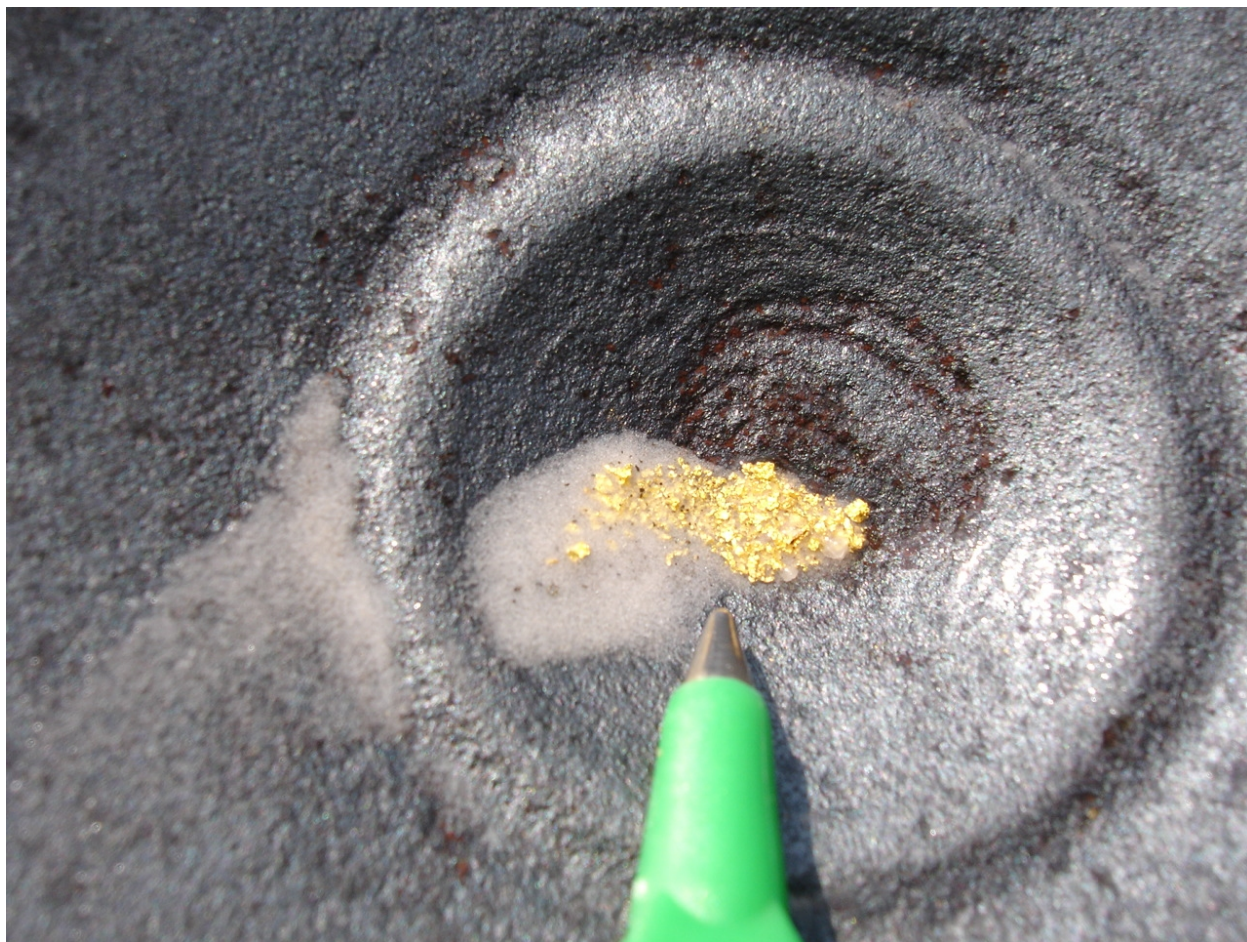


TECHNICAL REPORT

Machado Project Vaupés Department, Colombia



Prepared for

Horseshoe Gold Mining Inc.

January 16, 2011

by

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1.0 SUMMARY

Horseshoe Gold Mining Inc. (“Horseshoe”) is planning a business combination with Cosigo Resources Inc. (“Cosigo”), a Vancouver, British Columbia-based natural resources company. Cosigo has acquired the rights to the Machado gold exploration project, located in a metallogenically important region of Colombia. In accordance with an Arrangement Agreement signed on October 25, 2010 between Horseshoe and Cosigo, Horseshoe will acquire all of the outstanding securities of Cosigo in exchange for 60% of the post-combination Horseshoe shares. The resulting combined entity will be owned 40% by Horseshoe’s present shareholders and owned 60% by the current Cosigo shareholders. The business combination is subject to regulatory approvals as well as the approval of the securityholders of Horseshoe and Cosigo, respectively. The combined entity will be the 100% owner of the Machado gold exploration project. The Machado project consists of land holdings in the *Taraira Paleoplacer Gold Belt*, southeastern Colombia, which cover Precambrian quartz-sandstone stratigraphy known to host auriferous quartz veins and disseminated native gold occurrences interpreted as paleoplacer deposits (e.g., Cuéllar, 1997a; Montgomery, 2007a).

Cosigo owns the rights to a 9,973.09 ha mineral concession in the Taraira district. The *Taraira Paleoplacer Gold Belt* is a well established mining district, located in the far southeastern corner of Colombia along the border with Brazil. Small-scale mining has been ongoing at varying levels of activity over the past few decades since the first discovery of mineralization in the mid-1980s. Mining activity has focused on alluvial gold deposits and hard rock quartz vein-hosted native gold mineralization. The most comprehensive geological survey completed to date of the region was made during a series of programs conducted by Mineralco S.A., the precursor agency to the current Instituto Colombiano de Geología y Minería (Ingeominas), the Federal department of mines and geology in Colombia. Work completed by Mineralco comprised a series of geological investigations, which culminated in a 12-hole stratigraphically oriented diamond drilling program on the Machado project, completed in 1996. Native gold was reported in six of the holes (Morales and Varela, 2001). In spite of the mining activity and government based geological surveys, which have been conducted in the region, no systematic exploration activity has taken place and the Taraira belt by industry standards is untested.

The current study by Cosigo represents the first comprehensive assessment of the mineral potential of the Taraira Paleoplacer Gold Belt in Southeastern Colombia. The economic potential in the area, as envisioned by Cosigo, lies in the possibility of discovery and delineation of large disseminated paleoplacer gold deposits as well as economically important higher-grade structurally controlled and vein-related gold mineralization. Cosigo's main objective is to define the importance and extent of known gold-bearing zones and to identify additional areas of interest.

Initial exploration by Cosigo on the Machado Project has included the construction of a 30-man exploration base-camp at the center of the Machado project, line-cutting and trail construction, an MMI (mobile metal ion) multi-element partial leach geochemical soil survey, reconnaissance-scale geological mapping, initial stream sediment, rock and conventional soil sampling as well as limited petrographic studies. Limited channel sampling combined with the processing by Cosigo of two bulk samples have confirmed the presence of coarse gold at Machado with the bulk samples containing up to 37.6 g/t gold. Results from MMI sampling on the Machado Project highlight a zone of anomalous gold $\pm$ W-Bi-Ta-As-Sb soil geochemistry which appears to be associated with iron oxide-bearing and silicified horizons within favorable quartz arenite strata, which mapping has traced for more than 20 km. The recognition of visible gold at multiple locations on the Taraira projects and previous accounts of analytical values which range up to > 2,000 ppm gold for select samples (Montgomery, 2007a) indicates the presence of significant concentrations of gold locally.

Historically Colombia was a major gold producer in South America. Improving social and political conditions in recent years have led to increased mineral exploration and development. Current conditions in Colombia may be analogous to conditions in Peru some 10 years ago, when a number of important mining projects were discovered and later developed into major mining projects (e.g., Yanacocha, Pierina, Antamina) following that country's stabilization and opening to foreign investment. Mining opportunities in Colombia are currently attracting the attention of major mining companies such as Anglo Ashanti Gold and include recent success stories like Ventana Gold. The Taraira Paleoplacer Gold Belt represents an almost entirely unexplored region which appears to hold potential for discovery of both paleoplacer gold and/or structurally controlled and vein- and/or shear-related high-grade gold mineralization. Widespread

alluvial gold deposits and bedrock gold occurrences suggest that the potential for further discovery in this region is excellent.

An initial phase of drilling is recommended. Specialized drilling equipment has been mobilized to the project and drilling is expected to begin shortly to test known mineralized areas as well as areas of anomalous soil geochemistry. Large, up to 1,000 kg, samples are recommended to test for true gold grade in areas with coarse gold mineralization. It is also recommended that work include property-wide reconnaissance drilling as well as detailed structural and stratigraphic mapping. In order to establish a stratigraphic and structural map, petrographic and spectral studies of a subset of surface and drill chip sampling should be completed.

2.0 INTRODUCTION AND TERMS OF REFERENCE

At the request of James E. McInnes, President of Horseshoe Gold Mining Inc. (“Horseshoe”), a corporation registered in British Columbia with its Registered Office at 950-1199 West Hastings Street in Vancouver, the author has been retained to provide a technical report describing an exploration project located in the Republic of Colombia (“Colombia”) for the purpose of Horseshoe forming a business combination with Cosigo Resources Inc. (“Cosigo”), a private corporation registered in British Columbia with its Registered Office at 2610-1066 West Hastings Street in Vancouver and to satisfy the requirements of the British Columbia Securities Commission and National Instrument 43-101.

Horseshoe and Cosigo are planning a business combination in accordance to an Arrangement Agreement signed by the two corporations on October 25, 2010. According to the Arrangement Agreement, Horseshoe will acquire each of the outstanding shares and warrants of Cosigo in exchange for such a number of Horseshoe shares that will result in the former Horseshoe shareholders holding, as a group, 40% of the post-combination outstanding Horseshoe shares. The business combination is subject to regulatory approvals as well as the approval of the securityholders of Horseshoe and Cosigo, respectively. The subject project for this report includes a 9,973.09 ha mineral concession (the “Machado Project”) situated within the *Taraira Paleoplacer Gold Belt* in the Vaupés Department (Province) of southeastern Colombia. This report provides a summary of the technical and scientific information regarding the Machado Project held under Mineral License by Cosigo and the Plans of Operation for the project, as well as an opinion of the exploration potential of the area and recommendations for further work on the project.

Technical information presented in this report is a summary from numerous government and corporate publications and technical reports and of data collected during a personal visit to the project as well as the information obtained from geological and geochemical surveys completed by Cosigo during the past years. All references are cited in Section 21 of this report.

A personal visit was made by the author to the Machado Project within the *Taraira Paleoplacer Gold Belt* during May 31st and June 1st, 2010. The project visit comprised evaluation of the main areas of geological interest where access permitted, collection of representative

surface and underground grab samples, and a review of the work completed by Cosigo personnel at these sites.

The author is a Qualified Person under National Instrument 43-101 and is independent of Horseshoe, Cosigo and the Machado Project as the term “Independence is defined in National Instrument 43-101.

3.0 RELIANCE ON OTHER EXPERTS

For historical or general information the writer has relied largely upon reports produced by the Instituto Colombiano de Geología y Minería (Ingeominas) i.e. the Colombian Institute of Geology and Mining and Mineralco S.A., the precursor geological agency of Colombia. The authors of these reports are qualified geologists, geophysicists and geochemists. They may not be Qualified Persons as defined by NI 43-101, but the writer believes that their information is accurate. For claim ownership information, the author relied upon Cosigo Resources Inc. and their legal counsel, who, in writing, attest to the validity of the Machado Project mineral concession.

Details of exploration results, including analytical results from the subject project have been provided by Cosigo. The source of this information and the person responsible for managing Cosigo's exploration work on the Machado Project is Joseph Montgomery, PhD, Executive Vice President - Exploration for Cosigo and a Qualified Person under National Instrument 43-101. The information has not been independently verified by the author but is believed by the author to be accurate and reliable.

4.0 PROPERTY DESCRIPTION AND LOCATION

The subject of this report is Cosigo's Machado project in the Taraira Paleoplacer Gold Belt (Montgomery, 2007a). The Machado project is located close to the Brazilian border in southeastern Colombia, centered at ca. 0°34' S latitude and 69°40' W longitude (Figure 4-1). The Machado project covers areas of historic placer and small scale bedrock gold mining, including the Cerro Rojo, Peladero and Cerro Bombo mineralized zones. The project is centered approximately 180 km SSE of the provincial capital Mitu and approximately 4.5 km west of the small town of Taraira in the Vaupes Departamento (Province) of Colombia.

Mineral rights in Colombia are reserved to the federal government and governed by the Colombian Mining Code. The Colombian Mining Code has been changed and amended on several occasions. The oldest version applicable is Law 20 promulgated in 1969. Law 20 was superseded by decree 2655 in 1988 (the "1988 Decree"), which in turn was amended by Law 685 in 2001 (the "2001 Law"). A recent development is the amendment of the 2001 Law by Law 1382, enacted February 9, 2010. Under Colombian mining law, the holder of surface or subsurface minerals, whether operating on government or private property, is subject to the legal requirements established under the 1988 Decree, the 2001 Law, and the new (February 2010) Law 1382. Due diligence review of Law 1382 is currently in progress. The mining law is administered by the Ministry of Mines and Energy which has relegated the administrative duties to Ingeominas.

4.1. Land area

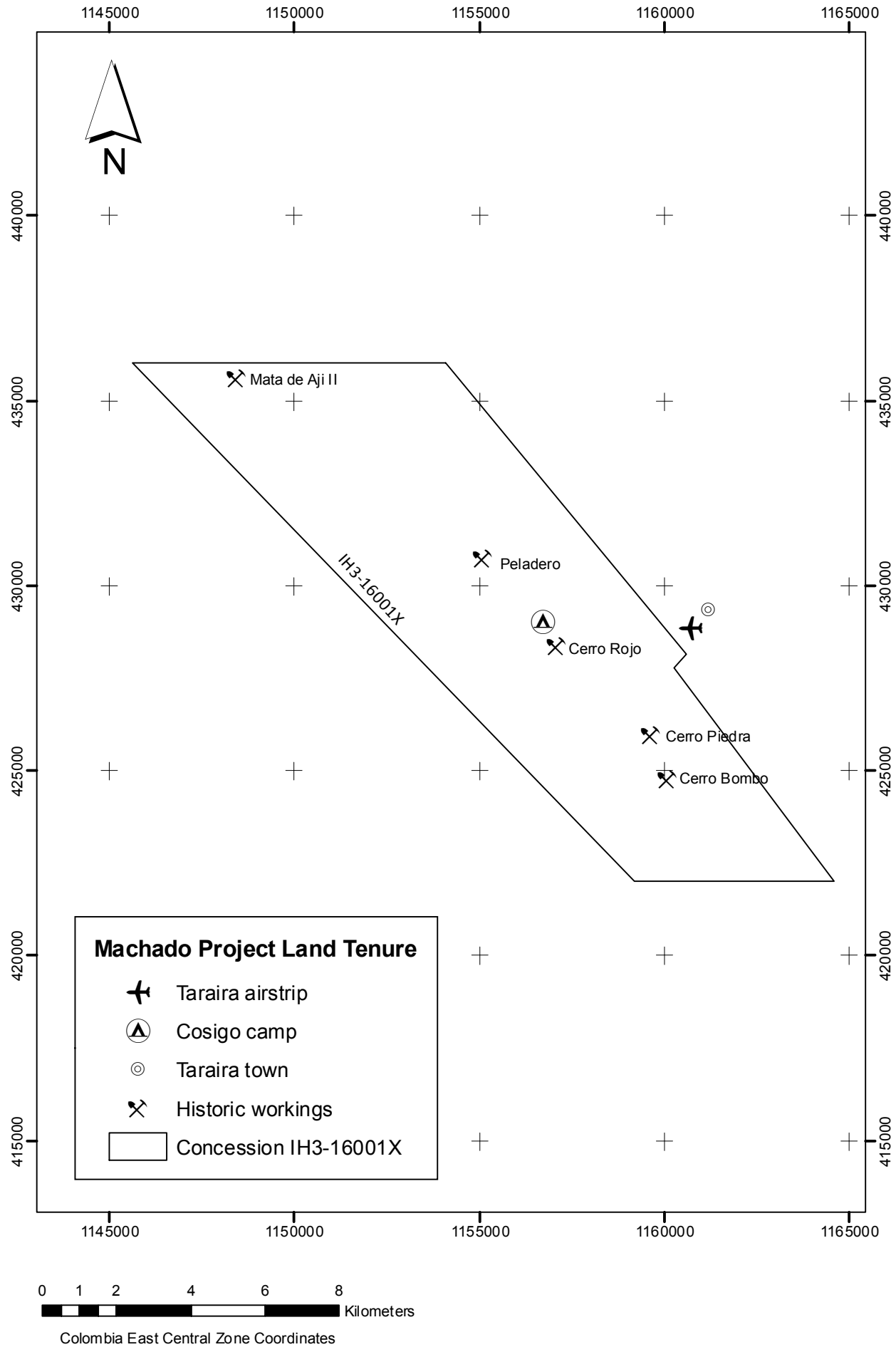
The Machado project consists of one mineral concession (Reg. No. IH3-16001X), referred to by Cosigo as the "Bid Property" covering 9,973.09 hectares (Figure 4-2).

In 2007, the Bid Property was put out for bid by the Colombian government. Bids for the area were submitted by several gold explorers, including major gold companies. Cosigo's joint bid, together with former joint venture partner Frontier Pacific Mining Corporation ("Frontier"), was successful leading to the acquisition of concession IH3-16001X. In July 2008, the

Figure 4-1. General location of the Machado Project



Figure 4-2. Machado Project Land Tenure



outstanding shares of Frontier were acquired by Eldorado Gold Corporation, effectively ending the joint venture between Frontier and Cosigo and leaving Cosigo as the sole 100% beneficial holder of the Bid Property.

Horseshoe and Cosigo are planning a business combination in accordance to an Arrangement Agreement signed by the two corporations on October 25, 2010. According to the Arrangement Agreement, Horseshoe will acquire each of the outstanding shares and warrants of Cosigo in exchange for such a number of Horseshoe shares that will result in the former Horseshoe shareholders holding, as a group, 40% of the post-combination outstanding Horseshoe shares.

The Bid Property is held by Cosigo Frontier Mining Corporation (“CFMC”), a 100% owned subsidiary of Cosigo, under a concession agreement dated September 28, 2007 with Ingeominas (the Colombian Geological Survey) (See Appendix I).

According to the concession agreement between CFMC (“the Concessionaire”) and Ingeominas, CFMC has the obligation to pay annual surface royalties to Ingeominas in order to retain the property. The size of the surface royalties is tied to the Colombian minimum wage as set out annually by the Colombian government. At the time of the concession agreement in 2007, the surface royalties amounted to approximately \$27CAD per hectare. According to Cosigo’s legal counsel the surface royalty obligations that must be met in order to retain the property have been reduced to approximately \$9CAD per hectare per year following the introduction of the new Law 1382. The concession agreement has a total duration of thirty years and the concessionaire may request an extension for an additional thirty years. Coordinates for the Bid Property are given in Table 4-1. Metric X- and Y-coordinates are given in the Colombian East Central Zone coordinate system with datum Bogota Observatory.

Table 4-1. Polygonal points – “Bid Property” IH3-16001X

Point	X-COORD.	Y-COORD
1	428,130.004	1,160,610.000
2	436,000.005	1,154,100.000
3	436,000.005	1,145,600.000
4	422,000.002	1,159,200.002
5	422,000.002	1,164,600.002
6	427,770.001	1,160,250.004

Cosigo's Colombian legal counsel has reviewed the Machado Project mining title and reported that title is in good standing. The author has been privy to their report. Gold production by Cosigo on the Bid Property is subject to a royalty payable to the Colombian state equal to 5% of the gross value of the minerals calculated at the mine mouth for gold, subject to certain deductions and adjustments.

There are no known environmental liabilities associated with the Bid Property. Surface ownership in the area is held by the Colombian state and there are no individual surface owners in the area. The concession agreement gives the Concessionaire the right to carry out exploration work for minerals and to exploit minerals discovered through such exploration work. The subject commodity of the concession agreement is gold. Should the Concessionaire discover commodities other than gold during its exploration work the Concessionaire can apply to have such other commodities included in the concession agreement. The concession agreement further gives the Concessionaire the right to construct and install equipment, services and works required for exploration work and exploitation. In case of private property lots the concession agreement gives the Concessionaire the right to construct right of ways. The Concessionaire's rights under the concession agreement are subject to compliance with environmental permits and the completion of a prior consult with indigenous populations. Where exploration is planned in forested areas, such as at Cosigo's Machado project, a Forestry Reserve Subtraction is applied for at the Colombian Ministry of Environment. For its exploration, Cosigo plans to use light-weight reverse circulation percussion drill rigs with an extremely small environmental footprint, which should make permitting less onerous. At the time of writing, Cosigo's application for a Forestry Reserve Subtraction has been tentatively approved by the Ministry of Environment pending Cosigo's completion of an informative process with two small (less than 50 people) indigenous communities in close proximity to the site, in accordance with standard procedures laid out by the Ministry of Interior. Once this consultation and information giving process is completed Cosigo can begin its exploration program on Machado. Cosigo's obligation to pay surface royalties for the Bid Property has been lifted by the Colombian authorities until such time that the Forestry Reserve Subtraction has been approved and the prior consult completed.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Machado project is situated in the south eastern corner of Colombia within the Department of Vaupés. A base camp was constructed in 2007 in the centre of the Machado project to provide accommodation and access during work programs. It is possible to carry out exploration work year round in the Machado area. Access to the project area from the outside is by air only at the present time. Charter flights are available from Bogotá, a distance of 720 km, or from Villavicencio, located about 600 km northwest of the project. The town of Taraira, which lies just east of the Machado project, has a well maintained gravel airstrip, which can accommodate a DC-3, the aircraft most often used by the current charter service. The town of Leticia, which lies about 340 km to the south of Taraira, has an international airport from which charter aircraft may be used to access the Taraira airstrip. A number of small airstrips in the area were formerly used by drug smugglers only to be decommissioned by the Colombian Armed Forces. Cosigo has received permission to repair these airstrips and currently uses one of them for reconnaissance access to areas neighbouring the Machado project.

