

**ZALANTUN GOLD PROJECT,  
INNER MONGOLIA, PEOPLE'S  
REPUBLIC OF CHINA**

**PREPARED FOR  
INTER-CITIC MINERAL  
TECHNOLOGIES INC.**

**December 10, 2003  
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## SUMMARY

### INTRODUCTION AND TERMS OF REFERENCE

Cargill Consulting Geologists Limited (Cargill) has been retained by Inter-Citic Mineral Technologies Inc. (Inter-Citic or the Company) to prepare an Independent Technical Report (the Report) for the gold properties in the Zhalantun Area of Inner Mongolia, People's Republic of China (Figure 1). The Report is to be prepared to the standard of the National Instrument 43-101 (NI 43-101) and is to be used to support a private placement of shares by the Company.

This Report is based on information collected during a site visit, discussions with representatives of Inter-Citic and the Beijing Institute for Geology and Mineral Resources (BIGM) and by information in the public domain where it was deemed appropriate.

This Report has not included information under Item 25 of National Instrument 43-101F1 because the properties in the Zhalantun Area are not regarded as development or production properties at this time.

### DISCLAIMER

This report has been prepared by Cargill for Inter-Citic (the Client). The information, conclusions, opinions and estimates contained herein are based on information available to Cargill at the time of preparation of this report. Assumptions, conditions and qualifications as set forth in this Report, and data, reports and opinions were provided by the Client and other third party sources. Cargill does not guarantee the accuracy of conclusions, opinions, or estimates that rely on third party sources for information that is outside Cargill's area of technical expertise.

### PROPERTY DESCRIPTION AND LOCATION

The Zalantun Project consists of four exploration licenses (the Property) covering three prospect areas referred to as the Pentouling Area, comprising two licenses, the Bashenge Area comprising one license and the Huangcaogou Area, comprising one license.

The Property is located 75 km to 100 km northwest of the city of Zalantun in northeastern Inner Mongolia, People's Republic of China (PRC). The Exploration Licenses are owned by the Beijing Institute. Cargill understands that the Property has not been legally surveyed nor is a legal survey necessary. BIGM and Inter-Citic have agreed to form a joint venture. BIGM will contribute its four Exploration Licenses and Inter-

Citic will contribute RMB 15,002,500 over a 24 month period. After the completion of Inter-Citic's contributions BIGM's interest in the joint venture will be 15% and Inter-Citics 85%.

## **ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

Access to the Property is by four-wheel drive vehicle from the city of Zalantun along good quality primary paved and secondary gravel roads. Within the Project areas, tertiary gravel roads and four-wheel drive tracks provide access subject to weather conditions. During the rainy season road access is difficult and in some locations impossible, because high water levels makes fording rivers impossible.

The region is mountainous with a temperate continental climate. Winter starts in September and lasts until mid-May. Lowest temperatures are minus 35° C to minus 38° C. The highest summer temperature is about 31° C. Most precipitation comes from late June to mid August. Winds are usually from the northwest ranging from 3 to 5 on the Beaufort wind scale.

The Exploration Licenses are in a forested region, taiga in the north and a mixed coniferous-broadleaf forest in the south. Bureaus of forestry, at Yakeshi and Zalantun, manage forest protection stations and check gates in all parts of the area. Agriculture and animal husbandry are the other major activities in the region.

Yakeshi and Zalantun are the two major cities. Both are on major railway lines, highway systems, telephone and hydroelectric grids. Both cities have facilities for repairing agricultural and forestry equipment but neither has a significant industrial base.

The residents are mostly of Han and Mongolian nationalities with some minorities including the Hui, Dahan and Eluchun nationalities.

## **HISTORY**

Initial geological work began in the area in 1951. Between 1984 and 1985, the PRC carried out a 1:200,000 scale silt geochemical survey. During the period from 1986 to 1990 a 1:200,000 geological mapping program and heavy mineral stream-surveys were completed. Between 1986 and 1990 the BIGM studied the potential of the area for large and super-large sized copper mines.

## **GEOLOGICAL SETTING**

### **REGIONAL GEOLOGY**

The Zalantun Area is in the Tianshan-Hinggan Domain along the northern border of China. This domain stretches across Xinjian, Gansu, Inner Mongolia, Jilin and Heilogjiang. It includes the continental-margin mobile belts on both sides of the Paleo-Asiatic ocean and part of the Circum-Pacific continental-margin mobile belt. Rocks within the domain are mostly mobile belt and transitional types. Magmatic activity was intense and paired magmatic belts occur along the margins of the Paleo-continent. The domain is also characterized by the diversity of metamorphism, metamorphic facies series and metamorphic rock types.

### **LOCAL GEOLOGY**

Most exposed rocks are Jurassic intermediate to acid tuffs unconformably overlying Paleozoic metamorphosed sediments and volcanics. Available geological maps give the impression that the Jurassic tuffs are a flat lying formation on a post-Paleozoic erosional surface. The Paleozoic rocks are intruded by a Variscan (Upper Paleozoic) granodiorite, granitic stocks and granitic porphyries. These intrusives are below the unconformity. Other intrusives include granitic porphyry, diorite, quartz-diorite, biotite granite, quartz monzonite and adamellite. These intrusives are Early Yanshanian (Early Mesozoic) and have the form of stocks, batholiths, dykes and veins. They are roughly contemporaneous with the Jurassic tuffs and may be coeval.

### **PROPERTY GEOLOGY**

#### ***PENTOULING AREA***

The Pentouling Area is at the northeast end of the Zinlitun-Habuqi-Aexhan Volcanic Eruption Zone. Most outcrops are Jurassic volcanic rocks and include acid breccias, ash, rock debris, acid tuffs and devitrified glass. Former volcanic craters are indicated by ring fractures on satellite imagery. Wallrock alteration includes alunitization, kaolinization, silicification, sericitization, pyritization and epidotization. Intrusive rocks include Variscan granite and biotite granite and stocks of Yanshanian adamellite, diabase and granite porphyry dikes.

#### ***HUANGCAOGOU AREA***

The Huangcaogou Area is underlain by the Jurassic felsic volcanics including: volcanic breccia, ash, rock debris and lithic and vitric tuffs. Felsic volcanics show varying degrees of alunitization, kaolinization, silicification, sericitization, pyritization and epidotization. Magmatic rocks include granite and biotite granites of the late Variscan. Adamellite of early Yanshanian age is exposed as a batholith on the eastern part of the area and there are diabase and prophyritic granite dykes. The structure is an open anticline and syncline with axes striking northeast and north-northeast and there is a major northeast trending fault structure.

### **BASHENGE AREA**

The Bashenge Area covers part of the northeast trending Aonierhe-Jiqinhe fault zone where northeast, northwest and east-west faults intersect. Intrusive rocks are Yanshanian granite porphyry and monzonite porphyry.

## **DEPOSIT TYPES**

The Zalantun area is at the junction of, the Altaids Belt and the Yanshanian Volcano-Plutonic Belt. The Altaids Belt is related to the closing of the Paleo-Asiatic ocean. Current exploration in southern Mongolia, and northern China is demonstrating it is an important area for Cu-Au porphyry deposits. Oyu Tolgoi in Mongolia is the most notable recent discovery.

The Yanshanian Belt is part of the circum Pacific system. It is a segment of a 5,000 km long belt of Mesozoic intrusives and volcanics, stretching from the Bering Strait to western Kalimantan. In China, copper and gold deposits associated with this belt include intrusion-related lode gold deposits, porphyry copper ( $\pm$ Au) deposits, skarn copper ( $\pm$ Au) and epithermal gold ( $\pm$ Cu) deposits.

Two porphyry copper ( $\pm$ Au) deposits near Zalantun are Tuanjiegou and Duobaoshan deposits (Figure 3). At Tuanjiegou, Yang (1998) reported >20 tonnes of 2 g/t to 8 g/t Au. At Duobaoshan, Ge (1990) described a porphyry copper-molybdenum deposit.

The exploration model, established for the volcanic-hosted porphyry copper deposits of the Canadian Cordillera appears to fit the Zalantun Area. In Canada, this type of deposit is hosted in Jurassic mafic volcanic rocks with coeval granitic-porphyrific intrusives. Recoverable gold is usually associated with the chalcopyrite mineralization.

## **MINERALIZATION**

The Zalantun area has only been mapped at a regional scale. So there is very limited information on mineral occurrences. Anomalous concentrations of metallic minerals include silver, copper, lead, zinc and iron. Non-metallic mineral occurrences include alunite, kaolinite, fluorite and barite. There are two small mineral deposits, 12 showings and 16 occurrences defined in the region. In addition, there are 47 geochemical anomalies and ten circular aeromagnetic anomalies, indicative of volcanic centres or vents (Misener, 2003).

### **PENTOULING AREA**

The Pengtoulung Area contains an alunite occurrence, the Gaoling quarry and two gold-heavy minerals anomalies. It also contains one geochemical anomaly for Cu, Pb, Zn, Ag, Sb, W, Bi, and two geochemical anomalies for Au.



### **HUANGCAOGOU AREA**

The Huangcaogou Area has a silver occurrence on the contact of a granitic porphyry. Associated minerals include magnetite, pyrite hematite, limonite, sphalerite and chalcopyrite. There is also a geochemical anomaly for gold. There is a significant heavy minerals anomaly for gold and arsenopyrite and a significant silt geochemical anomaly for gold.

### **BASHENGE AREA**

The Bashenge Area contains a volcanic center and a heavy mineral anomaly for gold. There is a silver occurrence in a small quartz vein on the outer contact of a granitic porphyry. Associated minerals include magnetite, pyrite, hematite, limonite, sphalerite and chalcopyrite. A grab sample yielded 7.7 g/t silver (Ag) and 0.02 g/t gold (Au).

## **EXPLORATION**

Fieldwork in 2003 consisted of silt geochemical sampling on the Pentouling Area. This program covered 100 km<sup>2</sup> with a sample density of about four samples per square kilometre. The soil samples are being analyzed for Au, Ag, As, Sb, Hg, Cu, Pb, Zn and Mg. The silt samples were analyzed for these elements and also W, Sn, Mo, Co and Ni. The analytical work is being done by the Chinese Institute of Geology and Geophysics. At the time this report was written, Inter-Citic had not received any information on the status of these analyses.

## **GEOPHYSICS**

In 2003 Inter-Citic retained Paterson, Grant & Watson Ltd., Toronto, to acquire, process and study the aeromagnetic data for the Zalantun Area.

## **DRILLING**

Cargill is not aware of diamond drilling on any of the areas.

## **SAMPLING METHOD AND APPROACH**

The only sampling completed on the Project was on the Pentouling Area. It consists of stream sediment and soil sampling by the BIGM.

## **SAMPLE PREPARATION, ANALYSES AND SECURITY**

Samples were dried and taken to the laboratory for analyses by atomic absorption methods. There is no formal security program but all the sample treatment and handling

is by employees of the BIGM. As a result, Cargill does not believe there is any problem with sample security.

