

# **Amended Updated Mineral Resource Estimate, El Roble Copper-Gold Project, Chocó Department, Colombia**



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Effective Date December 7, 2015  
Date of Report April 11, 2016

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## 1.0 SUMMARY

### 1.1 Introduction

At the request of Minera El Roble S.A. (MINER), a Colombian subsidiary of Atico Mining Corporation (Atico) which is a British Columbia corporation primarily focused on the acquisition, exploration and development of copper and gold mining projects in Latin America, Donald F. Earnest, President, Resource Evaluation Inc.(REI), and Michael J. Lechner, President, Resource Modeling Inc. (RMI), as Qualified Persons defined by Canada National Instrument 43-101, have completed this amended Technical Report on the El Roble Project, located within the Chocó Department in the country of Colombia, in order to address specific deficiencies in the original Technical Report that was titled "Updated Mineral Resource Estimate, El Roble Copper-Gold Project, Chocó Department, Colombia". These deficiencies were identified by the British Columbia Securities Commission (BCSC) as a result of the Commission's routine review of select Technical Reports for compliance with the Securities Act, regulations and policies, including National Instrument 43-101, Standards of Disclosure for Mineral Projects (NI 43-101). In addition to correcting these deficiencies, this Amended Technical Report serves to provide a reiteration of the results of the Qualified Persons' review of information and data from drill holes and other work that have been accumulated and completed since public disclosure of the NI 43-101 Technical Report titled, "Amended Technical Report, El Roble Copper-Gold Project, Chocó Department, Colombia, August 27, 2013". These recent data and information form the basis of the updated Mineral Resource estimate completed by MINER technical personnel with the assistance of José Enrique Gutiérrez Ramírez, MAusIMM (CP 314606), a Senior Resource Geologist with Geotecnologías Aplicadas (GTC) from Lima, Peru retained by MINER in early 2015, which the Qualified Persons responsible for this Amended Technical Report reviewed. Throughout this Amended Technical Report, the Qualified Persons will refer to the current owner/operator of the Minera El Roble project as MINER. To avoid confusion, the Qualified Persons will indicate when certain activities were undertaken or completed by MINER prior to Atico's acquisition of that company in this Amended Technical Report.

The El Roble project consists of mineral concessions totaling approximately 6,779 hectares from which an underground mine and processing facility currently owned and operated by MINER produces gold and copper from a volcanic massive sulfide (VMS) deposit near the town of Carmen de Atrato. On November 22, 2013, Atico acquired 90% of MINER and its assets, which include the El Roble mining concessions, exploration licenses, the El Roble underground mine, processing facility, and ancillary facilities. The remaining 10% of the property is owned by several private owners. While mining and processing has continued uninterrupted since Atico's acquisition of MINER and its assets, it is important to note that as of the date of this amended Technical Report, MINER has yet to complete a mineral reserve estimate for the El Roble deposit.



## 1.2 Property Description and Location

The El Roble Project is located within the Chocó Department close to the border with the Antioquia Department in the country of Colombia (see Figure 1-1). Access to the project site is via paved highway southwest from the city of Medellín to the town of Carmen del Atrato, then north approximately three kilometres via an improved gravel road.

The El Roble Project consists of a working underground mine that produces copper and gold mineralization from the El Roble volcanic massive sulfide (VMS) deposit. The mine feeds an on-site processing facility that has a current capacity of 650 tonnes per day and which produces sulfide concentrates containing copper and gold. Mining and exploration takes place on eight mineral concessions totaling approximately 6,779 hectares (ha), comprised of five valid mining concession contracts and three valid exploration licenses (three of which are in the process of conversion to mining concession contracts). MINER also owns the rights for surface use to 208ha in the immediate mine area. Surface ownership on the remaining El Roble Project mineral concessions is divided among multiple individual landowners.

The only known encumbrances, back-in rights, or royalties that affect the El Roble Project consist of a 4% net smelter return royalty (NSR) on precious metals and a 3% NSR on copper to the Colombian Federal government, and existing pension obligations and severance agreements with MINER employees who belong to the union (Sintramienergetica). However, in November 2015, MINER received notice of a claim from the mining authority in Colombia requesting payment of royalties related to past copper production. The mining authority is basing its claim on the current mining law, which MINER noted post-dates the mining law that prevailed at the time that Minera El Roble S.A. executed the contract regulating its royalty obligations. The current mining law in Colombia explicitly states that it does not affect contracts executed prior to this law entering into force. MINER will attempt to resolve the claim, which totals approximately \$US 2 million, at an administrative level. With respect to environmental liabilities affecting the property, a partial failure of the tailings impoundment occurred in 2009 that resulted in sanctions requiring MINER to reforest the affected area and to restock the river with fish. MINER completed the repairs to the tailings dam and has complied with these sanctions. As part of its acquisition of MINER, Atico assumed responsibility for any environmental liabilities that may be associated with the El Roble project and for meeting eventual closure requirements that pertain to the existing mine and processing facility.

A PMA (Environmental Permit) that was issued to MINER by CODECHOCO (Corporación Autónoma del Chocó, a government agency) on January 30, 2001 is still in place. If an expansion of the existing processing facility (including tailings impoundment) is required, a formal plan must be approved by the Ministry of Mines and Energy and an environmental license must be granted by the Ministry of the Environment. Currently there is a contract in place for purchase of electric power from ISAGEN, a public company.

Figure 1-1: Location Map for the El Roble Project, Colombia



### 1.3 History, Development and Operations

#### History

Copper mineralization in the El Roble project area was first discovered during the early 1970's at the Santa Anita deposit, located six kilometers south of the current El Roble mine operation and within the MINER mineral concession area. A small amount of copper was reportedly produced underground at Santa Anita from vein and stockwork mineralization. During this same time, eroded boulders of massive sulfide mineralization were found below the current site of the El Roble mine. The source of these boulders was found to be a landslide scarp upslope that exposed an outcrop of oxidized volcanic massive sulfide (VMS) mineralization. The first company to develop and exploit the El Roble deposit was Minas El Roble, incorporated in 1972, at a mining rate of 30 tonnes per day.

In 1982, Minas El Roble entered into the first of three joint ventures that began with Kennecott Copper Company (Kennecott). Kennecott completed surface mapping and sampling, a ground magnetic geophysical survey, and drilled 22 diamond core holes totaling 2,190 metres (averaging just 100m deep) that identified a preliminary mineral resource that was too small for that company's project size requirements. Following Kennecott's departure, a partnership between Minas El Roble and Nittetsu Mining Company Ltd (Nittetsu) of Japan was formed in 1986. Nittetsu expanded the area of surface mapping and sampling, conducted induced polarization (IP) and resistivity geophysical surveys, and completed additional drilling that identified and delineated the mineralized Main and North zones. In 1987, C. Itoh and Co. (Itoh) of Japan joined the Nittetsu/Minas El Roble partnership and construction was started on a 96,000 tonne per year processing plant. Nittetsu continued to be the project operator, completing 66 additional diamond drill holes totaling 7,731 metres (averaging only 117m deep), which resulted in a reported "reserve" amounting to approximately 1.2 million tonnes averaging 4.83% copper, 3.23 g/t gold, and 12.4 g/t silver. The Qualified Persons responsible for this amended Technical Report emphasize that this "reserve" estimate WAS NOT in compliance with NI 43-101 and CIM guidelines for Mineral Resources/Mineral Reserves. As of the date of this amended Technical Report, the El Roble project has no Mineral Reserves that comply with NI 43-101 guidelines.

In 1990 the existing processing plant was completed and twenty additional diamond core holes were drilled from the surface. Nittetsu and Itoh withdrew from the joint venture and left Colombia in 1997, reportedly for security reasons, after which the name of the company was changed to Minera El Roble S.A. (MINER), the current mine operator. Since the departure of the Japanese partners in 1997, the El Roble mine has been operated by MINER, producing copper-gold concentrates and continuing to expand and delineate Mineral Resources by in-fill and step-out diamond drilling of the known VMS lenses and preliminary exploration diamond drilling for the discovery of new VMS lenses.. As of the date of this amended Technical Report, 230 diamond drill holes totaling 27,645 meters have been completed from both surface pads and underground stations. This drilling is summarized in greater detail in Item 10.0 of this amended Technical Report. On November 22, 2013, Atico acquired 90% of MINER and its combined assets, which include the El Roble mining concessions, exploration licenses, the El Roble underground mine, processing facility, and ancillary facilities. While underground development, production mining, and processing has continued uninterrupted since Atico's acquisition, it is important to note that as of the date of this amended Technical Report, MINER has yet to complete a Mineral Reserve estimate for the El Roble deposit that is compliant with NI 43-101 and 2014 CIM guidelines.

Production from the El Roble mine from 1990 through 2014 totaled 1,746,698 tonnes at an average copper grade of 2.48% Cu. Although gold was not recovered until 2004, the average mined gold grade from 2004 through 2014 was 2.41 g/t Au.

#### Development and Operations

The El Roble mine continues as of the date of this amended Technical Report to

operate at approximately 425 tonnes per day (three shifts per day, six days per week), using mechanized cut-and-fill stoping methods with waste rock or cemented rock as back fill. Current production is from between the 1940m and below the 1880m levels. In the opinion of the Qualified Person responsible for Item 6.0 of this amended Technical Report, based on observations made during the site visits required for both the August 2013 Technical Report and for this amended Technical Report, excess dilution resulting from the poor rock quality of the black chert unit exposed underground and in diamond drill core and poor mining practice on the part of MINER's former owners together were likely responsible for the steadily declining copper and gold grades from 2009 to 2013. The Qualified Person notes that geotechnical issues continue to adversely affect the operation, based on observations made as part of the examination of the underground workings during the September 2015 site visit for this amended Technical Report. Specifically, in the Goliat and Maximus lenses MINER lost control of the ground due to major structures and poor rock quality, resulting in local losses to the Mineral Resources.

Mineralization to be processed and waste (when required) are transported to the surface using 3-cubic-yard load-haul-dump units (LHD's) that feed material to the 2000 main haulage level which is serviced by battery locomotive and 3-tonne mine rail cars. Raises connect the underground levels for ventilation and services (compressed air, water, electricity). A ramp between the 2000 level and the lower 1950 level and the 1880 level provides access for mining of down-plunge extensions of the VMS mineralization lenses.

The existing processing plant at El Roble has a rated nominal throughput capacity of 650 tonnes per day. The processing methods consist of conventional crushing, grinding, and flotation to produce a copper-gold concentrate. Grinding is to 80% passing 200-mesh for flotation feed. Four banks of six flotation cells each generate concentrates which are subsequently thickened, filtered and stored on site for shipping via highway truck to the Pacific coast port of Buenaventura. Process tailings are deposited in an impoundment facility situated along the banks of the Rio Atrato next to the processing plant, or in a separate tailings impoundment located downstream of the processing plant. Process waste water is decanted in a series of ponds and then released after treatment back into the Rio Atrato. In 2014, process recoveries averaged 91.4% for copper, 66.7% for gold and 48.8% for silver. The grade of the concentrate produced by the plant in 2014 averaged 21.2% Cu and 15.3 g/t Au.

The current concentrate sales contract specifies that copper concentrate grades must be maintained between 18% and 24% Cu, gold grades between 8 g/t and 30 g/t Au, and silver grades between 5 g/t and 60 g/t Ag. The only penalty metal known to the Qualified Persons responsible for this amended Technical Report that occasionally exceeds maximum smelter limits is mercury. Concentrate payables are specified in the current sales contract to be the copper content minus 1%, 95% of the contained gold and 75% of the contained silver.

Electrical power for the El Roble operations is supplied from the existing electrical grid system in accordance with a three-year contract with ISAGEN, a Colombian public power company. Water for the operations is drawn from a tributary to the Atrato River and

collected in a small reservoir, from which it is then passed through a 3-inch-diameter pipe over a distance of one kilometre to the mine and processing plant. Support facilities at the mine include buildings for mine operations, project staff housing, administrative offices, a laboratory for analysis of mine and mill production samples and for metallurgical testing, a warehouse, a clinic/security/fire station, a cafeteria and truck scales.

#### 1.4 Geology and Mineralization

The mineral deposit that comprises the El Roble Project consists of mafic-type volcanogenic massive sulfide (VMS) mineralization for which there are numerous examples in the world. The host rocks for the VMS mineralization present on the MINER El Roble mineral concessions consist of basalt flows, black to grey chert and overlying deep-water marine volcanic rocks, sedimentary rocks, and sandstone. The deposition of the VMS mineralization is syngenetic with the black chert, which generally forms both the hanging wall and footwall “host” to the mineralization. The portion of the El Roble deposit currently being mined by MINER has been overturned by folding such that it now dips steeply to the east. Based on the drill hole data provided by MINER as of the effective date of this amended Technical Report, the dimensions of the deposit currently are 325 meters along strike by  $\pm 600$  meters deep by up to 45 meters in thickness. VMS mineralization continuity is locally disrupted by Tertiary andesite and latite dikes up to 10 meters in width that intrude both the VMS mineralization and the host rocks. In addition to the Tertiary dikes, strands of one of the major regional northwest-striking faults offset VMS mineralization at the El Roble mine, disrupting the continuity of the VMS mineralization lenses, particularly below the 2100 level.

The VMS mineralization is fine-grained with little internal structure or banding, consisting predominantly of pyrite and chalcopyrite (Figure 1-2). Pyrite occurs as euhedral and subhedral grains that can vary from 0.04 to 0.01 millimeters in diameter. Colloform pyrite textures and crushed pyrite grains are also common. Chalcopyrite typically fills spaces between pyrite grains, along with minor pyrrhotite and sphalerite. No other sulfide minerals have been identified. Gold occurs as electrum in 10- to 100-micron irregular grains in the spaces between pyrite grains. Minor silver is also present, presumably as a component of the electrum. Gangue minerals include quartz and chlorite along with lesser calcite, dolomite and minor hematite and magnetite.

**Figure 1-2: Typical Massive Sulfide Mineralization, El Roble Mine**

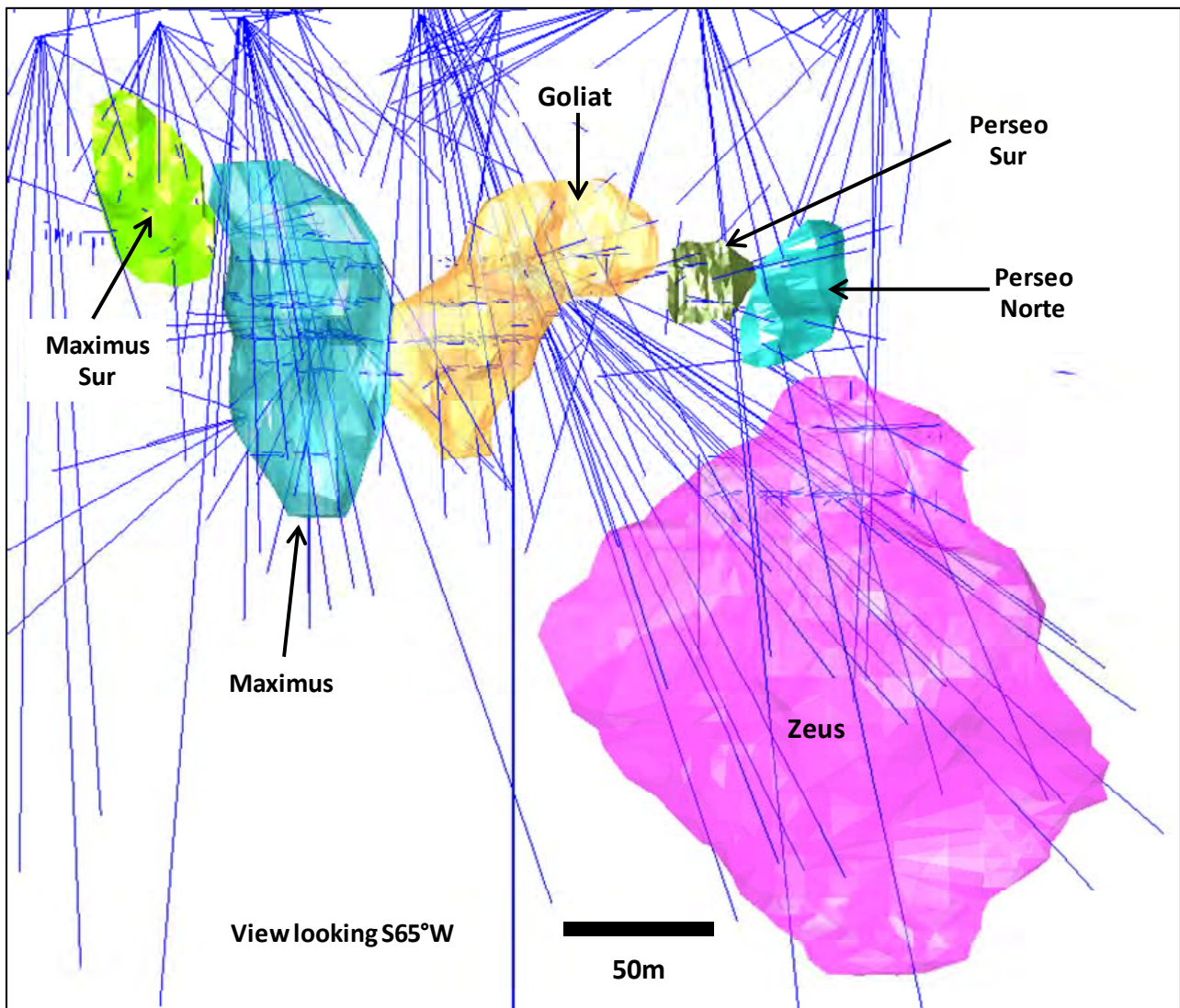


*Source: MINER, 2013*

MINER's drilling completed to date below the 2000m level of the El Roble mine has identified a series of lenses of VMS mineralization that are shown in Figure 1-3. These lenses, designated in order of size, are Zeus, Maximus, Ares, Goliat, Maximus Sur, Perseo Norte, and Perseo Sur, which exhibit a general plunge of minus 65° in longitudinal section.



**Figure 1-3: Perspective View of El Roble Massive Sulfide Lenses**



Source: RMI, 2016

### 1.5 Status of Exploration

After the June 18, 2013 Effective Date of the August 27, 2013 Technical Report, Atico's exploration efforts outside of the immediate El Roble underground mining operation were significantly reduced, in order for the company to focus on the underground infill drilling of the Inferred Mineral Resource disclosed in the 2013 Technical Report, and the closure of the purchase of MINER and its assets in November 2014. The limited amount of exploration work completed since November 2014 is summarized in Table 9-1 in Item 9.0 (Exploration).

## 1.6 Summary of Drilling

All of the sample data used to estimate Mineral Resources that are the subject of this report were obtained by MINER since they began underground core drilling June 2012. In addition to diamond core data, underground channel samples collected by MINER (about 6% of the total data) were used to estimate Mineral Resources. Historic drilling by Kennecott Mining Company (1982-1984) and Nittetsu Mining Company Ltd. were not used by the Qualified Persons because those drill holes identified VMS-style mineralization located spatially above the Mineral Resources that are the subject of this amended Technical Report. The VMS bodies that were delineated by the Kennecott and Nittetsu drilling have been mined out.

Table 1-1 summarizes the sample data that were used by GTC and the Qualified Persons responsible for this amended Technical Report in the update of El Roble resources.

**Table 1-1: Summary of El Roble Sample Data**

Year	Surface Core Holes			UG Core Holes			UG Channels Samples			Total	
	Company	No. Holes	Meters	Company	No. Holes	Meters	Company	No. Holes	Meters	No. Holes	Meters
2010	MINER	3	724	MINER	5	393				8	1,117
2011	Atico	2	611	MINER	19	1,114				21	1,725
2012				Atico	27	4,816				27	4,816
				MINER	14	931				14	931
2013				Atico	54	6,662				54	6,662
				MINER	3	137				3	137
2014				Atico	57	5,024	Atico	316	1,090	373	6,114
2015				Atico	46	7,233	Atico	147	747	193	7,980
<b>Total</b>	<b>n/a</b>	<b>5</b>	<b>1,335</b>	<b>n/a</b>	<b>225</b>	<b>26,310</b>	<b>n/a</b>	<b>463</b>	<b>1,838</b>	<b>693</b>	<b>29,482</b>

Source: GTC, 2015

In general, core recovery within the massive sulfide zones was very good. Poor core recoveries were usually associated with narrow structural zones, along hangingwall and footwall contacts of the massive sulfide lenses and along latite dike contacts with other lithologies.

Like most VMS deposits, the El Roble drilling results have identified a number of high-grade zones or lenses of mineralization within packages of lower grade material. The MINER wireframes used to constrain block grade estimation are comprised of about 66% massive sulfide, semi-massive sulfide, or brecciated massive sulfide lithologies. The remaining material inside of the wireframes is primarily Cretaceous black chert with minor amounts of intrusive dikes.

## 1.7 Sampling, Sample Preparation, and Assaying

The majority of the drill hole assays that are pertinent to this report were prepped and assayed by ALS Chemex. The samples were shipped from the El Roble project site via MINER personnel in company trucks and delivered to the Chemex lab located in



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Medellín, Colombia. The prepared pulps were then shipped to the ALS Chemex lab located in Lima, Peru.