The local residents of Taraira and local indigenous tribes make use of the various waterways from Rio Taraira by canoe. Cosigo has designed, built and shipped a low draft powered barge to use for access and movement of equipment, supplies and fuel to various parts of the area as a lower-cost alternative to aircraft transport. Heavy equipment for eventual advanced exploration, mine construction and mine operation could also be mobilized by barge rather than by air, reducing capital costs. The heavy equipment could be barged from the major port of Manaus in Brazil up the Amazon and Taraira Rivers to within ~9 km of the centre of the Machado Project site. Transport from the Taraira River to the camp itself would only involve the upgrading of an existing all weather jeep road.

Serrania Machado, the ridge at the centre of the Machado Project, is a relatively flat topographical feature, which offers plenty of potential sites for future mine infrastructure. Sufficient surface rights for exploration work and potential future mining operations are granted, subject to compliance with environmental regulations, to the Concessionaire in the concession agreement between CFMC and Ingeominas.

5.2 Climate

The climate of Colombia is extremely diverse resulting from large differences in elevation. In the western part of the country, there is the Pacific Ocean coast and the high Andean ranges comprised of three sub-parallel north easterly-trending Cordilleras, the Occidental, Central and Oriental, and in the eastern part of the country are the Llanos or Orinoco-Amazon basins. The temperature and precipitation vary only a little from season to season.

In Colombia, the various parts of the country are commonly referred to in terms of climatic zones. The area below 900 meters in elevation is referred to as the hot zone (*tierra caliente*), elevations between 900 meters and 1,980 meters are the temperate zone (*tierra templada*) and elevations from 1,980 meters to 3,500 meters are the cold zone (*tierra frio*). The upper limit of the cold zone marks the tree line and is generally the upper limit of human habitation. The treeless zone extends to 4,500 meters and is termed the paramos. Above this is the area of permanent snow.

The hot zone covers over 80% of the land area of Colombia and includes the Orinoco-Amazon basin, the Pacific lowlands and the Magdalena and Cauca Valleys. The Machado project lies within this zone. Temperatures range from 24°C to 38°C. There are dry and wet seasons which correspond to Summer and Winter. Operations are unhampered by the seasons as exploration work can be carried out year-round, although production may be slower during the heaviest rains.

Rainfall in the parts of eastern Columbia where the Machado project is located, ranges from 254 cm to 635 cm per year.

The temperate zone covers about 8% of the country and includes the lower slopes of the Oriental and Central Cordilleras and part of the intermontane valleys. The cities of Medellin (1,487m) and Cali (1,030m) are in this zone.

The cold zone covers about 6% of the country which includes some of the densely populated areas in the plateaus and terraces of the Colombian Andes. The mean annual temperature ranges between 10°C and 19°C and wet seasons occur in April to May and September to December.

5.3 Local Resources and Infrastructure

The closest municipality to the Machado project is Taraira, a town with about 250 residents. The main resource of importance here is the abundant availability of personnel with various

degrees of experience in prospecting, panning and small scale mining (both underground and placer operations). Cosigo has sourced personnel working in geochemical sampling, line and grid establishment, camp building and as cooks and assistants from this town. A number of employees have been or will be trained to operate vehicles, loaders and drilling equipment. Cosigo has paid for several employees to be trained in Bogota in safe food handling. The local workforce is remarkably talented, adaptable and displays a high work ethic. Four geologists, graduates from Colombia University, Bogotá, have worked on the project mapping geology, taking samples and surveying.

No regular roads are present in the Taraira area but a good jeep road has been constructed from Taraira to the Machado project, a distance of about 5 km. This road will be extended when permits are acquired. Numerous trails are present in the general area and many of the local residents make use of canoes and waterways.

A 30-man camp has been established at the centre of the Machado project with sleeping tents, kitchen and dining areas, workshop, geological office and storage facilities. A workshop for drilling crews is under construction (see Figure 5-1).

Few supplies are available in Taraira. Most equipment and supplies are shipped via DC-3 from Bogotá to the Taraira airstrip. No adequate supplies of potable water are available but Cosigo plans to drill and equip a well for the village and camp.



Figure 5-1. Cosigo camp at Machado (Cerro Rojo)



5.4 Physiography

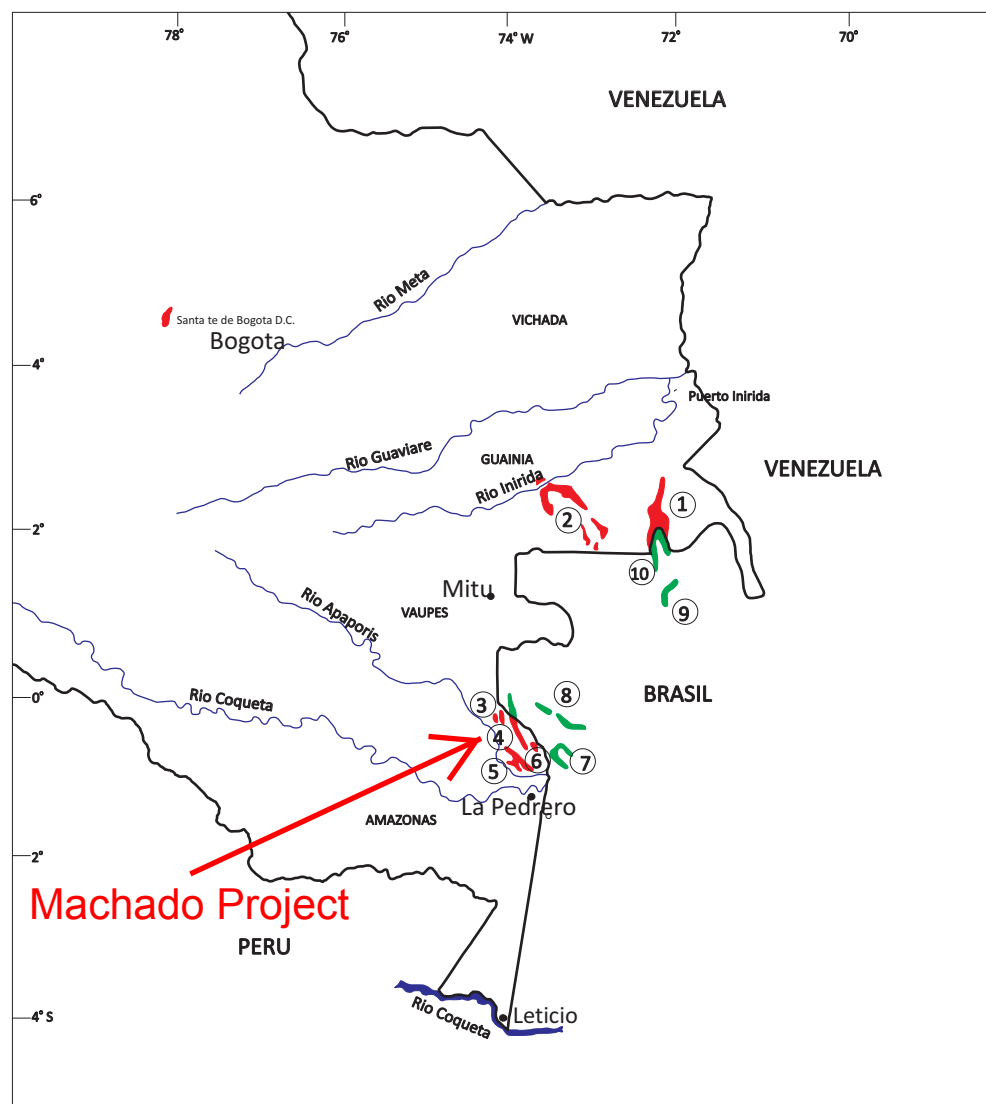
Colombia is bordered on the northwest by Panama, the Pacific Ocean and the Caribbean Sea (Atlantic Ocean), on the east by Venezuela and Brazil and on the southwest by Ecuador and Peru.

The western half of the country is marked by three Andean Ranges, the Cordillera Occidental (Western Cordillera), the Cordillera Central and the Cordillera Oriental (Eastern Cordillera). The Central Cordillera has the highest elevations up to the Huila volcanic cone which has an elevation of 5,750 meter (18,865 feet). The three principal Andean ranges are separated by Colombia's two major rivers, the Cauca (1,014km in length) and the Magdalena (1,153 km in length).

The eastern half of the country is mainly a low, flat plain drained by tributaries of the Orinoco and Amazon Rivers. This area, for the most part, is known as the Llanos. The Taraira region is situated at the northwestern reaches of the Orinoco and Amazon basin north of the Apaporis River within the Guayanan Shield. The area is characterized by thick rain forest cover over low, somewhat rolling hills, and drainage basins with average elevations of <100 to 150 meters above sea level. Resistive quartz sandstone horizons define NNW- to NS-trending elongate and often sinuous ridges (*serranías*) which stand modestly above the surrounding lowlands (see Figure 5-2).

The most densely populated area of Colombia is in the fertile plateau and valleys of the Cordillera Oriental. The Orinoco-Amazon Basin is, for the most part, sparsely populated by isolated indigenous tribes.

Figure 5-2. Serranias in Colombia and Brazil



CONVENCIONES	
	Serranias en territorio Colombiano
	Serranias en territorio Brasileño
① Naquen	⑥ Garimpo
② Snias de Caranacoa	⑦ La Esperanza
③ Snias de Aguablanca	⑧ Snias Tukanos +
④ Machado	⑨ Tunui
⑤ La Libertad	⑩ Caparro
+ Localización aproximada	

LOCALIZACION DE LAS PRINCIPALES SERRANIAS DE LA REGION GUAINIA - VAUPES Y ZONAS BRASILERAS ADYACENTES	
Escala: 1:5,000,000	
DIBUJO: Domingo Carriazo B.	FECHA: Octubre de 1993
Source: Mineralco files	

Principal Serranias of Guainia and Vaupes Departments in Colombia and in Western Brazil which make up the Taraira Paleoplacer Gold Belt.

6.0 HISTORY

Although numerous instances of artisanal mining have taken place over the past two decades, with a few continuing into the present in the Machado project area, Cosigo considers their operation one of exploration. Gold is reported to have been discovered in the Taraira area in 1985/86, and between 1988 and 1990 at one time or another up to 10,000 *garimpos*, or small-scale individual miners, were working colluvial, alluvial and small lode gold deposits along the Taraira Paleoplacer Gold Belt (Cuéllar, 1998). Production from these operations between 1985 and 1990 is estimated by Cuéllar to have reached *ca.* 100,000 ounces gold.

A few artisanal miners without mining permits have sunk shallow shafts and driven short tunnels following high-grade gold-bearing veins and horizons. Between 1995 and 1996, 3,600 tons of material were processed from a small open pit located at the Cerro Rojo mineral occurrence, central Machado project, which reportedly graded 83.3 g/t gold (Cuéllar, 1998) (See Figure 6-1). Cuéllar (1998) states that gold recoveries were in the 50-60% range and estimates a gold grade of 150-200 g/ton in the mined material. In the same area, multiple short underground workings follow narrow quartz $\pm$ pyrite $\pm$ wolframite veining containing native gold and/or stratabound auriferous horizons within quartz arenite. The principal tunnels include the Juan Chivo Bajo ($\sim$ 50 m length), Amarillo ($\sim$ 25m length) and Juan Chivo Alto ($\sim$ 20m length) adits.

The most comprehensive and systematic study of the area to date was completed in the early to mid-1990s by Mineralco S.A., the former Mining Department of Colombia (Cuéllar, 1998). This work was intended to assess the geological setting and mineral potential of the area and was focused on the Machado project, but investigations were also made of serranias (small ridges) outside of the Machado project area. Work during this program included the completion in 1996 of twelve diamond drill holes totaling 1,103 m on the Machado project (see Figure 6-2), completion of five, 500 m dipole-dipole IP lines, reconnaissance ground magnetometer and vertical-type electrical geophysical surveys centered on the Cerro Rojo mineral occurrence, regional-scale 1:25,000- and more detailed 1:5,000- and 1:2,000-scale geological mapping at selected areas and collection of stream sediment and limited rock chip samples.

Drilling by Mineralco targeted the metasedimentary strata on the Machado project and a detailed stratigraphic column was constructed from drill data and surface mapping (See Figure 7-3). Free gold in the form of microscopic gold grains were reported in six of the drill holes (Morales and

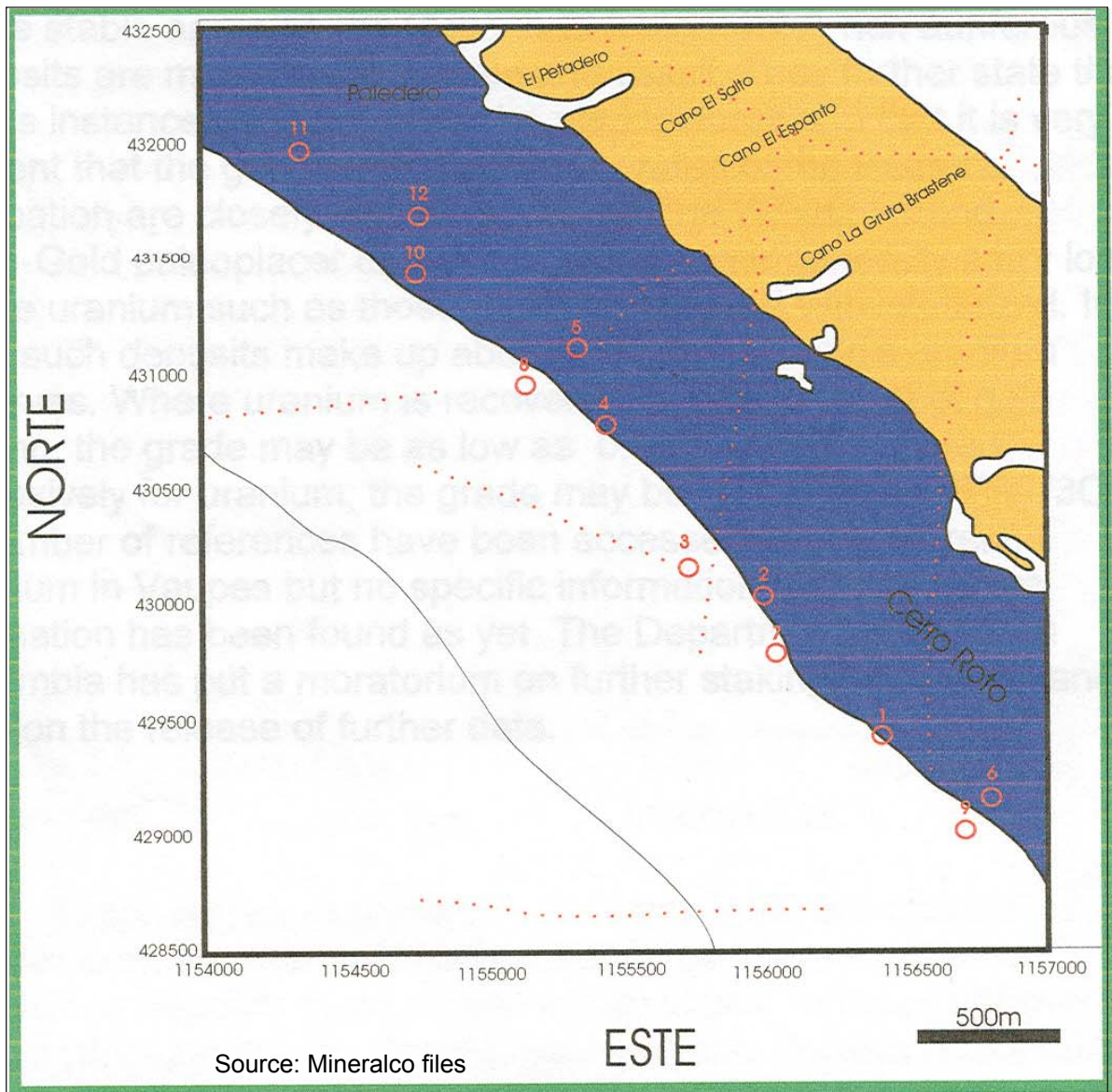


Figure 6-1. Open pit at Cerro Rojo



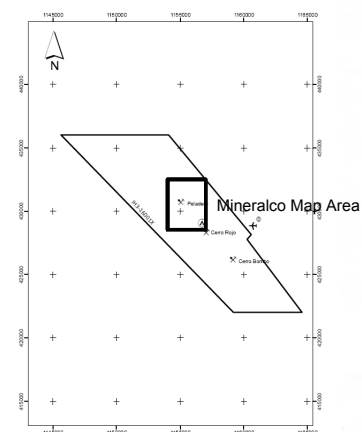


Figure 6-2. Mineralco drill holes at Serrania de Machado



LEGEND

- Qal
- Tia
- Pcpe
- Faults
- Drill Hole



Location of Mineralco map area on the Machado Project

Varela, 2001). Gold mineralization was noted to occur at distinct stratigraphic levels (Cuéllar, 1997d), particularly within quartz-arenite containing abundant iron-oxides in unit III of the Cerro Rojo Member, Peladaro Formation (see below). About 50% of the gold noted in drill samples was found to occur along bedding planes, while other occurrences were associated with quartz veining both cross-cutting and parallel to stratigraphy (Cuéllar, 1997a). Analyses of drill core generally returned weakly anomalous gold values of up to a few hundred ppb or background values, although a few samples returned values as high as 4.1 g/t gold (Cuéllar, 1998).

Highly anomalous gold values are reported for drill core samples associated with one laboratory (Corelab) as reported in Cuellar (1997a, b; 1998). However, these results are distinctly higher than anomalous values from analyses of core at two additional labs used (Quimia Ltda, Bogota and Bondar-Clegg, Quito/Vancouver). This apparent lab bias pertaining to drill core samples is discussed by Cuellar (1997a, b; 1998). This author mentions the use of different sieve sizes at the different laboratories but does not adequately account for the discrepancy. The Mineralco drill results are discussed further in subsequent sections of this report.

Stream sediment and rock samples on the Machado project returned gold values which range between 0.02 and 942 g/t (Rodriguez and Carrillo, 1991; Cuéllar, 1997a; 1997b). Native gold was identified in samples from all 15 drainages along the Serranía de Machado hill (Cuéllar, 1997a; 1997b; 1998).

The IP survey outlined a significant chargeability anomaly at ca. 200 m depth at the Cerro Rojo mineral occurrence (Cuellar, 1997a; 1997c). Drilling evidently did not reach the depth of this geophysical response and the anomaly remains untested.

To the best of the author's knowledge, no further systematic geological or exploration work has been completed in the Taraira district subsequent to the Mineralco program.

7.0 GEOLOGICAL SETTING

Cosigo's Machado Project in the Taraira Paleoplacer Gold Belt lies within the far southwestern edge of the Neblina successor foreland basin, a large Meso- to Paleo-Proterozoic basin, which overlaps the Paleo-Proterozoic Roraima foreland basin and encompasses a large area of Brazil, as well as areas of Venezuela, Guyana and Colombia (Santos et al., 2003). Deposits within these basins were derived from the Trans-Amazonian mountain range and inferred northern sources and are dominantly mature deltaic and shallow-marine sandstones (quartz arenite and arkosic sandstones). Sedimentary strata underlying the project area and hosting gold mineralization are thought to belong to a group of *Roraima-like* outliers for which zircon ages between 1.55 and 1.81 Ga (1 Ga = 1 Billion years) have been determined at various locations (Santos et al., 2003). Sedimentary outliers are interpreted by Santos et al. (2003) to overlie unconformably Roraima Supergroup strata further east, for which zircon from tuffs within this Supergroup yielded a Paleoproterozoic age of 1873 ± 3 Ma (1 Ma = 1 Million years) with a minimum age of 1782 ± 3 Ma. In the Taraira area, the *Taraira dyke* (Santos et al., 2003), dated at 1498 ± 2 Ma provides a minimum age for sedimentary deposits here. Basin deposits in the project area overlie the western Proterozoic Rio Negro Amazon craton formed mostly by collisional S- and I-type granitoids with ages from ca. 1.60 to 1.52 Ga, which were intruded into basement of ca. 1.80 Ga (Santos et al., 2003).