## **DATA VERIFICATION**

The only data verification is the insertion of standards and internal duplication of samples by the laboratory. As the geochemical analyses are only attempting to determine the relative quantities of elements and not the absolute amounts, Cargill believes this level of verification is adequate.

## **ADJACENT PROPERTIES**

Cargill is not aware of any other Exploration Licenses held by other companies in the area of the project.

## **MINERAL PROCESSING AND METALLURGICAL TESTING**

As the areas in the Project are early stage exploration properties, there has not been any work on mineral processing and metallurgical testing.

## **MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES**

As these are early stage exploration properties, there has not been any estimate of Mineral Resources or Mineral Reserves.

## **OTHER RELEVANT DATA AND INFORMATION**

The Exploration Licenses are in a forest reserve and cutting trees requires permission from the federal Ministry of Forestry. The BIGM are not aware of other special environmental concerns.

## **INTERPRETATION AND CONCLUSIONS**

1. The Zalantun Area is at the intersection of two major belts, which host Cu-Au porphyry deposits. The two belts trend roughly east-west and north-south and there are significant porphyry Cu-Au deposits, Tuanjiegou and Duobaoshan, on both sides of the area in both of the belts. Tuanjiegou is reported to contain > 20 tonnes of Au grading in the 2 – 8 g/t Au range. Duobaoshan is a large porphyry

copper deposit with no reported gold. The Zalantun Area is considered to be an extremely good place to explore for Cu-Au porphyry deposits.

2. The Exploration Licences contain strong stream silt anomalies for gold, copper and other elements associated with porphyry Cu-Au deposits.
3. The Exploration Licenses are underlain by volcanic rocks intruded by high-level, porphyritic granitic intrusions, a geologic environment similar to several known porphyry Cu-Au deposits in the area.
4. On the parts of the Pentouling and Bashenge areas visited by Cargill, the alteration in the volcanic rocks consisted of silicification, pyritization and fine grained white mica, sericite or pyrophyllite and possibly alunite. These alteration assemblages correspond to those associated with porphyry copper deposits in British Columbia (BC) and the Philippines.
5. Cargill found the geological environment very similar to the environment of volcanic hosted porphyry copper deposits in BC such as the Island Copper deposit. Island Copper operated from 1971 to 1995. During this period it produced 400 million tonnes of ore containing; 1.4 million tonnes of copper (0.35% Cu), 34 thousand tonnes of molybdenum (0.009 % Mo), 1 million ounces of gold (0.003 oz/tonne Au) and 11 million ounces of silver and 34 tonnes of rhenium (Marcus, 1997).

## **RECOMMENDATIONS**

1. In Cargill's opinion this property is of sufficient merit to justify the work program recommended
2. Each of the Exploration Licenses should be explored with systematic, detailed silt geochemistry. At the same time, the streams should be mapped and prospected.
3. The available aeromagnetic data should be interpreted to search for magnetic patterns associated with porphyry deposits in other parts of the world. The available satellite imagery should be interpreted to search for colour anomalies and topographic patterns associated with porphyry Cu-Au deposits. All geochemical silt anomalies should be mapped, prospected and covered with soil geochemistry to define drill targets.
4. Soil geochemical anomalies should be covered with ground magnetics and widely spaced IP surveys to define drill targets.
5. A few of the zones of extremely intense alteration should be drilled at an early stage to obtain a three-dimensional picture of the alteration system and any associated mineralization.

**PHASE ONE**

1. Cover the Bashenge and Huangeaogou areas with silt geochemistry, mapping and prospecting;
2. Cover the Pentouling area, which has been surveyed with a detailed silt survey, with soil geochemistry, mapping and prospecting over the silt anomalies;
3. Use IP and magnetics over soil geochemical anomalies and the zones of intense alteration to establish drill targets; and
4. Drill test the best of soil geochemical and ground geophysical targets and the zones of intense sericite and alunite alteration.

**PHASE TWO**

1. Follow up the new silt geochemical anomalies on the Bashenge and Huangcaogou areas with soil geochemistry, mapping and prospecting;
2. Follow up soil geochemical anomalies with ground geophysics to establish drill targets;
3. Initial drill testing of soil geochemical and ground geophysical targets; and
4. Follow up drill testing of interesting zones intersected with initial drilling.

Recommended programs for Phase One and Phase Two are outlined in the following table.

<b>Project Area</b>	<b>Phase One</b>	<b>Phase Two</b>
Pentouling Area	\$539,000	\$707,000
Huangcaogou Area	\$84,500	\$645,140
Bashenge Area	\$45,650	\$347,500
<b>Grand Total</b>	<b>\$669,150</b>	<b>\$1,699,640</b>

Notes: 1. All figures are in Canadian \$  
2. The exchange rate used is RMB5.4 + Can. \$ 1.00

## INTRODUCTION AND TERMS OF REFERENCE

Cargill Consulting Geologists Limited (“Cargill”) has been retained by Inter-Citic Mineral Technologies Inc. (Inter-Citic or the Company) to prepare an Independent Technical Report (the Report) for the gold properties in the Zalantun Area of Inner Mongolia, People’s Republic of China (Figure 1). The Report is to be prepared to the standard of the National Instrument 43-101 (NI 43-101) and is to be used to support a private placement of shares by the Company.

This Report has been prepared based on information provided by representatives of Inter-Citic and by the Beijing Institute for Geology and Mineral Resources (BIGM) and by information in the public domain where it was deemed appropriate.

Dr. D. George Cargill visited the BIGM in Beijing and in Inner Mongolia between September 4 and September 14, 2003. During the period, September 6 to September 11, he visited the properties in Inner Mongolia, collected grab samples of altered rocks and discussed both the properties and the 1993 exploration programs with Senior Scientists from the BIGM. Citations of material that was reviewed are listed at the end of this report. Various reports written in Chinese were translated into English in Toronto.

This technical report has not included information under Item 25 of National Instrument 43-101F1 because the Property is not regarded as a development or production property at this time.

It is agreed and understood that the services to be preformed by Cargill for Inter-Citic will include:

- a.) Review of technical data from reports prepared by geologists working for the BIGM and by geologists working for the federal and provincial governments working on the Property.
- b.) Cargill will accept information provided by Inter-Citic concerning land title, agreements, environmental situations and other land title questions. Cargill is not qualified to provide an independent assessment of these matters.
- c.) Preparation of an Independent Technical Report in accordance with NI 43-101.
- d.) The Report will be issued by Cargill Consulting Geologists Limited, a company with an association of Professional Engineers of Ontario, Certificate of Authorization to Practise Professional Engineering in Ontario.

- e.) The Qualified Person (QP) will be D. George Cargill, Ph.D., P. Eng., a principal of Cargill. However, Cargill may employ other senior geologists and engineers as necessary to assist in the preparation of the Report.

## **DISCLAIMER**

This Report has been prepared by Cargill for Inter-Citic. The information, conclusions, opinions and estimates contained herein are based on information available to Cargill at the time of preparation of this Report. Assumptions, conditions and qualifications as set forth in this Report and data, reports, and opinions were supplied by Inter-Citic, SGS Laboratories (SGS) in Toronto and other third party sources. Cargill does not guarantee the accuracy of conclusions, opinions or estimates that rely on third party sources for information outside Cargill's area of technical expertise.

Cargill has relied on the following reports and/or opinions from third party sources for information outside the area of Cargill's technical expertise. Inter-Citic's statement that the title is in good standing is supported by copies of the Exploration Licences and a copy of the agreement between Inter-Citic and the BIGM (Appendix 2). Cargill has not tested the validity of these documents and does not certify the title. Cargill has accepted the assay data provided by SGS, Toronto and the statement by the BIGM, the local experts, that there are no environmental or other constraints to exploration or mining on the Property.

## **PROPERTY DESCRIPTION AND LOCATION**

The Zalantun Project consists of four exploration licenses (the Property) covering three prospect areas referred to as the Pentouling Area, comprising two licenses, the Bashenge Area comprising one license and the Huangcaogou Area, comprising one license (Table 1).

**TABLE 1 EXPLORATION LICENSES**

<b>Inter-Citic Mineral Technologies Inc. - Zalantun Project</b>				
<b>License No</b>	<b>Prospect</b>	<b>Map Area</b>	<b>Area (km<sup>2</sup>)</b>	<b>Duration</b>
1500000210311	Pentouling	L51E002008	28.31	Nov. 18, 2002 – Dec. 31, 2003*
1500000310411	Pentouling	L51E002008	44.49	July 28, 2003 – July 28, 2004
			72.9	
1500000210310	Bashenge	L51E001007	13.81	Nov. 18, 2002 – Dec. 31, 2003*
1500000310410	Huangcao gou	L51E002007 L51E001007 L51E001008 L51E002008	38.6	July 28, 2003 – July 28, 2004

\* Cargill has been informed by Inter-Citic that the renewal of these licenses is automatic on application.

The Property is located 75 to 100 km northwest of the city of Zalantun in northeastern Inner Mongolia, People's Republic of China (PRC). To Cargill's knowledge the Property has not been legally surveyed nor is a legal survey necessary.

BIGM and Inter-Citic have agreed to form a joint venture (JV). Both parties shall pay their respective capital contributions in stages as follows:

**STAGE ONE**

(i.)

1. Inter-Citic within fifteen days shall establish a Temporary Bank Account for the JV by a contribution of RMB 500,000 for initial start-up expenses.
2. BIGM shall contribute its four Exploration Licenses.
3. Inter-Citic shall contribute RMB 3,500,000 subject to the conditions listed below.
4. At the end of stage one the BIGM interest in the JV is 39.82% and the Inter-Citic interest 60.18%.

(ii.)

The parties shall make the above mentioned payments, except for (i) – 1, within one month of the satisfaction of all the following conditions.

1. Approval of this Contract by the Approval Authority.
2. Issuance to the JV of the Business License and such other licenses or approvals necessary for the operation of its business.
3. The CJV having received a Foreign Exchange Registration Certificate from the State Administration of Foreign Exchange or its local branch confirming the ability of the CJV to have access to the foreign exchange market and to maintain foreign exchange bank accounts.

4. The Exploration Licenses listed in the agreement have been validly transferred to the CJV and it has been determined that the Valuation of such Exploration Licenses does not impact upon the relative interests of the Parties.

#### **STAGE TWO**

Inter-Citic shall make the balance of its respective contributions as follows:

1. RMB 4,000,000 within seven to twelve months of the completion of the provisions of Stage One (ii). At this time the BIGM interest in the JV is 24.86% and Inter-Citic interest 75.14%.
2. RMB 4,000,000 within thirteen to eighteen months of the completion of the provisions of Stage One (ii). At this time the BIGM interest in the JV is 18.07% and the Inter-Citic interest 81.93%.
3. RMB 3,002,500 within nineteen to twenty-four months of the completion of the provisions of Stage One (ii). At this time the BIGM interest in the JV is 15% and Inter-Citic interest is 85%.