SGS (Medellín, Colombia) has been contracted by MINER to act as a secondary check assay lab and to handle overflow work (e.g. underground channel samples). Samples sent to SGS were shipped from the El Roble project site via MINER personnel in company trucks.

MINER's drill core and channel samples were always in the control of company personnel while at the project site or during transportation to the Chemex and SGS facilities located in Medellín. The core storage facility was locked at night to assure that the samples were secure.

MINER routinely submitted quality assurance/quality control (QA/QC) samples with the drill hole samples that were sent to ALS Chemex or SGS. The quantity of blanks and standards that were inserted approximated one of each per 20 regular samples. Field duplicates were inserted at less frequent intervals (approximately one field duplicate for every 60 regular samples).

In the opinion of the Qualified Persons, the sample preparation, security, and analytical procedures implemented by MINER and their primary analytical lab (ALS Chemex) were adequate. The poor performance of blank material during MINER's initial drilling campaigns appears to have been addressed by Chemex by virtue of more rigorous cleaning of the sample prep equipment between individual samples and sample batches.

## 1.8 Data Verification

The Qualified Person responsible for this section obtained assay certificates for a representative number of MINER drill holes and channel samples. Copper, gold, and silver assay grades that were provided by MINER were compared to signed ALS Chemex and SGS certificates.

Approximately 25% of the Zeus sample data stored in MINER's database were compared to signed assay certificates from ALS Chemex and SGS. The Zeus zone contains approximately 85% of the resource that is the subject of this amended Technical Report. Based on that comparison which yielded no material errors, it is the opinion of the Qualified Person that the assay data that were provided by MINER are suitable for estimating Mineral Resources.

In addition to verifying a significant proportion of the assay database, the Qualified Persons responsible for this amended Technical Report also examined and independently performed independent checks on a variety of other data. Both Qualified Persons responsible for this amended Technical Report examined drill core and compared that core with drill hole logs that were generated by Atico's geologic staff. Those checks confirmed that the lithologic, alteration, mineralization, and structural attributes were accurately logged and reflect the overall geologic framework of the El Roble deposit.

A number of randomly selected down-hole survey records were compared against the supplied electronic drill hole database. No errors were discovered. Independent core recovery and RQD calculations were completed by the Qualified Persons responsible for this amended Technical Report. No discrepancies were discovered.

During a tour of the underground operation, the Qualified Persons responsible for this amended Technical Report noted the location of monumented drill hole collars. Those drill hole collars appeared to be properly located based on their location relative to level maps and cross sections.

### **1.9 Mineral Processing and Metallurgical Testing**

As described in Item 1.6, the El Roble processing plant has a rated nominal throughput capacity of 650 tonnes per day. The processing methods consist of conventional crushing, grinding, and flotation to produce a copper-gold concentrate. Grinding is 80% passing 200 mesh for flotation feed. In 2014, process recoveries averaged 91.4% for copper, 66.7% for gold and 48.8% for silver. The grade of the concentrate produced by the plant in 2014 averaged 21.2% Cu and 15.3 g/t Au. The only penalty metal known to the Qualified Person responsible for this amended Technical Report that occasionally exceeds maximum limits is mercury.

The metallurgical recoveries assumed for the Measured, Indicated and Inferred Mineral Resource estimation update that is the focus of this amended Technical Report are 93.5% for copper and 73% for gold. The slightly higher copper recovery assumed for the Mineral Resource cut-off is based on plant copper recovery improvements reported for the Third Quarter 2015 year-to-date that averaged 94.4%. The higher gold recovery assumed for the Mineral Resource cut-off is based on steadily improving plant gold recoveries (68.5%) and the results of metallurgical testwork done by SGS Laboratories (SGS) in Lima, Peru, under the supervision of MINER metallurgical consultants. These tests for direct flotation of copper and gold achieved gold recoveries that ranged from 47.05% to 93.85%, with lower gold recoveries found to be due to encapsulation of some of the gold in pyrite. Although finer grinding did improve gold recoveries, it also greatly increased the amount of slimes. As an alternative to finer grinding, SGS achieved higher recoveries on the order of 75% to 80%, mainly through the addition of reactive collectors during flotation. In the opinion of the Qualified Persons responsible for this amended Technical Report, the results of this test work, coupled with the historic production at the El Roble mine described in Item 6.0 and the more recent production results achieved by MINER since its acquisition by Atico in November 2013 provide firm support for the copper and gold recovery assumptions used for the update to the El Roble Mineral Resources that are the focus of this amended Technical Report.

### **1.10 Mineral Resources**

Mr. Michael J. Lechner, President of Resource Modeling Inc., is the Qualified Person responsible for this Item. Mr. Lechner was contracted by MINER to review Mineral Resource estimates for six VMS bodies located within the El Roble mine complex. The

Mineral Resource estimates were prepared for MINER by José Enrique Gutiérrez Ramírez, MAusImm (CP no. 314606), a Senior Resource Geologist with Geotecnologías Aplicadas (GTC) from Lima, Peru.

GTC developed separate rotated models for each of the six VMS bodies and estimated block grades by ordinary kriging and inverse distance methods using Datamine® software. Approximately 94% of the Measured and Indicated Mineral Resources that are the subject of this report are contained in two VMS lenses, Zeus (86%) and Maximus (8%). The other four deposits only comprise six percent of the Mineral Resource. For that reason, The Qualified Person focused the review on the Zeus and Maximus Mineral Resources. The Qualified Person examined data associated with those two Mineral Resources and constructed independent models and compared them with the GTC estimates.

A cutoff grade of 0.93% copper equivalent grade was used to define undiluted Mineral Resources. The cutoff grade was established by using a copper price of US\$2.80 per pound, a gold price of US\$1200/oz. Metallurgical recoveries for copper and gold were assumed to be 93.5% and 73%, respectively. Payable metal recoveries were assumed to be 96% and 95% for copper and gold, respectively. As mentioned in Item 14.3, a copper equivalent grade was calculated for each block using the following expression:

$$\text{CuEQ} = \text{Cu} (\%) + [\text{Au} (\text{g/t}) * 0.4829].$$

The metal prices and recoveries listed above were used in determining an equivalency factor for the gold component (i.e. 0.4829). The total cost per tonne was estimated to be US\$53.45, which includes mining, processing, and general and administrative (G&A) costs. Using the parameters from above, the following expression was used to calculate the copper equivalent break-even cutoff grade (BECOG) :

$$\text{BECOG} = \$53.45 / (\$2.80 \times 1.102 \times 20 \times 0.935) = 0.93\% \text{ Copper Equivalent}$$

Table 1-2 summarizes El Roble undiluted Mineral Resources at a 0.93% copper equivalent cutoff grade by VMS body and Mineral Resource category.

**Table 1-2: El Roble Undiluted Mineral Resources**

Category	VMS Body	Tonnes (000)	CuEq (%)	Cu (%)	Au (g/t)	Ag (g/t)	Cu Lbs (000)	Au oz (000)	Ag oz (000)
Measured Resources	<b>Goliat</b>	56.5	4.34	3.45	1.84	8.11	4,296	3	15
	<b>Maximus</b>	148.1	5.33	3.60	3.57	10.42	11,764	17	50
	<b>Maximus Sur</b>	21.6	2.09	1.22	1.81	11.12	580	1	8
	<b>Perseo Norte</b>	9.7	3.42	2.55	1.81	10.60	546	1	3
	<b>Perseo Sur</b>	1.2	4.29	3.24	2.19	6.79	89	0	0
	<b>Zeus</b>	553.7	5.04	3.84	2.47	10.12	46,914	44	180
<b>Total Measured Resources</b>		<b>791</b>	<b>4.94</b>	<b>3.68</b>	<b>2.61</b>	<b>10.06</b>	<b>64,189</b>	<b>66</b>	<b>256</b>
Indicated Resources	<b>Goliat</b>	2.8	3.30	2.35	1.98	5.16	145	0	0
	<b>Maximus</b>	3.8	5.56	3.71	3.84	10.13	309	0	1
	<b>Maximus Sur</b>	8.2	2.01	1.02	2.05	18.04	186	1	5
	<b>Perseo Norte</b>	0.3	4.04	2.87	2.41	8.19	21	0	0
	<b>Zeus</b>	1,059	4.29	3.31	2.02	7.92	77,363	69	270
<b>Total Indicated Resources</b>		<b>1,074</b>	<b>4.27</b>	<b>3.29</b>	<b>2.02</b>	<b>8.00</b>	<b>78,023</b>	<b>70</b>	<b>276</b>
<b>Total Measured + Indicated</b>		<b>1,865</b>	<b>4.55</b>	<b>3.46</b>	<b>2.27</b>	<b>8.87</b>	<b>142,212</b>	<b>136</b>	<b>532</b>
Inferred	<b>Zeus</b>	255	4.75	4.10	1.34	5.21	23,042	11	43
<b>Total Inferred Resources</b>		<b>255</b>	<b>4.75</b>	<b>4.10</b>	<b>1.34</b>	<b>5.21</b>	<b>23,042</b>	<b>11</b>	<b>43</b>

Source: GTC, 2015

Note: Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. Inferred Mineral Resources are estimated on the basis of limited geologic evidence and sampling. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

The Qualified Persons are not aware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other factors that could materially affect the El Roble Mineral Resources discussed in this amended Technical Report.

### 1.11 Interpretation and Conclusions

Since the June 18, 2013 effective date of the 2013 Technical Report titled, "Amended Technical Report, El Roble Copper-Gold Project, Chocó Department, Colombia, August 23, 2013", MINER has completed significant infill drilling from underground drill stations. These holes have intersected the VMS lenses at acute angles to the trends of the mineralization that are acceptable for the adequate definition of the thicknesses of the lenses, allowing the classification of Measured and Indicated Mineral Resources, as well as Inferred Mineral Resources in peripheral areas where drill hole intercept spacing currently is too wide. In the opinion of the Qualified Persons responsible for this amended Technical Report, these Mineral Resources, as estimated by GTC, meet the definitions established by the CIM Standing Committee on Reserve Definitions (and adopted by the CIM Council on May 10, 2014).

The Qualified Persons responsible for this amended Technical Report note that the +20-year history of successful mining of the El Roble VMS deposit by MINER under its former ownership prior to November 2013 and since the acquisition of MINER and its assets by Atico, together lend significant support to the updated Mineral Resource estimate that is the focus of this amended Technical Report. However, the Qualified Persons stress that these Mineral Resources are not Mineral Reserves, and thus by definition do not have demonstrated economic viability. Although MINER has been mining and processing material from the El Roble VMS deposit for over 20 years, the company has yet to complete the work required to estimate NI 43-101 compliant Mineral Reserves that are based on a detailed Life of Mine (LOM) plan. However, the Qualified Persons responsible for this amended Technical Report understand that the MINER technical staff has plans to complete a Mineral Reserve estimate in 2016.

As of the effective date of this amended Technical Report, MINER had scaled back its exploration efforts on land it controls in the area of the El Roble mine operations, instead focusing its efforts on increasing mill throughput via plant equipment upgrades, underground development of the VMS lenses below the 1885 level, and improving operations infrastructure. However, in the opinion of the Qualified Persons responsible for this amended Technical Report, the exploration work completed by MINER as of the effective date of this amended Technical Report indicates that there is very good potential for the discovery of additional VMS lenses, both along strike and down dip of the VMS lenses delineated thus far, as well as along the 10-kilometer strike length of prospective ground covered by the El Roble mineral concessions. This opinion is based on a combination of the geologic observations initially made by G. Smith and D. Pohl, Qualified Persons responsible for the January 2012 Technical Report, but also on the results of MINER's exploration efforts since 2012.

## 1.12 Recommendations

### Status of Previous Recommendations

In the January 24, 2012 Technical Report titled, "Technical Report on the El Roble Project, Chocó Department, Colombia" by Greg Smith, a number of recommendations were made for an aggressive two-phase exploration effort designed to discover additional VMS deposits on MINER's El Roble mineral concessions. In the opinion of the Qualified Persons responsible for this amended Technical Report, MINER has acceptably addressed the recommendations made in the January 24, 2012 Technical Report.

In their earlier 2013 Technical Report titled, "Amended Technical Report, El Roble Copper-Gold Project, Chocó Department, Colombia, August 23, 2013", the Qualified Persons responsible for this amended Technical Report recommended that it was necessary to reduce (infill) the drill hole spacing in the El Roble VMS lenses to 20m-25m in order to define the continuity of the mineralization at an adequate level for classification of Indicated Mineral Resources. In the opinion of the Qualified Persons responsible for this amended Technical Report, MINER completed sufficient infill drilling and sublevel

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development in mineralization to adequately define the continuity, tonnes, and grade for the estimation and classification of the Measured and Indicated Mineral Resources that are the focus of this amended Technical Report.

*Estimation of Mineral Reserves and Development of a Life of Mine (LOM) Plan*

The single most important task that the Qualified Persons responsible for this amended Technical Report are recommending is for MINER to complete an estimation of NI 43-101-compliant Mineral Reserves for the El Roble deposit and a Life of Mine (LOM) plan based on that Mineral Reserve estimate. In the opinion of these Qualified Persons, MINER has completed sufficient infill drilling, ramp access, secondary portal access, sublevel development in mineralization, and production stoping in the Maximus, Goliat, and Zeus VMS lenses to demonstrate successful mining of the El Roble deposit based on realistic unit operating costs and metal recoveries. The Qualified Persons note that while MINER can complete a Mineral Reserve estimate in-house, because MINER does not meet the requirements of a “producing issuer”, as defined on Page 2 of Item 1.1 – Definitions, in Part I – Definitions and Interpretation, Standards of Disclosure for Mineral Projects, National Instrument 43-101, an audit of the in-house Mineral Reserve will have to be completed by independent mining and mineral processing engineers who meet the requirements for Qualified Persons defined on Page 3 of the above reference. The Qualified Persons responsible for this amended Technical Report estimate that the cost of an independent audit of the Mineral Reserve and LOM Plan will range from US\$100,000 to US\$125,000.

*Underground Exploration Drilling*

As of the effective date of this amended Technical Report, MINER was nearing completion of the first two “etapas” (Phases 1 & 2) of a four-phase underground exploration drilling effort designed to locate new VMS lenses in the vicinity of the main lenses (Maximus, Goliat, Zeus). MINER has plans to complete Phases 3 and 4 in 2016. Phase 3 will consist of four holes drilled from the 2000 Level, each 250 meters in length, totaling 1,000 meters. Phase 4 will include three holes drilled from the 2000 Level (each 300 meters in length) totaling 900 meters, as shown in Figure 26-1, designed to test two VMS lens targets. The total cost of this exploration (including direct drilling costs, sample assaying, and exploration office expenses that include salaries, etc.) estimated by MINER is \$US492,000. In the opinion of the Qualified Persons responsible for this amended Technical Report, the targets to be investigated by drilling Phases 3 and 4 warrant testing.

*General Recommendations*

The Qualified Persons responsible for this amended Technical Report recommend that MINER revert back to their initial protocol of submitting ¼ core samples as field duplicates as a part of their QA/QC program. That protocol was changed in 2014 by requesting that the commercial lab (ALS Chemex or SGS) prepare another pulp sample from the coarse rejects that were generated from the initial sample. If possible, it would be

statistically more meaningful if ½ core samples could be submitted as original and field duplicate samples. The cost for this recommendation is estimated to be in the range of US\$5,000 to US\$7,500 for a 1,000 sample infill drilling program, depending on how many duplicate samples are submitted.

## 2.0 INTRODUCTION

The purpose of this amended Technical Report, titled, "Amended Updated Mineral Resource Estimate, El Roble Copper-Gold Project, Chocó Department, Colombia", is to address specific deficiencies in the original Technical Report that was titled "Updated Mineral Resource Estimate Technical Report, El Roble Copper-Gold Project, Chocó Department, Colombia". These deficiencies were identified by the British Columbia Securities Commission (BCSC) as a result of the Commission's routine review of select Technical Reports for compliance with the Securities Act, regulations and policies, including National Instrument 43-101, Standards of Disclosure for Mineral Projects (NI 43-101). The Qualified Persons responsible for this amended Technical Report note that the Mineral Resources that are the focus of this amended Technical Report were not changed and remain identical to the Mineral Resources disclosed in the original Technical Report titled, "Updated Mineral Resource Estimate, El Roble Copper-Gold Project, Chocó Department, Colombia, dated January 29, 2016.

At the request of Minera El Roble S.A. (MINER), a Colombian subsidiary of Atico Mining Corporation (Atico) which is a British Columbia corporation primarily focused on the acquisition, exploration and development of copper and gold mining projects in Latin America, Donald F. Earnest, President, Resource Evaluation Inc. (REI), and Michael J. Lechner, President, Resource Modeling Inc. (RMI), as Qualified Persons defined by Canada National Instrument 43-101, have completed this amended Technical Report on the El Roble Project, located within the Chocó Department in the country of Colombia. The project consists of mineral concessions totaling approximately 6,779 hectares from which an underground mine and processing facility currently owned and operated by MINER produces gold and copper from a volcanic massive sulfide (VMS) deposit near the town of Carmen de Atrato. In addition to correcting the deficiencies referred to in the previous paragraph of this section, this amended Technical Report serves to provide a reiteration of the results of the Qualified Persons' review of information and data from drill holes and other work that have been accumulated and completed since public disclosure of the NI 43-101 Technical Report titled, "Amended Technical Report, El Roble Copper-Gold Project, Chocó Department, Colombia, August 27, 2013". These recent data and information form the basis of the updated Mineral Resource estimate completed by MINER technical personnel with the assistance of an independent consultant retained by MINER in early 2015, which the Qualified Persons responsible for this amended Technical Report reviewed.

On November 22, 2013, Atico acquired 90% of MINER and its assets, which include the El Roble mining concessions, exploration licenses, the El Roble underground mine, processing facility, and ancillary facilities. The remaining 10% of the property is owned by several private owners. While mining and processing has continued uninterrupted since Atico's acquisition of MINER and its assets, it is important to note that as of the date of this amended Technical Report, MINER has yet to complete a Mineral Reserve estimate for the El Roble deposit.



The Qualified Persons responsible for this amended Technical Report emphasize that by definition, Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. Although MINER has continued essentially uninterrupted to mine the El Roble deposit and produce copper-gold concentrates, the Qualified Persons responsible for this amended Technical Report refer to Companion Policy 43-101CP to National Instrument 43-101, Standards of Disclosure for Mineral Projects, Part 4, Section 4.2(6), Page 13, where it is stated, “We recognize that there might be situations where the issuer decides to put a mineral project into production without first establishing mineral reserves supported by a technical report and completing a feasibility study. Historically, such projects have a much higher risk of economic or technical failure.” While the Qualified Persons responsible for this amended Technical Report consider the continued operation of the El Roble mine under MINER’S new ownership to be a positive indicator that some portion of the updated Measured and Indicated Mineral Resources might be converted to Mineral Reserves (once mining dilution and extraction factors are applied and the cost of secondary development assessed), the Qualified Persons again stress that MINER has yet to complete a Mineral Reserve estimate for the El Roble deposit, and thus MINER faces a higher degree of risk of economic or technical failure. However, in the opinion of the Qualified Persons, this risk is reduced to some degree by over 20 years of continuous mining and processing operations at El Roble.

Both Qualified Persons visited the El Roble Project site from September 22 – 24, 2015, where they examined the underground workings, reviewed diamond drill core, drill hole logs, drill core photos, the project electronic database, geologic cross sections and plan maps, and held meetings with MINER technical personnel and senior operations management. The Qualified Persons also examined the ALS Chemex sample preparation facility and the SGS analytical laboratory, both located in Medellin, Colombia, and met with management of both facilities on September 24, 2015.

The Qualified Persons responsible for this amended Technical Report assume that the data and information given verbally, in electronic formats, and as paper copies by the employees of MINER were complete and correct to the best of each employee’s knowledge, and that no material information, whether requested or not by the Qualified Persons, was intentionally withheld.