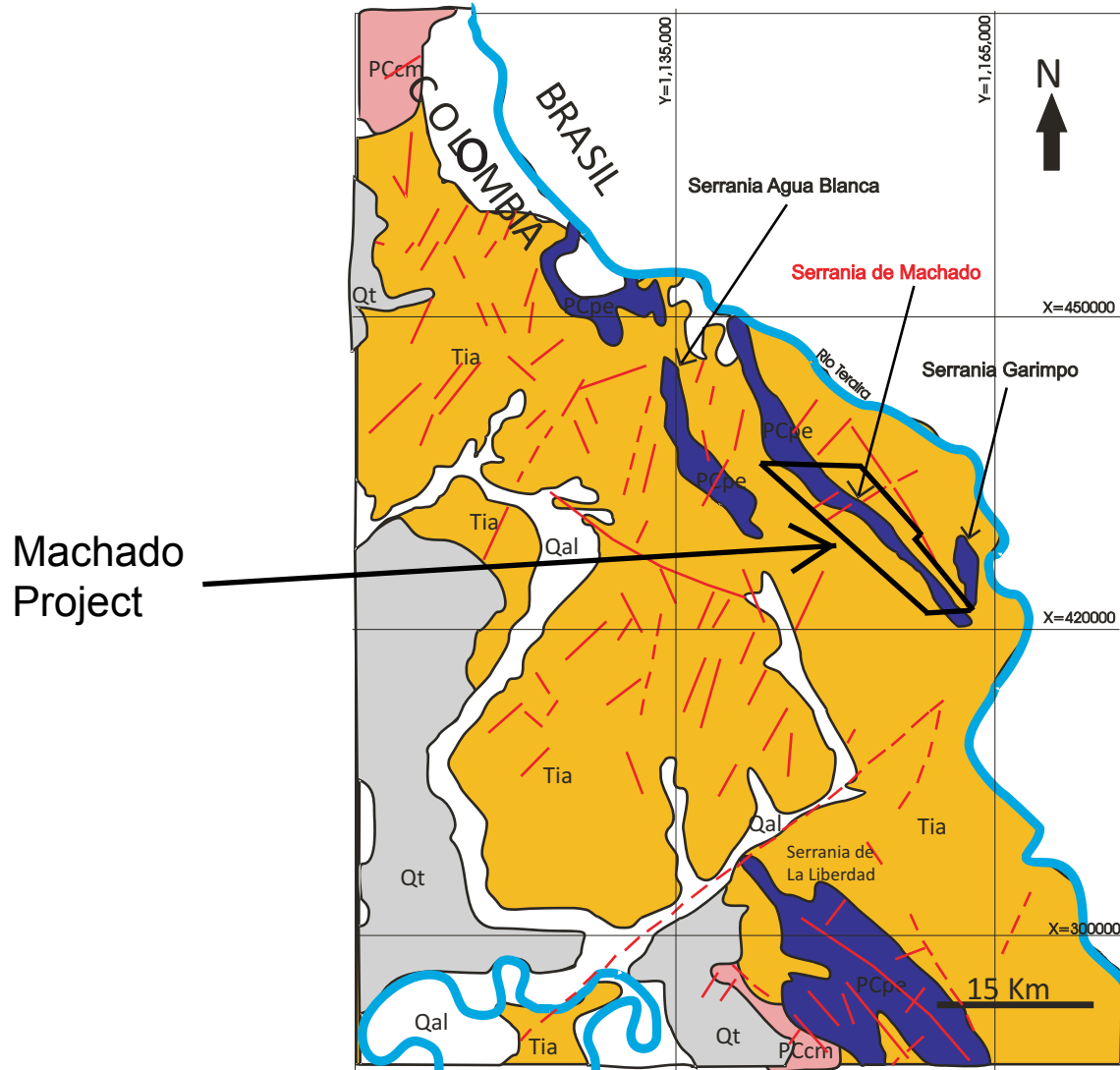
Roraima-like sequences including deposits in the Taraira and more northerly Naquén regions were deformed during the Sunsás (Grenvillian) collision at ~ 1.33 Ga – 0.98 Ga (Ar-Ar in muscovite) along the northwestern and southwestern margins of the Amazon craton. These deposits remained buried until Late Jurassic, when they were uplifted during the Takutu rift event which preceded the drift phase of Africa and North America.

The metasedimentary sequence in the Taraira belt is comprised predominantly of quartz-arenite strata with minor mudstone and siltstone intercalations and metaconglomerate beds (Cuéllar, 1997a; mapping by Cosigo, see below). This sequence is the primary host to gold mineralization in the region (see Figure 7-1).

The sedimentary sequence is best described for the Machado area. Here the metasedimentary strata comprise a ca. 1000 m-thick moderately SW-dipping monoclinical sequence assigned to the *La Pedrera Formation* (Galvis et al., 1979; Carrillo, 1995) and divided into four main



Figure 7-1. Regional Geology of the Taraira Area



Map source: Mineralco files

LEGEND

-  Qal - Quaternary alluvium
-  Qt - Quaternary rounded pebbles in clay.
-  Tia - Tertiary (Lower Amazonica clays)
-  PCpe - Precambrian - Pedrera Formation
-  Pccm - Precambrian migmatite complex

lithological units by Carrillo (1995). These include: the upper *Siete Pintas* and lower *Juan Chivo* coarse- to fine-grained quartz arenite $\pm$ minor metaconglomerate sequences, ~ 450 m and ~ 150 m thick, respectively; the 30 -125 m thick *Paja Brava* unit intermediary between the upper and lower quartz arenites, comprising intercalated quartzite, meta-siltstone and meta-mudstone; and a ~ 250 m thick basal welded rhyolitic tuff sequence (rhyodacite porphyries and rhyolite tuffs in the Machado area; Consorcio, 1996; Montgomery, 2007a), similar lithologically to 1200 Ma (Rb/Sr whole-rock age) Piraparaná Formation acid volcanoclastic rocks located 100 km NW of the Taraira area.

Based on drill data and geological mapping in the Machado area, Cuéllar (1997d) divided the Pedrera strata into two Members including the upper *Cerro Rojo* and lower *Peladero* Members, which the author further sub-divides into multiple lithological levels (Cuéllar, 1997d). Level III of the Cerro Rojo Member is characterized by abundant iron-oxides and the presence of pyrite and gold, while gold is also reported at the base of Level I metaconglomerate of the Cerro Rojo Member (Cuéllar, 1997d).

Overlying the La Pedrera Formation in the Taraira area are meta-quartz arenites of the *Machado Formation* (Cuéllar, 1997d). Tertiary and Quaternary deposits overlie older units. Amphibolite and gneiss of the *Mitu Migmatitic Complex* underlie the metasedimentary and metavolcanic strata in the region, while rhyolitic porphyries and tuffaceous deposits occur in the extreme northern Taraira area. Diabase dykes up to 10 m wide cut the sedimentary stratigraphy (see Figures 7-2 and 7-3).

Meta-sedimentary strata throughout the Taraira region have been folded into a sequence of northerly-trending anticlines and synclines. Outcrop patterns suggest poly-phase folding. The SW-dipping strata on the Machado project have been interpreted as the eastern limb of a syncline in which the western flank forms the Serrania Agua Blanca (Montgomery, 2007a). NW-, WNW- (*syn-mineralization*; Laurent, 2007), NE- and possibly $\sim$ NS-trending steep-angle faults cut the metasedimentary strata in the Taraira area (Garzon and Lema, 1992; Laurent, 2007; Montgomery, 2007a).

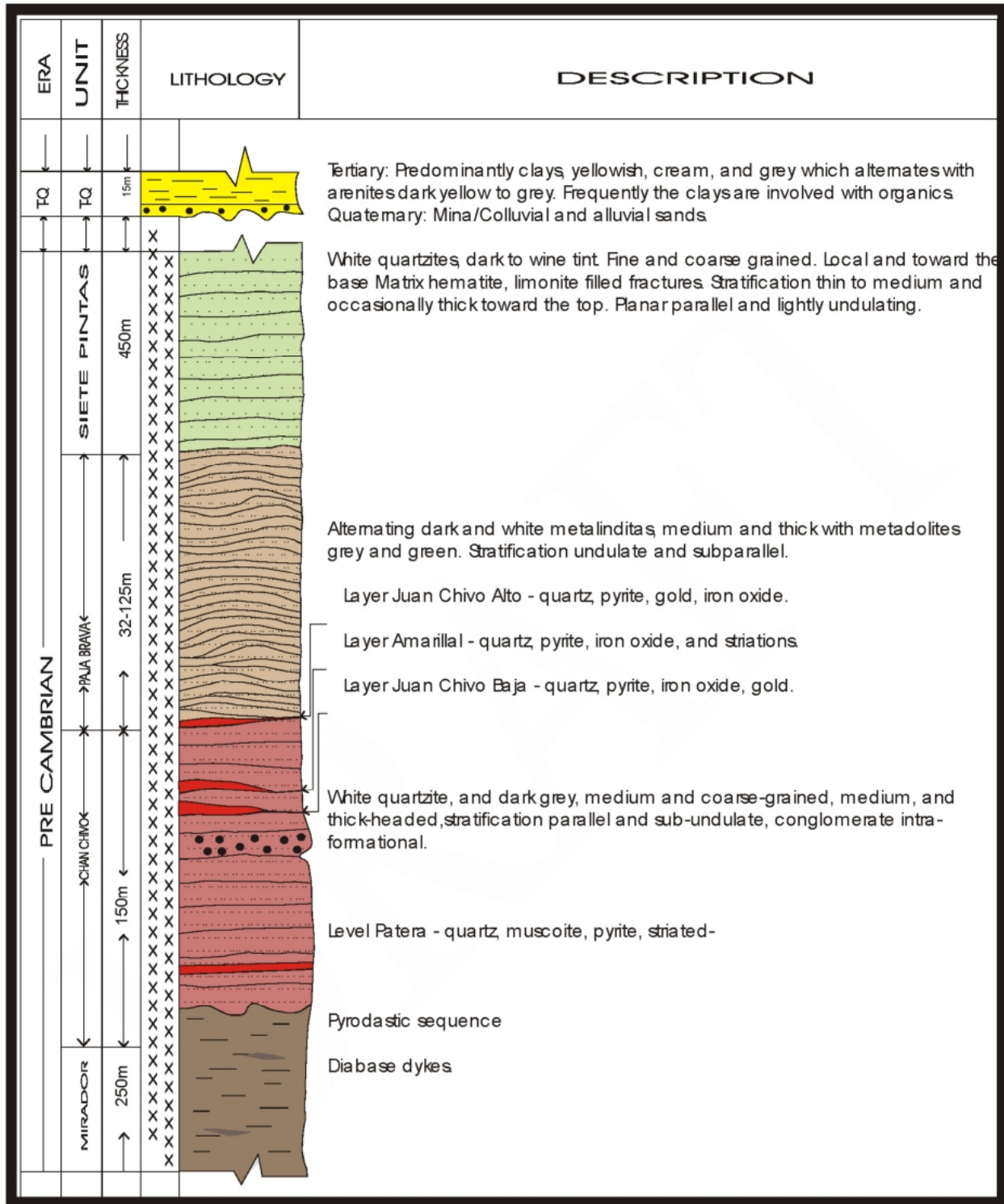


Figure 7-2. Stratigraphy of the Machado area

EDAD	UNIDAD UNIT		DESCRIPCION	
PRECAMBRICO PRECAMBRIAN	Fm Machado Formation		Arenitas de cuarzo con goethita y hematita dispuestas en capas, hasta de 1m de espesor con laminacion plano paralela y contactos netos	
	Fm La Pedrera Formation	Miembro Cerro Rojo Member	Nivel IV	Intercalaciones de lodolitas verdes en capas medias con arenitas de color amarillo
			Nivel III	Arenitas ricas en oxidos de hierro
			Nivel II	Metarenitas de tamano fino en capas finas a medias
			Nivel I	Metaconglomerados clastosportados constituidos por cantos de duarcitas y volcanicos
		Miembro Peladero Member	Nivel III	Metarenitas de grano medio
			Nivel II	Metarenitas interestratificados con metalodolitas de laminacion muy fina y capas delgadas de tobas rioliticas
			Nivel I	Metarenitas con moscovita
	Complejo Igneo de Taraira Taraira Igneous Complex		Porfidos riodaciticos y tobas rioliticas	
Compleja Migmatitico de Mitu Mitu Migmatitic Complex		Neises y anfibolitas con migmatizacion		

Source: Mineralco files

Figure 7-3 Stratigraphic column, Serrania Machado (After Mineralco, 1993)



8.0 DEPOSIT TYPES

Historic reports and preliminary investigations by Cosigo suggest that the Taraira district has the potential to host paleoplacer or modified paleoplacer (e.g., Witwatersrand-type) and/or epigenetic vein- and shear-related gold mineralization (Rodriguez and Carrillo, 1991; Carrillo, 1995; Cuellar, 1997d; Laurent, 2007; Montgomery, 2007a; Montgomery, 2007b). A *syn-sedimentary* origin for gold mineralization in the Taraira district is consistent with apparent lithological and stratigraphic controls on mineralization and by the widespread distribution of gold mineralization in quartz arenite-dominant strata (e.g., the Naquén paleoplacer district, hosted within quartz arenite-dominant stratigraphy, is located ca. 340 km NNE of the Taraira district; Carrillo, 1995, Figure 5-2). The tentative identification (Montgomery, 2007b) of rounded and irregular-shaped gold particles (mostly < 20µm in size) in quartz sandstone also supports a syn-sedimentary origin since these particles closely resemble paleoplacer “micronuggets” (e.g., Frimmel, 2005), and do not appear to be related to veining. The apparent paucity of sulfides associated with gold mineralization and the absence of significant hydrothermal alteration (e.g., Rodriguez and Carrillo, 1991; Cuéllar, 1998) could also be construed as supportive of a paleoplacer origin for stratabound mineralization at Taraira.

Remobilization and re-deposition of inferred detrital gold by hydrothermal solutions possibly during regional metamorphism may have been an important mechanism of gold concentration in the Taraira region (e.g., Montgomery, 2007a) and similar processes have been documented in other paleoplacer districts, including in the Witwatersrand district (e.g., Rasmussen et al., 2007). The common occurrence of native gold in narrow quartz veins and along fractures (Montgomery, 2007b), supports either an epigenetic or remobilized paleoplacer model. The close association between mineralization and silica, as silicification of quartz arenite strata and/or as narrow quartz veinlets (e.g., Cuéllar, 1998) and the apparent association between gold and elements such as bismuth and antimony may more readily conform with an epigenetic model.

A strong fault-related structural control on mineralization at Cerro Rojo on the Machado project has been likened to BIF (Banded Iron Formation)-related epigenetic gold mineralization found in the Archean Yilgarn Craton of Western Australia (Laurent, 2007). The general Fe-poor nature of the Taraira strata (Laurent, 2007) and apparent paucity of felsic intrusive and mafic volcanic rocks in the Taraira district, which occur in BIF related gold districts within the Yilgarn

Province (e.g., Robert et al., 2005), may be important distinctions between these two regions. Shear/vein-hosted and detrital gold mineralization in the Taraira district may approximate Paleoproterozoic conglomerate- and quartzite-hosted gold at the Jacobina Paleoplacer district, Brazil, where a “hydrothermal-shear reservoir” model incorporates detrital gold strongly overprinted by hydrothermal and structural events (Milesi et al., 2002).

Of importance to the paleoplacer model for the Taraira belt is the suggested age of host siliciclastic sedimentary strata. At Witwatersrand host Rand Group strata are late Archean (i.e., ca. 2.9 – 2.7 Ga; Frimmel, 2005). At other paleoplacer gold districts early- to mid-Paleoproterozoic ages are most common (e.g., Tarkwa, Ghana, Jacobina and Roraima, Brazil, Groves et al., 2005). Although the Taraira strata are inferred to have a possible Late Paleoproterozoic age of ca. 1.55 to 1.81Ga (Santos et al., 2003), further geochronological work is required to better establish the age of these deposits (e.g., Carrillo, 1995; Santos, 2003). Nevertheless, a possible Paleoproterozoic age for siliciclastic deposits and therefore also for inferred detrital gold mineralization at Taraira do not preclude a paleoplacer origin for gold mineralization. It is hypothesized that paleoplacer gold deposits have formed throughout earth’s history, and particularly after ~ 1.7 Ga, but only to have survived where regional-scale tectonic processes favored their preservation (Groves et al., 2005). A large spike in the distribution of orogenic gold deposits globally at ca. 1.9 Ga (Groves et al., 2005) evidently would have provided a ready source of primary gold for redistribution in Late Paleoproterozoic placers.

Given the plausible arguments for paleoplacer or remobilized paleoplacer and structurally controlled and/or vein-hosted gold mineralization in the Taraira district, and considering the potential economic importance associated with these styles of mineralization, both epigenetic and syn-genetic paleoplacer deposit types are being targeted by Cosigo in their current exploration program.

9.0 MINERALIZATION

The Taraira Paleoplacer Gold Belt is the location of bedrock native gold occurrences and numerous relatively small alluvial gold deposits. Mineralization was discovered in the area in 1985-86 and since that time has been the site of multiple small-scale placer and hard-rock gold recovery operations by individual miners. Alluvial gold deposits appear to be widespread in the region and these types of deposits have been the main target of small-scale individual miners in the Taraira Paleoplacer Gold Belt. Native gold is readily panned from the Machado project and surrounding areas, generally in areas of minor excavations and mine workings and also from creeks which drain Cosigo's project (See Figure 9-1). Grains of native gold up to 5mm in size have been observed in rock samples from the project (Pantorrilla de Maria, 1993). The Taraira Paleoplacer Gold Belt is therefore, at least in part, a coarse gold (nuggety) environment characterized as one where gold grains of more than 0.1mm in diameter occur and are often erratically distributed (Dominy et al., 2000).

In-situ primary gold mineralization in the district occurs along folded N- to NNW-trending ridges of Precambrian sedimentary stratigraphy. Gold mineralization on the Bid Property appears widespread along Serrania Machado ridge. Cuellar (1997a) reports that during a visit to the area by Mineralco in December of 1992 artisanal mining operations were being carried out on Serrania de Machado between Mata de Aji II in the north and Cerro Bombo in the south (see Figure 4-2). The main areas of artisanal mining activity appear to have been Cerro Rojo, Peladero and Cerro Bombo (Figure 4-2). The author visited the Machado Project during May 31st and June 1, 2010 and was able to verify the presence of gold mineralization and historic workings at Cerro Rojo and Peladero. Quartz arenite is the main lithological unit in this metasedimentary sequence and is also the primary host of gold. Minor native gold also occurs in metaconglomerate beds in the sedimentary sequence (e.g., Cuéllar, 1997a). Favorable sedimentary ridge strata crop out over a cumulative strike length of ~ 100 km within the Taraira district, defining a series of district-scale folds with apparent NW-trending axes and tight fold hinges. Cosigo's Machado project covers a strike length of more than 20 km of quartz arenite stratigraphy.

Primary gold mineralization identified to date in the Taraira district appears to be strongly controlled by stratigraphy (e.g., Rodriguez and Carrillo, 1991; Cuéllar, 1997a), however, it is

Figure 9-1. Gold panning in the Taraira Paleoplacer Gold Belt



also associated with cross-cutting structures (e.g., Laurent, 2007). Mineralization occurs as fine- to coarse-grained native gold hosted by narrow cryptocrystalline quartz veins, generally 1 - <10 cm wide, parallel to and cross-cut stratigraphy, and by thin quartz- and/or Fe-oxide-lined fractures or along narrow clay-rich shears. Gold mineralization also occurs as possibly detrital grains along bedding planes (e.g., Rodriguez and Carrillo, 1991; Cuéllar, 1997a) and as very fine (mostly < 20µm) interstitial grains interpreted as paleoplacer mineralization (e.g., Montgomery, 2007b).

Mineralization is most closely associated with silica alteration at all locations, occurring as minor zones of narrow quartz veining and/or as evidently more widely distributed zones of silicification in host strata (e.g., Rodriguez and Carrillo, 1991; Cuéllar, 1998). On the Machado project, mineralization is also closely associated with Fe-oxide-rich horizons within the quartz arenite strata. Commonly noted alteration minerals reported in minor amounts in the Taraira district within quartz arenite include phyllosilicates (sericite, illite, fuchsite) and argillization. Native gold most commonly occurs in the absence of sulfides or other opaque minerals or in association with trace to minor amounts of pyrite and/or wolframite. The presence of organic matter within the sedimentary strata has also been suggested to be important to gold mineralization (e.g., Cuéllar, 1998).

Mineralization in the Taraira region has most commonly been interpreted as paleoplacer, shear-related or structurally controlled and hydrothermal-magmatic. Vein-hosted mineralization clearly indicates an epigenetic component, while irregular-shaped interstitial native gold grains found in quartz arenite (Montgomery, 2007b) suggest in addition a detrital origin for gold.

The most extensive mine workings and best example of gold mineralization on the subject property occur at the Cerro Rojo mineral occurrence. Here, small underground and open pit workings provide good exposure of host sedimentary strata and mineralization. Exposures comprise medium-grained, cross-bedded grey to white quartz arenite, variably oxidized and often strongly hematitic and limonitic as well as minor metaconglomerate and mudstone. Abundant Fe-oxides give outcrop and soil at this location its red color, hence the name “Cerro Rojo” (*Eng.: Red Hill*). Quartz sandstone at Cerro Rojo is typically highly compacted consisting of mature rounded quartz grains with well developed eutaxitic quartz overgrowths forming tight irregular contacts between grains. Minor phyllosilicates, detrital rutile and zircon occur interstitial to quartz grains. Occasional sand-sized lithic fragments were also observed. A strong

structural overprint is evident in some samples from Cerro Rojo, expressed in thin section as irregular extinctions in quartz grains associated with abundant to intense micro-fracturing and narrow quartz veining.