## **ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

Access to the Property is by four-wheel drive vehicle from the city of Zalantun along good quality primary paved and secondary gravel roads (Figure 1 and Figure 6). Within the immediate Property area and on the Property, tertiary gravel roads and four-wheel drive tracks provide access to most parts of the Property, subject to weather conditions. When the weather is dry it is possible to drive to most parts of the Property; however, during the rainy season road access is very difficult and in some locations impossible, because high water levels makes fording rivers impossible.

The region is mountainous with a continental climate. Winter starts at the end of September and lasts until mid May. Lowest winter temperatures are minus 35° C to minus 38° C. Summer is short with the highest temperature about 31° C. Most precipitation comes as rain from June to August. Winds are usually from the northwest ranging from 3 to 5 on the Beaufort wind scale.

The exploration licenses are in a forested region. In the northern part, it is mostly taiga and in the south it is a mixed coniferous-broadleaf forest. There are bureaus of forestry, one at the city of Yakeshi and the other in the city of Zalantun. These bureaus manage several forest protection stations and maintain access gates in much of the area. Agriculture and animal husbandry are the other major activities in the region.

Yakeshi and Zalantun are the two major cities in the area. Both cities are on major railway lines, highway systems, telephone and hydroelectric grids. The nearest airport to



Zalantun is at Qiqihar in Heilongjiang Province. Both cities have facilities for repairing agricultural and forestry equipment but neither has a significant industrial base.

The residents are mostly of Han and Mongolian nationalities with some minorities including the Hui, Dahanr and Eluchun nationalities.

The area is in the middle Great Ziang'an Mountains which trend from northeast to north-northeast. The mountains are higher in the west and lower in the east. The area is within the Chuo'erhe and Jiqinhe river systems. The Chuo'erhe River is biggest river in the area and has torrential flows during the rainy season.

Each of the properties has surface conditions which will allow mining operations in terms of potential tailings, waste disposal areas and sites for processing plants. Each area offers abundant water sources and is close to the provincial power grid. There is also a pool of mechanically skilled labor, which was working in the forestry industry.

## **HISTORY**

1951

Liu Guochang, Changcun Geological Institute established the stratigraphy of the area. Ministry of Geology and Minerals 1:200,000 geological mapping of the area.

1975-1976

Heilongjiang Geology Bureau studied Paleozoic and parts of Mesozoic strata in the area.

1984-1985

Second Geophysical Exploration Team, Ministry of Geology and Minerals completed a 1:200,000 survey of silt geochemistry of area collecting 2,145 samples. Although they analyzed 33 elements they found only 18 elements were present in sufficient quantity to meet survey specifications and of these, only Cu, Pb, Zn, Mn and Au could be used at each sample site. The regional distribution of the gold anomalies (1 to 10 ppb Au) is in the northwest, east and southeast of the map area. Anomalies are associated with intermediate to acidic tuff, andesite, rhyolite, granite diorite and granite. Anomalous zones are associated with faults trending northeast and northwest marked by river valleys.

1986-1990

Second Regional Exploration Team of Inner Mongolia carried out a 1:200,000 geological mapping program and collecting heavy mineral samples from streams.

**TABLE 2 IMPORTANT REGIONAL STUDIES**  
**Inter-Citic Mineral Technologies Inc. - Zalantun Project**

<b>Date</b>	<b>Organization</b>	<b>Research Project</b>
1976-1977	Heilongjiang Geology Bureau	Maps of Inner Mongolia at 1:1,000,000
1980	Inner Mongolia Geology Bureau	Geologic and tectonic maps of Inner Mongolia at 1:500,000
1983-1991	Geological Resources Bureau Inner Mongolia	Systematic 1:200,000 geological and mineral occurrence surveys.
1986-1990	BIGM	Research on mineralization and exploration targets for copper, lead and zinc on the north edge of the North China Platform. A key part of this study was volcanic related Porphyry Cu (Mo, Au) deposits.
1989-1992	BIGM	Study of Geological Environment for large-sized and super-sized Copper Mine at home and abroad.
1991-1993	BIGM.	Appraisal of Potential for Copper Polymetallic Mining Area in the Great Xing'an Mountains. Concluded attention should be paid to volcanic rocks and intrusives of the Mesozoic.
1991-1995	Heilongjiang Research Institute for Nonferrous Metals	Study of Mineralization Conditions of Volcanic Rock Porphyry Copper Ore in South of Hulunbeir League, Inner Mongolia.
1996-1998	BIGM.	Rules for gold and silver mineralization related to Volcanic Rocks-Epicrustal Rocks and Ore Search Directions for China.
2001-2002	BIGM.	Geochemical Exploration in Forests and Marshes in De'erbugan Mineralized Belt.

## **GEOLOGICAL SETTING**

### **REGIONAL GEOLOGY**

Zhang, (2000) places the Zalantun Area in the Tianshan-Hinggan domain along the northern border of China. This domain stretches across Xinjian, Gansu, Inner Mongolia, Jilin and Heilogjiang. It includes the continental-margin mobile belts on both sides of the Paleo-Asiatic ocean and part of the Circum-Pacific continental-margin mobile belt. Strata within the domain are mostly mobile belt and transitional types. Magmatic activity was intense and paired magmatic belts occur on the margins of the Paleo-continent. The domain is also characterized by the diversity of metamorphism, metamorphic facies series and metamorphic rock types.

The domain has experienced three stages of formation: 1.) Continental basement formation, 2.) Paleo-Asiatic-ocean's marginal accretion and evolution and the Circum-Pacific tectonics and 3.) intra-continental faulting stage. The Paleo-Asiatic-ocean's

accretion and evolution is the major stage. It was characterized by the accretion of micro block and the old continents north and south of the ocean during the Caledonian (early Paleozoic). Finally, the north and south continents collided and converged during the late Variscan (late Paleozoic). Afterwards, the western part of the domain underwent fault-block uplift and subsidence while the eastern part, which includes the Zalantun Area, was involved in the Circum-Pacific continental margin mobilization. This mobile zone tended northeast to east-northeast and was marked by intense tectonic activity and magmatic activity superimposed on the accretion margin of the Paleo-Asiatic continent. From the Yanshanian (Mesozoic) through the Cenozoic, magmatic activity shifted east and west from western Liaoning.

The Zalantun area is in the northern extension of Yang's Hingan-Yanliao Zone (Yang, 1998) of the Yanshanian volcano plutonic belt. The area consists of Jurassic and Cretaceous terrestrial volcanic rocks and granites. The volcanic rocks consist of an early calc-alkaline suite related to subduction and a late hawaiite-trachyte-peralkaline rhyolite (bimodal) suite possibly related to intra-continental extension.

From a metallogenic perspective, the Paleo-Asiatic ocean part of the belt is the eastern extension of the Altaids (Yakubchuk, 2001). The Altaids belt is characterized by porphyry Cu (-Mo-Au) deposits, but there are zones of orogenic and epithermal gold deposits. The Circum Pacific belt is superimposed on the Altaids. It is characterized by younger porphyry Cu (-Mo-Au) deposits and mesothermal and epithermal gold deposits.

## **LOCAL GEOLOGY**

The following description of the local geology is taken from Fang (2003). The exposed rocks are mostly Jurassic intermediate to acid tuffs (Figure 7). The tuffs unconformably overlie Paleozoic metamorphosed sediments and volcanics. The maps give the impression that the Jurassic tuffs are a flat lying formation on a post-Paleozoic topographic surface. The Paleozoic rocks are intruded by a Variscan (upper Paleozoic) granodiorite, granitic stock and granitic porphyry. These intrusives are below the unconformity. Other intrusives include granitic porphyry, diorite, quartz-diorite, biotite granite, quartz monzonite and adamellite. These intrusives are Early Yanshanian and have the form of stocks, batholiths, dykes and veins. They are roughly contemporaneous with the Jurassic tuffs and may be coeval.

## **PROPERTY GEOLOGY**

### **PENTOULING AREA**

The following description of the Property geology is from Feng (2003), (Figures 6, 7, and 8). The area is at the northeast end of the Zinlitun-Habuqi-Aexhan Volcanic Eruption Zone. Most of the outcrops are volcanic rocks of the Jurassic Maketouebo Formation. Volcanic lithologies include acid breccias, ash, rock debris, acid tuffs and

devitrified glass. The volcanics are mixed with tuffites and sedimentary rocks. Former volcanic craters are indicated by ring fractures. Wallrock alteration includes alunitization, kaolinization, silicification, sericitization, pyritization and epidotization.

Intrusive rocks include Variscan granite and biotite-granite stocks of early and middle Yanshanian adamellite and diabase- and granite-porphyry dikes.

## **HUANGCAOGOU AREA**

The geological description of this area is from Wang (2002) (Figures 6 and 7). The area is underlain by Jurassic felsic volcanic rocks of the Manketouebo Formation. The lithologies reported include: volcanic breccia, ash, rock debris and lithic and vitric tuffs. The volcanic rocks are mixed with tuffites and sedimentary rocks. Exposed felsic volcanics show varying degrees of wallrock alteration including, alunitization, kaolinization, silicification, sericitization, pyritization and epidotization.

Magmatic rocks include granite and biotite granites of the late Variscan (Figures 6 and 7). Adamellite of early Yanshanian age is exposed on the eastern part of the prospect as a batholith. There are also dykes of diabase and prophyritic granite.

The structure consists of an open anticline and syncline with axes striking northeast and north-northeast. There is a major northeast trending fault structure. Volcanic centers are indicated by ring fractures.

## **BASHENGE AREA**

The following description of the geology of this license is from Zhang (2002). This prospect covers part of the northeast-trending Aonierhe-Jiqinhe fault zone where northeast, northwest and east-west faults intersect. Intrusive rocks are probable Yanshanian granite porphyry and monzonite porphyry.

## **DEPOSIT TYPES**

The Zalantun area is at the junction of two belts of porphyry copper-gold deposits, the Altaids Belt and the Yanshanian Volcano plutonic Belt (Figure 3). The Altaids Belt is related to the closing of the Paleo-Asiatic ocean and is not well documented in English. Yakubchuk, A., et al., 2001 is one of the few papers. However, current exploration in southern Mongolia, (Oyu Tolgoi, Cu-Au Camp) and northern China is demonstrating that this is an important area for Cu-Au porphyry deposits in Mongolia and China. If one follows the belt west to the Urals, as Yakubchuk (2001) did, it is an important zone for Cu-Au porphyry deposits on an international scale.

The Yanshanian Belt is part of the Circum-Pacific system and is much better documented. In China (Yang, 1998), it is a segment of a 5,000 km long belt of Mesozoic

intrusives and volcanics, which stretches from the Bering Strait in Russia to western Kalimantan. It has received a great deal of mineral exploration in China over the last twenty years. Copper and gold deposits associated with this belt include intrusion-related lode gold deposits, porphyry copper ( $\pm$ Au) deposits, skarn copper ( $\pm$ Au) and epithermal gold ( $\pm$ Cu) deposits. In 1998, the belt contained 70 % of China's gold reserves and 48 % of the copper reserves.