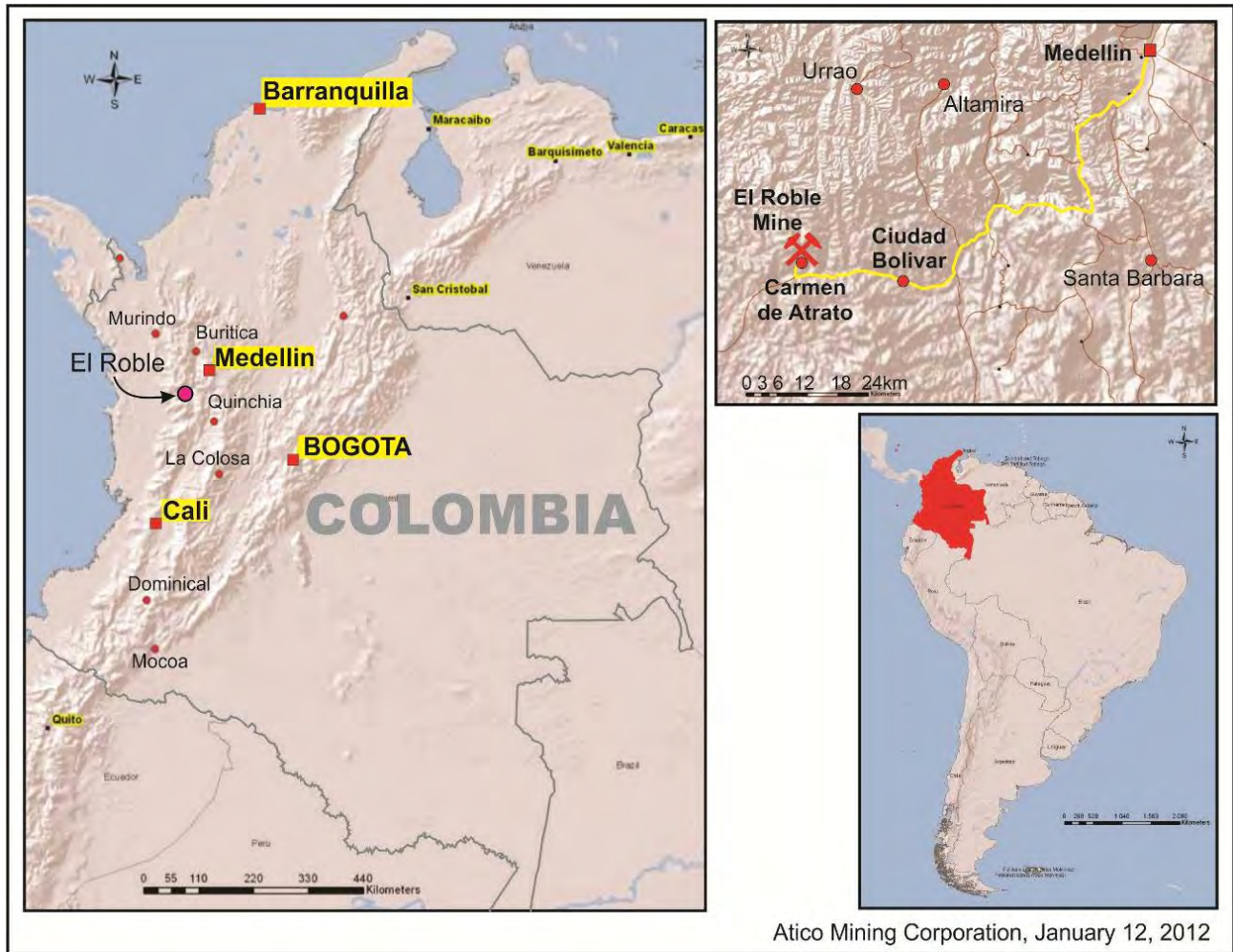
### **3.0 RELIANCE ON OTHER EXPERTS**

With respect to the status of the mineral concessions, the Qualified Persons responsible for this amended Technical Report have relied on title opinions provided to them by MINER's legal counsel that confirmed that the mineral concessions were in good standing as of that date.

#### 4.0 PROJECT DESCRIPTION AND LOCATION

The El Roble Project is located within the Chocó Department close to the border with the Antioquia Department in the country of Colombia (see Figure 4-1). Access to the project site is via paved highway southwest from the city of Medellín to the town of Carmen del Atrato (driving time approximately four hours), then north approximately three kilometres via an improved gravel road. The El Roble Project consists of a working underground mine that produces copper and gold contained in a copper concentrate at a current production rate of 650 tonnes per day, and exploration targets on concessions that surround the underground operations. Figure 4-2 is a view from west of the El Roble mine operations site. The current main underground mine access is the 1880m level tunnel, which is visible in Figure 4-2 above the processing plant.

Figure 4-1: General Location Map



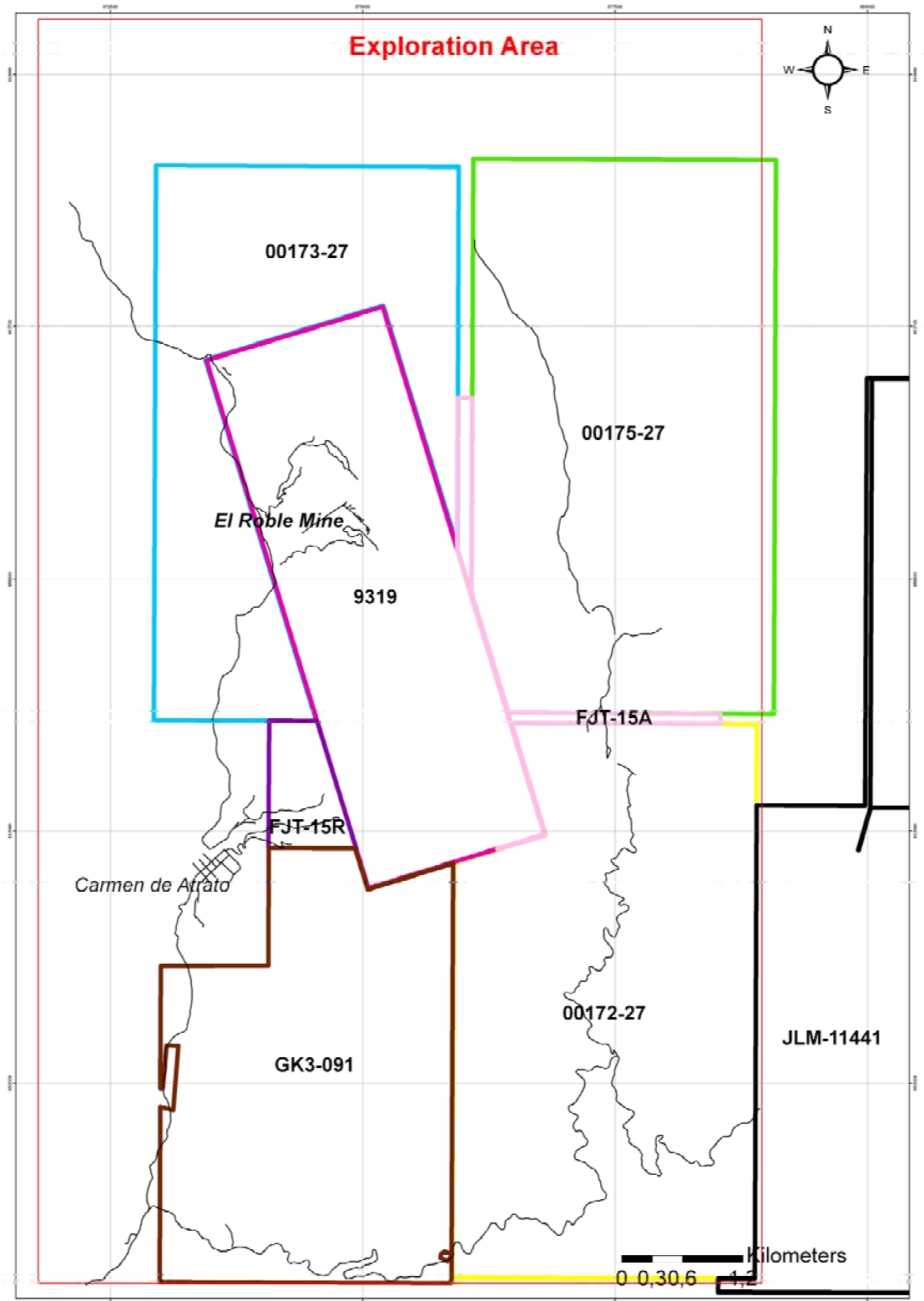
**Figure 4-2: View of the El Roble Mine Operations Site**



*Source: MINER, 2016*

The El Roble Project consists of eight mineral concessions that total 6,779 hectares (ha), comprised of five valid mining concession contracts (Contrato Nos. 9319, GK3-091, FJT-15A, FJT-15R, and JLM-11441) and three valid exploration licenses (No. 00172-27, No. 00173-27, and No. 00175-27). The locations of all of these concessions are shown in Figure 4-3. Table 4-1 summarizes the pertinent aspects of all concessions, the status of which were last confirmed to be in good standing by MINER's legal counsel as of the date of this amended Technical Report.

Figure 4-3: Location of the El Roble Mineral Concessions



Source: Atico, 2013

**Table 4-1: List of El Roble Mineral Concessions**

Title	Title Holder/Request	Classification	Stage	Area (ha)	Registration Date	Expiration Date
00172-27	Minera El Roble S.A.	Exploration License	Fifth year of exploration	1,555.27	December 24, 2010	December 24, 2014 License in conversion to Mining Contract
00173-27	Minera El Roble S.A.	Exploration License	Fifth year of exploration	952.95	December 23, 2010	December 23, 2012 License in conversion to Mining Contract
00175-27	Minera El Roble S.A.	Exploration License	Third year of exploration	1,627.87	March 11, 2013	March 11, 2018 License in conversion to Mining Contract
9319	Minera El Roble S.A.	Mining Concession Contract Minera	Twenty fourth year of exploitation	999.19	March 20, 1990	June 24, 2017
GK3-091	Minera El Roble S.A.	Mining Concession Contract Minera	Fifth year of exploration	1,085.79	December 17, 2010	December 17, 2040
FJT-15A	Minera El Roble S.A.	Mining Concession Contract Minera	Third year of construction and assembly	49.51	February 11, 2008	February 11, 2038
FJT-15R	Minera El Roble S.A.	Mining Concession Contract Minera	Third year of construction and assembly	84.84	February 11, 2008	February 11, 2038
JLM-11441	Minera El Roble S.A.	Mining Concession Contract Proposal	Third year of exploration	423.28	January 25, 2012	January 25, 2042

*Source: MINER, 2016*

MINER owns the rights for surface use to 208ha in the immediate mine area (within mining concession contract No. 9319 and exploration license 00173-27). Surface ownership on the remaining El Roble Project is divided among multiple individual landowners. Although access to the surface is guaranteed by law, actual exploration activities require negotiations for compensation of the separate owners. Where purchase of permanent surface rights is necessary, the purchase price is negotiated with the surface landowner. However, by Colombian law, the purchase price is based on the fair market value of the surface, irrespective of the potential value of underlying minerals.

To the best knowledge of the Qualified Persons responsible for this amended Technical Report, there are no encumbrances, back-in rights, or royalties that affect the El Roble Project other than the following:

- Royalties owed the Federal government in accordance with the mining laws of Colombia (Law 865 of 2001 and Law 756 of 2002) which stipulate a 4% net smelter return royalty (NSR) on precious metals and a 3% NSR on copper. In a November 15, 2015 News Release, Atico advised that, “the Colombian subsidiary Minera El Roble S.A. has received notice of a claim from the mining authority in Colombia requesting payment of royalties related to past copper production. The mining authority is basing its claim on the current mining law, which is subsequent to the

prevailing mining law under which Minera El Roble S.A. executed the contract regulating its royalty obligations. The current mining law in Colombia explicitly states that it does not affect contracts executed prior to this law entering into force. Therefore, the Company and its legal counsel's position is that the authorities' claim is not legitimate and the Company has complied rigorously with its royalty payments due and called for under the current contractual obligations. The claim of approximately \$2 million USD is at an administrative level and the Company will attempt to favorably resolve the claim at this level, and if necessary, will vigorously defend itself should legal action be required.”;

- MINER has pension obligations and severance agreements with respect to its employees who belong to the union, Sintramienergetica.

With respect to environmental liabilities affecting the property, a partial failure of the tailings impoundment occurred in 2009 (described in Item 6.0 - History) that resulted in sanctions requiring MINER to reforest the affected area and to restock the river with fish. MINER complied with these sanctions. As of January 2010, the repairs to the tailings impoundment were completed, and there are no known long-term impacts of the tailings failure, nor are any restrictions in place that might affect the future ability of the mine to operate. As part of its acquisition of MINER, Atico assumed responsibility for any environmental liabilities that may be associated with the El Roble Project and for meeting eventual closure requirements that pertain to the existing mine and processing facility.

A PMA (Environmental Permit) that was issued to MINER by CODECHOCO (Corporación Autónoma del Chocó, a government agency) on January 30, 2001 is still in place. The PMA allows MINER to operate the El Roble mine under the following terms, which apply to all companies that use water resources:

- Hazardous waste (tailings) must be disposed of using an appropriately licensed contractor;
- A compensation fee must be paid to CODECHOCO for the use of natural resources (water) and a bond must be posted equivalent to 20% of the value of the Environmental Management Plan;
- Exploration activities (principally drilling) must comply with Mining Environmental Guidelines (Resolution 18-0861).

A new processing facility, if needed in the future, would require a formal plan approved by the Ministry of Mines and Energy and an environmental license must be granted by the Ministry of the Environment.

Currently there is a contract in place for purchase of electric power from ISAGEN, a public company.



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

The El Roble Project, which consists of a working underground mine that produces a concentrate containing copper and gold, is easily accessed via paved highway from the city of Medellin, Colombia, to the town of Carmen del Atrato, Department of Chocó (driving time approximately four hours), then north approximately three kilometres via an improved gravel road to the mine operations (see Figures 4-1 and 4-3). The topography is quite rugged (see Figure 4-2), ranging in elevation from 1600 metres to 2700 metres AMSL. The region around the project site is drained by the Rio Atrato, which flows from north to south past the mine operations.

The climate in the general project area is tropical with well-defined wet and dry seasons over which relatively constant temperatures range from 18 °C to 28 °C daily, with little variation over the course of the year. Vegetation around the project site consists of forested hill slopes and cultivated lowlands.

During the rainy season torrential storms can cause minor landslides onto the roads that lead from National Highway 60 to the town of Carmen del Atrato. While these sporadic events can result in temporary effects to transportation of supplies into the mine operations and haulage of metal concentrates to transportation transfer points, day-to-day mine operations and exploration activities are not significantly hampered by weather or climate. Currently a planned operation shut-down takes place for a three week period centered around the Christmas and New Year holidays.

MINER controls 208ha of surface rights in the immediate vicinity of the mine which, as of the effective date of this amended Technical Report have been sufficient to operate the existing underground mine and dispose of tailings from the processing plant. MINER disposes of all tailings from the mine into a newly constructed tailings impoundment located south of the mine near the town of Carmen del Atrato.

Readily available process water is drawn from the Rio Atrato and subsequently discharged back into the river when water balance conditions require. Nearly all mining and process plant personnel come from the nearby town of Carmen del Atrato, where the labor force has proven to be adequate. A five megawatt substation operated by Isagen (a public company) provides electricity for operating the mine and processing facility under the terms of an existing contract with MINER.



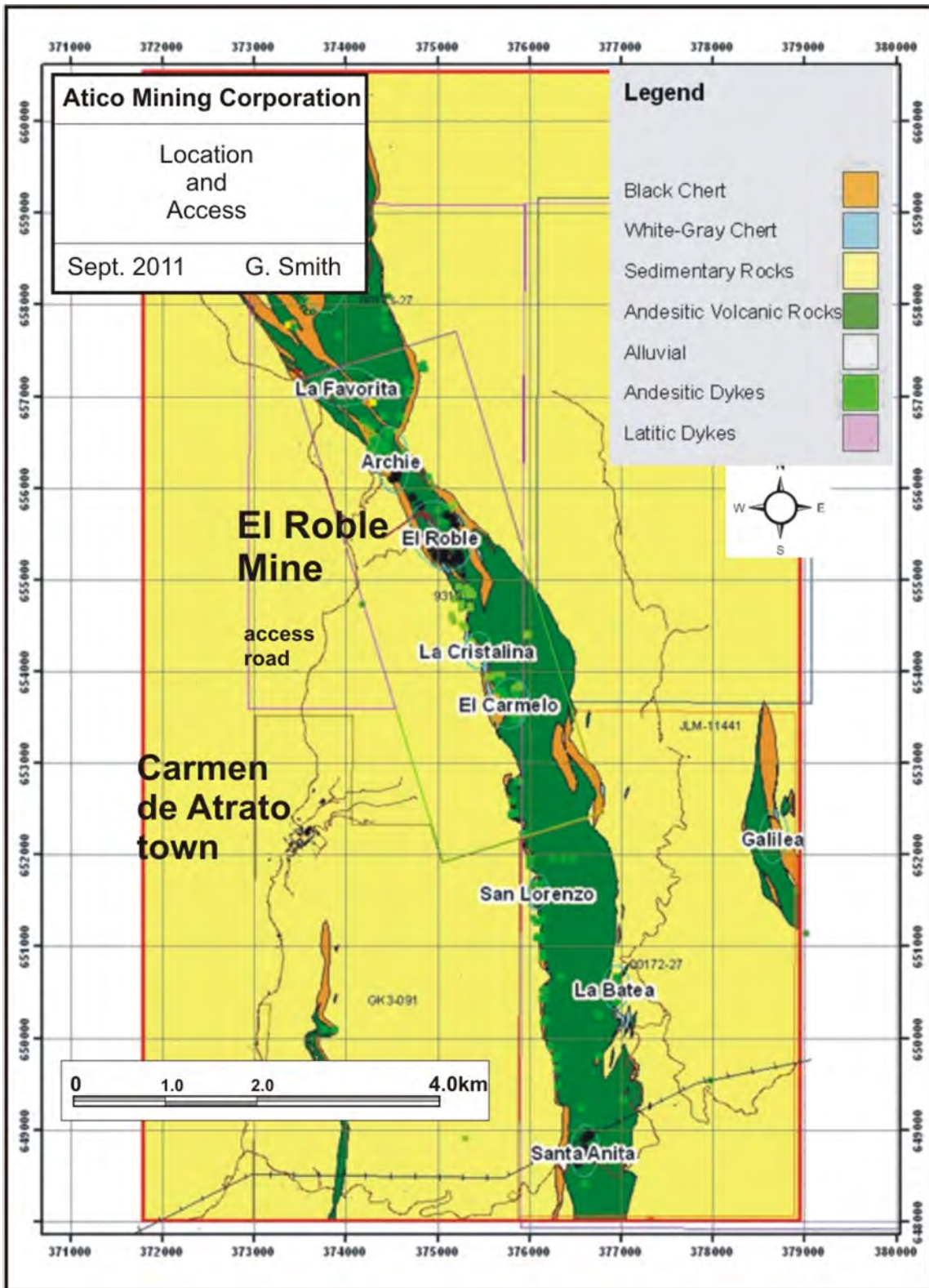
## **6.0 HISTORY**

This section describes the discovery, exploration and development, and production history of the El Roble mine up to the date of this amended Technical Report. Specific details regarding Atico's exploration efforts on the property since April 2011 are described in Item 9.0 - Exploration.

### **6.1 Discovery**

Copper mineralization in the El Roble area was first discovered during the early 1970's at the Santa Anita deposit, located six kilometres south of the current El Roble mine operation and within the MINER mineral concession area (Figure 6-1).

Figure 6-1: Location of Prospects



At Santa Anita, a small amount of copper was reportedly produced underground from vein and stockwork mineralization. During this same time, Don Humberto Echavarría (the owner of the Santa Anita mine) reportedly found eroded boulders of massive sulfide mineralization below the current site of the El Roble mine during construction of a road from Carmen de Atrato to the town of Urao. The source of the boulders was found to be a landslide scarp upslope that exposed an outcrop of oxidized massive sulfide mineralization (gossan). The first company to exploit the El Roble deposit (at a mining rate of 30 tonnes per day) was Minas El Roble, which was incorporated in 1972.

## 6.2 Historic Exploration and Development

Minas El Roble entered into a joint venture with Kennecott Copper Company (Kennecott) in 1982. During a two-year period Kennecott spent approximately US\$ 2 million on exploration that included surface mapping and sampling, a ground magnetic survey, and a 22-hole diamond drilling program (holes R-01 through R-22) totaling 2,190 meters (averaging just 100m deep) that identified a non-NI 43-101 compliant mineral resource amounting to approximately 1.1 million tonnes. Because this mineral resource did not meet Kennecott's minimum deposit size requirements, the company withdrew from the joint venture.

Following Kennecott's departure, a partnership between Minas El Roble and Nittetsu Mining Company Ltd of Japan was formed in 1986. As the operator, Nittetsu expanded the area of surface mapping and sampling, conducted induced polarization (IP) and resistivity geophysical surveys, and completed additional drilling that identified and delineated two mineralized zones. One of these, termed the Main zone, measured approximately 80 meters along strike by 100 meters down-dip by 45 meters wide. This zone was reported to contain approximately 700,000 tonnes of "proven plus probable reserves" that averaged 5.48% copper, 3.06 g/t gold and 9.39 g/t silver above the 2225m elevation in the mine. The adjacent North zone was reported to have dimensions of approximately 100 meters along strike by 80 meters down-dip by 15 meters in width, containing approximately 273,000 tonnes averaging 2.67% copper, 3.25 g/t gold and 10.9 g/t silver. The Qualified Persons responsible for this amended Technical Report were not able to review any of the tonnage and grade estimates discussed in this paragraph, and are of the opinion that it is highly unlikely that these estimates are in compliance with NI 43-101 and CIM guidelines for Mineral Resources or Mineral Reserves.

