and 0.7 grams per tonne gold. In addition to the porphyry style mineralization, younger cross cutting structures and porphyritic dykes are present on the property. Associated with the younger features is the potential for epithermal mineralization similar to what is found on the nearby Golden Bear Property.

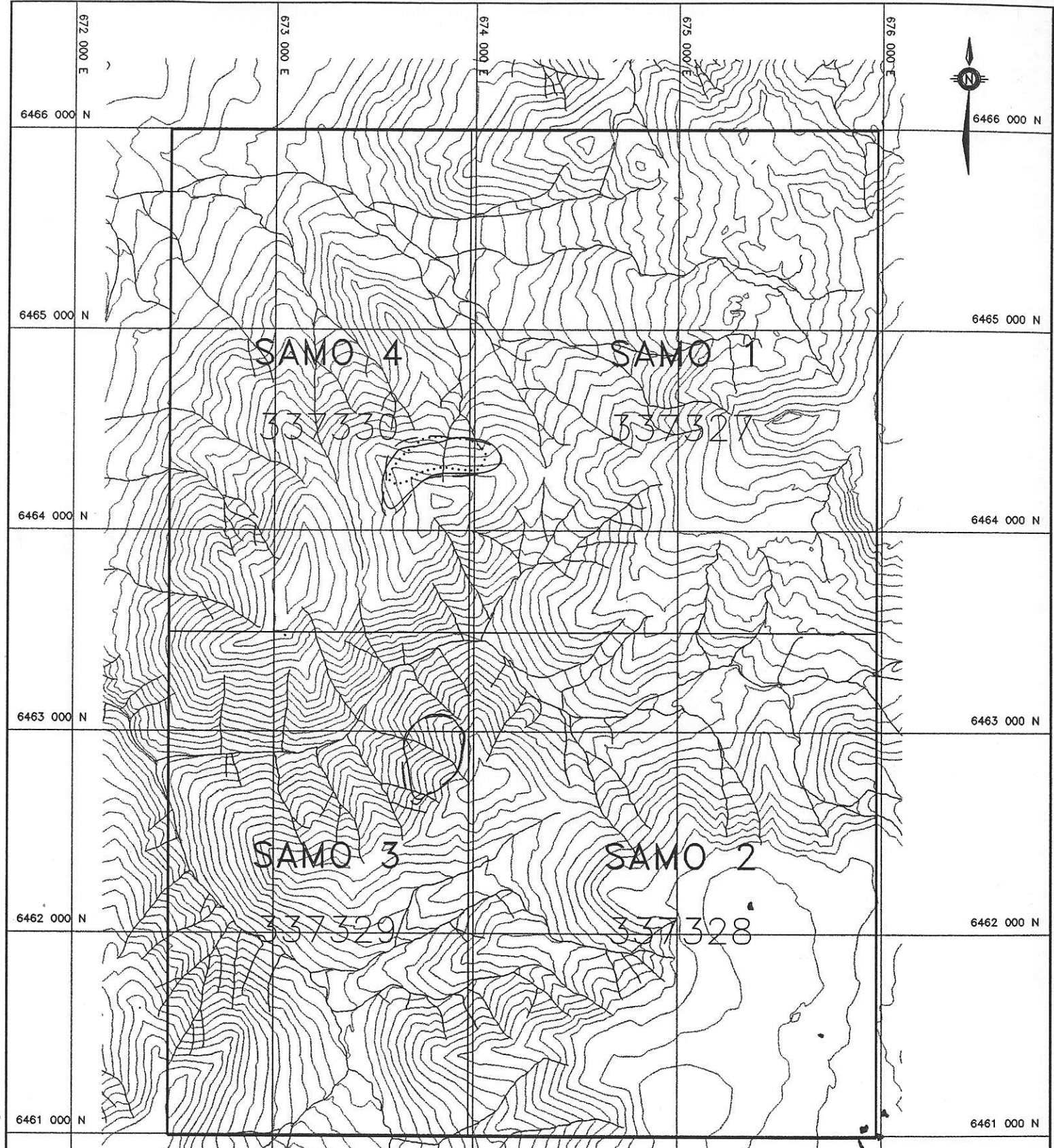
The Ant property warrants continued exploration. Exploration of the Ant Property should consist of an integrated program which includes: geological mapping; soil, stream and rock geochemical sampling; ground geophysical surveys including magnetic and induced polarization methods; and a contingent second phase diamond drilling program. Table 2 outlines the estimated cost of a first phase program which would include the above methods with the exception of diamond drilling. The main copper-molybdenum porphyry anomaly should be gridded (approximately 25 line kilometres). Soil geochemical samples should be collected over the gridded area and geophysical surveys should be completed