Two porphyry copper ( $\pm$ Au) deposits near Zalantun are the Tuanjiegou and the Duobaoshan deposits (Figure 3). At Tuanjiegou (Yang, 1998) gold (2-8 g/t, >20 tonnes Au) is the most important metal. The deposit is hosted by a Cretaceous rhyolitic porphyry (113-100 Ma) emplaced at the contact of Cretaceous volcanic rocks and Proterozoic basement rocks. Gold mineralization occurs in a fractured and brecciated zone in the high level intrusion on the margin of a volcanic terrain.

Duobaoshan (Ge et al., 1990) is a porphyry copper-molybdenum deposit and no mention is made of its gold content. However in 1990, gold was a state secret in China and would not be mentioned in a published document. The deposit is hosted in a Carboniferous (292 Ma) granodiorite intruding Ordovician andesites. The age of the intrusive suggests it is part of the Altaids Belt. Wallrock alteration is distributed in a circular pattern. The center of the alteration zone is silicified porphyry, followed by zones of K-feldspathization, biotitization, sericitization and propylitization. Mineralization has been divided into three zones. The inner zone is the copper-molybdenum zone, which corresponds to the silicified porphyry, potassium feldspar and biotite zones. The next zone is the copper zone and most of the ore body is in this zone, which corresponds to the sericite alteration zone. The pyrite zone corresponds to the propylitic alteration zone and contains higher levels of Pb and Zn but not enough of either metal to form economic occurrences. Strongly mineralized contact and hydrothermal breccias are other features of the deposit.

An exploration model, which fits the Zalantun Area was established for the volcanic-hosted porphyry copper deposits of the Canadian Cordillera by Cargill (1976), Dawson (1991), and Panteleyev (1995). In Canada, this type of deposit is hosted in Jurassic mafic volcanic rocks with coeval granitic prophyritic intrusives. Figure 4 shows a generalized plan and section of this type of deposit and Figure 5 shows a generalized diagram of the alteration patterns associated with this type of deposit. The Canadian deposits are difficult to describe because the alteration zones, which form discrete patterns in the classic porphyry copper deposits of the South Western U.S., are superimposed. Essentially there is an early stage of mineralization and alteration in the volcanic rocks immediately beyond the contact of the prophyritic intrusive. This zone is characterized by fine grained chalcopyrite mineralization in a crackled wall rock. It is associated with K-feldspar, biotite and magnetite alteration. The later stage of mineralization is above and superimposed on the first. It consists of chalcopyrite, and molybdenite mineralization associated with quartz veins, silicification and argillic and advanced argillic alteration. Although the alteration of the later stage of mineralization is more characteristic of gold deposits, there appears to be gold in both stages. The recoverable gold is usually associated with the chalcopyrite mineralization because the nature of the

metallurgical process recovers it at no additional cost. Gold associated with the pyrite mineralization is usually not recoverable because there must be high enough grades of gold with the pyrite to pay the recovery costs.

## **MINERALIZATION**

The Zalantun area has only been mapped at a regional scale. Therefore, there is very limited detailed information on mineral occurrences. Metallic minerals of potential economic importance discovered to date include silver, copper, lead, zinc and iron. Non metallic mineral occurrences include alunite, kaolinite, fluorite and barite. There are two small mineral deposits, 12 showings and 16 occurrences defined in the region. In addition, there are 47 geochemical anomalies and ten circular aeromagnetic anomalies, indicative of volcanic centers or vents.

### **PENTOULING AREA**

The area contains the Pengtoulung alunite occurrence, the Gaoling quarry and two gold-heavy minerals anomalies. It also contains a geochemical anomaly Cu, Pb, Zn, Ag, Sb, W, Bi, As, and two geochemical anomalies for Au.

### **HUANGCAOGOU AREA**

This area has a silver occurrence on the contact of a granite porphyry. Associated minerals include magnetite, pyrite, hematite, limonite, sphalerite and chalcopyrite. There is also a geochemical anomaly for gold.

The area contains a significant heavy minerals anomaly for gold and arsenopyrite and another significant silt geochemical anomaly for gold. The geological team did not define how they judged an anomaly as “significant”.

### **BASHENGE AREA**

This prospecting license has a volcanic center and a heavy mineral anomaly for gold. There is a silver occurrence in a small quartz veining on the outer contact of the granite porphyry. Associated minerals include magnetite, pyrite, hematite, limonite sphalerite and chalcopyrite. Values from a grab sample were 7.7 g/t Ag and 0.02 g/t Au.

## **EXPLORATION**

Fieldwork in 2003 consisted of silt geochemical sampling on the Pentouling Area. This program covered 100 km<sup>2</sup> with a sample density of about four samples per square kilometre. In addition, the BIGM established several soil profiles across the major

alteration zones, totaling 3.5 km. The program collected 400 silt samples and 50 soil samples. The soil samples are being analyzed for Au, Ag, As, Sb, Hg, Cu, Pb, Zn and Mg. The silt samples are being analyzed for these elements and W, Sn, Mo, Co and Ni. Analyses are done at a laboratory operated by the Chinese Institute of Geology and Geophysics near Beijing. It is regarded as the best geochemical laboratory in China; as a result, it is very busy and has a two-month waiting period for analyses. At the time this report was written, Inter-Citic had not received any information on the status of these analyses.

As part of this program the soil sample lines were mapped and rock samples and outcrop samples encountered in the stream were collected for thin and polished section study.

## **GEOPHYSICS**

In 2003, Inter-Citic retained Paterson Grant & Watson Ltd. (PGW) to acquire, process, and study the aeromagnetic data covering the Zalantun Area. Misener (2003) issued a report summarizing the results of this study.

The interpretation of the processed aeromagnetic maps outlined the lithology and intrusive activity and delineated the major fault trends. There are four areas that exhibit “linked” volcanic centres in a sub-circular pattern and these zones are interpreted as large volcanic centres or calderas (Figure 9). Most of the anomalous Au and Ag geochemical results cluster around these four caldera. The three areas are on the contacts of the three calderas.

Intruding the volcanics are a number of felsic to intermediate granitic intrusives. There is a major intrusive trend striking NE-SW across the central and southeastern part of the region bounded on the northwest by regional NE-SW faults.

## **DRILLING**

Cargill is not aware of diamond drilling on any of the areas.

## **SAMPLING METHOD AND APPROACH**

The only sampling completed on the Property was carried out on the Pentouling Prospect and consisted of stream sediment (silt) and soil sampling. This work was undertaken by the BIGM. They also collected samples of rocks encountered in the streams for thin sections.

## **SAMPLE PREPARATION, ANALYSES AND SECURITY**

Silt samples were dried and taken to the laboratory. Analyses were done by atomic absorption methods. There is no formal security program. However, samples were collected, dried, packaged and shipped to the laboratory by employees of the BIGM. Cargill does not believe that there is any problem with the sample security in the silt sampling program.

## **DATA VERIFICATION**

The only data verification involved in the analyses of the silt geochemical samples is the insertion of standards and internal duplication of samples by the laboratory. As the geochemical analyses are only attempting to determine the relative quantities of elements between different samples and not the absolute amounts Cargill believes this level of verification is adequate for this level of program.

## **ADJACENT PROPERTIES**

Cargill is not aware of any other exploration licenses held by other companies in the area of the Project.

## **MINERAL PROCESSING AND METALLURGICAL TESTING**

As these are early stage exploration properties, there has not been any work on mineral processing and metallurgical testing.

## **MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES**

As these are early stage exploration properties, there has not been any estimate of Mineral Resources or Mineral Reserves.



## OTHER RELEVANT DATA AND INFORMATION

The Property is in a forest reserve and cutting trees requires permission from the federal Ministry of Forestry. The BIGM is not aware of any other special environmental concerns.

## INTERPRETATION AND CONCLUSIONS

- 1 The Zalantun Area is at the intersection of two major belts, which host Cu-Au porphyry deposits. The two belts trend roughly east-west and north-south and there are significant porphyry Cu-Au deposits, Tuanjiegou and Duobaoshan, on both sides of the area in both of the belts. Tuanjiegou is reported to contain > 20 tonnes of Au grading in the 2 – 8 g/t Au range. Duobaoshan is a large porphyry copper deposit with no reported gold.
- 2 The Zalantun Area is an extremely good place to explore for Cu-Au porphyry deposits. The Exploration Licences contain strong stream silt anomalies for gold, copper and other elements associated with porphyry Cu-Au deposits.
- 3 The Exploration Licences are underlain by volcanic rocks intruded by high-level, porphyritic granitic intrusions, a geologic environment similar to several known porphyry Cu-Au deposits in the area.
- 4 On the parts of the Pentouling and Bashange area visited by Cargill, the alteration in the volcanic rocks consisted of silicification, pyritization and fine-grained white mica, sericite or pyrophyllite and probably alunite. These alteration assemblages correspond to those associated with porphyry copper deposits in BC and the Philippines.
- 5 Cargill found the geological environment very similar to the environment of volcanic hosted porphyry copper deposits in BC such as Island Copper. Island Copper operated from 1971 to 1995. During this period it produced 400 million tonnes of ore containing; 1.4 million tonnes of copper (0.35% Cu), 34 thousand tonnes of molybdenum (0.009 % Mo), 1 million ounces of gold (0.003 oz/tonne Au) and 11 million ounces of silver and 34 tonnes of rhenium (Marcus, 1997).

## RECOMMENDATIONS

1. In Cargill's opinion this property is of sufficient merit to justify the work program recommended
2. Each of the Exploration Licenses should be explored with systematic, detailed silt geochemistry. At the same time the streams should be mapped and prospected.
3. The available aeromagnetic data should be interpreted to search for magnetic patterns associated with porphyry deposits in other parts of the world. The available satellite imagery should be interpreted to search for colour anomalies and topographic patterns associated with porphyry Cu-Au deposits. All geochemical silt anomalies should be mapped, prospected and covered with soil geochemistry to define drill targets.
4. Soil geochemical anomalies should be covered with ground magnetics and widely spaced IP surveys to define drill targets.
5. A few of the zones of extremely intense alteration should be drilled at an early stage to obtain a three dimensional picture of the alteration system and any associated mineralization.

### **PHASE ONE**

1. Cover the Bashenge and Huangcaogou areas with silt geochemistry, mapping and prospecting;
2. Cover the Pentouling area, which has been surveyed with a detailed silt survey, with soil geochemistry, mapping and prospecting over the silt anomalies;
3. Use IP and magnetics over soil geochemical anomalies and the zones of intense alteration to establish drill targets; and
4. Drill test the best of soil geochemical and ground geophysical targets and the zones of intense sericite and alunite alteration.