Cerro Rojo occurs along a northwest trending, moderately southwest dipping upright (confirmed by cross-stratification in outcrop at Cerro Rojo) sequence of La Pedrera Formation quartz arenite +/- pebble conglomerate, which reportedly forms the eastern limb of a syncline with the more westerly Agua Blanca ridge. Satellite images (Figure 9-2) reveal an apparent fold closure at the south end of the Machado (Cerro Rojo) ridge, with the Garimpo ridge forming a short apparent eastern limb to a plunging fold. The occurrence of auriferous horizons at both of these locations may reflect a broad continuity of stratigraphy (and mineralization) across these regions.

Cerro Rojo is the site of three main adits (Chivo Bajo, Amarillal and Juan Chivo Alto) which total ~ 100 meters and follow zones of narrow auriferous quartz veining and evidently stratabound zones of mineralization (Personal communication with local miners) closely associated with strong Fe-oxides and locally strong silicification. Native gold in narrow quartz veins- and fracture-related mineralization exposed in underground workings as well as gold-bearing silicified quartz arenite float in small mine dumps was observed during a property visit by the author at Cerro Rojo. Thin section descriptions indicate that micro-fracturing is common in the Cerro Rojo area, and fracturing associated with silica and Fe-oxides host native gold (Montgomery, 2007b). Cerro Rojo is also the location of a small (~ 40 x 20 x 10 m deep) open pit where 3600 t of material was processed which reportedly produced 83.3 g/t gold (Cuéllar, 1998). Numerous small excavations elsewhere appear to also follow zones of quartz veining, oxidation $\pm$ silicification along strike in quartz arenite strata.

Mineralization at Cerro Rojo occurs as native gold, including examples of coarse grains up to several mm in diameter, hosted by massive quartz-lined fractures, hematitic fractures, narrow hematitic clay gouge zones and relatively widely spaced, generally massive to weakly drusy white to grey quartz veinlets (mostly <5 – 15 cm wide) within quartz arenite. Mineralization presently being mined underground at Cerro Rojo is locally of bonanza grade consisting of coarse to fine grained bright yellow native gold disseminated within and along fractures in fine grained white quartz veins, which cross-cut purple to deep red hematitic and silicified quartz sandstone (Figure 9-3). Minor dark metallic minerals are associated with gold in some veins.

Figure 9-2. Digital Elevation image showing the serranias of the Taraira area

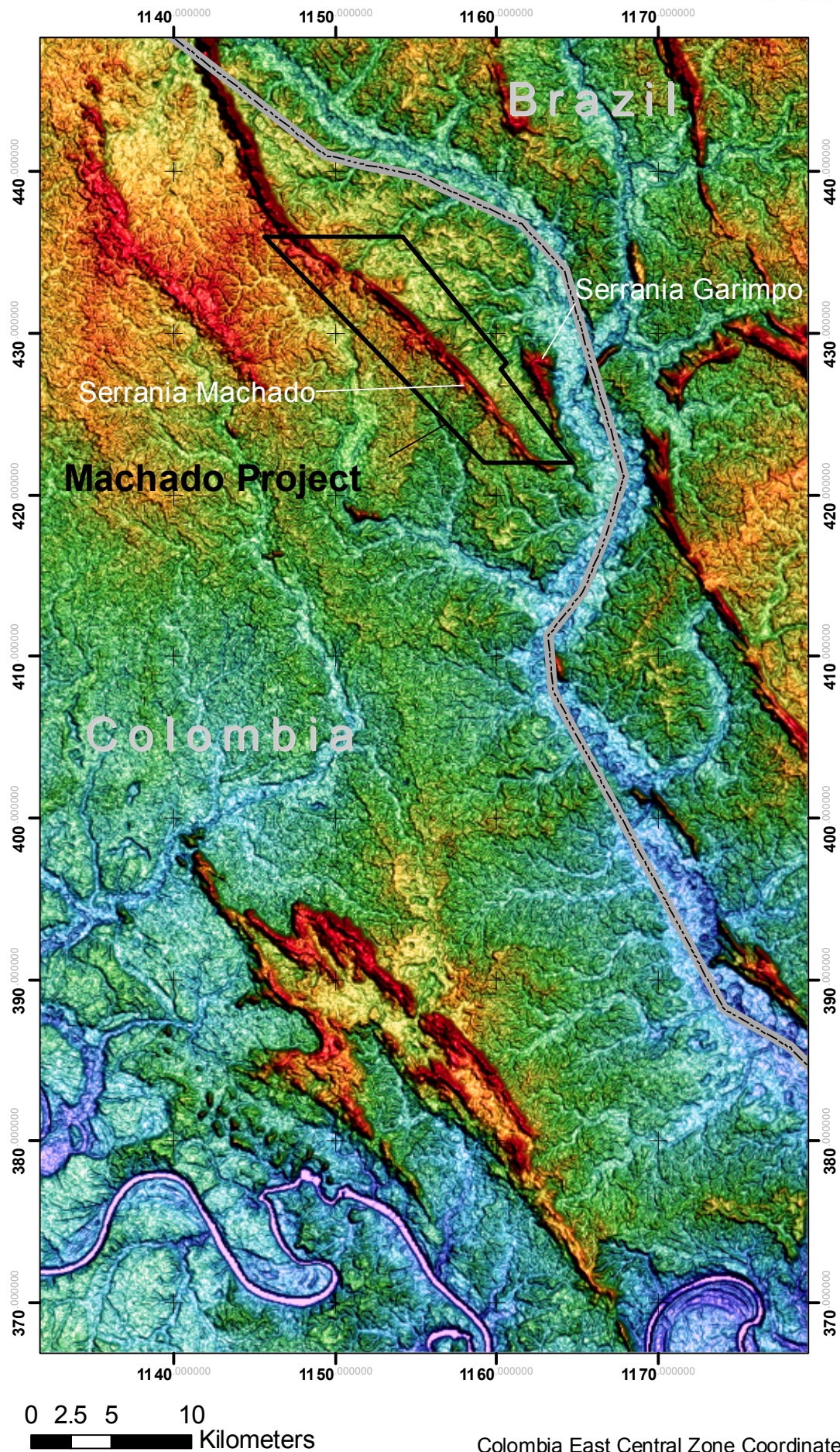


Figure 9-3. Quartz veins cross-cutting Fe-oxide stained metasedimentary stratigraphy at Cerro Rojo

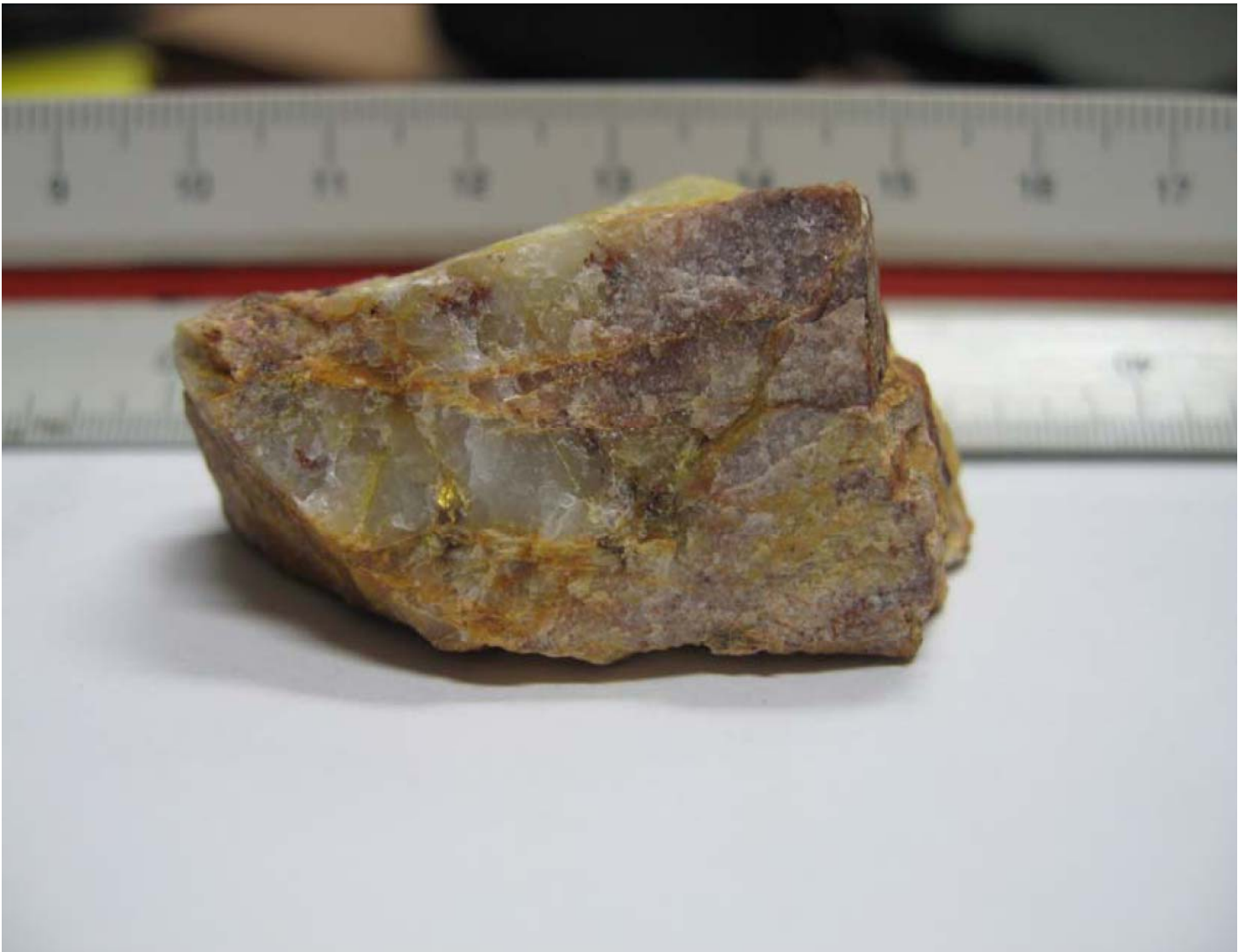


Auriferous veins examined underground at Cerro Rojo form a shallow angle with stratigraphy, while other veins (not observed) are reportedly oriented at high angles to bedding. High-angle, WNW-ESE trending, fault structures may be an important control on gold mineralization at Cerro Rojo (e.g., Laurent, 2007). Gold grades from rock sampling completed by Cosigo at Cerro Rojo range from trace to 2,350 ppm. The erratic high grades pointed to the presence of coarse gold and lead Cosigo to collect bulk samples from two adits at Cerro Rojo in order to more effectively assess the gold grades. The bulk samples contained up to 37.6 g/t gold with up to 91.5% of gold being recoverable by gravity methods. The bulk sampling thus confirmed the presence of coarse gold at Cerro Rojo since fine gold cannot be recovered by gravity methods (Berkman, 1997).

From the textures observed at Cerro Rojo, a preliminary chronology of geological events can be established. Initially, quartz sandstone acted as an aquifer in which early fluids deposited quartz overgrowths on detrital quartz grains. This was followed by later compaction and quartz dissolution at grain boundaries, resulting in development of a highly compacted aquitard with well developed dissolution textures between tightly arranged quartz grains and overgrowths. Deposition of gold bearing quartz veins and precipitation of gold along fractures reflects a later hydrothermal event, which may have occurred during folding associated with the Sunsás Orogeny. Evidence in support of this interpretation includes quartz veining at Cerro Rojo, which often follows bedding planes and which may be localized along fold hinges, features which imply syn-deformation timing of vein emplacement. Disseminated native gold hosted within quartz sandstone away from fractures and veins was apparently deposited independent of this late hydrothermal event, suggesting a separate depositional process. Paleoplacer models have been proposed (see Montgomery, 2007a) to account for the disseminated sandstone-hosted gold within the Taraira belt.

Elsewhere on the Machado project at the *Peladero* showing (located approximately 3 km NW of Cerro Rojo), native gold was found in dump material at a small (ca. 40 m deep, flooded) ramp which follows a hematitic horizon within a moderately dipping quartz arenite sequence (Figure 9-4). Dump material here includes silicified and often strongly hematitic quartz arenite, clear to white quartz vein material at times hosting coarse brassy pyrite, earthy hematite and hematitic clay-rich material. Native gold was observed in one sample of dump material along

Figure 9-4. Native gold in grab sample from the Machado project



fractures cutting a quartz veinlet in quartz arenite and in association with Fe-oxides at the margin of a quartz veinlet.

Hematite-dominant Fe-oxidation at Cerro Rojo and elsewhere on the Machado project appears to be associated with gold mineralization. Geological mapping suggests that this oxidized zone continues along strike for more than 20 km within the Machado project. Hematite occurs as fine disseminations within sandstone as well as along narrow clay-rich layers, following bedding, and along cross cutting fractures. The apparent strong stratigraphic control displayed by hematite distribution may reflect sedimentary Fe-enrichment or, alternatively, secondary Fe enrichment associated with hydrothermal alteration which followed bed-parallel zones.

10.0 EXPLORATION

Exploration by Cosigo on their Taraira projects started in 2007. Cosigo is the operator of the Machado Project and the Issuer, Horseshoe Gold Mining Inc., has not carried out any exploration work on the project. Ongoing field work is being carried out under the direct supervision of Cosigo geoscientists and sample analyses are being completed by ALS Laboratories Inc., Vancouver, and by SGS Canada Inc., Toronto. To the best of the author's knowledge all work is being carried out at or above industry standards and is considered reliable and of good quality. While much of the historical work at Machado may have been less than ideally suited for a coarse gold environment, field and analytical methods currently being applied appear to be appropriate for their intended application.

To date, exploration related work completed on the Machado project has included construction of a central 30-man tent base camp, mobilization of a light-weight reverse circulation percussion drill and completion of a network of access trails.

Initial rock, stream-sediment and soil sampling programs have been completed and petrographic work has been carried out on a small number of samples. On the Machado project work has commenced with initiation of 1:10,000-scale geological mapping and MMI grid-based soil sampling. Rock samples obtained by Cosigo have shown grades from trace up to 2,350 g/t gold. To date, 2 channel samples, 39 rock, 39 sediment and 5,631 MMI soil samples have been assayed from Cosigo's Machado project. An additional 4,539 MMI samples have been collected but have yet to be assayed (See Figure 10-7). Sampling and geological mapping has been completed in preparation for a planned drilling program to test the main areas of known mineralization and anomalies highlighted by the MMI survey. Drilling equipment has been mobilized to the Machado project, where initial testing of several priority targets is planned.

The most extensive known gold mineralization on the Machado project occurs at the Cerro Rojo mineral occurrence. In order to better understand the nature of the gold mineralization and to more effectively assess the gold grades, channel samples and bulk samples have been taken at this location. The bulk samples have shown grades up to 37.6 g/t gold. The channel samples, even while assayed by screen fire assay rather than by fire assay, have been shown to understate the grade from the bulk samples and this work has confirmed the overwhelming presence of coarse gold at Cerro Rojo (see Section 10.3). The proportion of coarse gold has a direct impact

on the effectiveness of sampling, where more coarse gold will require larger samples (Dominy and Platten, 2007).

Work being conducted by Cosigo on its Taraira project represents initial exploration activity in the region. Cosigo has designed their program to test areas of known mineralization and to evaluate the largely covered areas, along strike and surrounding the areas of known mineralization. A key component of this work will be drilling, to test known showings and their potential along-strike extensions.

10.1 Geochemistry

MMI sampling has been completed to date over parts of the Machado claim block centered over the Cerro Rojo area. Results highlight an evidently stratabound zone of anomalous gold-W-Bi±As±Sb±Ta, centered over an oxidized sandstone horizon in the Cerro Rojo area and extending in a NNW- direction along strike for at least 1,200 m. A second zone of anomalous gold extends ENE for at least 2,200 m from Cerro Rojo across the stratigraphic grain, however, this zone may be a product of secondary gold enrichment (Figures 10-1 to 10-7). MMI gold values range up to 619 ppb within this area. A third area of anomalous geochemistry occurs over much of the western sector of the grid, as completed to date, west of the sandstone ridge. Uniformly high values for several elements in this area and generally low gold values suggest that this anomalous zone may be lithologically derived.

10.2 Channel Sampling and Bulk Sampling

At the Cerro Rojo mineral occurrence, grab samples assayed for gold by Cosigo range from trace to 2,350 g/t. The erratic high grades, gold being readily visible in grab samples and from panning stream sediment, soil and crushed rock, point to the presence of coarse gold. The proportion of coarse gold has a direct impact on the effectiveness of sampling, where more coarse gold will require larger samples in order to determine true gold grade (Dominy and Platten, 2007). These indications of coarse gold led Cosigo to collect channel samples and bulk samples in order to better understand the nature of the gold mineralization and to more effectively assess the gold grade.

Cosigo collected a three barrel, 840 kg, bulk sample from the Chile Bajo Adit and 18 barrels of sample from Agaminon's Adit at the Cerro Rojo mineral occurrence. The three barrel, 840 kg, sample as well as 617 kg of sample from two randomly selected barrels from