In 1987, C. Itoh and Co. of Japan joined the Nittetsu/ Minas El Roble partnership to form a new company, EREESA, which began construction of a 96,000 tonne per year processing plant that was completed in 1990 and began operation at the rate of 380 tonnes per day. Nittetsu continued to be the project operator, completing 66 additional diamond drill holes totaling 7,731 meters (averaging just 117m deep), which increased reported "reserves" to approximately 1.2 million tonnes averaging 4.83% copper, 3.23 g/t gold, and 12.4 g/t silver. As with previous "reserve" estimates mentioned in this Item, the Qualified Persons responsible for this amended Technical Report were not able to review the tonnage and grade estimates discussed in this paragraph, and are of the opinion that it

is highly unlikely that these estimates are in compliance with NI 43-101 and 2014 CIM guidelines for Mineral Resources/Mineral Reserves.

In 1990, twenty additional holes ((CR1 to CR-20) totaling 4,638 meters were drilled from the surface, along with completion of more IP/Resistivity surveys. Nittetsu and C. Itoh eventually withdrew from the joint venture and left Colombia in 1997, reportedly for security reasons, after which the name of the company was changed to Minera El Roble S.A. (MINER).

Since the departure of the Japanese partners in 1997, the El Roble mine has been operated by MINER, producing copper-gold concentrates and continuing to expand and delineate Mineral Resources in known VMS lenses by in-fill and step-out diamond drilling, and initial diamond drilling to discover new VMS lenses. As of the date of this amended Technical Report, 230 diamond drill holes totaling 27,645 meters have been completed from both surface pads and underground stations. This drilling is summarized in greater detail in Item 10.0 of this amended Technical Report.

On November 22, 2013, Atico acquired 90% of MINER and its assets, which include the El Roble mining concessions, exploration licenses, the El Roble underground mine, processing facility, and ancillary facilities. While underground development, production mining, and processing has continued uninterrupted since Atico's acquisition of MINER and its assets, it is important to note that as of the date of this amended Technical Report, MINER has yet to complete a mineral reserve estimate for the El Roble deposit.

### **6.3 Historic Production**

The El Roble mine has been in continuous production since 1991 except for the year 1993 when the mine was closed for security reasons, and for a period of six weeks during March and April of 2013 due to a miners' work stoppage. Prior to Atico's entering into the option agreement on January 28, 2011 to acquire MINER and its assets, the mine was small in scale, operating at an average production rate of 320 tonnes per day. Except for some additional mineralization discovered during mine development, all mining prior to 2011 took place in VMS mineralization originally identified and defined by Kennecott and the Nittetsu-Itoh joint venture. Up to that point in time, MINER had maintained only rudimentary production records, and without the benefit of a geology/engineering staff had conducted no exploration. The option agreement between Atico and MINER included the commitment to explore for new VMS deposits on the MINER concession block.

Total production from the mine from 1990 through 2014 is summarized by year in Table 6-1, which clearly illustrates what were steadily declining copper grades under MINER's former owners, as the Main and North mineralized zones were steadily depleted through 2013. Prior to Atico's acquisition of the company, MINER did not complete any Mineral Resource or Mineral Reserve estimates that complied with any NI 43-101 and CIM guidelines that were in force during its ownership,, nor were any meaningful internal estimates of tonnes and grade made that could have formed the basis for short and long range mine planning. Instead, the approach was to conduct ongoing underground

“production” diamond drilling (generally only 30m to 50m ahead of the working faces) and to use the results of these drill holes to guide mining on a daily and weekly basis. While MINER did record the coordinates, azimuths inclinations, and total depth of each hole during this period, in general the company did not assay the core from these holes (core recovery was often poor), although the core was retained. Instead, the company used visual evidence provided by the core to determine the limits (contacts) to what it considered to be economic mineralization, and plotted these contacts on working mine maps.

**Table 6-1: Historic El Roble Mine Production (1990 - 2014)**

Year	Ore mined (tonnes)	Cu Head grade (%)
1990	4,769	5.33
1991	98,256	3.67
1992	75,234	3.19
1993	No Production	
1994	86,113	3.20
1995	81,204	3.59
1996	82,891	2.91
1997	76,778	2.53
1998	74,878	2.98
1999	80,888	2.89
2000	79,369	2.74
2001	76,256	2.73
2002	77,579	2.39
2003	72,718	2.06
2004	75,706	2.25
2005	68,696	2.06
2006	29,684	2.03
2007	49,878	1.63
2008	61,838	1.88
2009	73,214	1.77
2010	71,312	1.14
2011	76,379	1.19
2012	69,831	1.21
2013	69,895	1.07
2014	133,332	3.37
<b>Total</b>	<b>1,746,698</b>	<b>2.48</b>

Source: MINER, 2016

Table 6-1 lists no gold grades prior to 2004, as material mined and processed before that date was not assayed for gold. However, Table 6-2 summarizes mine production and concentrate produced from 2004 through 2014, with gold head grade assays for tonnes mined as well as concentrate gold grades.

**Table 6-2: El Roble Mine Production Since 2004 (with gold head grades)**

Year	Ore Production			Concentrate Production		
	Tonnes	Cu %	Au (g/t)	Tonnes	Cu %	Au (g/t)
2004	75,706	2.25	2.46	7,840	18.20	15.92
2005	68,696	2.06	1.02	6,330	20.76	11.65
2006	29,684	2.03	unknown	2,903	19.39	10.83
2007	49,878	1.63	3.91	4,196	18.00	23.13
2008	61,838	1.88	3.91	5,253	19.50	23.16
2009	73,214	1.77	3.17	5,688	20.80	25.70
2010	71,312	1.14	2.00	3,916	18.64	21.90
2011	76,379	1.19	1.40	4,042	20.30	15.86
2012	69,831	1.21	1.79	3,760	20.10	20.00
2013	69,895	1.07	1.56	3,294	19.40	21.70
2014	133,332	3.37	3.30	19,417	21.20	15.30
<b>Total</b>	<b>779,765</b>	<b>1.90</b>	<b>2.37</b>	<b>66,639</b>	<b>20.00</b>	<b>17.36</b>

Source: MINER, 2016

The Qualified Persons note that because the concentrate production grade data shown in Table 6-2 were back-calculated from smelter settlement sheets, the sum products of the annual data may not match reported smelter totals.

#### 6.4 Historic Mining and Processing

##### Mining

The El Roble mine has most recently operated for three 8-hour shifts, six days a week, using mechanized cut-and-fill stoping methods with mine development waste as back fill. Recent production from individual massive sulfide lenses has totaled as much as 50,000 tonnes, although some mined were much smaller. As noted in the January 2012 and the August 2013 Technical Reports, the hanging wall and the footwall host rocks of the massive sulfide lenses can be sufficiently competent to support stope openings of 5m to 10m wide and strike lengths of 15m to 20m. However, in the opinion of the Qualified Person responsible for this Item 6.4 of this amended Technical Report (which is based on observations made during the site visits required for both the August 2013 Technical Report and for this amended Technical Report), excess dilution resulting from the poor rock quality of the black chert unit exposed underground and poor mining practice on the part of MINER's former owners together were likely responsible for the steadily declining copper and gold grades from 2009 to 2013. The Qualified Person notes that geotechnical issues continue to adversely affect the operation, based on observations made as part of the examination of the underground workings during the September 2015 site visit for this amended Technical Report. Specifically, in the Goliath and Maximus lenses MINER lost control of the ground due to major structures and poor rock quality, resulting in local losses to the Mineral Resources.

While earlier reports cite that the general thicknesses of VMS mineralization lenses mined by MINER prior to its acquisition by Atico decreased with depth from approximately 40m at the surface (2223m AMSL) to 15m at the 2000m level and 10m at the 1980m level, the Qualified Persons responsible for this amended Technical Report note that mining in the Zeus and Maximus deposits since Atico's acquisition of MINER has revealed significantly wider widths (up to 60m).

Mineralization to be processed and waste are transported to the surface using 3-cubic-yard load-haul-dump units (LHD's) that feed material to the 2000m main haulage level which is serviced by battery locomotive and 3-tonne mine rail cars. Raises connect the underground levels for ventilation and services (compressed air, water, electricity). A ramp between the 2000m haulage level and the lower 1950m level and the 1880m level provides access for mining of down-plunge extensions of the VMS mineralization lenses.

### Processing

The existing processing plant at El Roble has been operated by MINER since 1990 and after recent upgrades has a rated nominal throughput capacity of 650 tonnes per day. The processing methods consist of conventional crushing, grinding, and flotation to produce a copper-gold concentrate. Grinding is to 80% passing 200 mesh for flotation feed. Four banks of six flotation cells each generate concentrates which are subsequently thickened, filtered and stored on site for shipping via highway truck to the Pacific coast port of Buenaventura. Process tailings are deposited in an impoundment facility situated along the banks of the Rio Atrato next to the processing plant, or in a separate tailings impoundment located downstream of the processing plant. Process waste water is decanted in a series of ponds and then released (at a pH of 10.2) into the Rio Atrato.

In 2014, process recoveries averaged 91.4% for copper, 66.7% for gold and 48.8% for silver. The grade of the concentrate produced by the plant in 2014 averaged 21.2% Cu and 15.3 g/t Au. The only penalty metal known to the Qualified Person responsible for this amended Technical Report that occasionally exceeds maximum limits is mercury.

## **6.5 Historic Operating Costs, Infrastructure and Marketing**

### Operating Costs

MINER's operating costs for the period 2010 through 2014 are provided in US dollars in Table 6-3.

**Table 6-3: El Roble Mine Operating Costs (2010 - 2014)**

Cost Center	Unit Cost by Year (US\$/tonne)				
	2010	2011	2012	2013	2014
Mine	\$17.46	\$16.31	\$21.48	\$21.48	\$30.00
Milling	\$13.00	\$13.99	\$16.69	\$14.56	\$12.00
Electricity	\$7.70	\$7.36	\$7.31	\$7.46	\$6.45
Mine G & A	\$4.06	\$4.96	\$8.42	\$5.81	\$5.00
Shipping	\$9.45	\$5.11	\$4.70	\$6.42	\$10.87
<b>Total</b>	<b>\$51.67</b>	<b>\$47.73</b>	<b>\$58.60</b>	<b>\$55.73</b>	<b>\$64.32</b>

Source: MINER, 2016

### Infrastructure

Electrical power for the El Roble operations is supplied from the existing electrical grid system in accordance with a three-year contract with ISAGEN, a Colombian public power company. The monthly power consumption at the operations typically ranges from 360kwh to 365kwh.

Water for the operations is drawn from a tributary to the Rio Atrato and collected in a small reservoir, from which it is then passed through a 3-inch-diameter pipe over a distance of one kilometer to the mine and processing plant.

in addition to the underground mine operations and processing plant, support facilities include buildings for mine operations, project staff housing, administrative offices, a laboratory for analysis of mine and mill production samples and for metallurgical testing, a warehouse, a clinic/security/fire station, a cafeteria and truck scales.

### Concentrate Marketing

A total of 19,417 tonnes of concentrates produced in 2014 (all since Atico's acquisition of MINER in November 2013) were sold to Consorcio Minero de Mexico, a Trafigura Group company. Current smelter charges are US\$80 per dmt. Refining charges are US\$0.08 per payable pound of copper, US\$6.00 per payable ounce of gold, and US\$0.35 per payable ounce of silver. Payables are specified in the contract as the copper content minus 1%, 95% of the contained gold and 75% of the contained silver. The current concentrate sales contract specifies that copper concentrate grades must be maintained between 18% and 24% Cu, gold grades between 8 g/t and 30 g/t Au, and silver grades between 5 g/t and 60 g/t Ag.



## 7.0 GEOLOGICAL SETTING AND MINERALIZATION

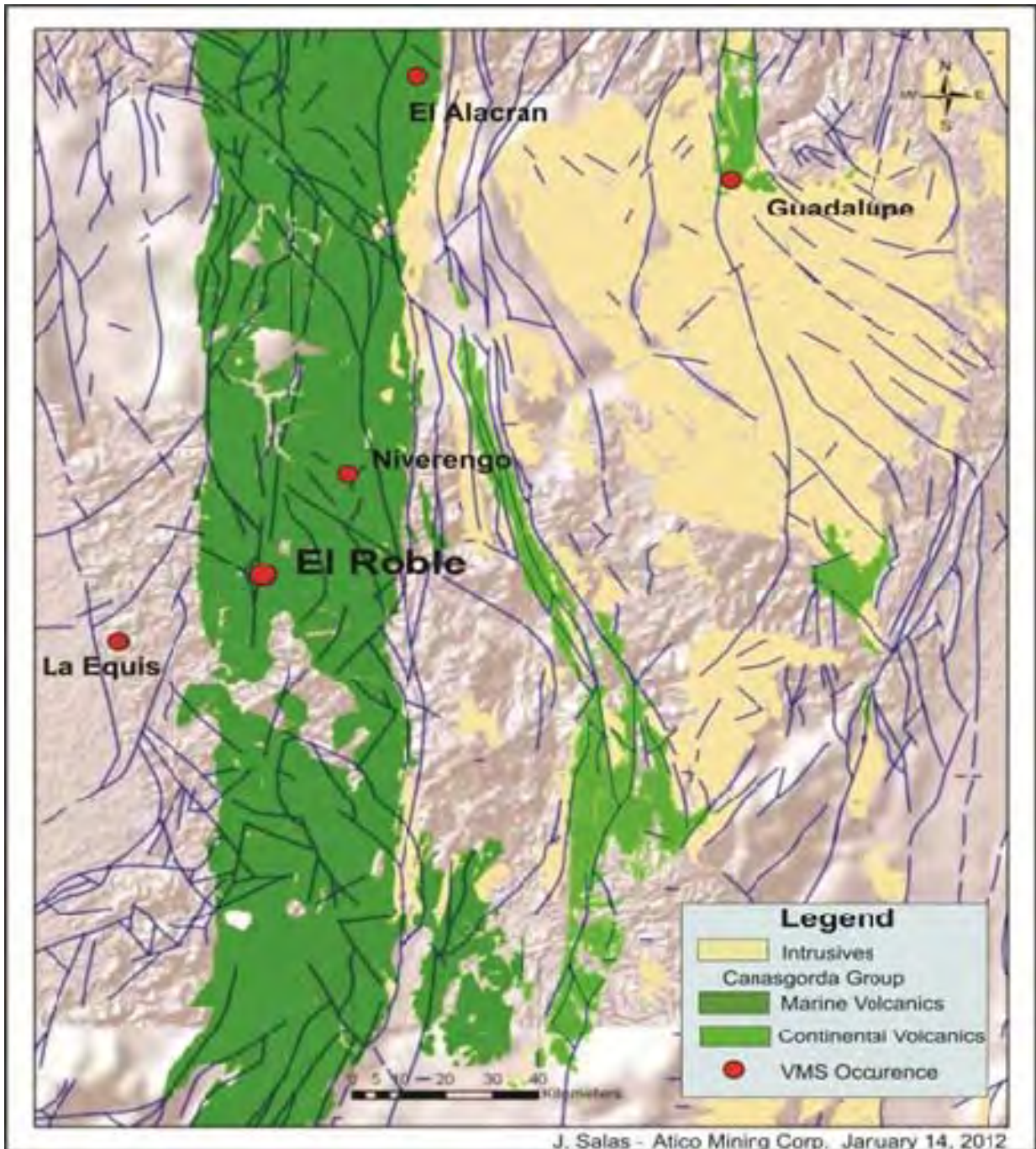
The majority of the descriptions in this Item 7.0 were excerpted from the report titled, "Technical Report on the El Roble Deposit, Chocó Department, Colombia", by Greg Smith and Demetrius Pohl, dated January 24, 2012.

The host rocks for the volcanogenic massive sulfide (VMS) mineral deposits present on the MINER mineral concessions (including those where MINER is currently conducting underground mining) consist of basalt flows, black to grey chert and overlying deep-water marine volcanic rocks, sedimentary rocks, and sandstone-shale turbidites (Ortiz et al., 1990) that are part of the Cretaceous Cañas Gordas Group. These units can be traced for over 800 kilometers along the western cordillera of Colombia, forming a north-south-trending belt that is approximately 40 kilometers wide in the El Roble project area (see Figure 7-1). Within the Cañas Gordas Group are local pillow basalts, tuffs, hyaloclastites, and agglomerates that are believed to be part of the Barroso Formation, while deep-water marine sedimentary rocks that include chert, siltstone and minor limestone belong to the Penderisco Formation. All of these rock units were deformed/metamorphosed during their Late Cretaceous to Tertiary accretion to continental South America, which resulted in both low-angle thrusting and high-angle strike-slip faulting that trend in a general north-south direction (Figure 7-1).

As noted by Smith and Pohl in the January 2012 Technical Report, Atico geologists have found that the volcanic Barroso Formation at El Roble contains not only basalt flows with interflow breccias and hyaloclastites, but also thin but significant andesite-dacite-rhyolite flows and pyroclastics. The basalt flows are often separated by thin (less than 50cm thick), black, pyritic and graphitic shale beds. A black, pyritic (and locally graphitic) chert unit up to 30 meters thick that caps the volcanic sequence is interpreted as an exhalite horizon. The deposition of the black chert is syngenetic with the VMS mineralization, thus it generally forms both the hanging wall and footwall rocks enveloping the massive sulfide mineralization. During the site visit for this amended Technical Report, the Qualified Person responsible for this report item observed both in the underground workings and in the drill core examined that this black chert quite often is very broken and rubbly. As a result of the general poor geotechnical quality of this unit, local excess external mining dilution has occurred in certain stopes mined by MINER since its acquisition by Atico.

The black chert unit is overlain by a gray chert that Atico geologists have determined to be a silicified, fine-grained ash tuff unit. Conformably above the grey chert is a thick (>1km) sequence of thin-bedded sandstones, siltstones and graphitic/pyritic black shales containing minor limestone units. Atico geologists have reportedly traced the contact between the volcanic rocks and the black and gray cherts for ten kilometres across the El Roble Project area, and have determined that this contact is an important control on the VMS mineralization.

Figure 7-1: Regional Geologic Map

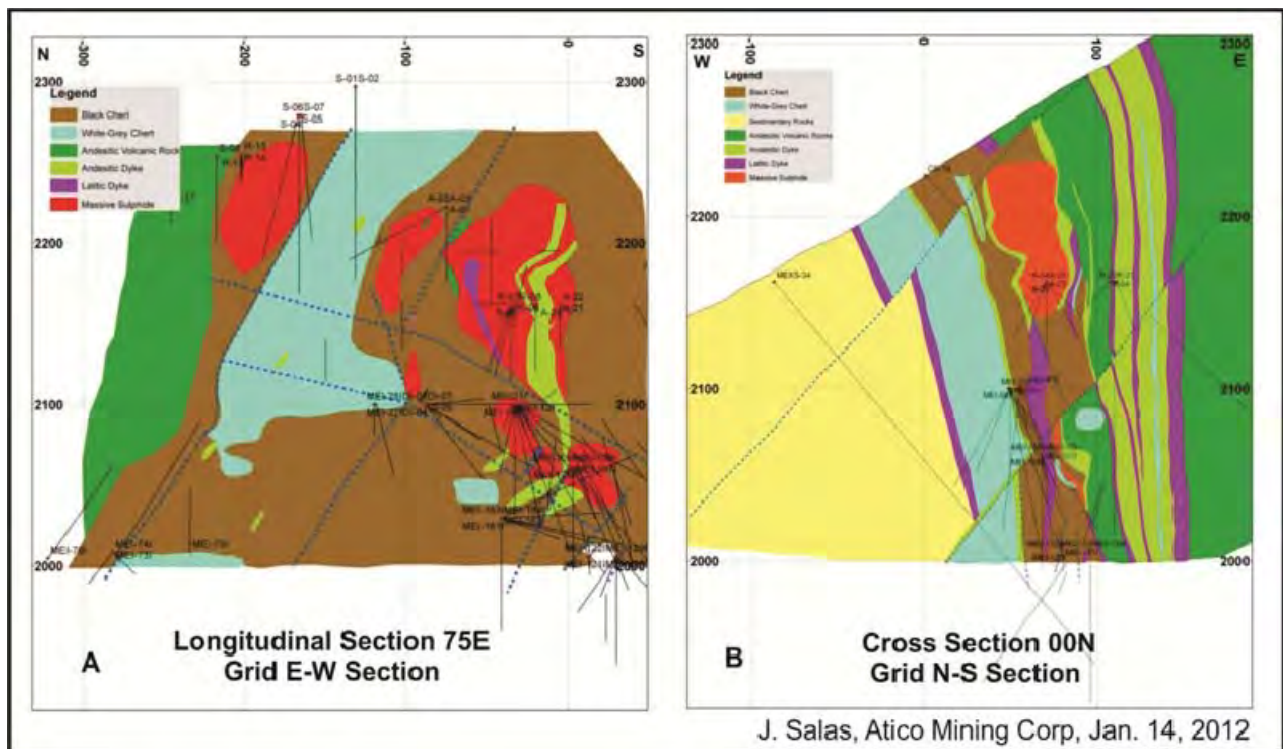


The volcanogenic massive sulfide mineralization that comprises the El Roble deposit has been overturned by folding such that it now dips steeply to the east. Based on the drill data provided by Atico as of the effective date of this amended Technical Report, the dimensions of the deposit currently are 325 meters along strike by  $\pm 600$  meters deep

by up to 45 meters in thickness. The presence of narrow local thicknesses (0.5m) of massive sulfides finely interbedded with gray to black cherts essentially confirms the syngenetic origin for the deposit. VMS mineralization continuity is locally disrupted by Tertiary andesite and latite dikes up to 10 meters in width that intrude both the VMS mineralization and the host rocks, as shown in Figures 7-2A and 7-4A. Locally, these dikes are mineralized, probably as a result of remobilization of copper out of the massive sulfide mineralization.