### **PHASE TWO**

1. Follow up the new silt geochemical anomalies on the Bashenge and Huangcaogou areas with soil geochemistry, mapping and prospecting;
2. Follow up soil geochemical anomalies with ground geophysics to establish drill targets;
3. Initial drill testing of soil geochemical and ground geophysical targets; and
4. Follow up drill testing of interesting zones intersected with initial drilling.

Recommended programs for The Pentouling, Huangcaogou and Bashenge Areas are outlined in the following tables.

**TABLE 3 RECOMMENDED EXPLORATION PROGRAMS -  
PENTOUING AREA**

**Inter-Citic Mineral Technologies Inc. - Zalantan Project**

	Phase One		Phase Two	
	RMB	Can \$	RMB	Can \$
Mapping	73,000	13,500		
Soil Surveys	73,000	13,500		
Prospecting	40,000	7,400		
IP	60,000	11,000		
Trenching	80,000	15,000		
Drilling	1,800,000	333,400	3,000,000	555,600
Assaying	200,000	37,000	150,000	28,000
Report	40,000	7,500	40,000	7,500
Geology Consultant	10,800	2,000	10,800	\$2,000
Geochemical Consultant	10,800	2,000	1,800	\$2,000
Supervision	259,200	48,000	259,200	48,000
Subtotal	2,646,800	490,000	3,470,800	643,000
Contingencies 10%		49,000		64,000
<b>Total</b>		<b>539,000</b>		<b>707,000</b>

Note: Exchange rate used is RMB 5.4 = Can.\$ 1.00

**TABLE 4 RECOMMENDED EXPLORATION PROGRAMS -  
HUANGCAOGOU AREA**

**Inter-Citic Mineral Technologies Inc. - Zalantan Project**

	Phase One		Phase Two	
	RMB	Can \$	RMB	Can \$
Mapping+	38,600	7,148		
Silt Surveys	38,600	7,148		
Soil	50,000	9,300		
Prospecting	40,000	7,400		
IP	30,000	5,600		
Trenching	50,000	9,300		
Drilling			1,500,000	555,600
Assaying	75,000	14,000	75,000	14,000
Report	40,000	7,400	40,000	7,400
Geology Consultant	5,400	1,000	5,400	1,000
Geochemical Consultant	5,400	1,000	5,400	1,000
Supervision	40,500	7,500	40,500	7,500
Subtotal		76,800		586,500
Contingencies 10%		7,680		58,650
<b>Total</b>		<b>84,500</b>		<b>645,150</b>

Note: Exchange rate used is RMB 5.4 = Can.\$ 1.00

**TABLE 5 RECOMMENDED EXPLORATION PROGRAMS -  
BASHENGEHE AREA**

**Inter-Citic Mineral Technologies Inc.- Zalantan Project**

	Phase One		Phase Two	
	RMB	Can \$	RMB	Can \$
Mapping	13,200	2,500		
Silt Surveys	13,200	2,500		
Soil Survey	15,000	3,000		
Prospecting	20,000	3,700		
IP	12,000	2,300		
Trenching	50,000	9,300	50,000	9,300
Drilling			1,500,000	280,000
Assaying	30,000	5,600	75,000	14,000
Report	30,000	5,600	30,000	5,600
Geology Consultant	5,400	1,000	5,400	1,000
Geochemical Consultant	5,400	1,000	5,400	1,000
Supervision	27,000	5,000	27,000	5,000
Subtotal		41,500		315,900
Contingencies 10%		4,150		31,590
<b>Total</b>		<b>45,650</b>		<b>347,500</b>

Note: Exchange rate used is RMB 5.4 = Can.\$ 1.00

**TABLE 6 SUMMARY OF RECOMMENDED EXPLORATION  
PROGRAMS**

**Inter-Citic Mineral Technologies Inc. - Zalantan Project**

	Phase One	Phase Two
Pentouling Area	\$539,000	\$707,000
Huangcaogou Area	\$84,500	\$645,140
Bashengehe Area	\$45,650	\$347,500
Grand Total	\$669,150	\$1,699,640

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## **SIGNATURE PAGE**

This report titled Zalantun Gold Project, Inner Mongolia, People's Republic of China and dated November 30, 2003 was prepared by and signed by the following authors:

Dated at Toronto, Ontario  
December 10, 2003

D. George Cargill, Ph.D., P. Eng.  
Consulting Geological Engineer  
President  
Cargill Consulting Geologists Ltd.



## CERTIFICATE OF QUALIFICATIONS

### D. GEORGE CARGILL

As an author of this report entitled “*Zalantan Gold Project, Inner Mongolia, People’s Republic of China*” prepared for Inter-Citic Mineral Technologies Inc, and dated *Dec. 10, 2003*, I hereby make the following statements:

- A. My name is Donald George Cargill and I am a Consulting Geological Engineer and President of Cargill Consulting Geologists Limited. My office address is Suite 501, 55 University Avenue, Toronto, Ontario.
- B. I have received the following degrees in Geological Sciences:
- a. B.A.Sc.            1967    University of Toronto, Toronto, Ontario
  - b. M.Sc.             1970    Queens University, Kingston, Ontario
  - c. Ph.D.             1975    University of British Columbia, Vancouver, B.C.
- C. I am a registered Professional Engineer in the provinces of Ontario and British Columbia and designated as a Consulting Engineer in Ontario. I am also a member of:
- a. The Canadian Institute of Mining, Metallurgy, and Petroleum (CIM)
  - b. The Prospectors and Developers Association of Canada (PDAC)
  - c. Society of Economic Geologists (Fellow)
- D. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience I fulfill the requirements to be a “qualified person” for the purpose of NI 43-101. My relevant experience for the purpose of this report is:

<b>Year</b>	<b>District</b>	<b>Project</b>
1982	Southwestern Taiwan	Evaluation of a Porphyry Cu-Au prospect
1993	Hunan and Jiangxi Province	Evaluation of gold properties
1994	Xichang City, Suichan Province	Evaluation of gold properties
1994	Laxi Gold Properties, Shandong	Evaluation of vein gold properties
1994	Xichang City, Suichan Province	Evaluation of gold properties
1994	Huaqiao Property, Jiangxi Province; Tongbei Property, Henan Province	Evaluation of gold properties with established resources and operating mines.
1997	HSG gold vein property, Suichan	Evaluation of a large gold vein related to a major fault structure
1997	Beipiao Gold Project, Lianoning	Evaluation of small gold occurrences
1997	Gold Properties in Hebei, Guandong, Lianzhou, Liaoning Provinces	Evaluation of a wide variety of types of gold deposits.
1997	Silver Mountain Property, Dexing Area,	Evaluation of copper veins adjacent to Dexing porphyry copper deposit

Year	District	Project
	Jiangxi Province	
1997	Zinc Oxide Deposits in China	Review of properties with Chinese experts
1997	Magushan Copper Deposits – Skarn Copper Deposits, Anhui Province	Initial review of data
1998	Magushan Copper Deposits – Skarn Copper Deposit, Anhui Province	Formal review of technical data by geologist, mining and metallurgical engineers
1999	Magushan Copper Deposits – Skarn Copper Deposit, Anhui Province	Review of new work since
2001	Ashele Copper Deposit VMS Deposit, Xianjiang Territory	Evaluation of a VMS property and review of resource/reserve estimate
2002	Gaofeng and Shuiluo Deposits, Guangxi Province	Evaluation of tin property and resource/reserve estimate
2001	Oyu Tolgoi Deposit, Altai Belt, Southern Mongolia	Review of geology and resource/reserve estimates for porphyry Cu-Au deposit

- E. This report is based on a visit to the properties in Inner Mongolia, China between Sept. 6, and Sept. 11, 2003 on my personal review of technical reports and other data supplied by the Geological Team and my personal discussions with the geologists working on the project between Sept. 4 and Sept. 13, 2003 in Beijing and Zalantun and on discussions with the Issuer and its representatives,
- F. I have been practicing as a professional geological engineer for over thirty years.
- G. I have not had prior involvement with the property that is the subject of this technical report.
- H. I am responsible for all sections in this technical report.
- I. I am not aware of any material fact of material change with respect to the subject matter of this report which is not reflected in “the Report” the omission to disclose which makes this report misleading
- J. I am independent of the Issuer applying the tests set out in section 1.5 of National Instrument 43-101.
- K. I have read National Instrument 43-101 and Form 43-101F1 and this report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.
- L. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public of the Technical Report.

Signed  
Dated at Toronto, Ontario  
December 10, 2003.

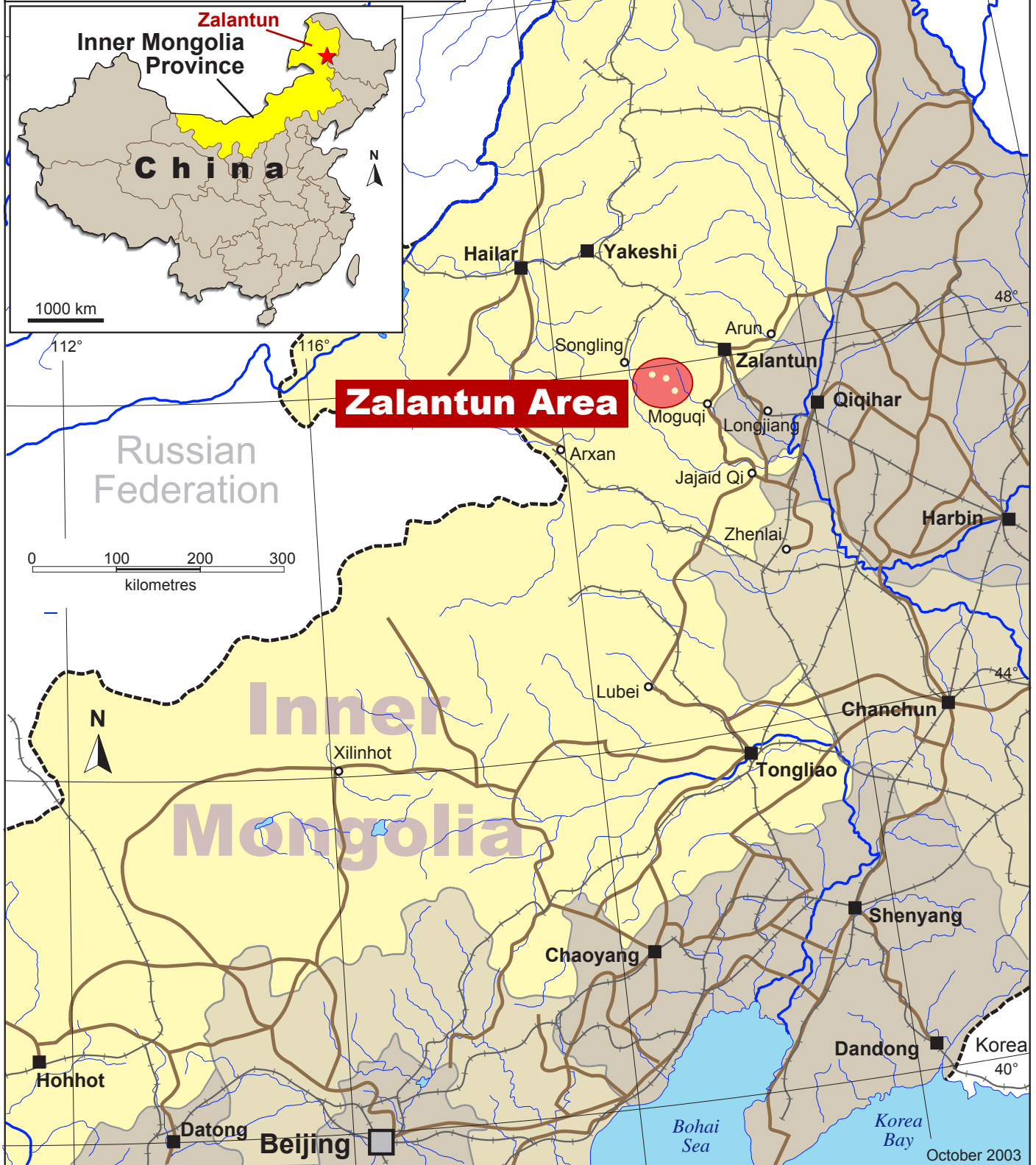
D. George Cargill, Ph.D., P.Eng.  
Consulting Geological Engineer