Figure 10-1 Machado Au MMI Results

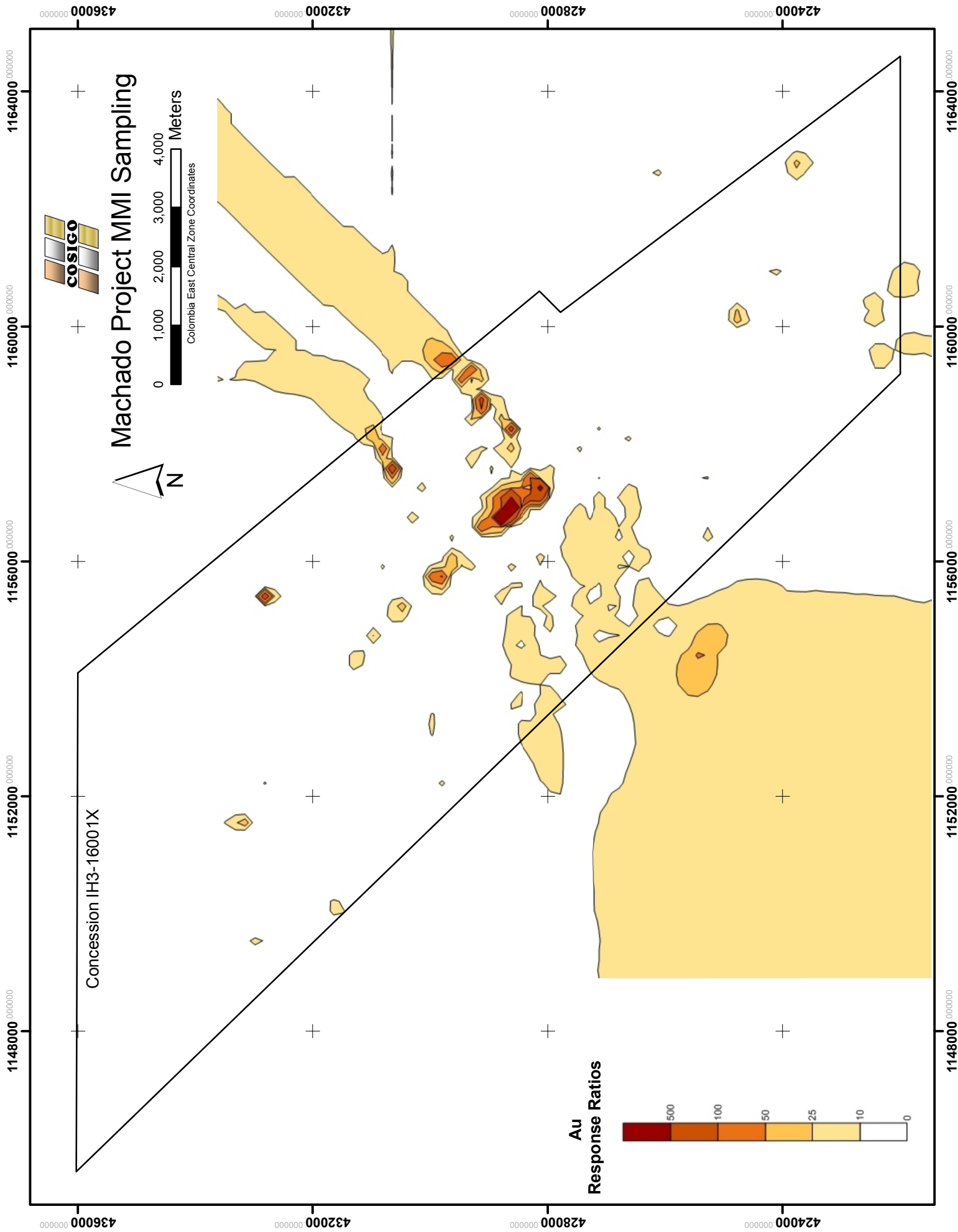


Figure 10-2 Machado W MMI Results

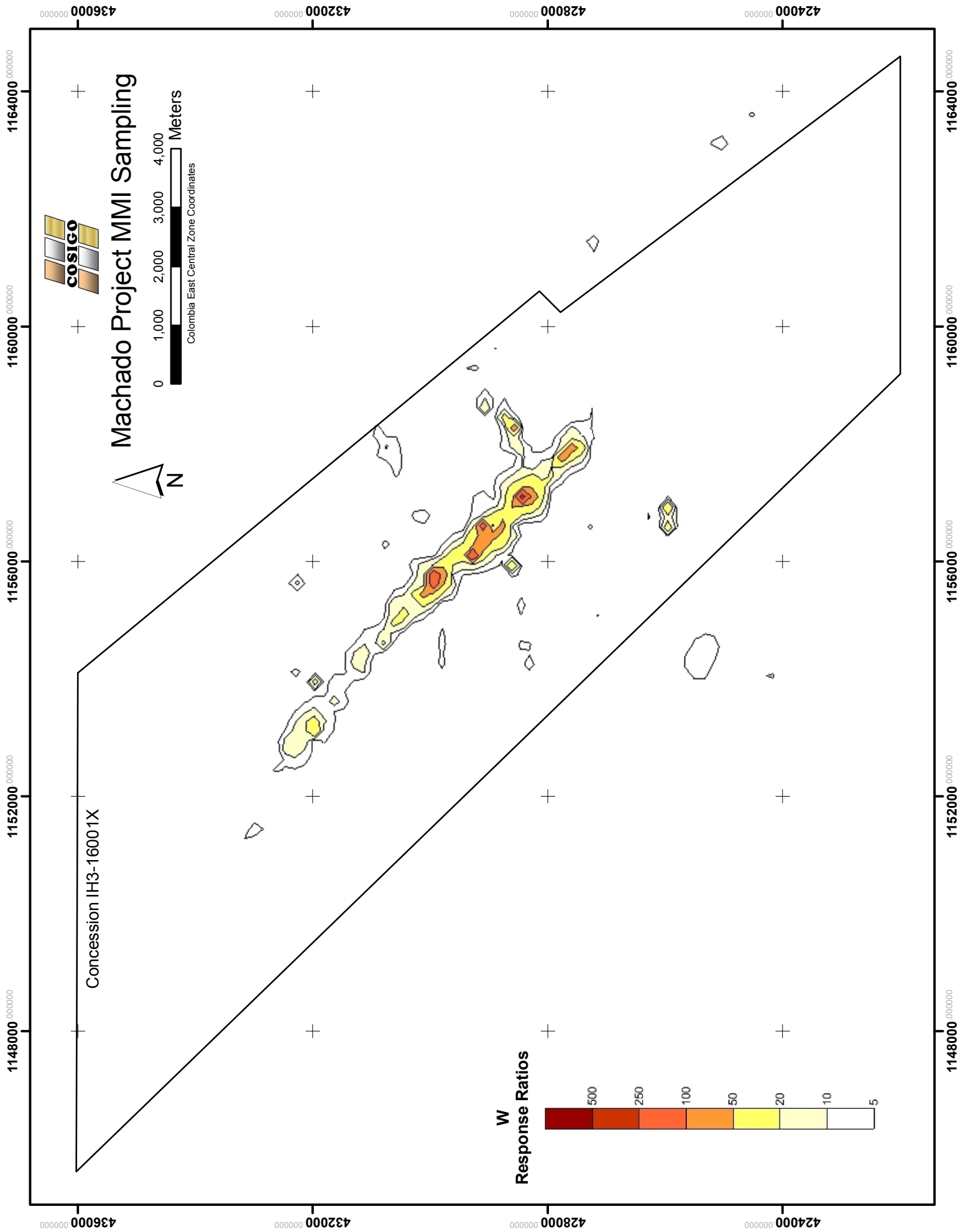


Figure 10-3 Machado Bi MMI Results

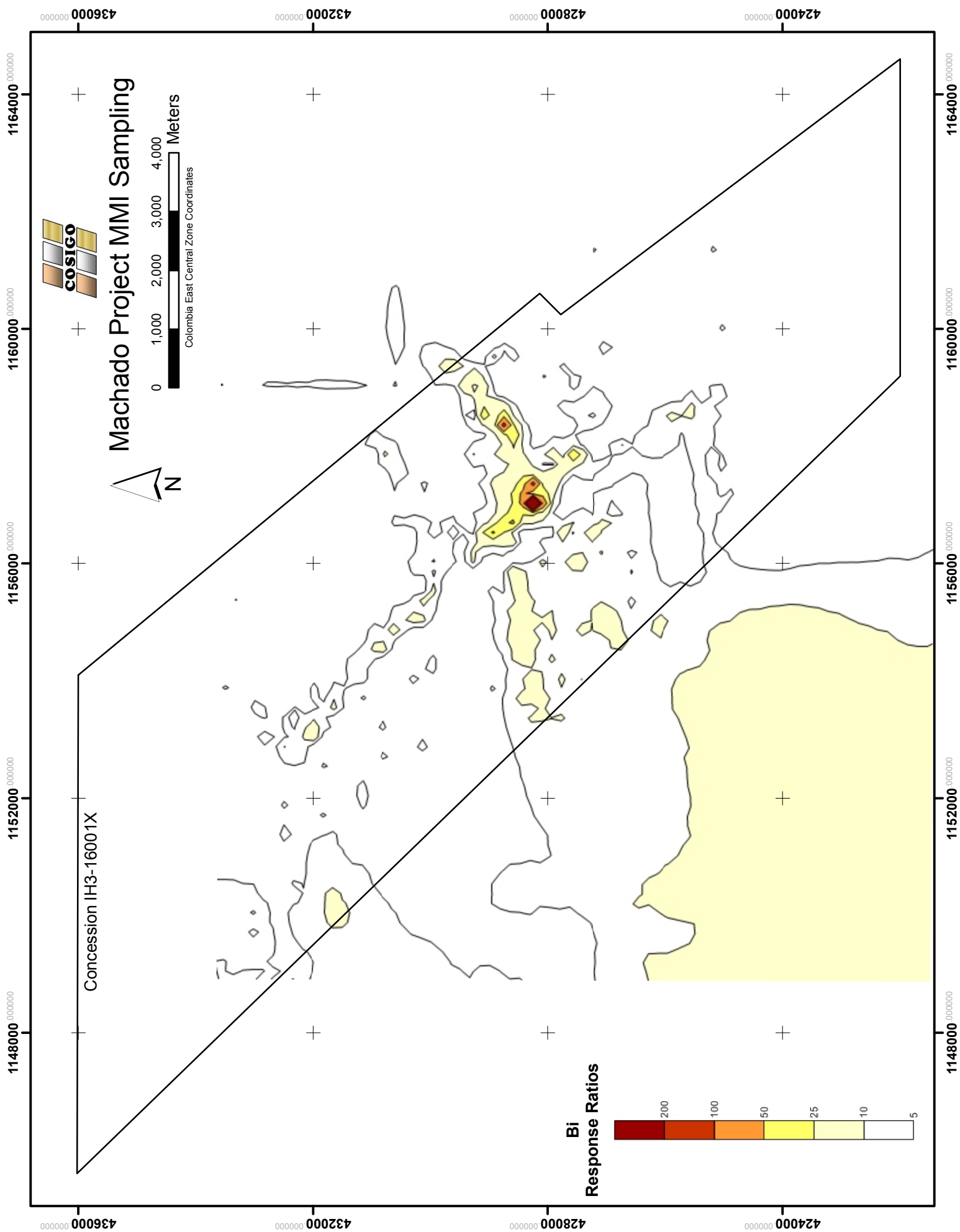


Figure 10-4 Machado As MMI Results

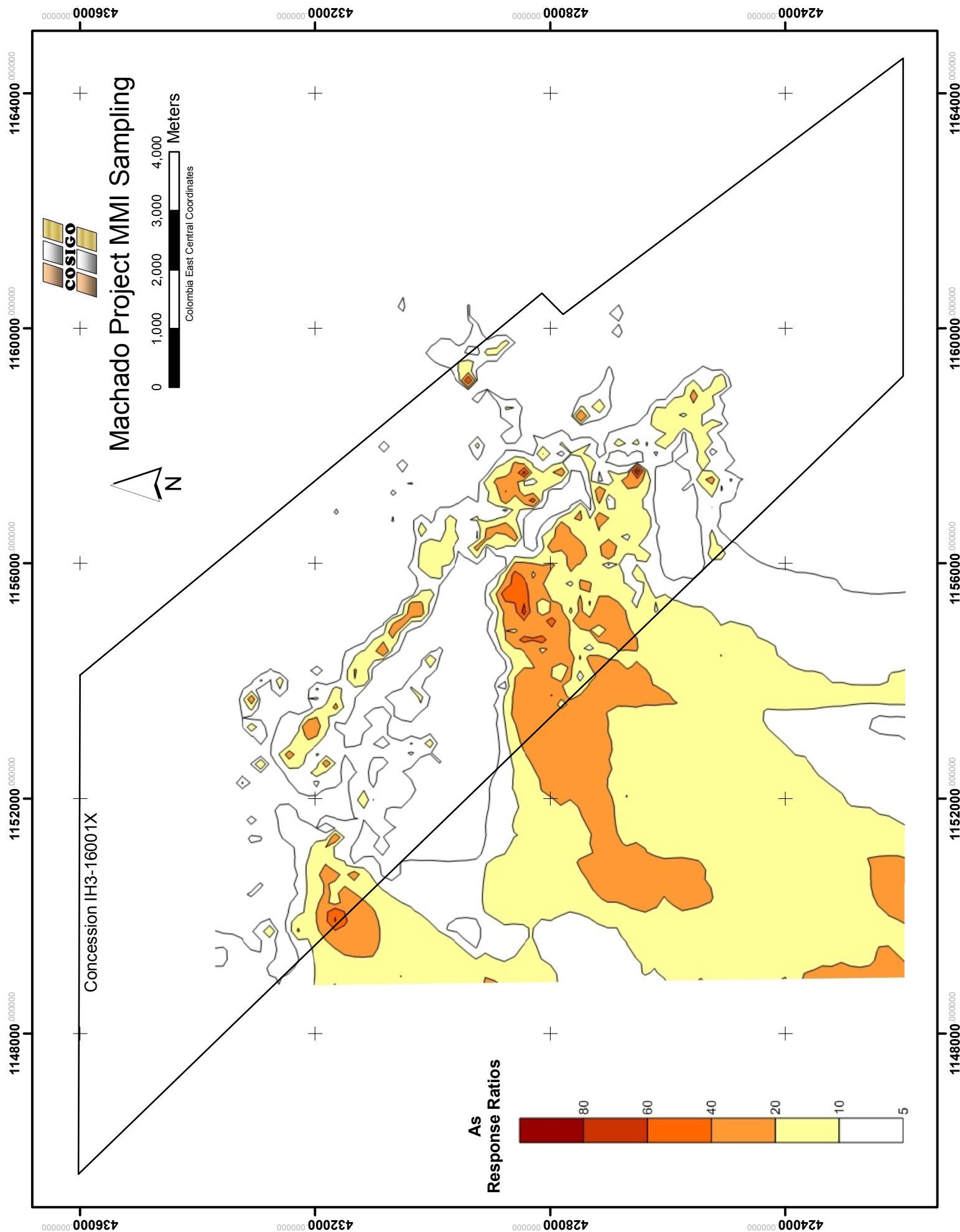


Figure 10-5 Machado Sb MMI Results

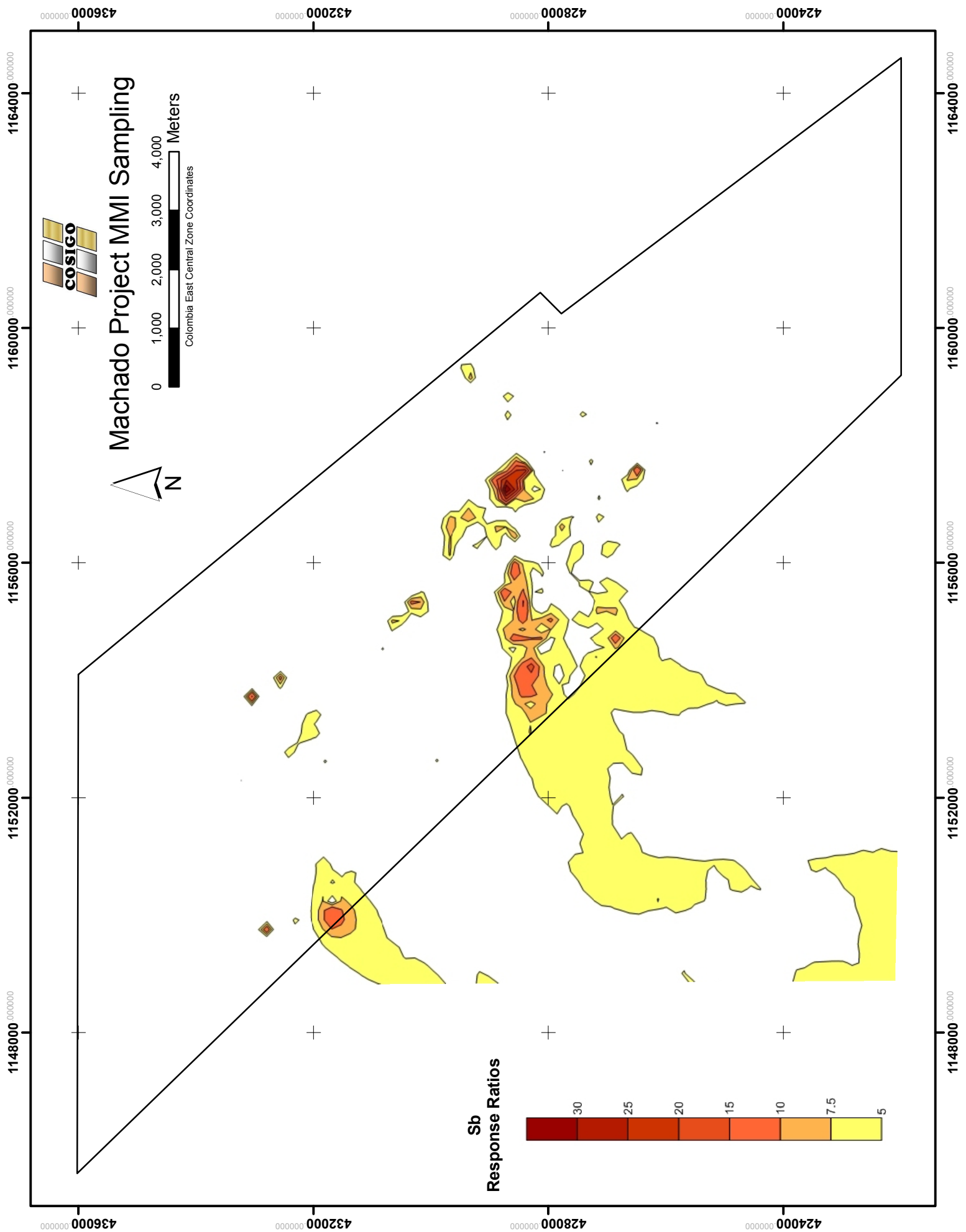


Figure 10-6 Machado Ta MMI Results

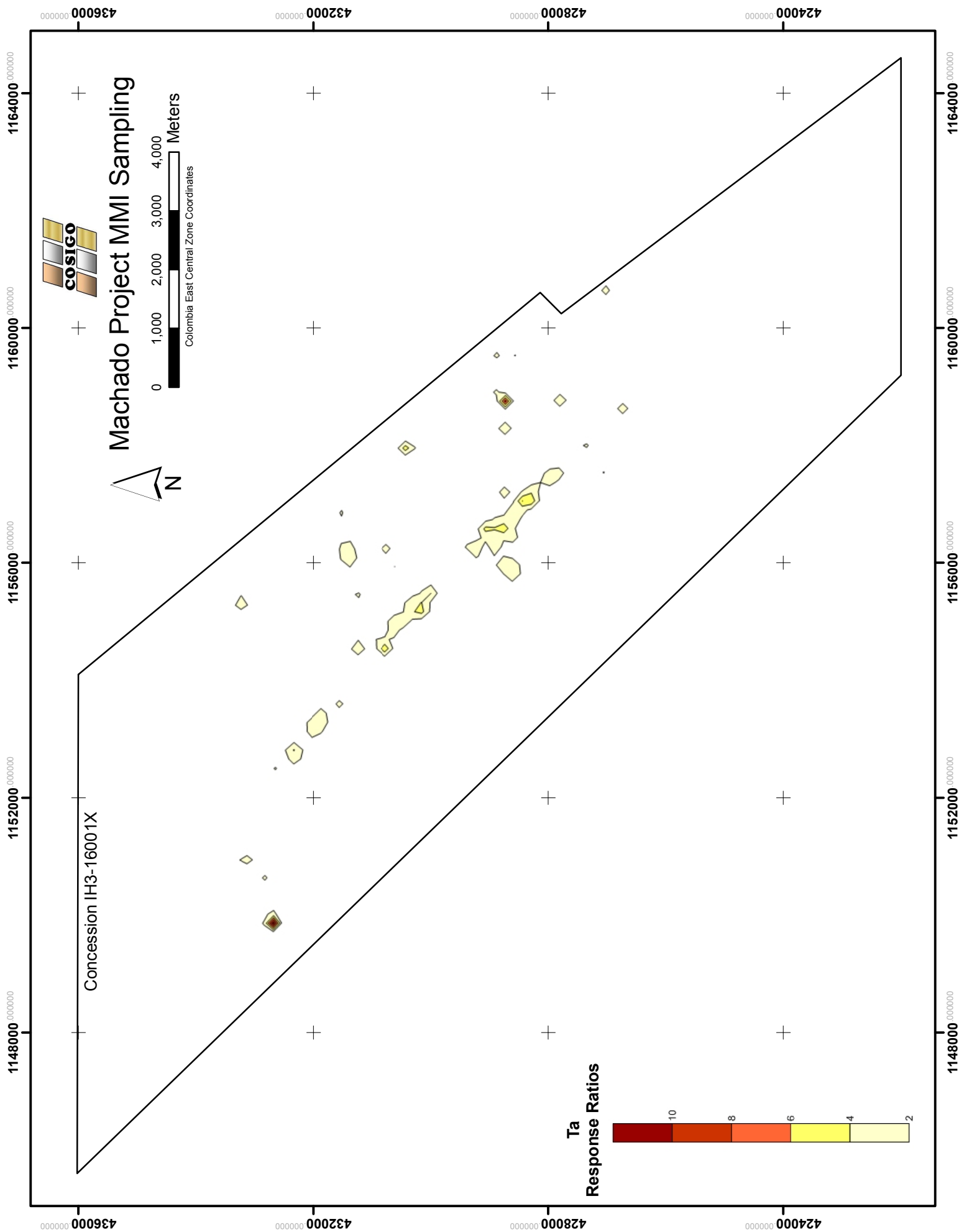
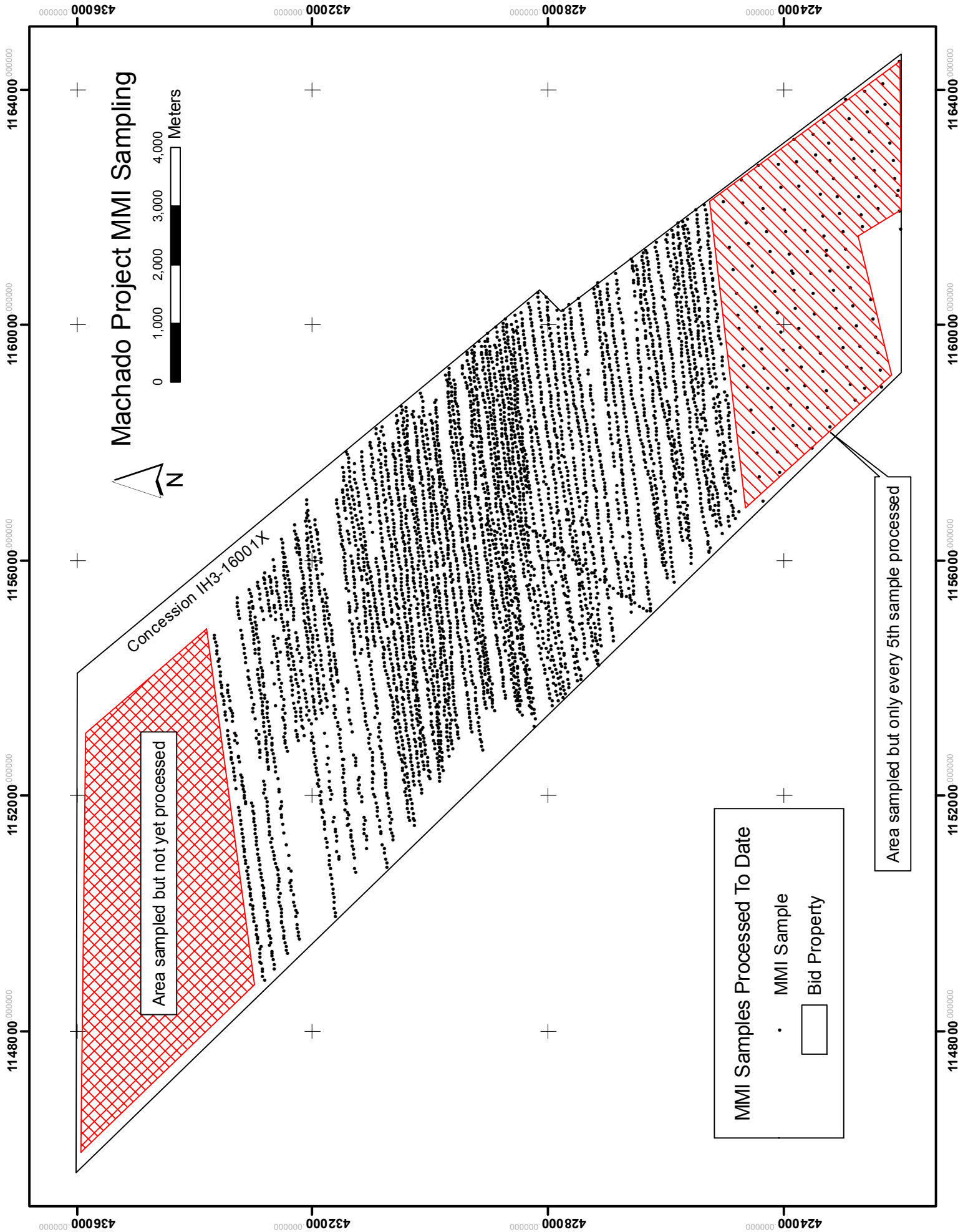


Figure 10-7. Machado MMI Samples Processed



Agamenon's Adit were processed in 2010 by gravity concentration at Knelson Research of Langley, B.C., Canada. The entire bulk samples were first crushed to approximately -1/4" mesh. The crushed material was then blended and 10-12 kg subsamples from each bulk sample were obtained using Knelson's laboratory rotary splitter. Each sub-sample was pulped with water to approximately 60% solids by weight prior to being loaded into a laboratory rod mill and milled for 12 minutes to achieve an approximate feed P_{80} of 100 microns. The sub-samples were then separately processed through Knelson's KC-MD3 concentrator. Concentrates as well as sub-samples of the tailings stream were subsequently assayed for gold by fire assay (see Appendix III). Four ~12 kg sub-samples from the Chile Bajo Adit bulk sample contained 6.47 g/t gold, 6.59 g/t gold, 6.71 g/t gold and 7.11 g/t gold, respectively. Two ~10 kg sub-samples from the Agaminon's Adit bulk sample contained 27.2 g/t gold and 37.6 g/t gold.