In addition to the Tertiary dikes, strands of one of the major regional northwest-striking faults (see Figure 7-1) offset VMS mineralization at the El Roble mine. These fault strands disrupt the continuity of the massive sulfide mineralization lenses, particularly below the 2100 level, as shown in Figure 7-2B.

**Figure 7-2 (A&B): Longitudinal Section 75E and Cross Section 00N**

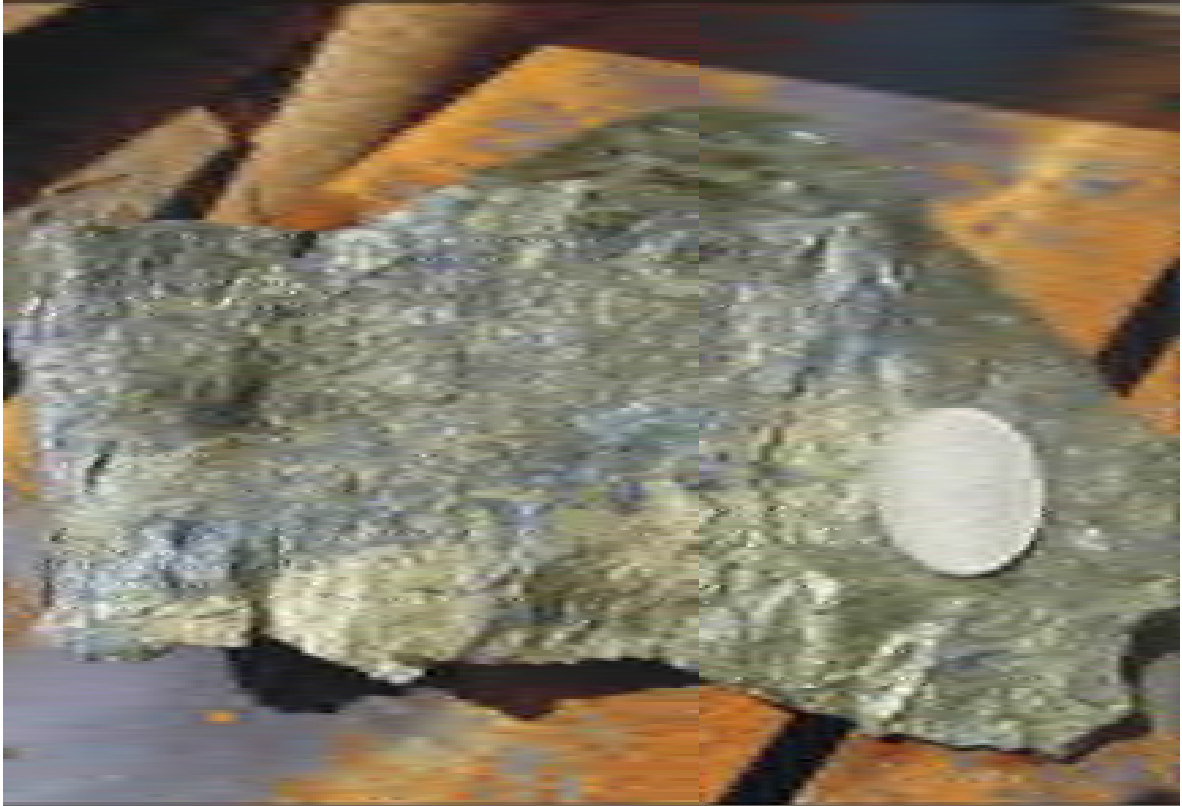


Thin and polished section examinations indicate that the VMS mineralization at El Roble has been subjected to at least one episode of ductile deformation and thermal recrystallization. In hand specimen and in diamond drill core, the massive sulfide mineralization is fine-grained with little internal structure or banding, consisting dominantly of pyrite and chalcopyrite (see Figure 7-3). Pyrite occurs as euhedral and subhedral grains that measure on average approximately 200 microns in diameter, but which can vary from 0.04 to 0.01 millimeters. Colloform pyrite textures and crushed pyrite grains are also common. Chalcopyrite typically fills spaces between pyrite grains, along with minor pyrrhotite and sphalerite. No other sulfide minerals have been identified. Gold occurs as



electrum in 10 to 100 micron irregular grains in the spaces between pyrite grains. Minor silver is also present, presumably as a component of the electrum. Gangue minerals include quartz and chlorite along with lesser calcite, dolomite and minor hematite and magnetite.

**Figure 7-3: Typical Massive Sulfide Mineralization, El Roble Mine**



*Source: Atico, 2013*

In addition to massive sulfide mineralization, stockwork-type mineralization consisting of chalcopyrite with subordinate pyrite in massive veins and patches of sulfides occurring in veins dominated by quartz and chlorite recently has been intersected in exploration drill holes between the 2000m and 1980m levels (see Figure 7-4B).

**Figure 7-4: Examples of Massive Sulfide Mineralization**



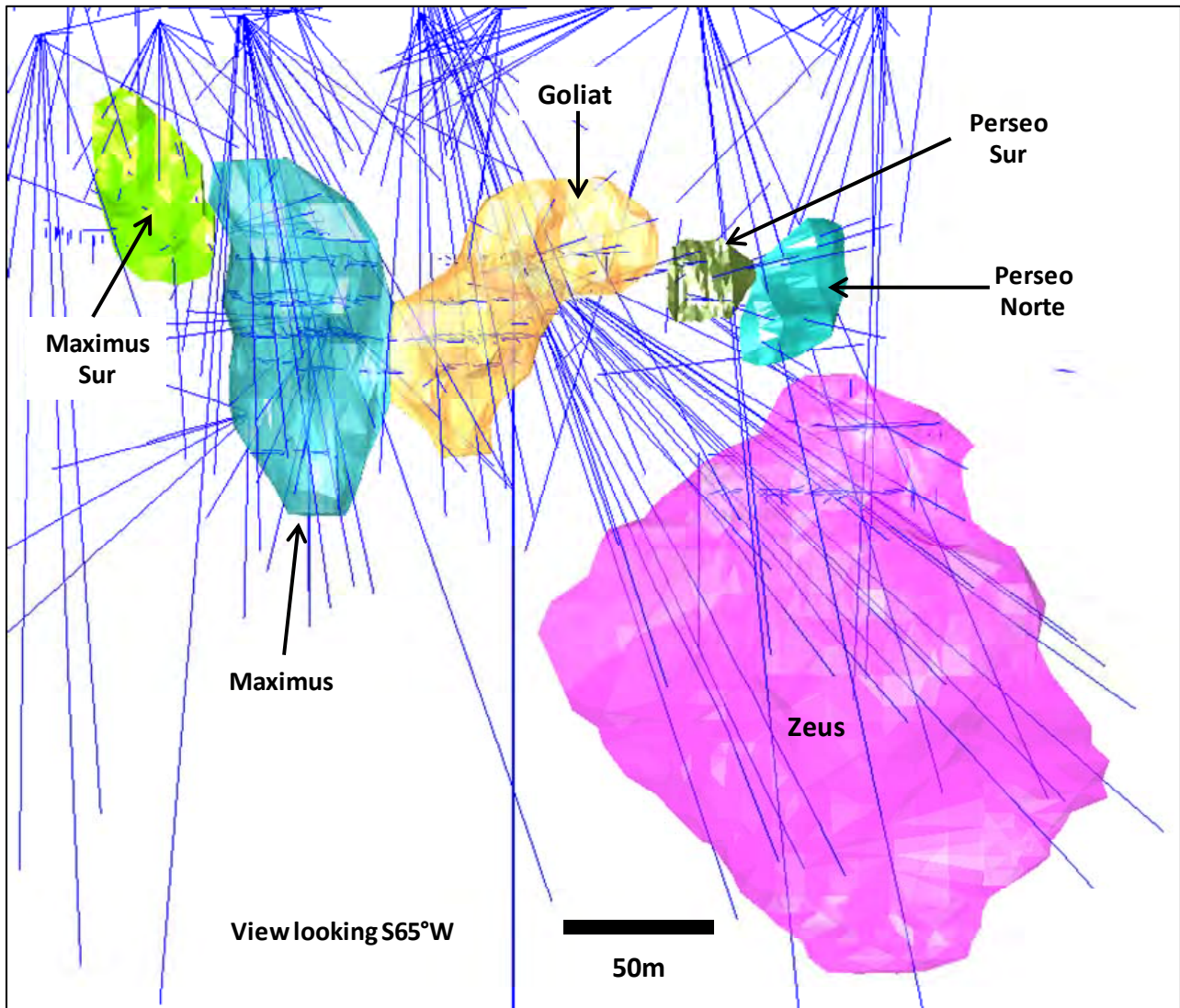
Source: Atico, 2013

*Notes: Figure 7-4A illustrates massive sulfides in fault contact with an intrusive latite dike on the 2080m level. Figure 7-4B illustrates chalcopyrite-pyrite veins and patches in quartz-chlorite stockwork veins in drill core from the below the 2000m level.*

Channel samples collected early in the 1980's (as reported by Ortiz et al., 1990) provided a good preliminary indication of the variation in grade of the mineralization at El Roble, with copper content ranging from 0.1% to 19.3%. Gold content in the channel samples varied from 0.1g/t to 13.1 g/t Au, with silver ranging from 0.9g/t to 38.9 g/t Ag and zinc grades as high as 0.33% Zn. More recently, underground infill diamond drill holes completed since the cut-off date for the 2013 Mineral Resource estimate intersected mineralization with individual samples that ranged in grade as high as 24.96% Cu (ATDHR-39: 147.00m – 148.04m), 65.9 g/t Au and 170 g/t Ag (ATDHR-40: 122.55m – 123.50m), and 6.31% Zn (ATDHR-47: 53.00m – 54.20m). In general, the copper and gold grades within the massive sulfide lenses are in excess of 1% copper and 1 g/t gold.

MINER's drilling completed below the 2000m level of the mine prior to the cut-off date for the 2013 Mineral Resource estimate identified (in order of size) eight apparent separate lenses of VMS mineralization exhibiting a general plunge of minus 65° to the northwest in longitudinal section. In order of decreasing size, these VMS lenses were designated as Zeus, Maximus, Ares, Goliath, Aquiles, Apollo, Orion, and Transformador. Infill diamond core drilling completed prior to the cut-off date for the 2015 Mineral Resource update resulted in a re-configured larger Zeus lens that now includes the former Aquiles and Ares lenses in addition to the recently modeled Perseo Norte, Perseo Sur, and Maximus Sur lenses. A perspective view of these lenses is shown in Figure 7-5. An example of massive chalcopyrite in contact with a felsic (latite) dike from a cross-cut driven through the upper part of the Zeus VMS body is shown in Figure 7-6.

Figure 7-5: Perspective View of El Roble Massive Sulfide Wireframes



Source: RMI, 2016



**Figure 7-6: Example of Zeus Massive Sulfide**

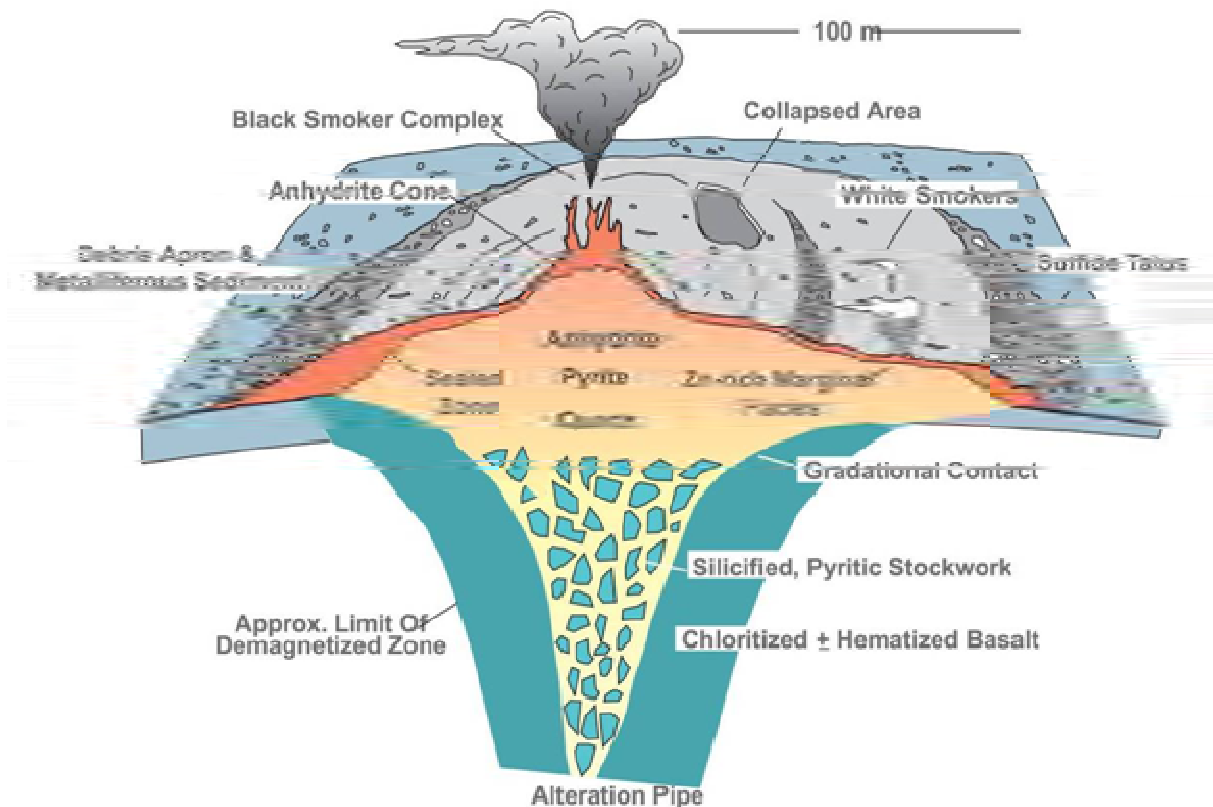


Source: MINER, 2016

## 8.0 DEPOSIT TYPES

The mineral deposit that comprises the El Roble Project consists of mafic-type volcanogenic massive sulfide (VMS) mineralization for which there are numerous examples in the world. Such deposits are defined by Franklin et al (2005) as “stratabound accumulations of sulfide minerals that precipitated at or near the sea floor in spatial, temporal and genetic association with contemporaneous volcanism.” These deposits are typified by submarine volcanic rocks that are predominantly tholeiite basalts with lesser sedimentary rocks, including chert. Figure 8-1 is a schematic cross section through a VMS deposit model after Galley et al (2011).

**Figure 8-1: Schematic Cross Section of a VMS Deposit**



Source: Atico, 2013

At El Roble, current geologic thinking is that the basalt and chert-bearing sedimentary host rocks represent a fragment of a Late Cretaceous seafloor that was accreted to the South American plate. The position of the El Roble deposit is believed to be in the chalcopyrite/pyrite/pyrrhotite zone in the central “mound” area of the schematic section (Figure 8-1), which explains the apparent lack of banded textures commonly found in the distal portions of the deposit model.



Based on the large number of mafic-type VMS deposits (more than 1,000 in total) around the world and the current knowledge of the sizes of these, it is possible to estimate a typical size and metal content for these deposit types. Franklin et al. (2005) cite the statistical mean deposit size for 74 individual, mafic-type VMS deposits is 2.7 million tonnes (Mt) at 1.82% copper, 0.02% lead, 0.84% zinc, 1.4 g/t gold, and 10.62 g/t silver. These tonnage and grade figures are similar to the undiluted Mineral Resources that are the subject of this amended Technical Report plus the historical production above the 2000 level. Because mafic-type and other VMS deposits typically occur in clusters (Galley et al., 2011), the aggregated deposits can have considerably larger tonnages, depending on the number and characteristics of the individual VMS deposits that make up the cluster. The El Roble Project concession block covers a strike length of 10 kilometers of prospective ground, allowing substantial room for the discovery of additional clustered VMS deposits.

Other mafic-type VMS deposits in Colombia include Guadalupe (Antioquia), La Equis (25km from El Roble in Choco), Sababablanca (Valle de Cauca), and El Alacran.

## 9.0 EXPLORATION

After the June 18, 2013 Effective Date of the August 27, 2013 Technical Report, Atico's exploration efforts outside of the immediate El Roble underground mining operation were significantly reduced, in order for the company to focus on the underground infill drilling of the Inferred Mineral Resource disclosed in the 2013 Technical Report, and the closure of the purchase of MINER and its assets in November 2014. For completeness, the Qualified Persons responsible for this amended Technical Report have included the entire contents of Item 9.0 from the August 27, 2013 Technical Report in this section. As was noted in the 2013 Technical Report, most of the text and figures found in Item 9.0 (Exploration) from the January 2012 Technical Report are reproduced in this amended Technical Report, with the text that was taken verbatim shown in italics. For the purpose of this amended Technical Report, any new exploration information and data are included in Table 9-1. The Qualified Persons responsible for this amended Technical Report are of the opinion that the potential for discovery of additional VMS mineralization on the MINER mineral concessions outboard of the El Roble mine workings is still very good.

### 9.1 Previous (Pre-2013) Exploration

Much of the past exploration conducted on the El Roble Project area was done by Kennecott and the Nittetsu/MINER joint venture partners from 1982 until 1991. Drilling completed during the tenures of these companies is discussed in Item 6.0 (History) of this amended Technical Report. *The Nittetsu joint venture expanded the area of surface mapping and sampling to ten square kilometres, and conducted an induced polarization and resistivity survey over the mine area.*

After Nittetsu's withdrawal from the project in 1997, MINER continued exploring the El Roble mineral concessions by conducting surface sampling and mapping at the La Calera, La Favorita, El Carmelo, and La Batea prospects (see Figure 6-1 in Item 6.0). Drilling completed by MINER during as part of this exploration work is described in Item 6.0 (History).