## APPENDIX 1

### FIGURES

- FIGURE 1 LOCATION AND ACCESS
- FIGURE 2 REGIONAL GEOLOGICAL DOMAINS
- FIGURE 3 ALTAIDS AND YANSHANIAN CU-AU PORPHYRY BELTS
- FIGURE 4 MODEL OF VOLCANIC HOSTED PORPHYRY COPPER DEPOSITS
- FIGURE 5 ALTERATION PATTERNS ASSOCIATED WITH VOLCANIC HOSTED PORPHYRY COPPER DEPOSITS
- FIGURE 6 REGIONAL GEOCHEMICAL ANOMALIES
- FIGURE 7 GEOLOGY OF THE ZALANTUN AREA
- FIGURE 8 ALUNITE ZONE, NORTH ZONE, PENTOULING AREA
- FIGURE 9 AEROMAGNETIC INTERPRETATION OF THE ZALANTUN AREA

Figure 1  
Inter-Citic Mineral Technologies Inc.  
**Zalantun Project**  
Inner Mongolia Province, China  
**Location and Access**

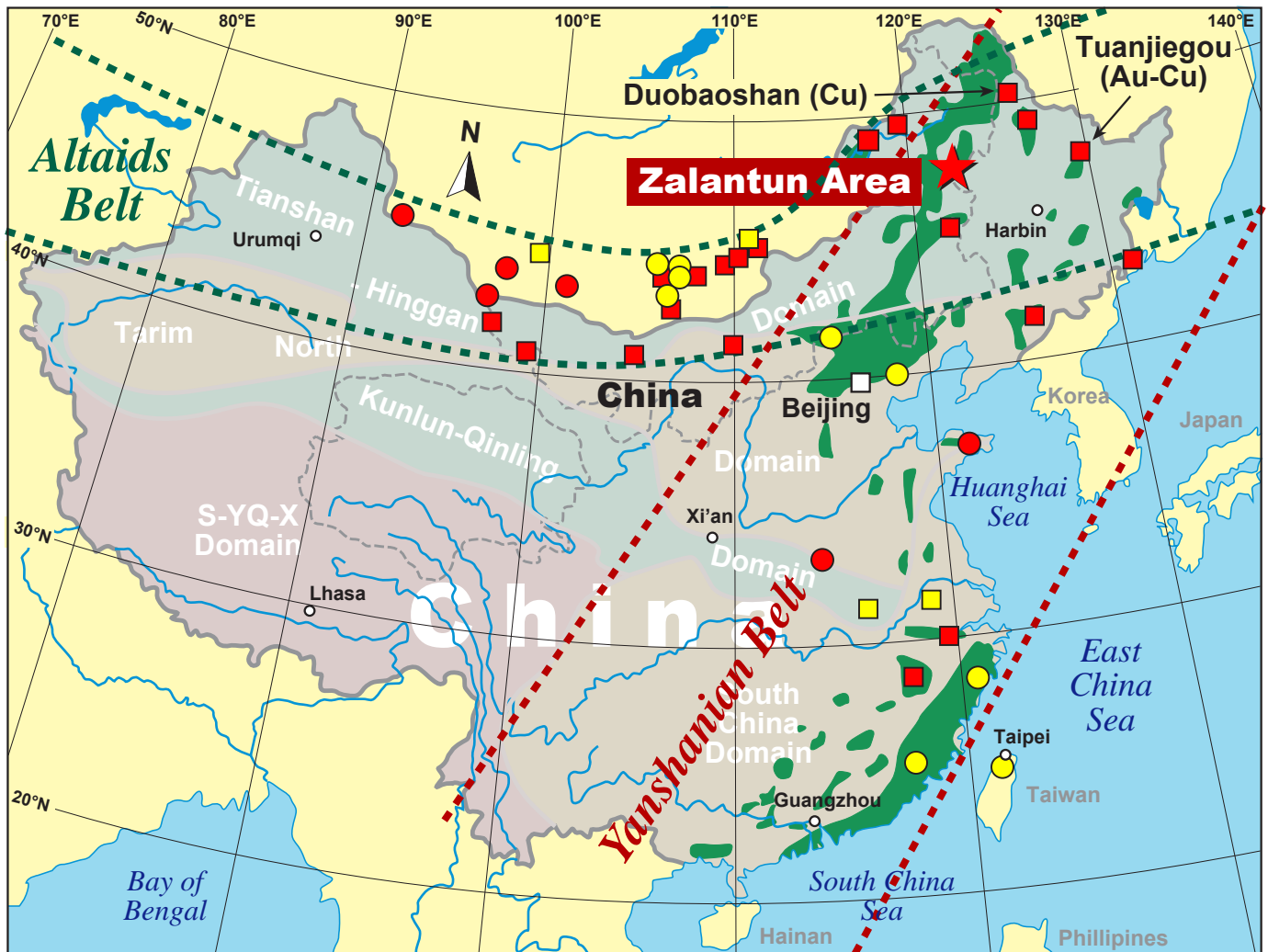




0 400 800  
kilometres

Figure 2  
Inter-Citic Mineral Technologies Inc.  
**Regional Geological Domains  
China**  
(after Shan, 2000)

October 2003



- Porphyry Cu,Au
- Skarn Cu,Au
- Intrusion-related lode Au
- Epithermal Au (Cu)
- Yanshanian volcanics and intrusives

Figure 3  
Inter-Citic Mineral Technologies Inc.  
**Altai and Yanshanian  
Cu-Au Porphyry Belts  
China**  
(after Anon, 2002, Yang-1998 and Guo-1987)

October 2003

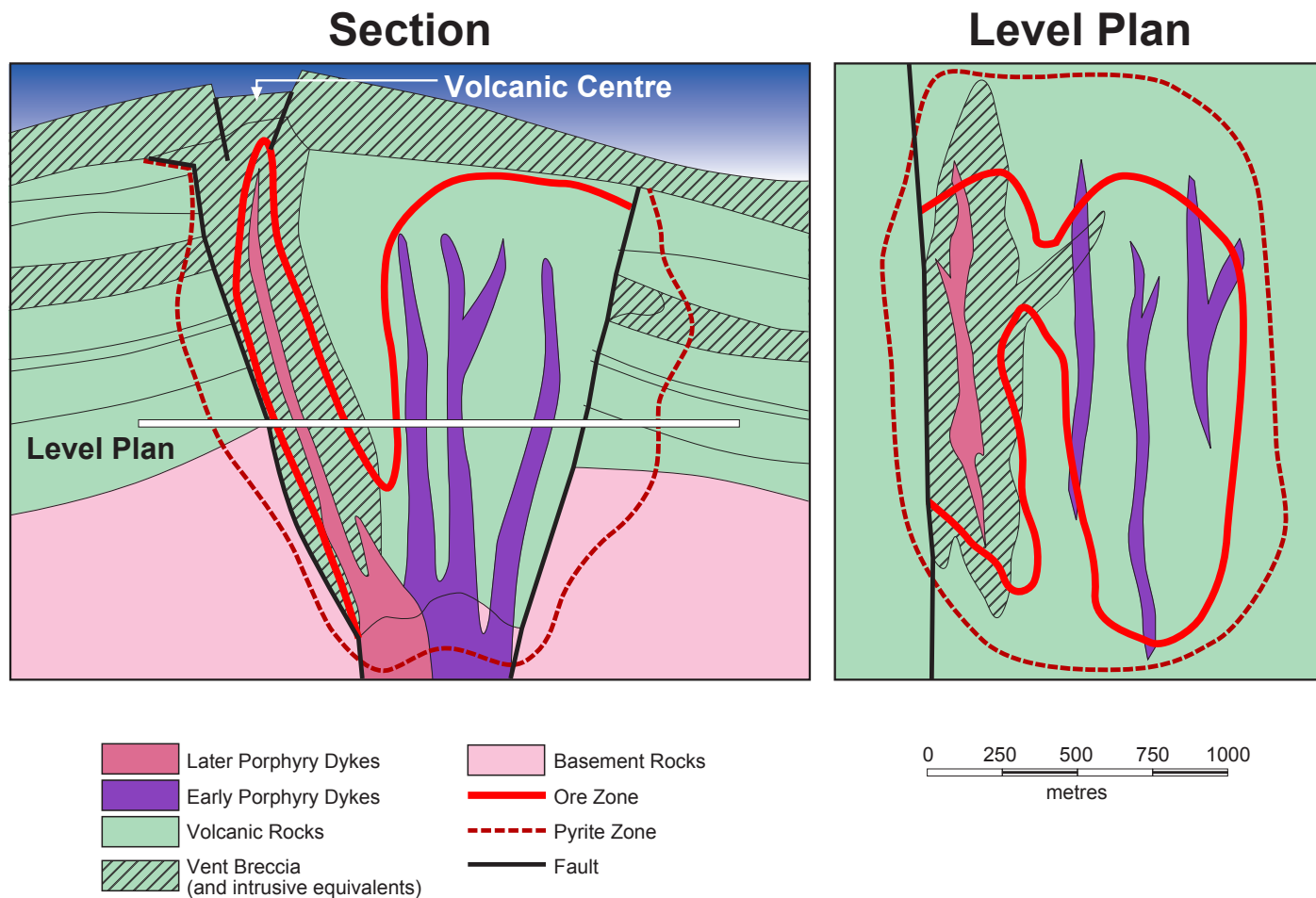


Figure 4  
 Inter-Citic Mineral Technologies Inc.  
**Model of Volcanic Hosted Porphyry Copper Deposit**  
 (after Dawson et al., 1991)