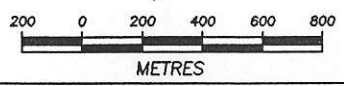
-  Ag GEOCHEM ANOMALY >3 ppm
-  Cu GEOCHEM ANOMALY >900 ppm
-  MINERALIZED ZONE
-  DDH-77-# DRILL HOLE
-  GEOPHYSICAL ANOMALY
-  GRID



<b>PREMIER MINERALS LTD.</b>		
ANT AND BING CLAIMS COMPILATION MAP		
SCALE: AS SHOWN	NTS: 104K/BE	DATE: OCTOBER, 1996
APPROVED BY: B.E.	FILE: FIG4A.DWG	FIGURE 4a
CANAMERA GEOLOGICAL LTD		



-  Au ANOMALY
-  Ag ANOMALY
-  Cu ANOMALY



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SAMO CLAIMS  
COMPILATION MAP

SCALE: AS SHOWN	NTS: 104K/8E	DATE: SEPTEMBER 1996
APPROVED BY: B.E.	FILE: FIG4b.DWG	FIGURE 4b
CANAMERA GEOLOGICAL LTD		

672 000 E

674 000 E

675 000 E

6466 000 N  
6465 000 N  
6464 000 N  
6463 000 N  
6462 000 N  
6461 000 N

6466 000 N  
6465 000 N  
6464 000 N  
6463 000 N  
6462 000 N  
6461 000 N

over the same grid. In addition to the grid work, detail mapping and prospecting should be completed over the entire property with trenching and detail sampling completed on any significant mineralization found. As an aid to mapping and data management, an accurate set of airphoto images should be acquired and a digital terrain model for the property constructed at a scale of 1:5,000.

## **7.2 Bing Property**

The Bing Property overlies a Cretaceous age quartz monzonite to hornblende diorite intrusive. Previous exploration has discovered fracture controlled and disseminated copper-molybdenum mineralization associated with widespread potassic alteration. Soil geochemical surveys conducted previously on the property returned large copper in soil anomalies that measure up to 975 metres in length and with analyses that ranged from trace to 3000 ppm. copper. Two drill holes were completed by Newmont during the 1960's. Assays from this drilling returned copper grades which ranged from 0.1 to 1.2% copper and molybdenum grades which ranged from 0.01 to 0.09%. Documented on the property are shear hosted narrow base and precious metal bearing veins. The narrow veins post date the main porphyry event and previously reported assays range up to 6.0 grams per tonne gold and up to 100 grams per tonne silver.

The Bing property warrants continued exploration. Exploration of the Bing Property should consist of an integrated program which includes: geological mapping; soil, stream and rock geochemical sampling; ground geophysical surveys including magnetic and induced polarization methods; and a contingent second phase diamond drilling program. Table 2 outlines the estimated cost of a first phase program which would include the above methods with the exception of a contingent diamond drilling program. The strong geochemical anomaly originally located by Newmont south of Chalco Creek should be gridded (approximately 15 line kilometres). Soil geochemical samples should be collected over the gridded area and geophysical surveys should be completed over the same grid. In addition to the grid work, detail mapping and prospecting should be completed over the entire property with trenching and detail sampling completed on any significant mineralization found. As an aid to mapping and data management, an accurate set of airphoto images should be acquired and a digital terrain model for the property constructed at a scale of 1:5,000.

## **7.3 Samo Property**

Gold and silver with localized chalcopyrite, galena, sphalerite, arsenopyrite and mercury mineralization is found at several locations on the property. Mineralization occurs almost always with quartz/carbonate vein structures and with their proximal stockworks and alteration zones. Mineralization is found predominantly within Pre-Upper Triassic sediments and volcanics and within Permian aged limestones. Iron Carbonate alteration zones mapped on the property appear to be controlled by both northerly striking and west dipping shear structures and east-west shear structures. Mineralization, when associated with base metals found to date on the Samo property, fits the mesothermal model for ore



**TABLE 2 Proposed Exploration Program Cost Estimate****Ant Property**

Mobilization/De-mobe		\$15,000
Project Supervision	30 Days @ \$350	\$10,500
Geological Mapping	30 Days @ \$250	\$7,500
Grid Emplacement (25 km)		\$6,250
Geophysical Survey	Magnetics	\$3,750
	Induced Polarization	\$30,000
Geochemical Survey	Sample Collection (Soils)	\$4,500
	Analysis (Soils)	\$10,000
	Analysis (Rock)	\$5,000
Camp Logistics	185 Man Days @ \$150	\$27,750
Helicopter Support	30 hours @ \$750	\$22,500
Fixed Wing Support		\$12,000
Air Photos and DTM	2200 hectares	\$7,700
Report Preparation		\$7,500
	<b>Sub-Total</b>	<b>\$169,950</b>