### 9.2 Geologic Mapping by Atico

*Atico began its exploration program at the El Roble Project in April of 2011. Atico started with surface (1:5,000 and 1:10,000-scale) and underground (1:250 scale) geologic mapping of the El Roble mine, the immediate mine area, and the MINER concession block. The 10,000-scale map covers an area of 85 square kilometres. Geological sections were generated by Atico, based on an updated understanding of the geology in the mine area. The main result of the Atico surface mapping program was confirmation of a prospectively mineralized contact between basaltic volcanic rocks and exhalite chert ("black chert") and a silicified ash tuff unit ("grey chert") that extends for ten kilometres across the MINER concession block. This contact exerts a strong control on the location of geochemically anomalous samples.*

### **9.3 Rock Chip Sampling by Atico**

*Atico compiled a single, up-to-date geochemical database for both underground and surface samples. The database includes analytical results for samples collected by Atico as well as results from previous sampling campaigns (Kennecott, Nittetsu and MINER). This compilation of old and new surface geochemical data generated a total of 13 preliminary drill targets (Figure 9-1). The targets are described in Table 9-1.*

### **9.4 Orientation Soil Sampling by Atico**

*Atico conducted an orientation soil sampling program which, to date, includes results for 45 samples collected from two lines across the middle and northern portion of the immediate El Roble mine area. The objective of these two lines is (was) to geochemically characterize the major lithologic units. These results show a clear geochemical characterization of the major lithologic units as well as dispersion of mineralized samples collected up to 400 metres to the west of and downslope from the projected trace of outcropping of VMS mineralization. Since the 2012 Technical Report, soil sampling has been expanded to cover the ten-kilometre, prospective strike length of the target horizon. A total of 773 soil samples were taken in six areas (Archi, El Roble Mine, San Lorenzo, La Batea, Santa Anita and Anomaly 28). The results of the sampling reveal a number of targets in the favorable black chert unit. Figures 9-2 and 9-3 illustrate the soil sampling results for silver and gold in the Santa Anita area.*

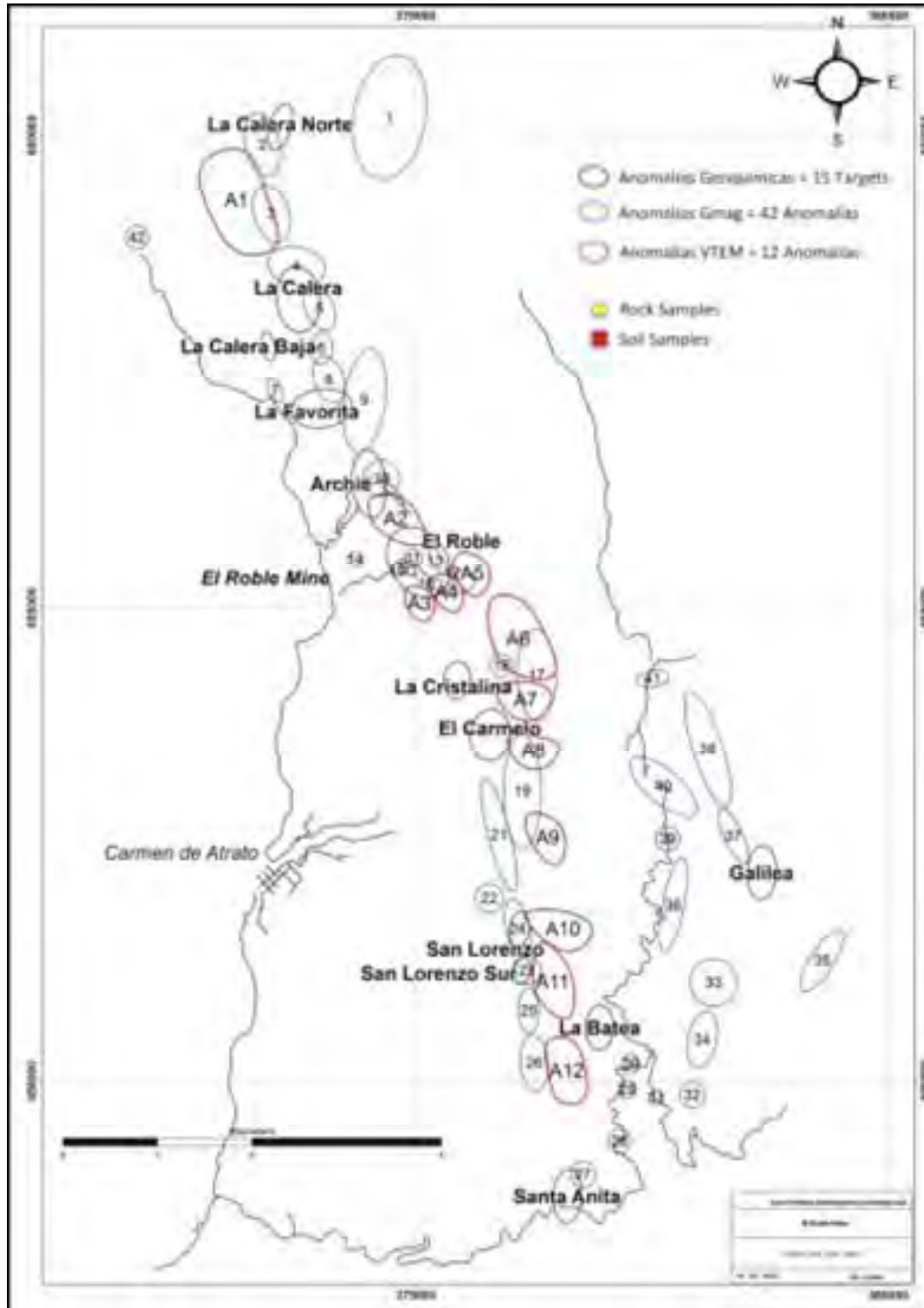
### **9.5 Geophysical Surveys - Re-Interpreted IP/Resistivity Data**

During 2011, Arce Geophysics Company reprocessed existing resistivity and induced polarization (IP/Resistivity) data on behalf of Atico. IP and resistivity are proven exploration tools for volcanogenic massive sulfide exploration. The original data were collected by Nittetsu in 1985-1986 on 1- to 1.5-kilometer lines with a 50-meter spacing between lines. The results of the reprocessing are shown in three dimensions on Figure 9-4 and in map view on Figure 9-5. The 3-D view, in particular, highlights the correspondence between known mineralization at the El Roble mine and areas of anomalously low resistivity (shown in red on Fig. 9-4).

### **9.6 Geophysical Surveys - Atico Ground Magnetic Program**

During 2011 a ground magnetic (GM) survey was carried out by Arce Geophysics Company, consisting of a total of 499 kilometers of GM lines with 100-meter line spacing and 50- meter stations. The results of that survey include 42 GM anomalies that confirm the previously mentioned geochemical and geological targets and generated other targets for investigation. All of these anomalies are on the favorable contact and black chert unit. The results are shown in Figures 9-6 and 9-7. An example of one of the 42 GM anomalies has outcrops and boulders with pyrite stringers up to 10 centimeters in width. These stringers are indicators that there may be a massive sulfide body in the black chert unit nearby. Atico also has identified similar outcrops on the San Lorenzo target area.

Figure 9-1: Drill Targets Generated as of December 7, 2015



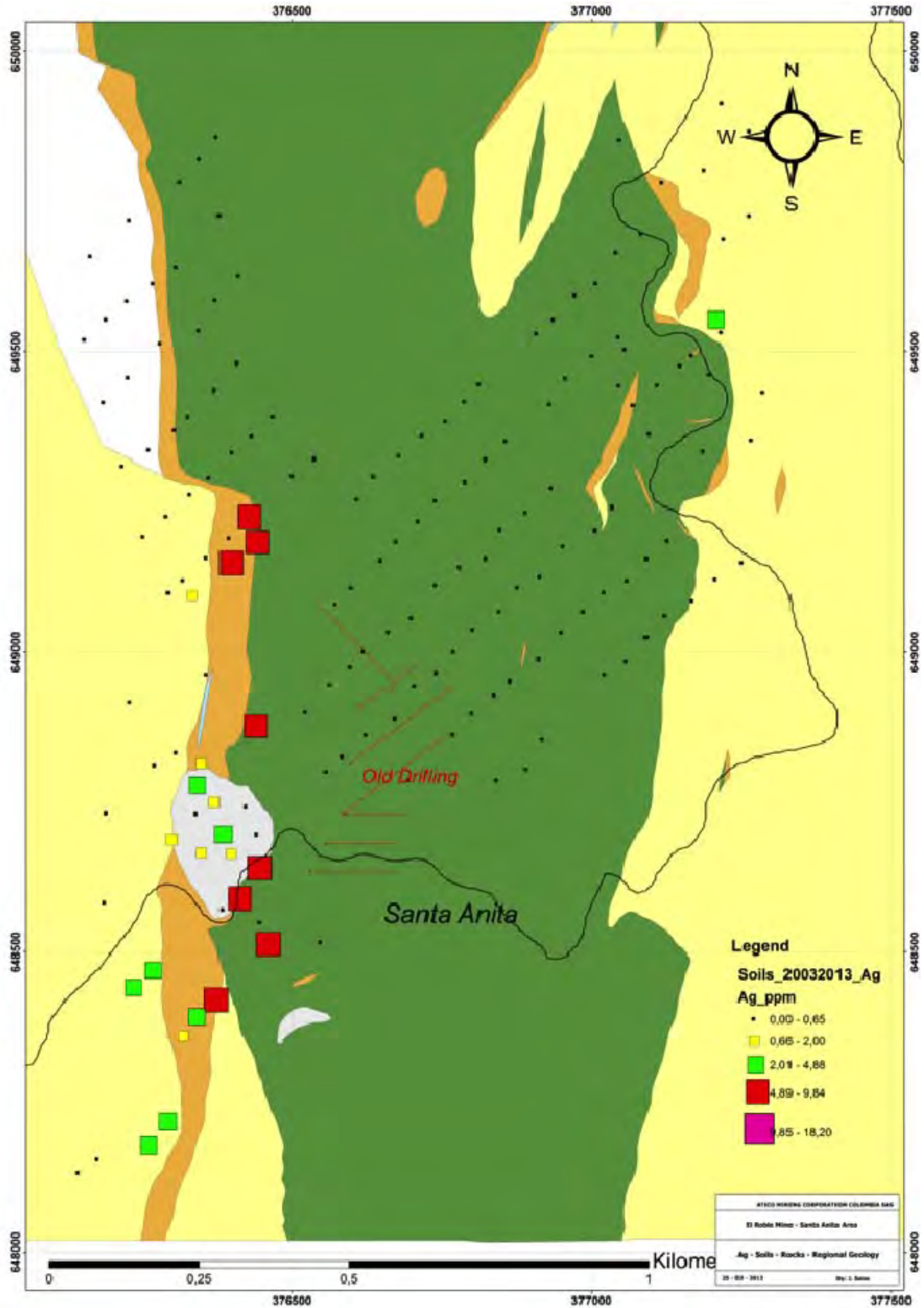
Source: MINER, 2016

**Table 9-1: List of Preliminary Drill Targets**

Target	Description
La Calera Norte	26 surface rock samples range from 173 to >10,000 ppm Cu and 0.11 to 3.2 ppm Au. The host rock is basalt, from near the prospective contact between basalt and overlying pelagic sedimentary rocks. Located near Gmag anomaly 2, SE VTEM anomaly A1.
La Calera	40 surface rock samples returned 0.1 to 3.42 ppm Au and 31 to 298 ppm Cu from milky pyritic quartz veins and nodules. Host rocks are basalt, black chert and shale from the prospective contact between basalt flows and overlying pelagic sedimentary rocks. Magnetic anomaly from the newly reprocessed Kennecott survey data. Located between Gmag anomaly 4-5.
La Calera Baja	Weak magnetic anomaly from the newly reprocessed Kennecott survey data. Recent rock samples (15) showed weak anomalous Au.
La Favorita	6 surface rock samples, 23 soil samples, six stream sediment samples and 10 stream sediment panned concentrate samples returned 0.01 to 1.09 ppm Au and 100 to 184 ppm Cu. Two magnetic anomalies from the newly reprocessed Kennecott survey data are located immediately to the east of La Favorita. Located near Gmag anomaly 7,8,9
Archie	110 soil samples, 73 surface rock samples returned 0.1 to 1.6 ppm Au and 0.01 to 323 ppm Cu. Host rocks are basalt and chert from the prospective contact between basalt flows and overlying pelagic sedimentary rocks. Fourteen diamond holes (MEX-01 to MEX-14) were drilled by MINER (1824.02 metres) during 2005 and 2006. Results were negative; no massive sulfide lenses were intersected. Magnetic anomaly from the newly reprocessed Kennecott survey data. Four core holes (1,329.1 m) drilled by Atico in VTEM anomaly 2 (Figure 9-8) didn't intersect massive sulfides.
El Roble	Twenty diamond holes (MEX-15 to MEX-34) were drilled by MINER (5142.63 metres) during the period 2007 to 2010 in the Quebrada El Roble area, immediately south of the El Roble mine. Magnetic anomaly from the newly reprocessed Kennecott survey data. Atico drilled 2 core holes (600m) into VTEM anomaly #4 (Figure 9-8); No massive sulfide intersected.
La Cristalina	36 surface rock samples range from 0.1 to 3.48 ppm Au; the samples were not analyzed for copper. Host rock is black chert, from the prospective contact between basalt and overlying pelagic sedimentary rocks.
El Carmelo	71 surface rock samples returned 0.01 to 1.4 ppm Au and 41 to 4670 ppm Cu from brecciated and silicified basalt cut by pyrite- and chalcopyrite-bearing quartz veins. Host rocks include basalt and black chert from the prospective contact between basalt flows and overlying pelagic sedimentary rocks. West of VTEM anomaly A7-A8.
San Lorenzo	27 surface rock samples returned 0.16 to 6.1 ppm Au and 71 to 225 ppm Cu. Recent Atico rock sampling (97 total) assayed 0.01 to 6.7 ppm Au, combined with 111 soil samples; The host rock is black chert, from the prospective contact between basalt and overlying pelagic sedimentary rock.
San Lorenzo Sur	24 surface rock samples returned 0.3 to 6.2 ppm Au and 71 to 273 ppm Cu. Samples were collected from grey chert, at the prospective contact between basalt and overlying pelagic sedimentary rocks.
La Batea	27 surface rock samples returned 0.01 to 0.24 ppm Au and 52 to 130 ppm Cu from brecciated host rocks including basalt, black chert and graphitic shale. Recent Atico rock sampling (16 total) NE of VTEM anomaly A12 returned 0.01 - 0.30 ppm Au; La Batea is located at the prospective contact between basalt flows and overlying pelagic sedimentary rocks.
Santa Anita	5 surface rock samples returned 0.01 ppm Au; Cu was not analyzed. Host rocks include basalt cut by quartz veins containing pyrite, chalcopyrite, covellite and malachite. Ten diamond holes were drilled by MINER. The best interval was a 37.5 metre section (drill hole MERSA-1 at 63.0 metres to 100.5 metres depth) that averaged 0.54 % Cu and was described as a sulfidic silicified breccia. Santa Anita is described in more detail in section 9.7 of this report. Atico collected 226 rock samples with up to 4.8 g/t Au. Atico collected 145 soil samples with values up to 0.7 g/t Au. SE of Gmag 27. Atico completed 1:5000 scale geologic mapping.
Galilea	6 samples were collected from basalt and from black chert, at the prospective contact between basalt and overlying pelagic sedimentary rocks. Pyrite varies from 5 to 10%, but analytical results are low (0.1 ppm Au), suggesting that Galilea may be the distal portion of a VMS deposit.

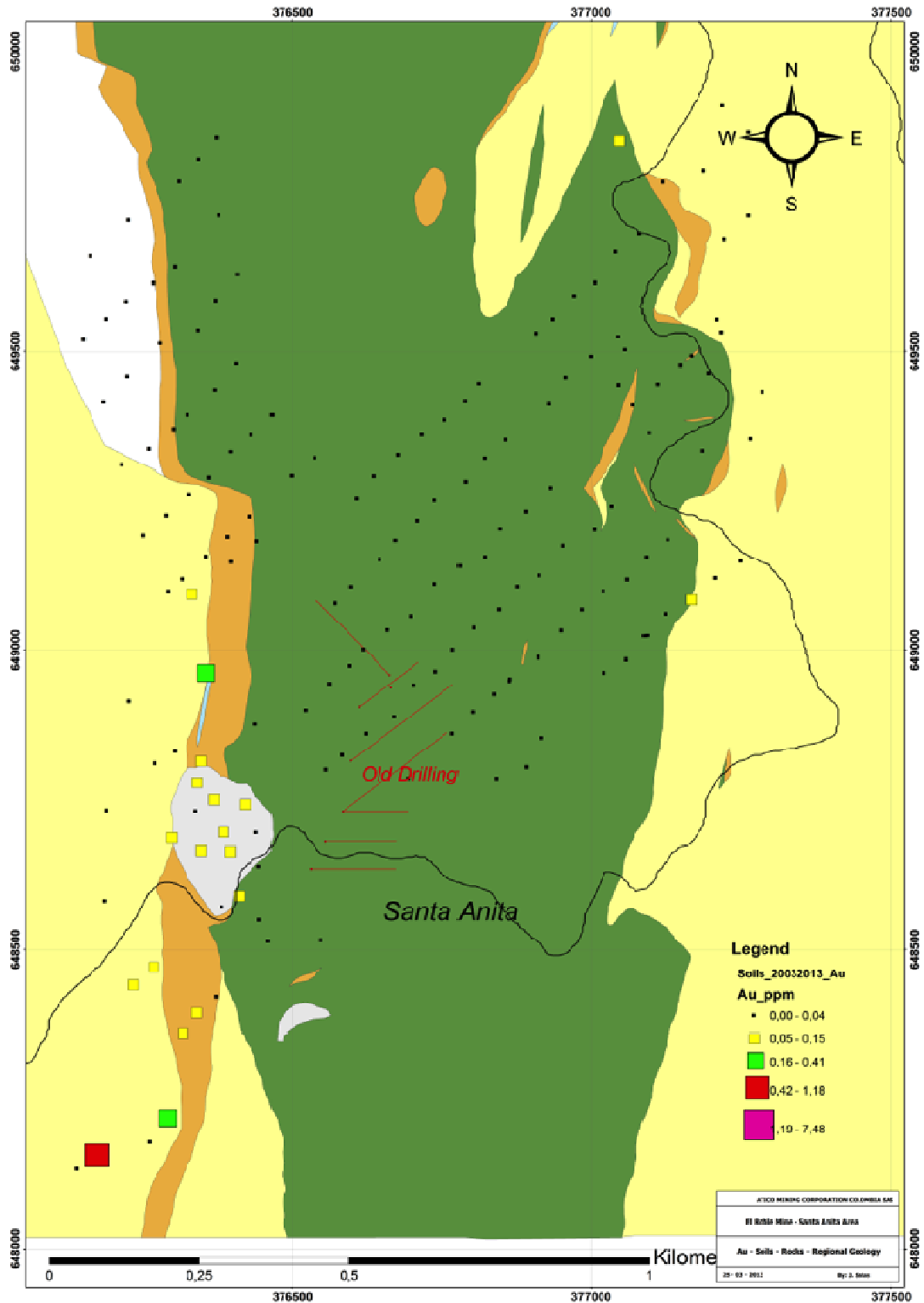
Source: MINER, 2016

Figure 9-2: Santa Anita Soil Sample Results - Ag



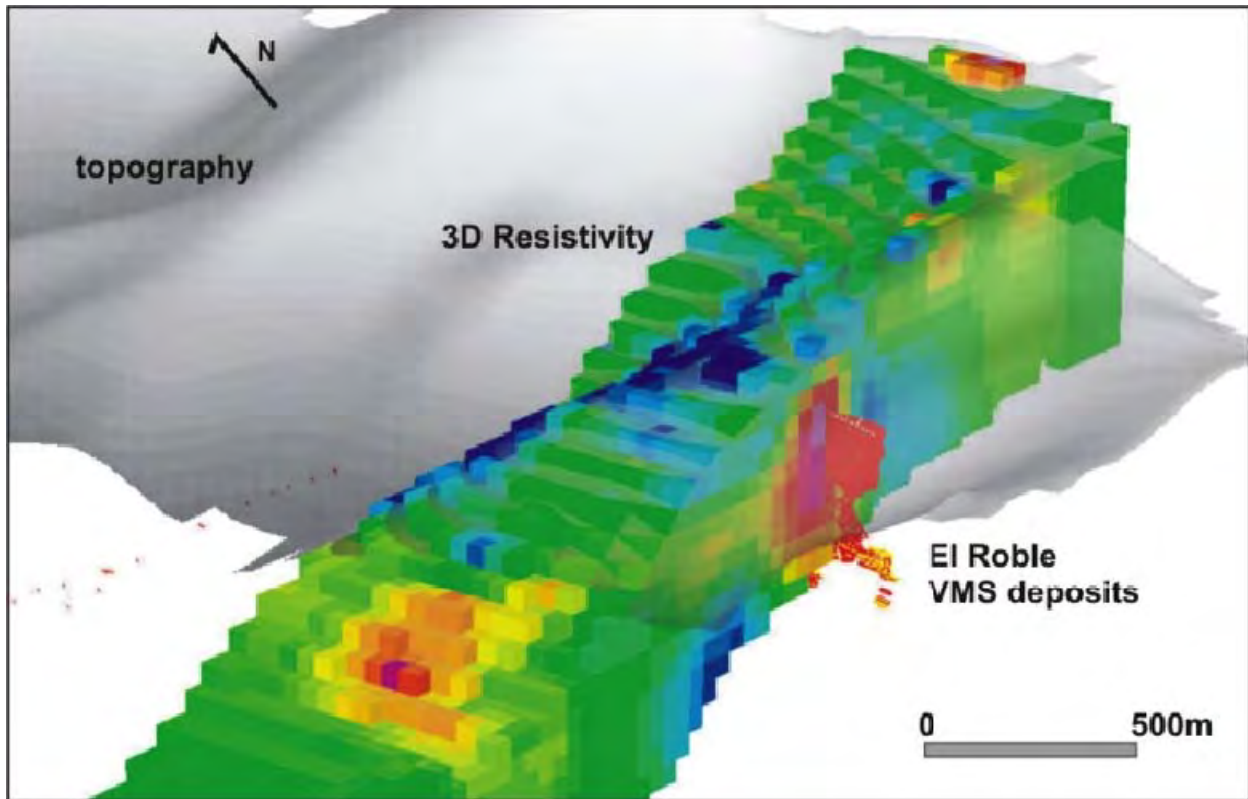
Source: Atico, 2013

Figure 9-3: Santa Anita Soil Sample Results - Au



Source: Atico, 2013

Figure 9-4: 3D Resistivity Map

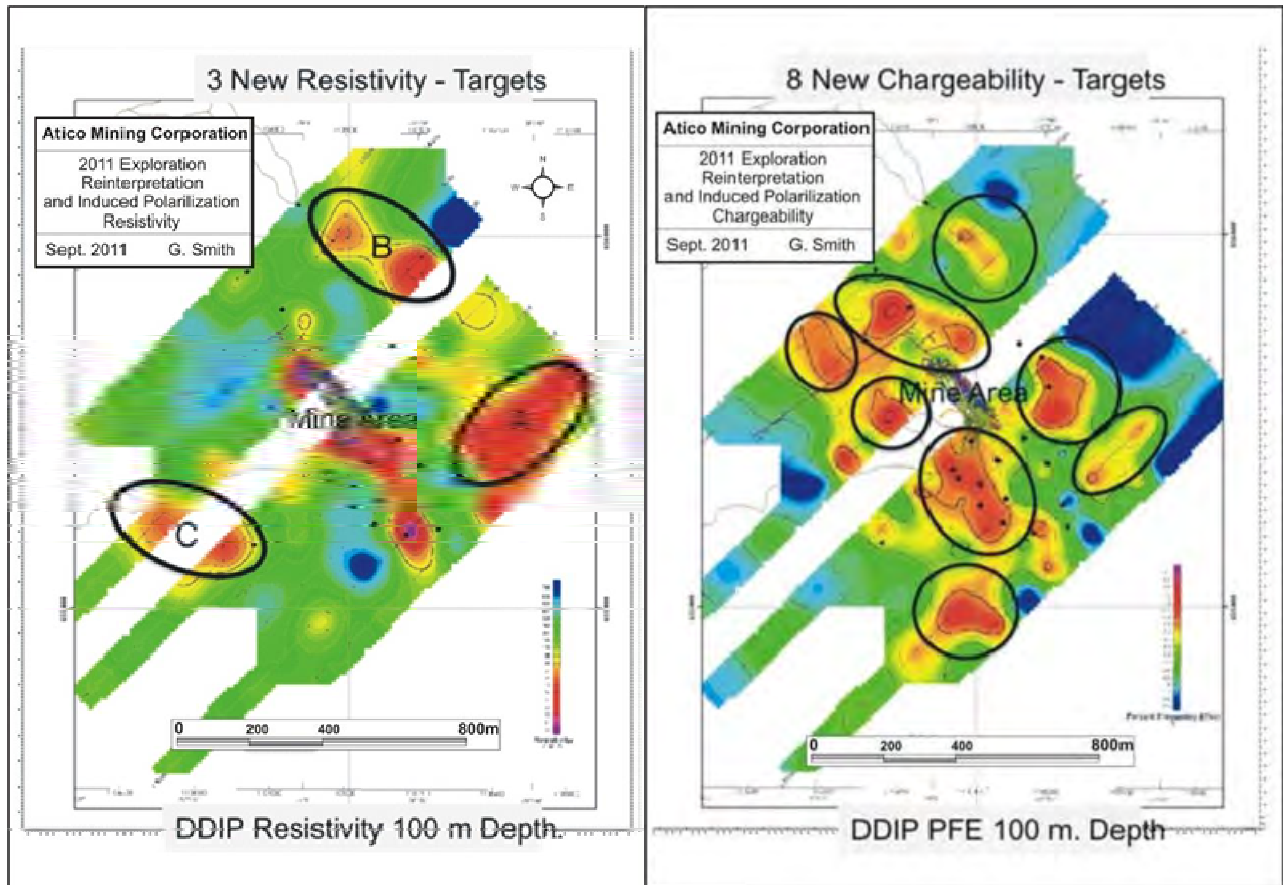


Source: Atico, 2013

Note that in Figure 9-4, resistivity is shown in various colors, surface topography is gray and VMS mineralization of the El Roble mine is shown in red.