October 2003

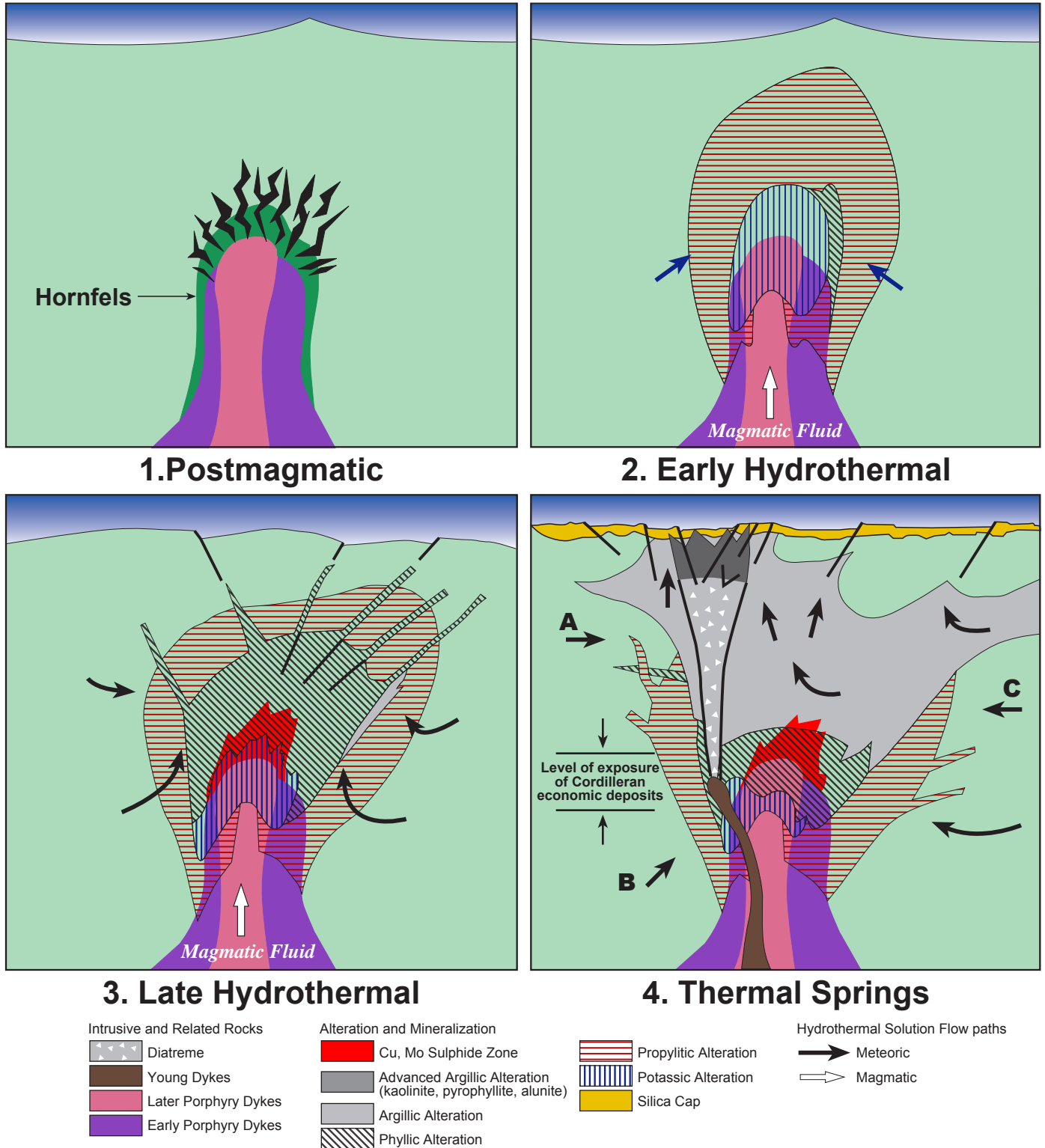
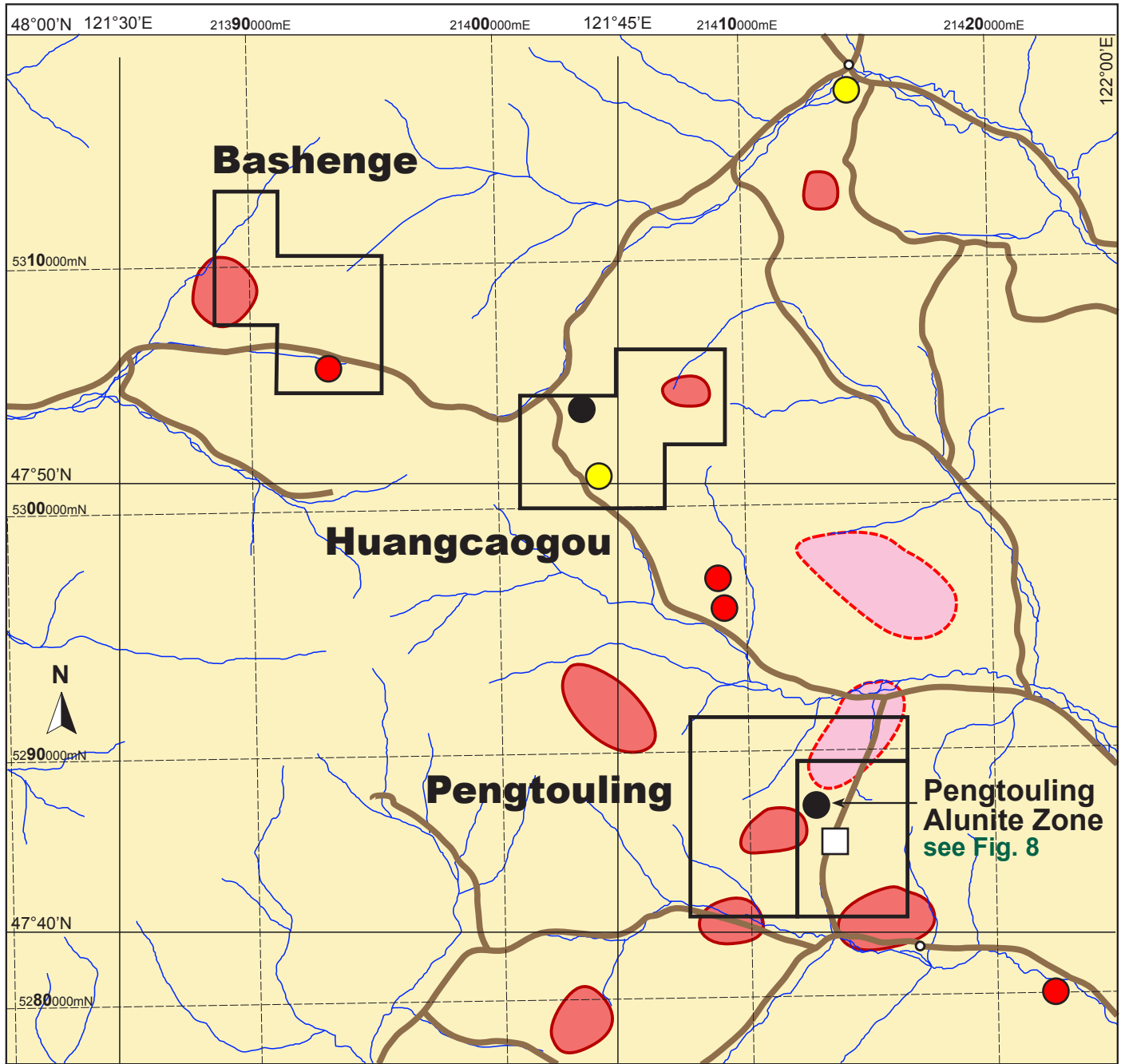


Figure 5  
Inter-Citic Mineral Technologies Inc.  
**Model Showing Sequential Stages of  
Alteration and Mineralization that Illustrate the  
Evolution of a Porphyry Hydrothermal System**  
(after McMillian, 1991)





- Geochemical Anomaly
- Heavy Mineral Anomaly
- Gold Heavy Mineral Anomaly
- Mineral Occurrence
- Alunite Zone
- Kaolinite Zone
- Road

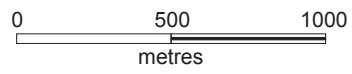
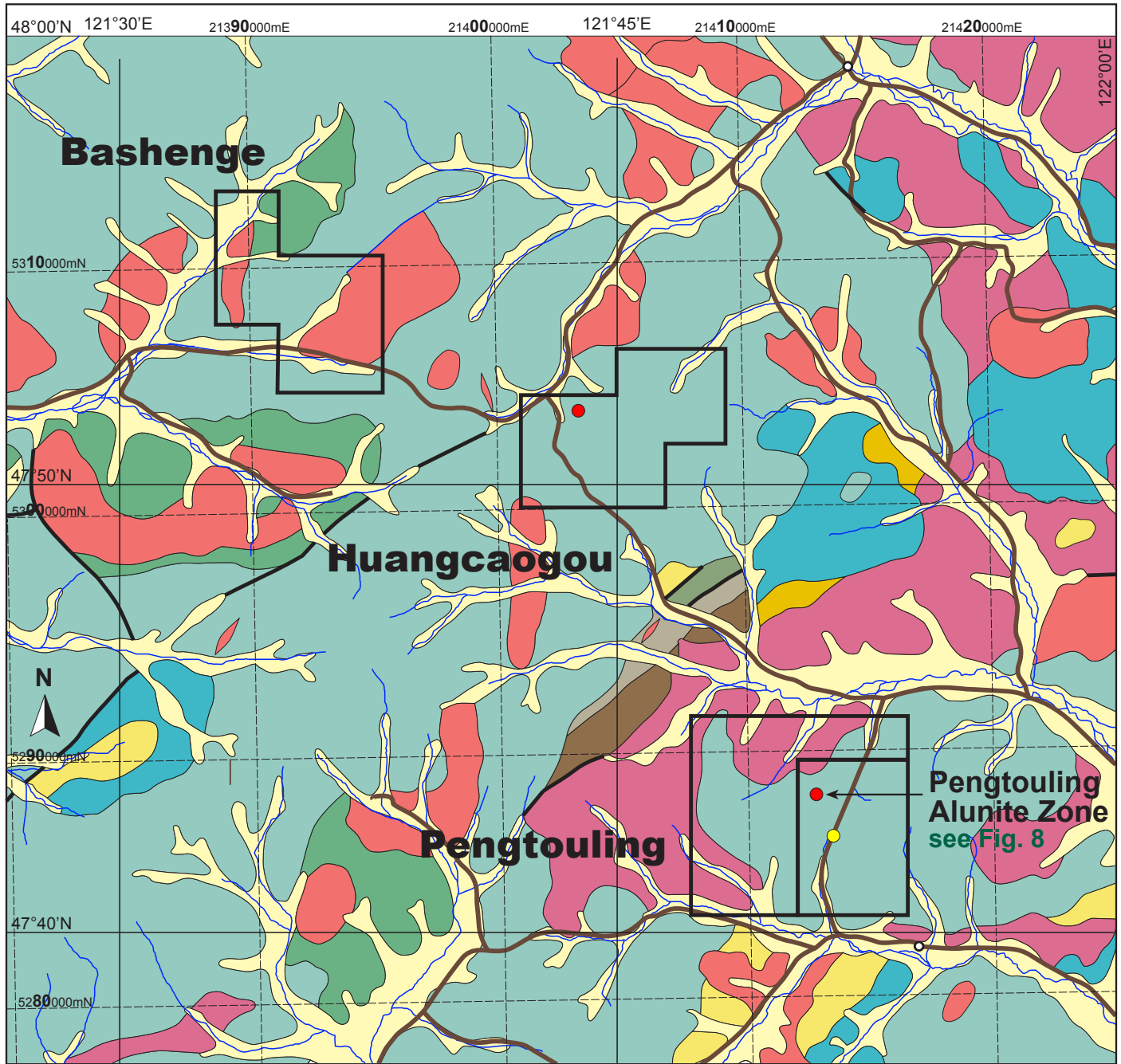