Processing of the bulk samples has provided Cosigo with concrete evidence to show that Cerro Rojo is a coarse gold (nuggety) mineral occurrence. Gold recovery by gravity concentration ranged from 67.98% to 70.7% from the Chile Bajo Adit bulk sample and from 84.4% to 91.5% from the Agaminon's Adit bulk sample (See Appendix III). The overwhelming presence of coarse gold in the bulk samples from Cerro Rojo is confirmed as fine gold would not be recovered by the gravity methods such as the one used by Knelson Research (Berkman, 1997).

In coarse gold environments accurate sampling of gold mineralization presents several difficulties. Standard 50 to 100g fire assay techniques on a large number of small samples of drill core, rock or chip samples tend to show extremely poor repeatability and will consistently understate the true grade (Johansen, 1997). Using standard fire assay techniques, the laboratory sample preparation procedures often lead to the gold content being understated. The error is caused by the assumption that the sample pulverizing process produces a homogeneous sample. This is not the case with samples containing coarse gold because the highly malleable coarse gold grains resist the pulverizing process. The coarse gold grains will then often be excluded from the material from which the small sample charge is taken for fire assay. Screen fire assays will minimize the problems associated with sample preparation since the coarse fraction is sieved out and assayed separately but a small sample size will still understate the true grade (Johansen, 1997). Effective sampling of coarse gold occurrences is difficult because of the low concentration and erratic distribution of larger gold particles. Small samples will have a statistically low chance of sampling the coarse gold grains.

Cosigo has obtained a very concrete example showing that channel samples significantly understate the grade from bulk samples collected at the Cerro Rojo coarse gold occurrence. Cosigo collected two channel samples from Agaminon's Adit prior to collecting a bulk sample from the same location. One 881.3g channel sample contained 0.98 g/t gold with a second 866 g channel sample returning a grade of 0.73 g/t gold from screen fire assays. Two 12 kg sub-samples from the corresponding 617 kg bulk sample processed by Knelson Research contained 27.2 g/t gold and 37.6 g/t gold confirming that larger samples are required to effectively assess the gold grade in this environment.

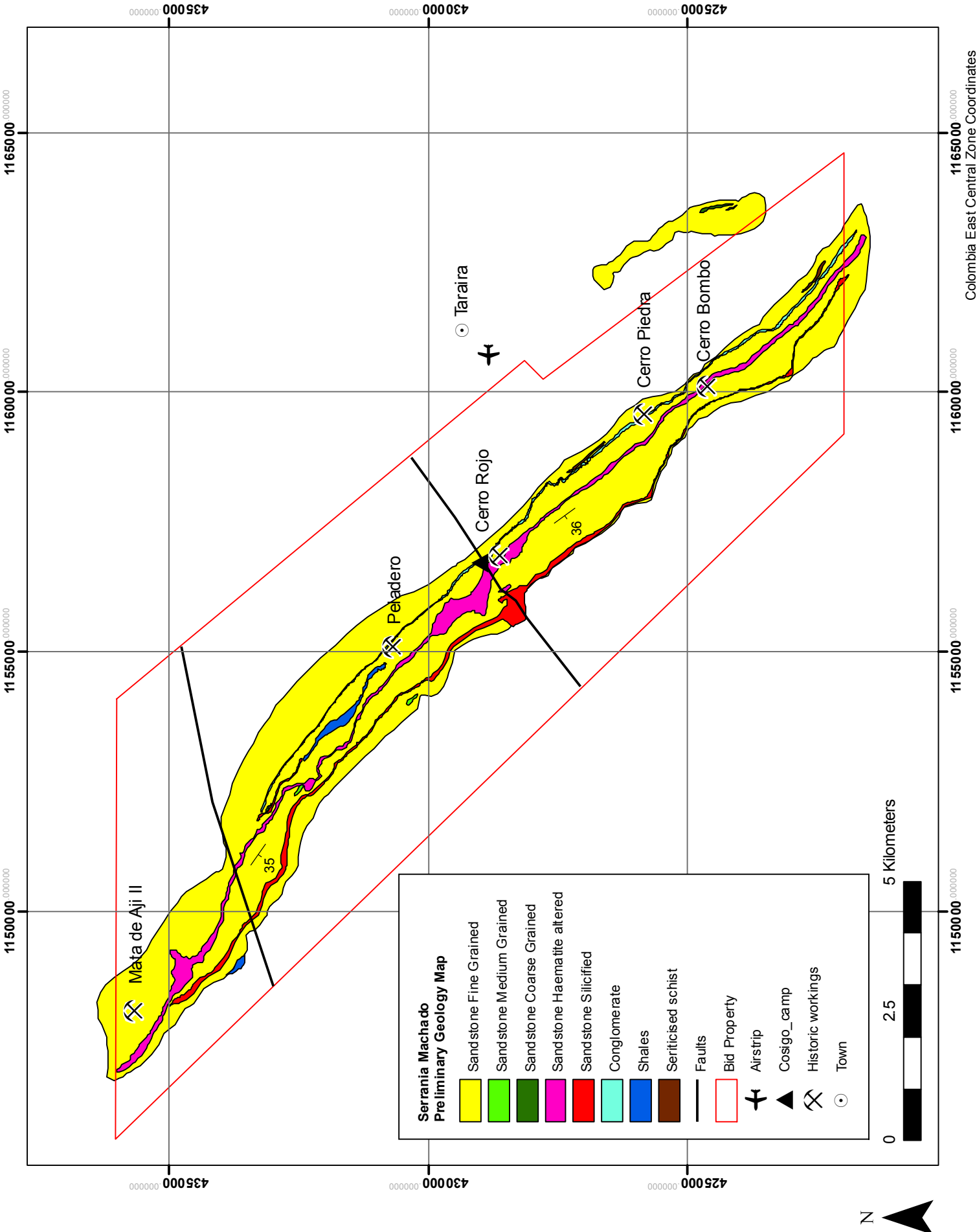
10.3 Geological Mapping

Cosigo has carried out geological mapping over the Machado project at a scale of 1:10,000 (Figure 10-8). This initial mapping indicates that the Machado project is underlain by a moderately west-dipping fine grained quartz arenite unit, containing continuous quartz pebble conglomerate and oxidized quartz arenite horizons. The western flank of the strata is silicified. The geological mapping has traced the iron oxide-bearing and silicified horizons with mineralized quartz arenite strata within the property for a strike length of more than 20 km along the Serrania de Machado hill.

11.0 DRILLING

No drilling has been carried out by Horseshoe or Cosigo on the Machado project. Cosigo has mobilized two light-weight RC drills to Colombia. One of these drills is currently on-site at the Machado project. Cosigo has applied for the permits necessary to carry out drilling on the property and expects drilling to commence before long.

Figure 10-8. Preliminary Geological Map - Serrania Machado



12.0 SAMPLING METHOD AND APPROACH

Sampling on the Machado project has included initial rock, soil and stream sediment sampling as well as a grid-based MMI soil sampling program covering most of the Bid Property.

Several hundred rock samples have been obtained on the Machado project by company geologists. Most were grab samples obtained from outcrop. The bulk of these were obtained solely for lithology identification purposes in connection with geological mapping. The location of each sample is recorded by GPS (Global Positioning System) and the sample is given an identification number and placed into a textile sample bag. Thirty-nine rock samples have been assayed for gold yielding grades from trace to 2,350 g/t gold. Select sample locations and associated gold assay results are given in Appendix II.

Two, approximately one meter long, channel samples were obtained from the end face (~4 m wide and ~2 m high) of one of the adits (Agaminon) at Cerro Rojo. The approximately 15 m long adit was produced by artisanal miners exploiting favourable metasedimentary silicified and Fe-oxide stained strata with cross-cutting narrow quartz veins and veinlets. The channel samples (weighing 881 g and 866 g, respectively) were obtained by hammer and chisel and oriented perpendicular to and crossing two narrow (~3 cm) quartz veins cross-cutting silicified and haematized metasedimentary strata (See Figure 9-3). Eighteen barrels of bulk sample was subsequently obtained from the same location as the channel samples to test for the potential impact of coarse gold on the gold grades at Machado. The bulk sample was obtained by blasting by local artisanal miners temporarily operating the adit. The blast was observed by Cosigo personnel on-site, who immediately after the blast acquired the material liberated by the blast from the artisanal miners. The bulk sample, which is best described as a large panel sample measuring 190 cm by 119 cm by 80 cm, included material from the narrow quartz veins but consisted mostly of silicified and haematized metasandstone. The results from the bulk sample have provided useful information regarding the coarseness of the gold in the Agaminon adit. Although the narrow quartz veins make up only a small fraction of the total weight of the sample they may have contributed significantly to the gold grade. A second, 3 barrel, 840 kg bulk sample was obtained from the Chile Bajo adit, which is located approximately 0.2 km SE of Agaminon's adit. The sample from here was obtained in the same way as the bulk sample from Agaminon's adit. The Chile Bajo adit follows 45 degree SW dipping metasedimentary strata to a depth of approximately 30 m. The height of the adit is 2 m and it is up to 8 m wide. The sample

represented a panel of approximately 200 cm by 100 cm by 30 cm of silicified, Fe-oxide stained metasediment with an approximately 15 cm wide quartz-vein cross-cutting the metasedimentary strata. This vein may be a significant contributor to the gold grade of the sample. The author believes that the results of the bulk samples should not be viewed as representative grades for the Machado Project as a whole but rather as evidence of the presence, at least locally, of high grade gold on the Bid property. Nonetheless, the results of the channel samples and the bulk samples have provided the company with valuable information about the coarseness of the gold at Cerro Rojo and will have a direct impact on the recommended sampling methods and approach going forward.

Stream sediment samples collected by Cosigo were obtained from favorable *trap sites* identified by company geologists and/or one of several experienced prospectors in the company's service. Samples were obtained by shovel and were bagged once the biggest rocks and pebbles (> 3cm in diameter) had been removed from the sample. The sample bags were marked with a sample identification number and the sample location recorded by GPS. A total of 39 stream sediment samples have been assayed with several samples yielding grades higher than 1,000 ppm gold.

The MMI soil sampling program was designed to cover the entire Bid Property area at a sample density of one sample per hectare. The sampling was carried out along E-W lines with a line spacing of 100 m and a sample spacing of 50 m. The program was centered on the Cosigo Camp at Cerro Rojo with 50 sample lines south and 50 lines north of the camp. Each line contained ca. 90 samples for a total of over 9,000 samples.

At each sampling site the humus layer is first scraped off. The sample is then obtained from the underlying 15 cm of soil, which mainly consists of quartz sand. The sample is obtained such that material is obtained evenly from the entire 15 cm profile using a plastic trowel. The sample sites were located by GPS. Samples were placed in numbered bags, which were sealed and brought to the Cerro Rojo camp at the end of each working day. In order to ensure the consistency of the sampled material only two samplers were used on the program. These samplers have been trained in MMI sampling techniques and their work was inspected by senior Cosigo personnel on a regular basis. The geochemical results from the MMI samples are interpreted by the company using an industry standard "Response Ratio" method. In order to calculate MMI response ratios when using large MMI datasets a background value is first calculated for each analyzed element. At Machado, Cosigo uses the lower 25th percentile value

of the assay values for each element as the background value. Response ratios for mapping are subsequently calculated by dividing the assay values with this background value. The geochemical data along with geological mapping and structural interpretations will be used by Cosigo to select drill targets. Results to date, highlight areas with anomalous gold values suggesting that MMI soil sampling is an effective means of identifying areas of anomalous gold within areas of cover along the Taraira Paleoplacer Gold belt.

13.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

All rock, sediment and conventional soil analyses are being completed at ALS Labs in Vancouver. Preparation of rock samples includes crushing to 70% less than 2mm and pulverizing to 85% less than 75 µm. Soil and sediment samples are sieved to -180 µm. Geochemical gold analyses of rock, soil and sediment samples are being carried out by FA (fire assay) and ICP-AES (Inductively Coupled Plasma Atomic Emission Spectroscopy) finish. Analysis of high grade samples is completed by 30 g split FA-AAS (Atomic Absorption Spectroscopy) finish, and where coarse gold is suspected, the wet screened -75µm oversize fraction is fire assayed and the total gold content calculated. Samples with >100 g/t gold are reanalyzed by FA-gravimetric finish. Rock, soil and sediment samples are also being analyzed for a 35-element multi-element package by Aqua Regia digestion and ICP-AES analysis.

In addition to the above analyses, MMI (Mobile Metal Ion) analyses of grid-based soil samples are being completed at SGS Canada Inc. laboratories in Toronto (“SGS”). MMI sample collection is being completed according to protocols outlined at www.sgs.com/geochem/mmi. The MMI method involves proprietary digestion of 50g samples using organic and inorganic compounds, as opposed to aggressive acids utilized in conventional digestion techniques, to selectively leach loosely held “mobile” metal ions. MMI samples have been analyzed by ICP-MS (Inductively Coupled Plasma Mass Spectroscopy) for gold-Ag-As-Bi-Sb-Ta-U-W ± several other elements. This technique is suitable for detection of buried bedrock sources in covered areas. SGS is carrying out a duplicate assay program where every 12th MMI sample is re-assayed. In addition, into every batch of 45 MMI soil samples is inserted, on average, 2 blank samples and 2 standard samples for further quality control.

An F-test of the original and duplicate gold values in Table 13-1 indicates that the two sample sets represent the same population ($F_{\text{calc}}=1.344 > F_{17,17, 95\%} = 2.272$). A Student's t-test also indicates that the sample sets represent the same population.

Table 13-1. Duplicate assays from Machado MMI soil sampling

Sample	Original Au (ppb)	Duplicate Au (ppb)
P6M 1E	100	79
P4M 1E	30.7	46.5
P7M 1E	21	16.5
P8M 1E	8.4	6.3
P5M 1E	6.1	6.7
P4M01W	3.3	2.9
P9M 1E	1.9	1.2
C14M 1E	1.7	1.7
P1M1W	1.2	1.3
P13M1W	1.1	0.7
C6M01W	0.9	0.8
P12M37W	0.7	0.8
P1M25W	0.6	0.9
P1M37W	0.6	0.5
P4M39W	0.6	0.5
P6M25E	0.6	0.3
P7M13E	0.6	0.4
P7M25E	0.5	0.3

The results of analysis of the blank samples are acceptable. Of 149 blank samples analyzed to date on the MMI soil sampling program, 148 show gold below the 0.1 ppb detection limit and one sample shows a gold result of 0.2 ppb.

At the time of writing, a standard sample, having an assay value of 32 ppb, had been analyzed 101 times. A t-test shows that the variation of the results is acceptable. Analytical results for a second standard, having an assay value of 4 ppb, also display variation within acceptable limits.

14.0 DATA VERIFICATION

The author conducted a site visit, accompanied by Cosigo Resources Inc. personnel, to the Machado Project on May 31st and June 1st, 2010. The 30-man camp was visited and the light-weight reverse circulation percussion drill rig was observed. Very fine- to coarse-grained native gold up to > 1 mm in diameter was observed in hand sample and/or thin sections from the Cerro Rojo mineralized area on the Machado project and from Peladero, located some 2.5 km NW of Cerro Rojo. At Cerro Rojo, native gold was identified in hand samples and in thin section in association with narrow quartz veins cutting quartz arenite, along finely drusy quartz- and Fe-oxide-lined fractures in quartz arenite, and as fine interstitial grains evidently unrelated to veining or fractures in quartz arenite. Samples were collected from underground workings where local mining activity was in progress. Sampling underground included narrow (< 5cm wide) quartz veins with native gold grains which were observed to range in size up to > 1 mm in diameter. Elsewhere on the Machado project, native gold was panned from small dumps at abandoned underground workings at Cerro Bombo and Peladero. At these sites, gold was found to be associated with silicified and hematitic quartz arenite.

While check assays were not carried out by the author on samples from the Machado project, the identification of native gold at several locations in outcrop, dump material and locally derived alluvial deposits clearly indicates the presence, at least locally, of high-grade gold material on these projects. All analyses reported on here have been contracted to internationally accredited laboratories (SGS Canada Inc. and ALS Laboratories) and analytical certificates have been provided to the author for these analyses. The author believes these data to be reliable and accurate. Sampling protocols and other sampling handling procedures put in place by Cosigo have not been verified by the author. Based on the information provided by Cosigo the author is of the opinion that sample preparation and analysis protocols as well as sample security have been adequate and that Cosigo's work meets accepted industry standards.

The reports produced by Mineralco in the mid- to late-1990s provide an excellent summary of the geological environment at the Machado Project. Analytical data presented in Mineralco technical reports and reported on here have not been independently verified by the author. A lack of sampling and in some cases analytical details attached to a percentage of this work introduces some uncertainty to these results, in particular, the location of surface samples and significance of results is often not presented clearly.

Highly anomalous gold values are reported by Mineralco for drill core samples associated with one laboratory (Corelab) as reported in Cuellar (1997a, b; 1998). However, these results are distinctly higher than anomalous values from analyses of core at two additional labs used (Quimia Ltda, Bogota and Bondar-Clegg, Quito/Vancouver). This apparent lab bias pertaining to drill core samples is discussed by Cuellar (1997a, b; 1998). This author mentions the use of different sieve sizes at the different laboratories but does not adequately account for the discrepancy. Notwithstanding the discrepancy between the laboratories, drill core was analyzed for gold by standard fire assay at all three laboratories. The generally low assay values reported by Mineralco from its drill core, stream sediment and rock samples on the Machado project seem at first to be inconsistent with Mineralco's reports of the widespread presence of visible native gold and the reported past production at Machado. However, the occasional very high gold assays and the reported widespread presence of visible gold grains by Mineralco are indications of the presence of coarse gold mineralization (Berkman, 1997). Concrete evidence has been obtained by Cosigo that the Cerro Rojo mineral occurrence is a coarse gold (nuggety) mineral occurrence (see Section 10.3). The Mineralco drill core, stream sediment and rock samples were all analyzed for gold by standard fire assay with small, 2g or 30g, sample charges having been taken for assay. This assay procedure will understate the true grade of any coarse gold mineralization intersected by the drill holes or contained in the samples (Johansen, 1997). With Mineralco's small sample sizes there will also have been a statistically low chance for any coarse gold grains to actually be included in the samples. For these reasons, it is the author's opinion that the Mineralco assay values should not be considered representative.

15.0 ADJACENT PROPERTIES

No current exploration activity by competitors on neighboring properties is known at Taraira. To date, known competitor activity consists of a single application for an exploration concession, which has been filed for an area at Serrania Agua Blanca, immediately NW of the Machado project by a group of private individuals.

Artisanal mining activities have been extensive in the northern part of the "Taraira Paleoplacer Gold belt at Naquen. In Brazil, across the Taraira River (which forms the boundary between Colombia and Brazil), locals are engaged in the recovery of gold from arenite serranias geologically similar to Serrania Machado.