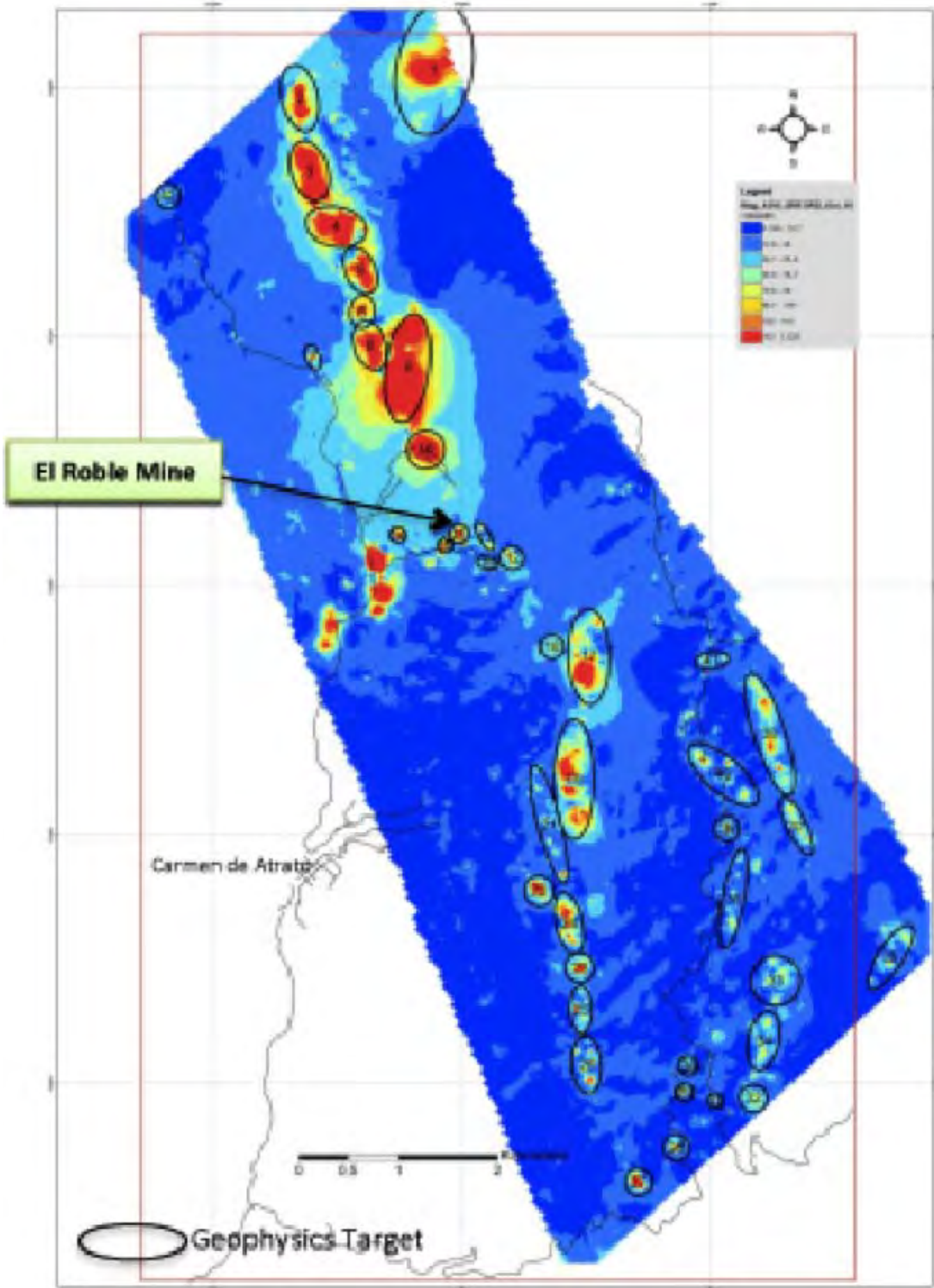
Figure 9-5: Resistivity and Chargeability Maps



Source: Atico, 2013

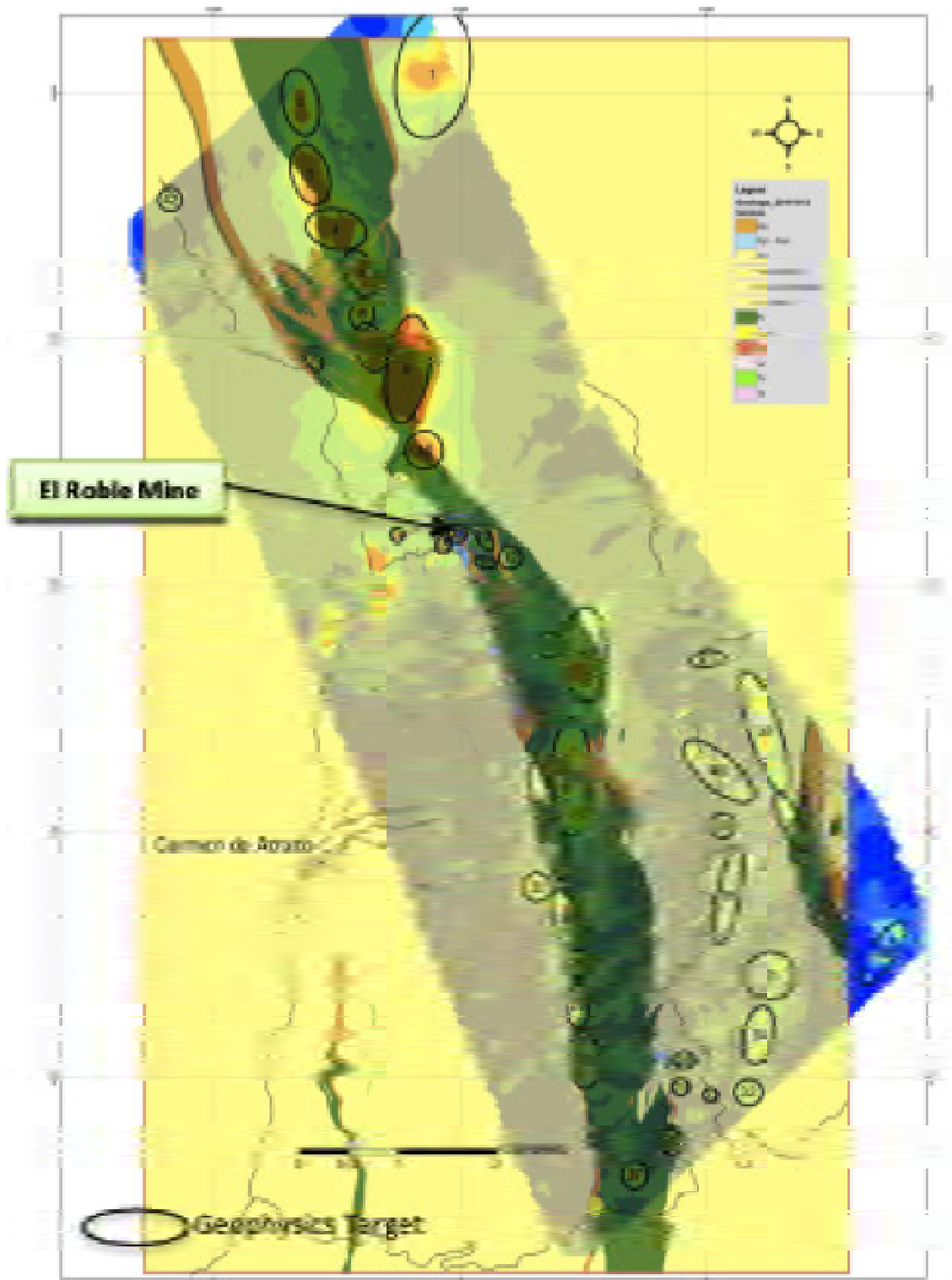
Currently, the most probable explanation of the resistivity lows and chargeability highs shown on Figure 9-4 is a package of locally-graphitic, black to grey (locally red) chert beds, up to 100 metres in thickness, that encloses known VMS mineralization at the El Roble mine. Targets identified by IP may need to be further refined by other geophysical methods such as gravity and EM before drilling.

Figure 9-6: Ground Magnetics over MINER Concessions



Source: Atico, 2013

Figure 9-7: Ground Magnetics over El Roble Mine Area



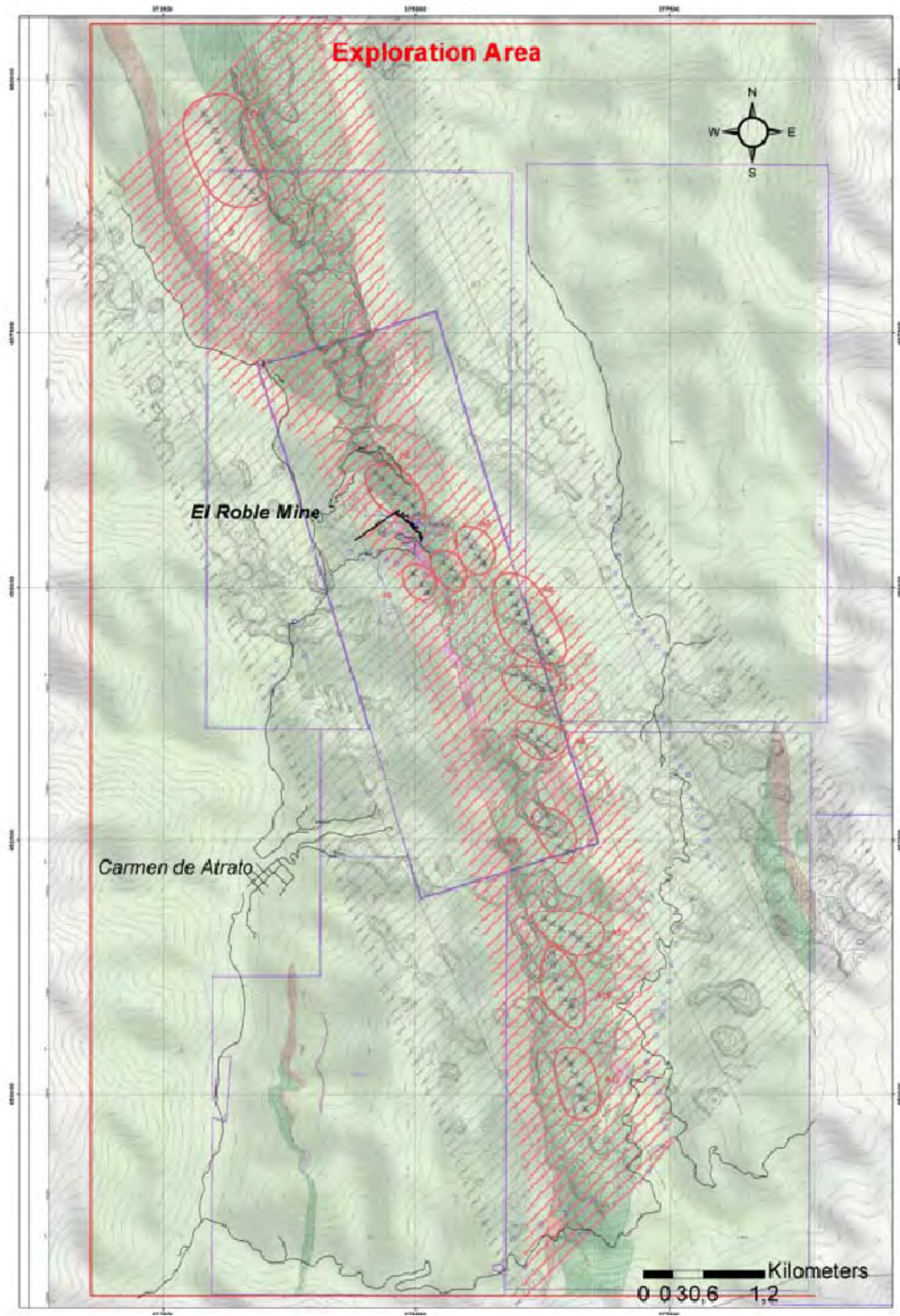
Source: Atico, 2013

### 9.7 Geophysical Surveys - VTEM (Time Domain Electro-Magnetics)

Atico completed 500 kilometers of VTEM flight lines to cover the 10-kilometer long favorable contact/black chert trend. Lines were flown using 100-meter spacing with a station every 50 meters. The results are eight VTEM anomalies that GEOTEC (Geophysical Company) recommended for drill testing. These eight anomalies also correlate well with the targets that geochemical sampling and geologic mapping have generated. Figure 9-8 shows the results of the survey. Anomalies are shown as red outlines.



Figure 9-8: VTEM Survey Results

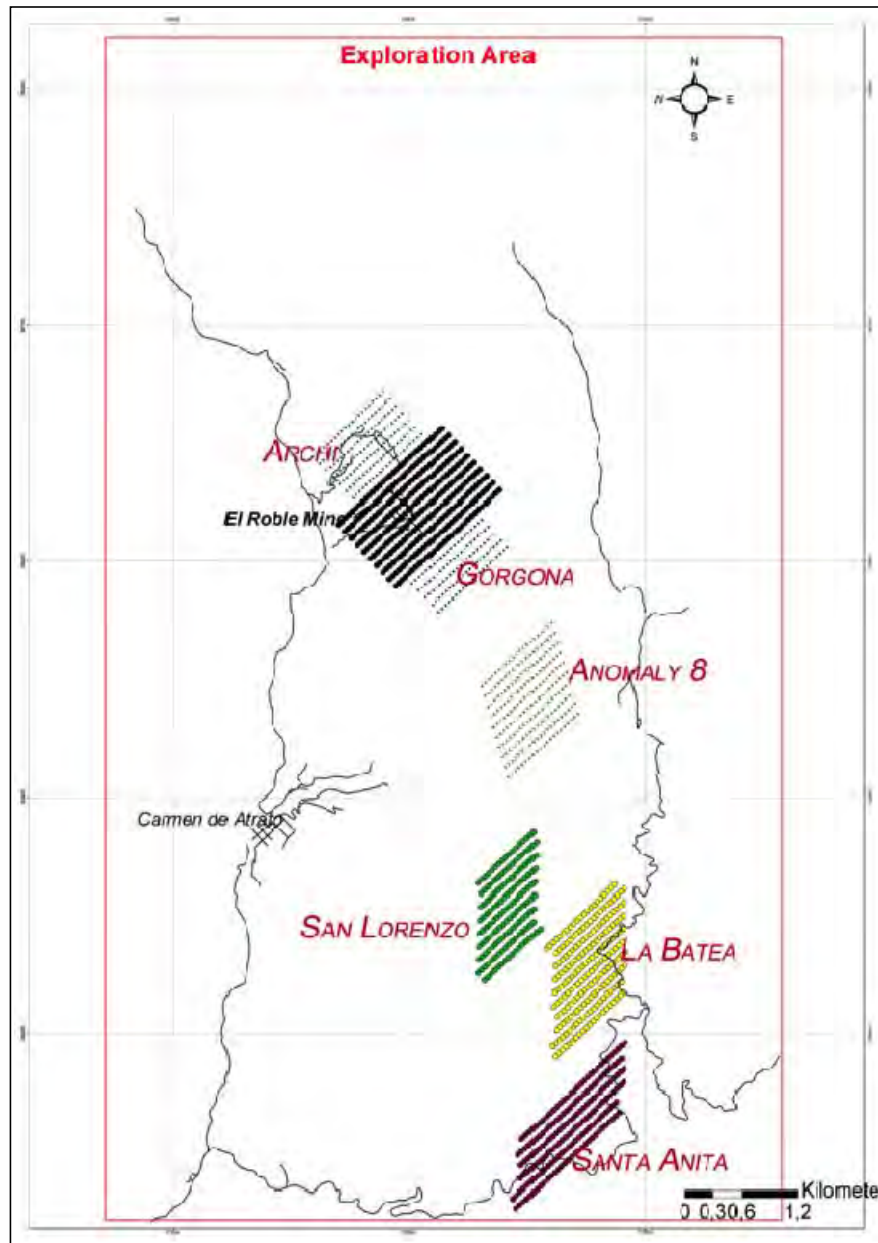


Source: Atico, 2013

## 9.8 Geophysical Surveys - Gravity

Atico completed 56 line-kilometers of gravity surveys on seven target areas (Archie, El Roble Mina, Gorgona, Anomaly 8, San Lorenzo, La Batea and Santa Anita). The results are not well understood, as the surveys tend to identify the black chert unit, not necessarily the VMS bodies. On the other regional target areas, Atico has identified gravity anomalies but the anomalies need to be tested by drilling and the results reinterpreted. Figure 9-9 shows the locations of the gravity survey lines.

**Figure 9-9: Gravity Survey Lines**



Source: Atico, 2013

## 10.0 DRILLING

### 10.1 Type and Extent of Drilling

Nearly all of the sample data that were used to estimate the Mineral Resources that are the subject of this amended Technical Report were obtained by Atico as either underground diamond core or underground channel samples. The Qualified Person notes that the five surface holes and a number of the underground core holes were located beyond the VMS Mineral Resource bodies that are the subject of this amended Technical Report but these holes are reported here only for completeness. Nearly all of the underground core and channel samples that were collected by MINER prior to Atico's acquisition of MINER in early 2014 are located higher in elevation in the deposit and nearly all have been mined out. For this reason, the Qualified Persons responsible for this amended Technical Report elected to not use the older Kennecott and Nittetsu drilling data that identified and/or defined the VMS bodies that are located above the recently discovered VMS mineralization that is the subject of this amended Technical Report, and which are essentially mined out.

Table 10-1 summarizes the El Roble drill hole and channel sample database by type, company, and year. The usage of MINER in Table 10-1 reflects that company prior to Atico's acquisition of MINER.

**Table 10-1: Summary of El Roble Sample Data by Type, Company, and Year**

Year	Surface Core Holes			UG Core Holes			UG Channels Samples			Total	
	Company	No. Holes	Meters	Company	No. Holes	Meters	Company	No. Holes	Meters	No. Holes	Meters
2010	MINER	3	724	MINER	5	393				8	1,117
2011	Atico	2	611	MINER	19	1,114				21	1,725
2012				Atico	27	4,816				27	4,816
				MINER	14	931				14	931
2013				Atico	54	6,662				54	6,662
				MINER	3	137				3	137
2014				Atico	57	5,024	Atico	316	1,090	373	6,114
2015				Atico	46	7,233	Atico	147	747	193	7,980
<b>Total</b>	n/a	5	1,335	n/a	225	26,310	n/a	463	1,838	693	29,482

Source: GTC, 2015

Diamond drill core assays represent well over 90% of the data that were used to estimate Mineral Resources for the various VMS bodies. The remainder of the assay data used are from channel samples collected by MINER's geologic mine staff.