**Bing Property**

Mobilization/De-mobe		\$7,500
Project Supervision	15 Days @ \$350	\$5,250
Geological Mapping	15 Days @ \$250	\$3,750
Grid Emplacement (15 km)		\$3,750
Geophysical Survey	Magnetics	\$2,250
	Induced Polarization	\$18,000
Geochemical Survey	Sample Collection (Soils)	\$2,250
	Analysis (Soils)	\$3,000
	Analysis (Rock)	\$2,500
Camp Logistics	110 Man Days @ \$150	\$16,500
Helicopter Support	15 hours @ \$750	\$11,250
Fixed Wing Support		\$6,000
Air Photos and DTM	600 hectares	\$2,100
Report Preparation		\$5,000
	<b>Sub-Total</b>	<b>\$89,100</b>

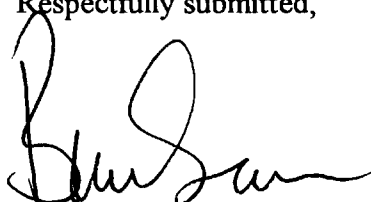
**Samo Property**

Mobilization/Dé-mobe		\$10,000
Project Supervision	20 Days @ \$350	\$7,000
Geological Mapping	20 Days @ \$250	\$5,000
Grid Emplacement (20 km)		\$5,000
Geophysical Survey	Magnetics	\$3,000
	Induced Polarization	\$24,000
Geochemical Survey	Sample Collection (Soils)	\$3,000
	Analysis (Soils)	\$4,000
	Analysis (Rock)	\$3,000
Camp Logistics	140 Man Days @ \$150	\$21,000
Helicopter Support	20 hours @ \$750	\$15,000
Fixed Wing Support		\$8,000
Air Photos and DTM	1750 hectares	\$6,125
Report Preparation		\$6,000
	<b>Sub-Total</b>	<b>\$120,125</b>
<b>Total Phase 1 Costs</b>		<b>\$379,175</b>

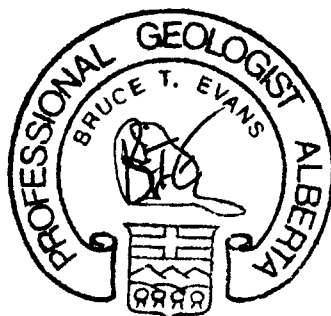
deposits. Where gold and silver mineralization is found with lower levels of base metals and an increased level in mercury, mineralization at the Samo Property fits an epithermal model for ore deposits.

Continued exploration of the Samo Property is recommended. Exploration of the Samo Property should consist of an integrated program which includes: geological mapping; soil, stream and rock geochemical sampling; ground geophysical surveys including magnetic and induced polarization methods; and a contingent second phase diamond drilling program. Table 2 outlines the estimated cost of a first phase program which would include the above methods with the exception of a contingent diamond drilling program. Detail mapping and sampling of the historical mineralized zones should be completed with any significant mineralization being sampled by trenching. Soil sampling should be carried out over the strike extensions of any mineralized zones where they are not exposed. Geophysical surveys (Magnetic and electromagnetic) should be carried out over all zones to test for un-exposed and buried targets. In addition to the grid work, detail mapping and prospecting should be completed over the entire property with trenching and detail sampling completed on any significant mineralization found. As an aid to mapping and data management, an accurate set of airphoto images should be acquired and a digital terrain model for the property constructed at a scale of 1:5,000. The total estimated Phase 1 costs for the Ant, Bing and Samo properties are \$379,175. To provide for a cost share benefit it is recommended that all three properties be explored simultaneously, sharing costs of mobilization, helicopter and camp construction.

Respectfully submitted,



Bruce T. Evans, P.Geol.  
September 25, 1996



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**CERTIFICATE**

I, Bruce T. Evans, of 164 Sierra Vista Terrace S.W., Calgary, Alberta, hereby certify:

1. That I am a consulting geologist.
2. That I graduated from Queen's University at Kingston, Ontario in 1982 with a degree of Bachelor of Science (Bsc. Honours) in Geological Science.
3. That I have practiced as a geologist in the resource exploration and development industry continuously since graduation.
4. That I am a member in good standing of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.
5. That I am the author of the report titled "Geological Report on the Ant, Bing and Samo Properties" for Premier Minerals Ltd. and that the conclusions and recommendations contained within are based upon my research, review of the company's files, reports and data sets, examination of the property and experience gained while working in the project area.
6. That I have no beneficial interest, either directly or indirectly, in the Ant, Bing and Samo Properties nor do I beneficially own, directly or indirectly, any securities of Premier Minerals Ltd. or any of their affiliates.

Dated at Calgary this 25th day of September 1996.



Bruce T. Evans, P. Geol.