Cosigo has acquired and/or applied for the mineral rights to several other gold exploration targets in the Taraira Paleoplacer Gold Belt covering known quartz arenite stratigraphy in the district. It is recommended that investigations are also extended over these properties. Artisanal mining may have been focused at Machado simply because it was easier to access rather than because it was shown to be the most prospective area. It is quite conceivable that these other properties are as prospective as Serrania Machado.

16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

To the best of the author's knowledge, no mineral processing or metallurgical testing has been completed.

17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

To the best of the author's knowledge, no current mineral resource or mineral reserve estimates have been completed.

18.0 OTHER RELEVANT DATA

No relevant data or information has knowingly been omitted by the author.

19.0 INTERPRETATION AND CONCLUSIONS

Horseshoe Gold Mining Inc. is planning a business combination with Cosigo Resources Inc. Cosigo is a Vancouver, British Columbia-based exploration phase natural resources company, which has acquired the rights to the Machado gold exploration project located in the metallogenically important region of Colombia known as the Taraira Paleoplacer Gold Belt, southeastern Colombia, along the border with Brazil. In accordance with an Arrangement Agreement signed on October 25, 2010 between the two companies, Horseshoe will acquire all of the outstanding securities of Cosigo in exchange for 60% of the post-combination Horseshoe shares. The resulting combined entity, which will be 100% owner of the Machado gold exploration project, will be owned 40% by Horseshoe's present shareholders and owned 60% by the current Cosigo shareholders.

Dramatically improving security conditions in Colombia over the last decade have re-opened the country to foreign investment. Despite the Machado project being located in the far eastern part of the country, access to the site is straightforward. Mobilization of personnel and supplies is by charter flight to the town of Taraira and then along a 5 km jeep road to the 30-man camp at the center of the property. Heavier equipment and supplies can be transported by barge from the major port of Manaus in Brazil up the Amazon and Taraira Rivers for significant cost savings. It is possible to carry out exploration work year round in the Machado area. The Taraira Paleoplacer Gold Belt has been the site of hundreds of placer and lode gold recovery operations since the discovery of mineralization in the mid-1980s. Some operations have produced significant quantities of gold, which at the Machado project is hosted in Precambrian quartz-sandstone stratigraphy within the Cerro Rojo and Peladero Members of the Pedrera Formation. The most extensive mine workings are located at the Cerro Rojo occurrence, at the center of Cosigo's Machado project. The results of processing by gravity concentration by Cosigo of 840 kg and 617 kg bulk samples from 2 adits at Cerro Rojo showed grades as high as 37.6 g/t gold and confirmed the overwhelming presence there of coarse (nuggety) gold.

Geological mapping by Cosigo has traced the favorable stratigraphy within the property for more than 20 km along strike and native gold has been identified in samples from all (15 in total) drainages along the Serrania de Machado hill (Cuellar, 1997a, 1997b; 1998). Visible gold has been identified in outcrop and at underground workings at several locations along this trend,

where previously reported results for select samples range up to >2000 g/t gold (Montgomery, 2007a).

Mineralization on the Machado property in the Taraira Paleoplacer Gold Belt occurs as:

- a) Stratabound, disseminated gold, of inferred paleoplacer and/or remobilized paleoplacer origin (Cuellar, 1997; Montgomery, 2007a);
- b) Epigenetic cross-cutting quartz vein-related and structurally-hosted gold;
- c) And recent placer deposits, generated locally from hard-rock sources.

Higher grade zones are reportedly preferentially developed at intersections between quartz arenite strata and WNW-ESE trending steeply south dipping faults (Laurent, 2007). These faults should be taken into consideration when planning exploration programs.

Although the geological data base for the area is sparse, a series of district-scale investigations completed in the 1990s by Mineralco S.A. (now Ingeominas: Instituto Colombiano de Geología y Minería), the federal department of mines and geology in Colombia, culminated in a 12-hole stratigraphically oriented diamond drilling program on the Machado project and provided some understanding of the local geological setting. The area is underlain by a sequence of folded and faulted quartz arenite-dominant strata, including minor pebble conglomerate, cut by high-angle transverse faults. Native gold was reported in six drill holes although partial analyses of drill core from the Mineralco S.A. program returned only “spotty” elevated gold values. A review of procedures at the laboratories used by Mineralco showed that analysis for gold was by standard fire assay. In a coarse gold environment this assay procedure will understate the true grade (Johansen, 1997). Taking into account the small sample sizes used by Mineralco there will have been a statistically low chance for any coarse gold grains to actually be included in the assayed portion of the samples. For these reasons, the author considers that the Mineralco assay values do not provide any reliable indication of true gold grade. In spite of the mining activity and Mineralco work, no further geological studies or systematic exploration programs have, to the author’s knowledge, been undertaken in the region. As a result, the Taraira gold belt remains relatively untested to date.

The current study by Cosigo represents the first comprehensive assessment of the mineral potential of the area. Several mineralized targets, including Cerro Rojo, Cerro Bombo and Peladero, have been identified where potential exists for significant gold resources. High grade

gold mineralization has been proven to occur on the Bid property, at least locally. The author is of the opinion that the bulk sample results obtained by Cosigo are reliable but that more sampling is needed in order to obtain representative information on gold grade. Future work programs will need to include the collection of large samples in order to effectively assess the gold grade at occurrences like Cerro Rojo where the presence of coarse gold has been confirmed. Results from an MMI soil sampling program highlight an apparently stratabound zone of anomalous gold+W-Bi-Ta-As-Sb soil geochemistry, which corresponds spatially with iron-oxide bearing and silicified horizons within favorable quartz arenite strata and extending for a distance of at least 1,200 m. The objective of the MMI soil sampling program was to identify areas of anomalous gold on the Machado Project. The program successfully met this objective and the parameters of the program (100 m line spacing, 50 m sample spacing along lines) seem to have been adequate for their purpose. The reliability of the MMI soil sampling work is highlighted by the fact that known gold occurrences at Cerro Rojo, Peladero and Cerro Bombo are clearly visible in the MMI data (see Figures 10-1 and 4-2). Further work will be warranted to test these large geochemical anomalies identified through the MMI survey. A light-weight reverse circulation percussion drill rig has been mobilized to the site by Cosigo. This drill can collect ~20 lbs of rock chips per foot drilled. An effective bulk sample would be obtained by drilling several such drill holes in a closely-spaced pattern. The drill also seems ideal for delineating the known mineral occurrences and for rapid testing of exploration targets. Cost effective and fast drilling will allow for an increased number of drill holes, which is of value in this area without much bedrock exposure. This also renders the drill suitable for shallow hole property-wide reconnaissance sampling.

In the opinion of the author the Machado project in the Taraira Paleoplacer Gold Belt represents an excellent exploration target for the potential discovery of economically significant gold mineralization. The underexplored nature of the district, wide distribution of gold occurrences, and geological characteristics analogous with those of several known paleoplacer regions, including a strong affinity between gold and sedimentary strata, are considered favorable attributes of the Taraira belt. The Machado project has the potential to host significant gold resources provided that areas with the right combination of stratigraphically controlled gold mineralization and structurally controlled high-grade mineralization can be identified.

20.0 RECOMMENDATIONS

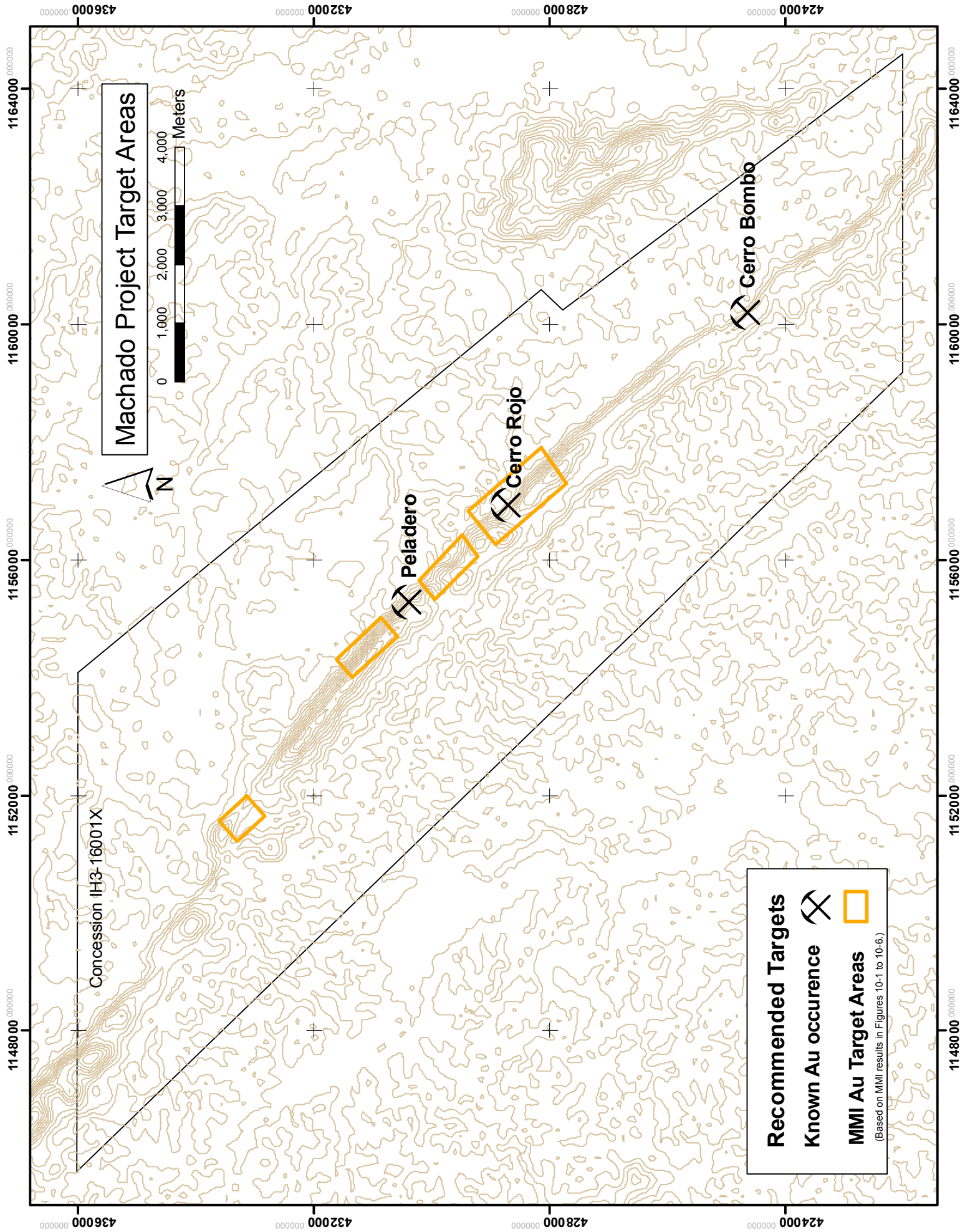
Based on the historic gold production on the Machado property, identified targets and a favorable geologic setting, Cosigo's Machado project in the Taraira Paleoplacer Gold Belt warrants further investigation. Recommended program objectives are to determine the importance and extent of known mineral occurrences, and to identify and delineate other areas of interest (see Figure 20-1). Work recommended includes delineation drilling at the known occurrences combined with bulk samples to determine true gold grade. A drilling program should be carried out to test the geochemical anomalies identified to date through the MMI sampling. Geological mapping and sampling to discover new occurrences should continue.

Several mineralized targets, including Cerro Rojo, Cerro Bombo and Peladero, have been identified where potential exists for significant gold resources. Delineation drilling is recommended to determine their lateral and vertical extent and to get an indication of gold grade. This initial work will indicate if and where bulk samples should be taken in order to effectively establish the true grade of mineralization. The results of processing 2 test bulk samples from the Cerro Rojo mineral occurrence confirmed the overwhelming presence there of coarse gold. The proportion of coarse gold has a direct impact on the effectiveness of sampling as more coarse gold will require larger samples (Dominy and Platten, 2007). It is recommended that studies be undertaken at the known mineral occurrences to determine gold particle sizing and distribution in order to establish the optimum sample size to effectively assess the grade.

The MMI soil sampling and geological mapping programs at Machado have been cost-effective ways of identifying exploration targets. Results from the MMI soil sampling program highlight an apparently stratabound zone of anomalous soil geochemistry, which corresponds spatially with iron-oxide bearing and silicified horizons within favorable quartz arenite strata and extending for at least 1,200 m. A drilling program is recommended to test the geochemistry anomalies identified to date through the MMI survey and geological mapping. Furthermore, it is recommended that the remaining unprocessed MMI samples are analyzed in order to increase MMI soil geochemical coverage onto the entire Bid Property.

In order to identify other areas of interest it is recommended that the mapping and sampling work be continued, including detailed structural and stratigraphic mapping in areas of known mineralization and, where feasible, coverage should extend along strike to test all known areas of favorable stratigraphy.

Figure 20-1.Machado Project - Recommended Target Areas



The coarse gold problem is most acute in the regional exploration stage, when little is known of the gold mineralization. It is recommended that all analyses for gold be by screen fire assay rather than by standard fire assay. Check samples are also an essential safeguard in a coarse gold environment in order to recognize sampling and assay problems (Berkman, 1997). If sample sizes are too small there is, statistically, only a small chance of sampling coarse gold grains. Samples must therefore be of sufficient size in order to minimize the risk of failing to recognize any potentially significant occurrences. Studies to determine the gold particle sizing and distribution at the known mineral occurrences will provide guidance for optimizing a reconnaissance sampling protocol.

A systematic program of lithogeochemistry is recommended over areas of known mineralization and in areas highlighted by the MMI soil sampling program, as well as along strike within the quartz arenite strata. Petrographic and spectral studies of a subset of surface and drill samples should be completed to help understand mineral associations and controls on mineralization. Portable Infrared Mineral Analyzer (PIMA), X-ray diffraction (XRD) and petrographic studies could be completed relatively quickly and potentially provide information on the alteration mineralogy associated with gold mineralization, and the deportment of gold.

Cosigo's light-weight reverse circulation percussion drills are considered very suitable for the Taraira area. Given the style of mineralization it is recommended that drill holes are directed to the NNE (azimuth 015°-025°) where limited exposure does not permit evaluation of controls on mineralization. This direction is considered optimal for the NW strike of the host rock and the WNW strike of the high angle fault structures. At well-exposed targets, local structural and stratigraphic controls should dictate drilling parameters. In order to maximize the amount of information obtained while minimizing surface disturbance, fanning several drill holes (dipping -90°, -70° and -50°) from one drill pad should be considered where applicable.

Table 20-1 shows a budget estimate for the proposed exploration program in the Taraira Paleoplacer Gold Belt. The Taraira Paleoplacer gold belt projects are, in the opinion of the author, of sufficient merit to warrant the recommended program. Further work will be contingent upon the results of the recommended program.

Table 20-1. Proposed budget for the recommended Machado Project exploration program

Description	Amount
Drill testing to delineate extent of 3 known gold occurrences 20 holes @100 m per area = 6,000 m 3.5" reverse circulation percussion drilling @ \$50/m 3,000 sample assays @50	\$450,000
Drill testing of 3 areas highlighted by MMI and mapping 20 holes @100 m per area = 6,000 m 3.5" reverse circulation percussion drilling @ \$50/m 3,000 sample assays @50	\$450,000
Bulk sampling for gold grade Bulk sample drilling 5,000 m @ \$75/m Sample preparation and transport Gravity processing 24 bulk samples (1 ton each) @ \$10,000/ton	\$690,000
Geodrilling – property-wide reconnaissance 150 holes @\$3,000/hole 3,000 screen fire assays @50	\$675,000
Small back hoe for site preparation	\$50,000
MMI Sample Processing 4,000 samples @\$22	\$88,000
On-site Personnel (12 months) On-site geologists, technical and camp support staff	\$480,000
Off-site project staff (12 months)	\$480,000
Logistics Camp costs Air support and transport	\$500,000
Sub-total	\$3,863,000
10% Contingency	\$386,300
Project total (\$CDN)	\$4,249,300

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22.0 CERTIFICATE OF THE AUTHOR

As the author of this report on the Machado exploration property of Cosigo Resources Inc., located in Vaupés province, Republic of Colombia, I, Raymond M. Ashley, do hereby certify that:

- 1) I am a consulting geophysicist with offices located at #3, 4111 Evans Rd., Oyama, BC, V4V 2E9;
- 2) I have been contracted by, and carried out this assignment for Horseshoe Gold Mining Inc., 950-1199 West Hastings Street, Vancouver, British Columbia, V6E 3T5, tel. 604 662-4480;
- 3) I am responsible for the technical report titled "*Technical Report, Machado Project, Vaupés Department, Colombia*" dated January 16, 2011 to which this certificate applies;
- 4) I hold a B.Sc. in Solid Earth Geophysics from McGill University, Montreal, Quebec, 1985;
- 5) I am a registered Professional Geophysicist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta and am a member in good standing;
- 6) I have worked in the mineral exploration industry for 25 years. In the 1980's I worked as a geophysicist in exploration for gold in Archaean Greenstone Belts in the Canadian arctic including a JV property with Hecla Mining. From 1990 to 1996 I was employed with BHP-Billiton, first in the Hope Bay Greenstone belt and later in diamond exploration. With BHP-Billiton I was a member of the Ekati discovery team and held the position as Manager Canada Diamonds. From 1996 to 2009 I was VP Exploration for Dia Met Minerals, COO of Trigon Exploration Ltd., a company that I co-founded, and VP Exploration for Diamondex Resources Ltd. I have been working as a consulting geoscientist from 2009 to the present;
- 7) I am familiar with NI 43-101 and by reason of education, experience and professional registration I fulfill the requirements of a Qualified Person, as defined in 43-101;
- 8) I have read NI 43-101 and this report has been prepared in compliance with that instrument;
- 9) I visited Cosigo Resources Inc.'s Machado exploration property from May 31st to June 1st, 2010. I have had no prior or subsequent involvement with the property, except for the preparation of this report;
- 10) I am independent of the Issuer (Horseshoe Gold Mining Inc.), Vendor (Cosigo Resources Inc.) and the Machado exploration property as defined in NI 43-101, Section 1.4 and applying all tests in 43-101 CP, Section 3.5;
- 11) As of the date of this certificate, to the best of my knowledge, information and belief, this report holds all scientific and technical data that is required to be disclosed in order not to make the report misleading;
- 12) I consent to the filing of this report to any Canadian stock exchange or securities regulatory authority, and any publication by them of this report;

Dated: This 16th day of January, 2011

Raymond M. Ashley, B.Sc., P.Geoph.



23.0 DATE AND SIGNATURE PAGE

"Technical Report, Machado Project, Vaupés Department, Colombia"

Prepared for Horseshoe Gold Mining Inc.

Effective date: January 16, 2011



Signed by: _____
Raymond M. Ashley, P.Geoph.