Figure 6  
 Inter-Citic Mineral Technologies Inc.  
**Zalantun Project**  
 Inner Mongolia Province, China  
**Geochemical Exploration Anomalies  
 and Heavy Mineral Anomalies**  
 (after Anon 2003)



- Quaternary, sediments
- Manitu Formation, andesite
- Manketou Ebo Formation, tuff
- Tamulangou Formation (Upper), andesite
- Sunjiafen Formation (Upper), slate
- Sunjiafen Formation (Lower), slate
- Hongshuiquan Formation, aleurolite
- Genlihe Formation (Upper), slate, limestone
- Genlihe Formation (Lower), pyroclastic rocks
- Cretaceous Felsic Intrusives, granite
- Late Paleozoic Felsic Intrusives, granodiorite
- Fault
- Alunite Zone
- Kaolinite Zone
- Road

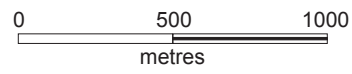


Figure 7  
Inter-Citic Mineral Technologies Inc.  
**Zalantun Project**  
Inner Mongolia Province, China  
**Geological Map**  
(after Anon 2003)

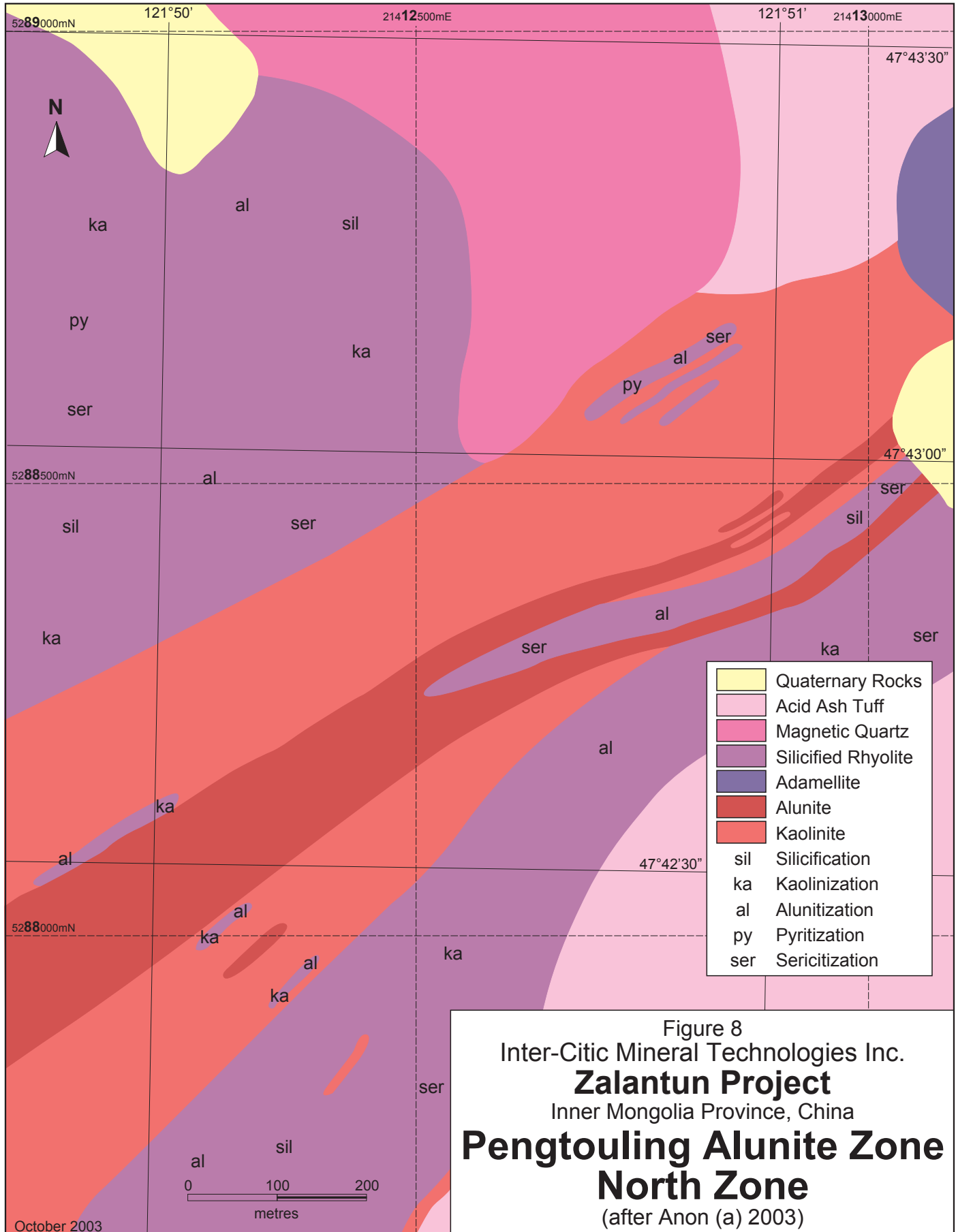
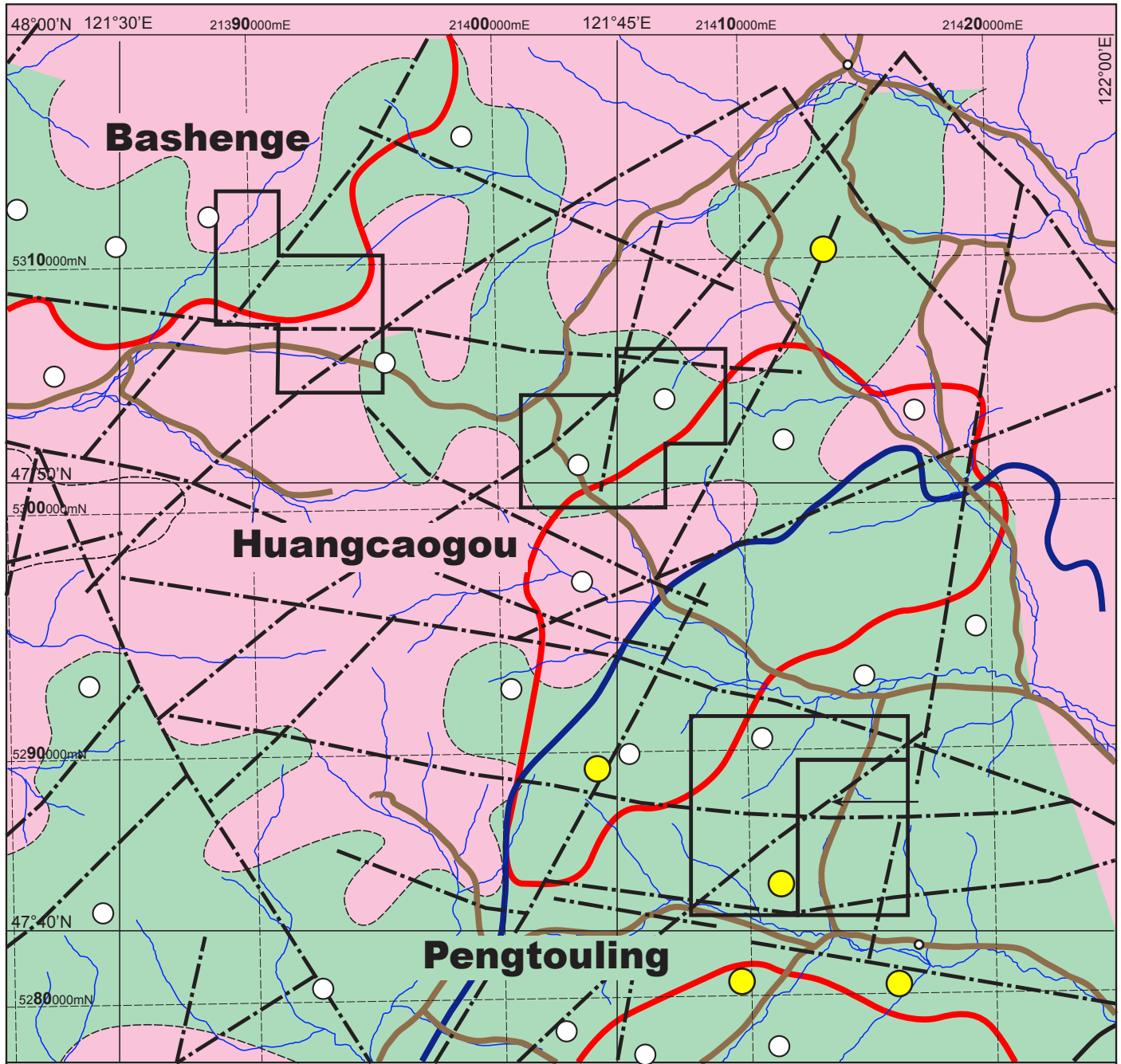


Figure 8  
Inter-Citic Mineral Technologies Inc.  
**Zalantun Project**  
Inner Mongolia Province, China  
**Pengtoulung Alunite Zone**  
**North Zone**  
(after Anon (a) 2003)



- Basalt, rhyolite
- Granite, Granodiorite
- Magnetic Anomaly
- Intrusive Contact
- Volcanic Centre
- Fault
- Geochem Anomaly (Au,Ag)
- Road

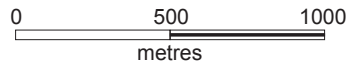


Figure 9  
Inter-Citic Mineral Technologies Inc.  
**Zalantun Project**  
Inner Mongolia Province, China  
**Aeromagnetic Interpretation**  
(after Misener, 2003)