Date: January 16, 2011



INSTITUTO COLOMBIANO
DE GEOLOGIA Y MINERIA
INGEOMINAS

FECHA DE EXPEDICIÓN: 10-03-2008 15:01 Página 1 de 1

CERTIFICADO DE REGISTRO MINERO		Código IH3-16001X
CONTRATO UNICO DE CONCESION IH3-16001X		
VIGENCIA DESDE: Marzo 10 de 2008	HASTA: Marzo 09 de 2038	FECHA Y HORA DE REGISTRO: Marzo 10 de 2008 15:03

TITULARES

COSIGO FRONTIER MINING COPORATION

IDENTIFICACIÓN

NIT 9001744240

DIRECCIÓN: CARRERA 21 NO 39 A -09 (BOGOTA D.C. - BOGOTA) Telf(s): 2455017**ÁREA TOTAL:** 9973 Hectareas y 900 Metros Cuadrados**MINERALES:** MINERALES DE ORO Y SUS CONCENTRADOS**MUNICIPIOS:** TARAIRA (VAUPES)**DESCRIPCIÓN DEL ÁREA****AREA Nro 1****PUNTO ARCIFINIO (P.A):** CENTRO CANCHA DE BALONCESTO POLIDEPORTIVO DEL CASCO URBANO NDE TARAIRA**COORDENADAS DEL P.A :** NORTE = 429398.79

ESTE = 1160657.25

PLANCHA DEL P.A : 516

LADO		ALINDERACIÓN				DISTANCIA	
Desde	Hasta	N-S	Grados	Minutos	Segundos	E-W	Metros Cm
0	1	S	02	07	57.50	W	1269.66
1	2	N	39	35	50.19	W	10213.57
2	3	S	90	00	00	W	8500.00
3	4	S	44	10	10.86	E	19518.20
4	5	N	90	00	00	E	5400.00
5	6	N	37	00	45.43	W	7226.02
6	1	N	45	00	00	E	509.12

ANOTACIONES**ANOTACIÓN Número: 1** DEL 10 DE MARZO DE 2008**DOCUMENTO:** CONTRATO**Número:** IH3-16001X DEL 28 DE SEPTIEMBRE DE 2007**EXPEDIDO POR:** INGEOMINAS - DIRECCION SERVICIO MINERO**LUGAR:** BOGOTA D.C., BOGOTA**ESPECIFICACION:** INSCRIPCION EN EL REGISTRO MINERO NACIONAL DEL CONTRATO DE CONCESION MINERA IH3-16001X**TITULARES AL FINAL DE LA ANOTACION:**

COSIGO FRONTIER MINING COPORATION

NIT 9001744240

***** FIN DE ESTE DOCUMENTO *****

COORDINADOR DE GRUPO DE REGISTRO MINERO - SUBDIRECCION DE CONTRATACION Y TITULACION MINERA

El interesado debe comunicar a esta Dependencia cualquier inconsistencia que se presente en este documento

Impreso por:
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 INSTITUTO COLOMBIANO DE GEOLOGÍA Y MINERÍA
INGEOMINAS
REPÚBLICA DE COLOMBIA
SUB-DIRECCION DE CONTRATACIÓN Y TITULACIÓN MINERA
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CÓDIGO RMN N°. IH3-16001X

FECHA: 2008 03 10
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INSCRIBIÓ COORDINADOR

Appendix II. Select assay results from the Macahdo project

Sample No.	Site name	Property	Assay type	Type	Au (ppm)	Colombia East Central Coordinates		Comment
						<i>Easting</i>	<i>Northing</i>	
D (2 bags tunnel Aga)	Agaminon' tunnel	Machado	FA w Gravimetric finish	Grab	2350	1156466	428963	Coordinate for mouth of tunnel
Ag Tailings 2	Cerro Rojo Open Pit Tailings	Machado	FA w Gravimetric finish	Mine tailings/Sediment	9.99	1156373	428994	Coordinate for center of pit
Channel # 1	Agaminon's tunnel	Machado	Screen fire assay	1 m channel	0.98	1156466	428963	Coordinate for mouth of tunnel. Sample weight 881 g.
Channel # 2	Agaminon's tunnel	Machado	Screen fire assay	1 m channel	0.73	1156466	428963	Coordinate for mouth of tunnel. Sample weight 866 g.
KRTS 20564	Agaminon's tunnel	Machado	Knelson Gravity Grade Test	Bulk sample (18 barrels)	32.4	1156466	428963	617 kg processed. From same location as samples Channel # 1 and 2.
KRTS 20542	Chile's tunnel	Machado	Knelson Gravity Grade Test	Bulk Sample (3 barrels)	6.72	1156631	428893	840 kg processed
1	Cerro Rojo-Aga's pit	Machado	FA and AAS	Grab	1.225	1156373	428994	Coordinate for center of pit
2	Cerro Rojo-Aga's pit	Machado	FA and AAS	Grab	4.91	1156373	428994	Coordinate for center of pit
3	Cerro Rojo-Aga's pit	Machado	FA and AAS	Grab	0.293	1156373	428994	Coordinate for center of pit
4	Cerro Rojo-Aga's pit	Machado	FA and AAS	Grab	5.86	1156373	428994	Coordinate for center of pit
5	Cerro Rojo-Aga's pit	Machado	FA and AAS	Grab	2.48	1156373	428994	Coordinate for center of pit
6	Cerro Rojo-Aga's pit	Machado	FA and AAS	Grab	0.03	1156373	428994	Coordinate for center of pit
7	Cerro Rojo-Aga's pit	Machado	FA and AAS	Grab	0.023	1156373	428994	Coordinate for center of pit



KRTS 20564 Cosigo Resources Gravity Grade Test Report

Report Prepared For: **Mr. Dennis Milburn**

Report Prepared By: **Mike Tran**

July 9, 2010

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1.0 Introduction

1.1 Background

On June 16, 2010, Knelson Research & Technology Center received 2 barrels of sample weighing a total of 617kg from Cosigo Resources for enhanced gravity testing to examine gold recoveries and sample gold head grades. It was proposed that the sample be crushed in its entirety, blended and representatively sub-sampled in 10kg duplicates for gravity testing. The sub-samples were processed utilizing Knelson's bench scale laboratory concentrator KC-MD3. From the gravity tests a gravity recovery value will be reported along with a back calculated gold head grade for each sub-sample.

1.2 Gravity Grade Test (GGT)

Prior to the Gravity Grade Test (GGT) each sub-sample is milled separately to liberate gold particles. After milling, each sample is processed through the laboratory Knelson. The concentrate produced is fire assayed to extinction to account for all gold recovered. A tailings sub-sample is taken during the process and assayed to produce a metallurgical balance around each sample. The metallurgical reports a gravity recovery value as well as a calculated sub-sample gold head grade. The main benefit of the GGT is the ability to examine relatively larger samples since samples are processed in their entirety.

The GGT has advantages over current methods of geological sampling analysis with its ability to eliminate the nugget effect associated with sub-sampling methods when coarse gold is present. The majority of free gold in samples can be accounted for and larger samples are analyzed when compared to conventional gold assay sample sizes. Currently, geological field samples are riffled down to a couple hundred grams for analysis. This sub-sample is pulverized and sub-sampled further for gold assay. In many instances the sub-sample represents a very small fraction of the entire field sample. Due to the heterogeneous nature of coarse gold in field samples, analyzing small sub-samples may not be representative.

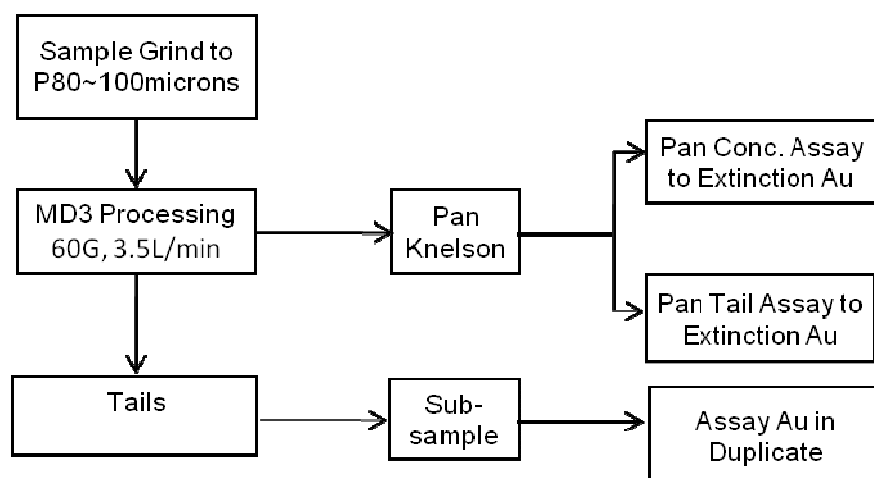
2.0 Procedure

2.1 GGT Test Procedure

Prior to processing the entire bulk sample from the three barrels were crushed to approximately minus 1/4". The crushed material was then blended and sub-sample to 10kg batches using Knelson's laboratory rotary splitter. The GGT procedure for processing the sample is listed below.

- i. Sub-sample dry masses were recorded.
- ii. The sample was pulped with water to approximately 60% solids by weight and loaded into a laboratory rod mill. Each sample was milled for 12min to achieve an approximate feed P_{80} of 100 microns.
- iii. Laboratory Knelson Concentrator (KC-MD3) operating parameters are set at fluidization water flow rate of 3.5L/min and cone RPM corresponding to a G-force of 60G.
- iv. Each pulped sample was slowly processed through the KC-MD3 separately
- v. During processing, sub-samples of the tailings stream were collected for Au assay.
- vi. The concentrate was lightly panned to produce a pan concentrate and pan tails.
- vii. Each fraction was dried, weighed and sent for Au fire assay.

2.2 GGT Test Flow Sheet



3.0 Results and Discussion

3.1 GGT Results

Each sample was milled and achieved an approximate feed P_{80} of 100 microns. Detailed particle size analysis is located in Appendix A. Table 1 below presents the overall gravity results for sub-sample A.

Table 1: Overall Gravity Results for Sub-Sample A

Sample A Product	Mass		Assay (Au g/t)	Distribution (%)
	(g)	(%)		
Pan Conc.	6.8	0.07	47074	83.9
Pan Tail	72.5	0.71	402.4	7.6
Final Tails	10080	99.2	3.2	8.5
Totals (Head)	10159	100.0	37.6	100.0
Knelson Conc.	79.3	0.78	4406.0	91.5

An overall gravity recovery of 91.5% gold was achieved for sub-sample A. The calculated gold head grade for the sample was 37.6 g/t gold.

Table 2 displays the overall gravity results for sub-sample B.

Table 2: Overall Gravity Results for Sub-Sample B

Sample B Product	Mass		Assay (Au g/t)	Distribution (%)
	(g)	(%)		
Pan Conc.	4.9	0.05	43513	75.3
Pan Tail	74.4	0.71	351.3	9.1
Final Tails	10433	99.2	4.3	15.6
Totals (Head)	10512	100.0	27.2	100.0
Knelson Conc.	79.4	0.76	3040.7	84.4

For sub-sample B an overall gravity recovery of 84.4% was achieved. The calculated gold head grade for sub-sample B was 27.2 g/t gold.

Table 3: Particle Size Distribution of Gold from Sub-Sample A Gravity Tailings

Mesh	Microns	Mass		Assay	Distribution
		(g)	(%)	(Au g/t)	(%)
100	150	3.6	2.3	5.35	3.2
140	106	20.1	12.8	2.67	8.9
200	75	40.8	25.9	0.85	5.8
270	53	22.2	14.1	1.40	5.2
400	38	15.7	10.0	2.95	7.7
500	25	9.5	6.0	3.28	5.2
-500	-25	45.5	28.9	8.49	64.1
Totals		157.3	100.0	3.83	100.0

Table 3 presents the particle size distribution of gold from the gravity tailings for sub-sample A. During the gravity process, a representative tailing sample was taken for particle screen size analysis. The screen fractions were dried, weighed and individually sent for gold fire assay. The tailings screen fraction analysis reveals the particle size distribution of gold loss from the gravity test. It can be seen in Table 3 that 64.1% of the gold loss exists in the -25micron fraction.



Figure 1: Visible Gold in from Sub-Sample A

Figure 1 displays a photograph of visible gold after the Knelson concentrate from sub-sample A was lightly panned. Fine visible gold can be seen disseminated throughout the panned concentrate.

4.0 Summary

Gold within the sub-samples were highly amenable to gravity concentration. The overall gravity recovery for sub-sample A was 91.5% with a calculated gold head grade of 37.6 g/t.

The gold recovery for sub-sample B was 84.4% with a calculated head grade of 27.2 g/t.

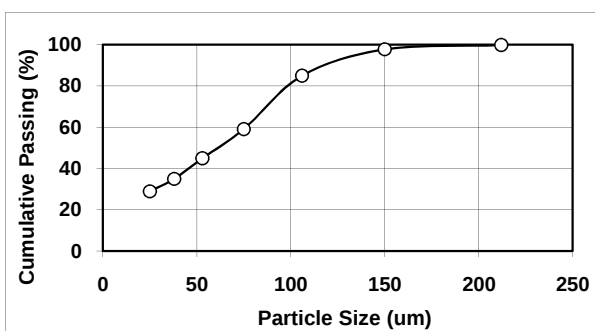
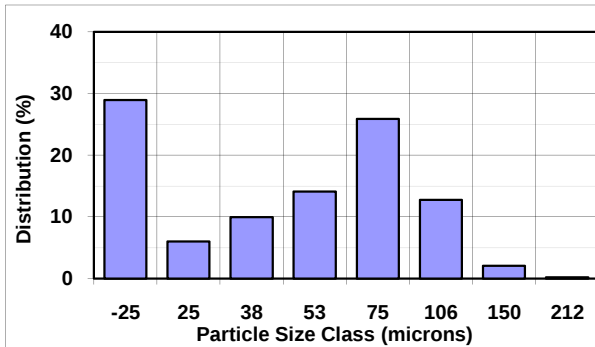
From the particle size analysis it was observed that the majority of the gold (64.1%) in the gravity tailings exists below -25 micron fraction.

Results reported herein are based on the sample supplied.



Sample:	Cosigo	Date:	16-Jun-10
Description:	Knelson Tails	Grind Time:	12 min
By:	Mike	P80:	100 µm

Sieve Size		Weight		Cumulative %Retained	Cumulative % Passing
US Mesh	Microns	(g)	(%)		
12	1700	0.0	0.0	0.0	
16	1180	0.0	0.0	0.0	
20	850	0.0	0.0	0.0	
30	600	0.0	0.0	0.0	
40	425	0.0	0.0	0.0	
50	300	0.0	0.0	0.0	
70	212	0.3	0.2	0.2	99.8
100	150	3.3	2.1	2.3	97.7
140	106	20.1	12.8	15.0	85.0
200	75	40.8	25.9	40.9	59.1
270	53	22.2	14.1	55.1	44.9
400	38	15.7	10.0	65.0	35.0
500	25	9.5	6.0	71.1	28.9
-500	-25	45.5	28.9	100.0	-
Total		157.3	100.0		





KRTS 20542 Cosigo Resources Gravity Grade Test Report

Report Prepared For: **Mr. Dennis Milburn**

Report Prepared By: **Mike Tran, BSc**

March 29, 2010

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1.0 Introduction

1.1 Background

On March 5, 2010, Knelson Research & Technology Center received 3 barrels of sample from Cosigo Resources for enhanced gravity testing to examine gold recoveries and sample gold head grades. It was proposed that the sample be crushed in its entirety, blended and representatively sub-sampled in 12kg quadruplicate for gravity testing. The sub-samples were processed utilizing Knelson's bench scale laboratory concentrator KC-MD3. From the gravity tests a gravity recovery value will be reported along with a back calculated gold head grade for each sub-sample.

1.2 Gravity Grade Test (GGT)

Prior to the Gravity Grade Test (GGT) each sub-sample is milled separately to liberate gold particles. After milling, each sample is processed through the laboratory Knelson. The concentrate produced is fire assayed to extinction to account for all gold recovered. A tailings sub-sample is taken during the process and assayed to produce a metallurgical balance around each sample. The metallurgical reports a gravity recovery value as well as a calculated sub-sample gold head grade. The main benefit of the GGT is the ability to examine relatively larger samples since samples are processed in their entirety.

The GGT has advantages over current methods of geological sampling analysis with its ability to eliminate the nugget effect associated with sub-sampling methods when coarse gold is present. The majority of free gold in samples can be accounted for and larger samples are analyzed when compared to conventional gold assay sample sizes. Currently, geological field samples are riffled down to a couple hundred grams for analysis. This sub-sample is pulverized and sub-sampled further for gold assay. In many instances the sub-sample represents a very small fraction of the entire field sample. Due to the heterogeneous nature of coarse gold in field samples, analyzing small sub-samples may not be representative.

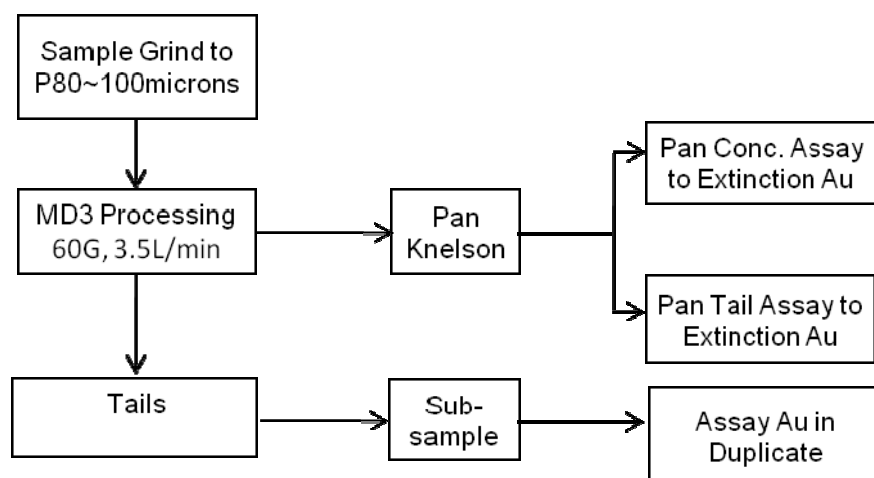
2.0 Procedure

2.1 GGT Test Procedure

Prior to processing the entire bulk sample from the three barrels were crushed to approximately minus 1/4". The crushed material was then blended and sub-sample to 12kg batches using Knelson's laboratory rotary splitter. The GGT procedure for processing the sample is listed below.

- i. Sub-sample dry masses were recorded.
- ii. The sample was pulped with water to approximately 60% solids by weight and loaded into a laboratory rod mill. Each sample was milled for 12min to achieve an approximate feed P_{80} of 127 microns.
- iii. Laboratory Knelson Concentrator (KC-MD3) operating parameters are set at fluidization water flow rate of 3.5L/min and cone RPM corresponding to a G-force of 60G.
- iv. Each pulped sample was slowly processed through the KC-MD3 separately
- v. During processing, sub-samples of the tailings stream were collected for Au assay.
- vi. The concentrate was lightly panned to produce a pan concentrate and pan tails.
- vii. Each fraction was dried, weighed and sent for Au fire assay.

2.2 GGT Test Flow Sheet



3.0 Results and Discussion

3.1 GGT Results

The sub-samples were labeled in alphabetical order from A through D with their corresponding masses from the gravity tests. Each sample was milled and achieved an approximate feed P_{80} of 127 microns. Detailed particle size analysis is located in Appendix A.

Table 1: Overall Gravity Results for Sub-Sample A

Sample A Product	Mass		Assay (Au g/t)	Distribution (%)
	(g)	(%)		
Pan Conc.	1.7	0.01	28715	56.5
Pan Tail	77.2	0.63	160.0	14.2
Final Tails	12180	99.4	2.10	29.3
Totals (Head)	12259	100.0	7.11	100.0
Knelson Conc.	78.9	0.64	780.7	70.7

An overall gravity recovery of 70.7% gold was achieved for sub-sample A. The calculated gold head grade for the sample was 7.11g/t gold.

Table 2: Overall Gravity Results for Sub-Sample B

Sample B Product	Mass		Assay (Au g/t)	Distribution (%)
	(g)	(%)		
Pan Conc.	2.8	0.02	16074	52.7
Pan Tail	74.2	0.58	176.2	15.2
Final Tails	12763	99.4	2.17	32.1
Totals (Head)	12840	100.0	6.71	100.0
Knelson Conc.	77.0	0.60	759.2	67.9

For sub-sample B an overall gravity recovery of 67.9% was realized. The calculated gold head grade for sub-sample B was 6.71 g/t gold.

Table 3: Overall Gravity Results for Sub-Sample C

Sample C Product	Mass		Assay (Au g/t)	Distribution (%)
	(g)	(%)		
Pan Conc.	2.1	0.02	19853	47.3
Pan Tail	77.0	0.56	260.9	22.5
Final Tails	13723	99.4	1.97	30.2
Totals (Head)	13802	100.0	6.47	100.0
Knelson Conc.	79.2	0.57	787.8	69.8

An overall gravity recovery of 69.8% gold was achieved for sub-sample C. The calculated gold head grade for the sample was 6.47 g/t gold.

Table 4: Overall Gravity Results for Sub-Sample D

Sample D Product	Mass		Assay (Au g/t)	Distribution (%)
	(g)	(%)		
Pan Conc.	3.0	0.02	14743	51.2
Pan Tail	78.5	0.60	200.9	18.2
Final Tails	13084	99.4	2.03	30.6
Totals (Head)	13166	100.0	6.59	100.0
Knelson Conc.	81.5	0.62	738.6	69.4

For sub-sample D an overall gravity recovery of 69.4% was realized. The calculated gold head grade for sub-sample D was 6.59 g/t gold.



Figure 1: Visible Gold in from Sub-Sample A

Figure 1 displays a photograph of visible gold after the Knelson concentrate from sample A was lightly panned. Fine visible gold can be seen at the upper center of the photograph.

It should be noted that visible gold was observed in all the gravity concentrates for each sub-sample processed.

4.0 Summary

Gold within the sub-samples were highly amenable to gravity concentration. Table 1 summarizes the results from the gravity test work for all four sub-samples.

Table 5: Summary of Gravity Results for All Sub-Samples

Sub-Sample	Mass (g)	Recovery (%)	Calculated Gold Grade (g/t)
A	12259	70.7	7.11
B	12840	67.9	6.71
C	13802	69.8	6.47
D	13166	69.4	6.59

The results from the test work showed very good repeatability for gravity recovery as it ranged from 67.9 to 70.7%. The calculated gold head grades also exhibited good repeatability. The calculated gold head grades had a range from 6.47 to 7.11 g/t.

Increased gravity recoveries may have been realized from the gravity tests with a finer grind size feed but further gravity test work on a finer grind size feed is needed to confirm assumption.



Sample: Cosigo **Date:** 17-Mar-10
Description: Knelson Feed **Grind Time:** 12 min
By: Mike **P80:** 127 µm

Sieve Size		Weight		Cumulative %Retained	Cumulative % Passing
US Mesh	Microns	(g)	(%)		
12	1700	0.0	0.0	0.0	
16	1180	0.0	0.0	0.0	
20	850	0.0	0.0	0.0	
30	600	0.0	0.0	0.0	
40	425	0.0	0.0	0.0	
50	300	0.0	0.0	0.0	
70	212	4.8	3.4	3.4	96.6
100	150	9.8	7.0	10.4	89.6
140	106	26.1	18.5	28.9	71.1
200	75	40.3	28.6	57.5	42.5
270	53	16.7	11.9	69.3	30.7
400	38	9.1	6.5	75.8	24.2
500	25	5.6	4.0	79.8	20.2
-500	-25	28.5	20.2	100.0	-
Total		140.9	100.0		