MINER drilled approximately 164 underground diamond core between 1998 and 2010 (Smith G., and Pohl, D., 2012). Many of these holes were used for the development and mining of massive sulfide material between the 2100 and 2000 levels of the operating mine. Most of this core was BQ- or AX- diameter in size. As mentioned above, most of these data are not relevant to this amended Technical Report.

Since late 2012, MINER's underground core drilling programs collected primarily



HQ- and NQ-diameter core. During the drilling process, core was removed from the core barrels and carefully transferred directly into very sturdy weather-resistant and termite-proof core boxes composed of a thick, black composite material. Each core box was clearly labeled with the hole number, from-to interval drilled, and box number. The drillers routinely inserted sturdy plastic run blocks in the core boxes at the end of each drilling run that were clearly labeled on top with the down-hole distance in meters in red permanent marker, as well as the beginning and ending hole depth in meters of the drill run, the total meters drilled, and the total meters of core recovered on one side of the run block. The boxes of core were then transported by MINER personnel directly to the core storage warehouse where the dividers in each box were clearly labeled with the hole number, box number, down-hole meter markers (whole meters and tenth meters), and arrows indicating down-hole direction. Colored dowels were also inserted in the boxes to indicate sample breaks (from and to) for the technicians responsible for cutting the core for sampling (see Item 11.0). Samples were collected on intervals that did not exceed 2.5 meters in mineralized core or 10.0 meters in non-mineralized core.

After underground drill holes were completed, white PVC pipes oriented at the azimuths and inclinations that the holes were drilled were installed in the drill hole collars and 0.3m by 0.4m concrete pads were poured around the PVC collar pipes (Figure 10-1) to monument the hole collars.

**Figure 10-1: Underground Drill Hole Collar Monumenting**



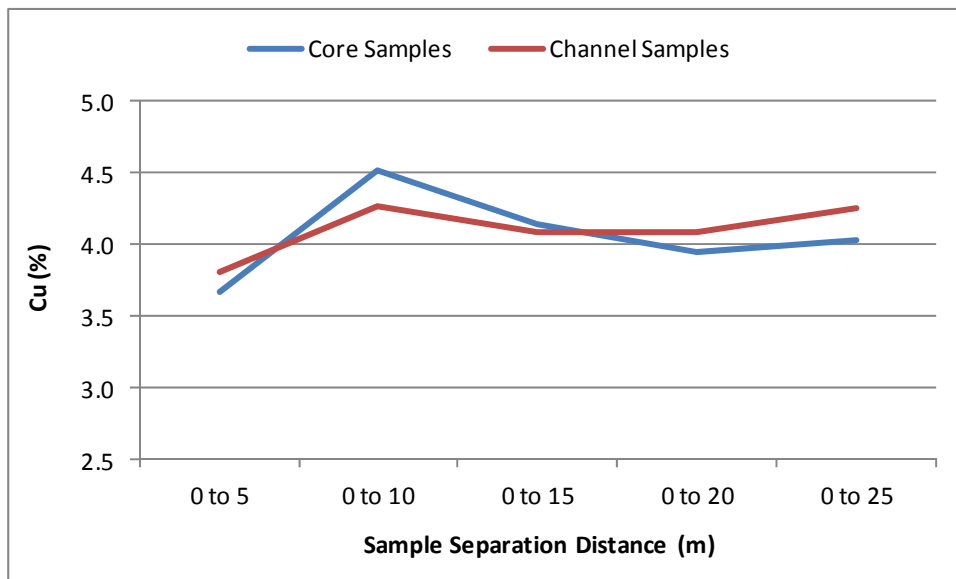
Source: REI, 2013



## 10.2 Underground Channel Sampling

MINER routinely collects channel samples during mine development and in support of active mining operations. Electric chisels are used to chip out approximately 1-meter-long samples from approximately a 10-centimeter by 2-3-centimeter slot that can range between 0.25 and 1.50 meters in length depending on geologic conditions. These samples are typically collected along the left and right ribs of cross-cuts and drives through the VMS bodies. Data from these samples were used, in addition to the underground core samples, to estimate Mineral Resources. As mentioned above, the underground channel samples represent less than 10% of the samples that were used to estimate Mineral Resources. The Qualified Person spatially paired underground core and channel samples so that grades from the two data types could be compared. Figures 10-2 and 10-3 compare the average copper and gold grades, respectively, between the two sampling methods. The Qualified Person notes that many of the underground channel samples were assayed at the El Roble mine laboratory, while the diamond core was assayed at ALS Chemex. So in addition to differing sampling methods, two different assay labs introduce additional potential variances.

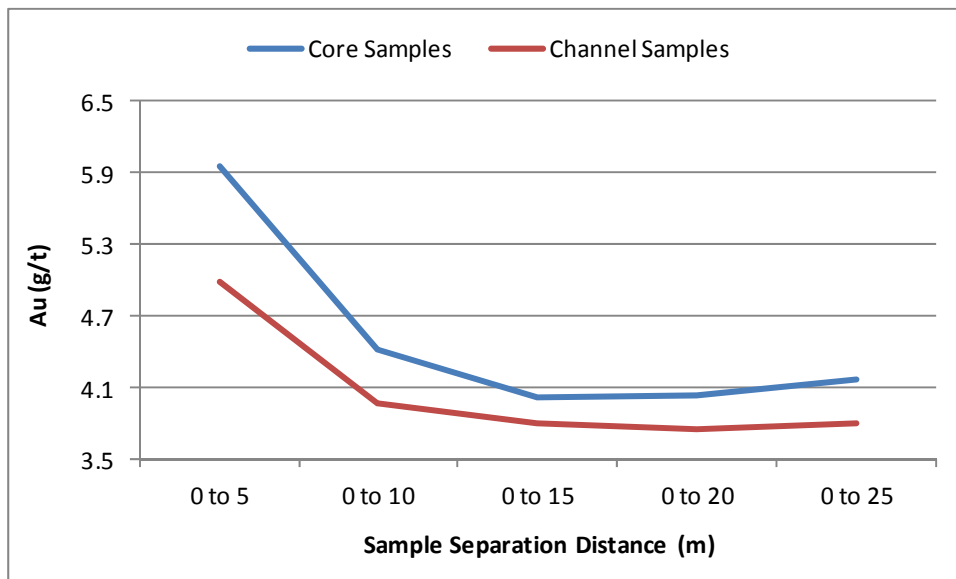
**Figure 10-2: Underground Core vs. Channel Samples - Copper**



Source: RMI, 2016

Copper grades compare very favorably between the two sample types at all five distance separation bins, as illustrated in Figure 10-2. Channel sample gold on the other hand tends to be consistently lower than nearby core hole samples, perhaps reflecting differences in the two assay labs that were used.

**Figure 10-3: Underground Core vs. Channel Samples - Copper**



Source: RMI, 2016

### 10.3 Relevant El Roble Sample Results

Table 10-2 tabulates continuous mineralized drill hole and channel sample intervals that are greater than five meters in length and are above a 5% copper cutoff grade. These intervals are restricted to the VMS wireframes used to generate the Mineral Resources that are the subject of this amended Technical Report. The data in Table 10-2 are sorted from longest sample to shortest sample.

**Table 10-2: Relevant El Roble Drill Hole Intercepts**

Drill Hole/Channel	From Depth (m)	To Depth (m)	Length (m)	Cu (%)	Au (g/t)	Ag (g/t)	VMS	Type
ATD-0014	164.50	248.15	58.75	9.69	1.80	7.00	Zeus	UG Core
ATDHR-17	71.80	160.50	50.40	7.93	2.02	10.74	Maximus	UG Core
ATD-0004	173.65	225.75	48.95	8.08	1.35	6.25	Zeus	UG Core
ATDHR-26	147.80	238.00	44.23	12.41	7.92	23.45	Zeus	UG Core
ATD-0003	194.90	231.55	36.65	8.79	1.63	6.41	Zeus	UG Core
ATD-0013	157.60	203.65	35.55	7.72	1.59	5.60	Zeus	UG Core
ATD-0017	203.30	235.60	32.30	9.86	0.65	3.84	Zeus	UG Core
ATDHR-01	109.25	139.00	25.75	8.68	2.53	8.79	Goliat	UG Core
ATD-0002	184.20	212.50	23.10	10.98	1.56	4.03	Zeus	UG Core
ATDHR-38	67.80	133.20	21.95	7.50	4.46	4.78	Maximus	UG Core
ATD-0012	188.80	210.50	21.70	10.15	4.39	12.17	Zeus	UG Core
ATDHR-28	259.46	281.00	16.91	7.43	1.72	6.98	Zeus	UG Core
ATD-0009	168.20	184.20	16.00	9.81	5.72	12.85	Zeus	UG Core
ATDHR-12	113.90	128.00	14.10	12.43	2.58	7.43	Goliat	UG Core
ATDHR-04	81.00	95.00	14.00	14.49	7.26	16.58	Maximus	UG Core
ATD-0001	205.80	217.05	11.25	10.20	0.83	6.58	Zeus	UG Core
6298	1.84	12.29	10.45	6.89	3.63	0.00	Zeus	Channel
ATMEI-0018	84.70	95.00	10.30	10.89	5.12	13.52	Goliat	UG Core
ATD-0007	209.00	234.10	10.30	8.82	1.79	12.00	Zeus	UG Core
7773	0.00	8.95	8.95	10.75	6.06	0.00	Zeus	Channel
ATMEI-0047	61.85	70.50	8.65	12.61	3.08	6.26	Maximus	UG Core
ATD-0016	169.10	177.05	7.95	10.42	1.66	1.94	Zeus	UG Core
ATMEI-0019	74.80	82.60	7.80	4.99	0.52	2.98	Goliat	UG Core
571	0.00	7.70	7.70	8.06	4.80	9.77	Maximus	Channel
7028	0.00	7.32	7.32	8.98	2.16	0.00	Zeus	Channel
ATDI-0020	23.10	29.30	6.20	10.69	4.91	8.53	Goliat	UG Core
3877	0.00	6.19	6.19	6.93	1.57	0.00	Maximus	Channel
ATD-0008	166.35	172.50	6.15	13.10	5.44	35.71	Zeus	UG Core
ATDHR-35	119.90	126.05	6.15	12.61	1.32	9.15	Goliat	UG Core
ATMEI-0050	40.75	46.60	5.85	6.37	4.32	17.36	Maximus	UG Core
5425	0.00	5.60	5.60	14.34	1.80	0.00	Maximus	Channel
5353	0.00	5.60	5.60	23.47	16.83	0.00	Maximus	Channel
3872	0.00	5.05	5.05	13.16	1.21	0.00	Maximus	Channel
8084	0.70	5.75	5.05	8.35	9.89	0.00	Zeus	Channel
1375	0.00	5.00	5.00	10.96	1.05	4.05	Goliat	Channel

Source: RMI, 2016

#### 10.4 Drilling, Sampling, Recovery Factors

In general, core recovery within the massive sulfide zones was very good. Poor core recoveries are most typically associated with hangingwall/footwall contacts of the VMS bodies, narrow structural zones within the zones and along latite dike contacts with other lithologies. About 2% of the MINER drilling data had less than 75% core recovery. Approximately 16% of the data had core recoveries in the range of 75% to 95% with 82% of the data above 95% recovery. There are no material factors that the Qualified Persons

responsible for this amended Technical Report are aware of that would compromise the representativeness of the samples, given the rare intervals that had poor recovery.

In summary, the Qualified Persons responsible for this amended Technical Report believe that there are no material issues associated with drilling and sampling at El Roble.

### **10.5 True Thickness**

Many of the earlier (pre-2014) El Roble drill holes intersect the massive sulfide zones at steep angles due to a lack of drilling platforms which would allow for more favorable drill hole intersections. However, the Qualified Persons note that MINER has improved drilling angle orientations with completion of the 1886 level. This allowed for new drill holes since the 2013 Technical Report to intersect the steeply plunging massive sulfide zones at more favorable angles to the strike and dip of the VMS pods, so that a more accurate estimate of mineralized thickness (true width) and determinations of mineralization continuity can be accomplished. Many of the drill hole intersection lengths reported in Table 10-2 are exaggerated because the hole did not cross the mineralized zone along a normal vector.

### **10.6 Significantly Higher Grade Intervals**

Like most VMS deposits, the El Roble drilling results have identified a number of high-grade zones or lenses of mineralization within packages of lower grade material. The MINER wireframes are comprised of primarily massive sulfide, semi-massive sulfide, or brecciated massive sulfide lithologies. The remaining material inside of the wireframes is primarily Cretaceous black chert with minor amounts of intrusive dikes. In general, metal grades for the massive sulfide material is significantly higher than the chert and dike material. However, the Qualified Persons responsible for this amended Technical Report note that locally, the dikes and chert can also contain high copper or gold grades.

## **11.0 SAMPLING PREPARATION, ANALYSES, AND SECURITY**

Since acquiring the El Roble property in early 2014, Atico has continued the same sampling procedures and protocols that they established during their exploration and infill due diligence drilling programs. ALS Chemex (Medellín/Lima) remains MINER's primary laboratory for the preparation and analysis of most drill core samples. SGS (Medellín) has been contracted to act as a secondary lab for overflow work and also to serve as a check assay lab. MINER recently began operating the El Roble mine assay lab primarily analyzing underground channel samples and three daily mill head samples. Numerous check samples from the El Roble mine lab have been sent to SGS for QA/QC purposes.

### **11.1 ALS Chemex Sample Preparation**

The majority of the drill hole assays that were used to estimate Mineral Resources that are the subject of this report were prepped and assayed by ALS Chemex. The samples were shipped from the El Roble project site via MINER personnel in company trucks and delivered to the Chemex lab located in Medellín, Colombia. The prepared pulps were then shipped to the ALS Chemex lab located in Lima, Peru.

Drill core is delivered twice a day from the underground drill rigs to the core logging/processing facility which is located just down slope from the main adit portal. The core is washed, photographed, logged for lithology, alteration, mineralization, and geotechnical attributes including RQD and core recovery. Logged attributes are entered into Power Builder®, which is a commercial drill hole logging software package.

Samples are selected based on lithology and/or mineralization. The minimum sample length is typically 50 centimeters with a maximum length of 2.5 meters. The average sample length of the underground core samples is approximately 1.49 meters.

The drill core that is received by Chemex in Medellín is logged in and then dried, crushed, split, and pulverized using Chemex's DRY-22, CRU-31, SPL-21, and PUL-31 protocols, respectively. The samples are dried in large ovens with a maximum temperature of 60° C. The samples are then fine crushed (CRU-31) to a nominal 70% passing through a 2mm screen. Chemex routinely cleans ("washes") the crushing equipment with compressed air (between each sample), and with barren material between each batch (protocol WSH-21). The finely crushed material is then passed through a riffle splitter (protocol SPL-21) to produce a nominal 250 gram sub-sample. The sub-sample is then pulverized (protocol PUL-31) with a ring and puck pulverizer that results in 85% of the sample passing 85 microns. Chemex routinely cleans ("washes") the pulverizing equipment with compressed air or by vacuuming between each sample and by using barren material between sample batches (protocol WSH-22).

## 11.2 ALS Chemex Sample Analyses

After the drill core samples were prepared by Chemex in Medellín, the pulps were shipped to the Chemex lab located in Lima, Peru. The samples were analyzed for a variety of metals using five separate Chemex protocols. Copper, silver, and zinc were analyzed by Chemex protocol AA62, which features a four-acid digestion followed by atomic absorption spectrometry (AAS). The digestion acids include HNO<sub>3</sub>, HCl, HF, and H<sub>2</sub>SO<sub>4</sub>. This method requires a minimum sample weight of 0.5 grams. Protocol AA62 has a detection range of 0.001% to 50% for copper, 1 to 1500 ppm for silver, and 0.001 to 30% for zinc.

Gold was analyzed by two different Chemex protocols (Au-ICP22 and Au-GRA22). Gold was initially analyzed by Induced Coupled Plasma (ICP) followed by atomic emission spectra (AES). This method requires a 50-gram charge. The Au-ICP22 has a detection limit of 0.001 ppm with an over-limit level of 10 ppm. Samples above a 10-ppm limit were re-analyzed by protocol Au-GRA22, which is a fire assay with a gravimetric finish. A 50-gram nominal sample charge weight is required for this procedure, which has an over-limit value of 1000 ppm. Preference was given to gold assays analyzed by fire assay with a gravimetric finish.

Trace elements were analyzed using Chemex's protocol ME-MS61, which is a 48 element procedure featuring ICP methods with a mass spectrometer (MS) analysis that uses four acids to digest the sample.

Trace mercury was tested for using Chemex's protocol Hg-CV41, where the sample was digested with aqua regia and the cold vapor analyzed by AES methods.

## 11.3 SGS Sample Preparation

Drill core, underground channel samples, and previously prepared pulps are shipped by MINER's geologic staff to the SGS laboratory in Medellín. Those samples are weighed and logged into a Laboratory Information Management System (LIMS). The samples are then dried, crushed, split, and pulverized using SGS's PRP91 prep package. Drying is completed in large ovens at temperatures ranging between 60° and 100° C for approximately four to five hours. The samples are then crushed to a nominal 75% passing through a 2mm screen. SGS routinely cleans ("washes") the crushing equipment with compressed air (between each sample), and with barren material between each batch. The finely crushed material is then passed through a riffle splitter to produce a nominal 500-gram sub-sample. The sub-sample is then pulverized with a ring and puck pulverizer that results in 85% of the sample passing 75 microns. SGS routinely cleans ("washes") the pulverizing equipment with compressed air or by vacuuming between each sample and using barren material between sample batches.

#### **11.4 SGS Sample Analyses**

Samples were analyzed by SGS in Medellín by several different methods. Gold was analyzed by SGS using their AA515 protocol, which consists of a 50-gram fire assay with an AAS finish. The limit of detection for this method ranges between 5 and 10,000 ppb. Samples greater than the AA515 detection limit were re-analyzed using SGS protocol FAG505 which is a 50-gram fire assay with a gravimetric finish. Copper, base metals, and other trace metals were assayed using either SGS's ICP40B or AAS42S protocols. The ICP40B package consists of a four-acid digestion of the sample media followed by ICP-AES analysis. The four acids used by SGS include nitric, hydrofluoric, perchloric, and hydrochloric. Over-limit copper and silver samples were re-analyzed using the AAS42S protocol which consists of a four-acid digestion followed by AAS analysis. MINER also created a custom SGS package for analyzing high-grade silver, copper, and zinc samples using a four-acid digestion followed by AAS analysis.

#### **11.5 El Roble Mine Lab Sample Preparation**

Samples are delivered to the El Roble mine lab by MINER personnel. The samples are dried at approximately 105°C for about four hours. The dried samples are then processed through a jaw crusher to produce material passing a 10-mesh (about 2mm) sieve. The jaw crusher is cleaned between every sample by processing barren quartz rock material and through the use of compressed air. The crushed sample material is passed through a riffle splitter several times to produce a sub-sample in the range of 250 to 500 grams. That sub-sample is then further reduced in size by a ring and puck pulverizer which produces a 200-mesh product. The pulverizer is also cleaned between samples with quartz sand and compressed air.

#### **11.6 El Roble Mine Lab Sample Analyses**

Precious metals are analyzed by conventional fire assay methods (aqua regia digestion and AA finish) using 30-gram charges. Copper and zinc are assayed using a two-acid digestion (nitric and hydrochloric) followed by atomic absorption (Perkin-Elmer). The AA machine is calibrated between each sample with one of five standards.

#### **11.7 Sample Security**

MINER's drill core samples were always in the control of company personnel while at the project site or during transportation to the Chemex and SGS facilities located in Medellín. The core storage facility was locked at night to assure that the samples were secure.

#### **11.8 Quality Assurance/Quality Control**

MINER routinely submitted quality assurance/quality control (QA/QC) samples with the drill hole samples that were sent to ALS Chemex and SGS. The quantity of blanks and

standards that were inserted approximated one of each per 20 regular samples. Field duplicates were inserted at less frequent intervals (approximately one field duplicate for every 60 regular samples) for the initial drilling programs undertaken by MINER. Samples referred to as "field duplicates" no longer represent quarter core samples but rather are duplicate pulps prepared by ALS Chemex based on requests from MINER's geologic staff. Table 11-1 summarizes the number of QA/QC samples that were submitted to ALS Chemex and SGS since Atico's involvement with the El Roble project.

**Table 11-1: QA/QC Sample Summary**

Sample Type	Name	Number Submitted		
		ALS Chemex	SGS	Total
Blank	Field blank	276	122	398
Standard	Oreas 66a	94	18	112
Standard	Oreas 68a	44	7	51
Standard	Oreas 110	36	7	43
Standard	Oreas 113	64	21	85
Sub-total	Standards	238	53	291
Duplicate	Field Duplicate	160	25	185
Duplicate	Reject	62	62	124
Duplicate	Check	62	62	124

Source: RMI, 2016

### 11.9 Blank Performance

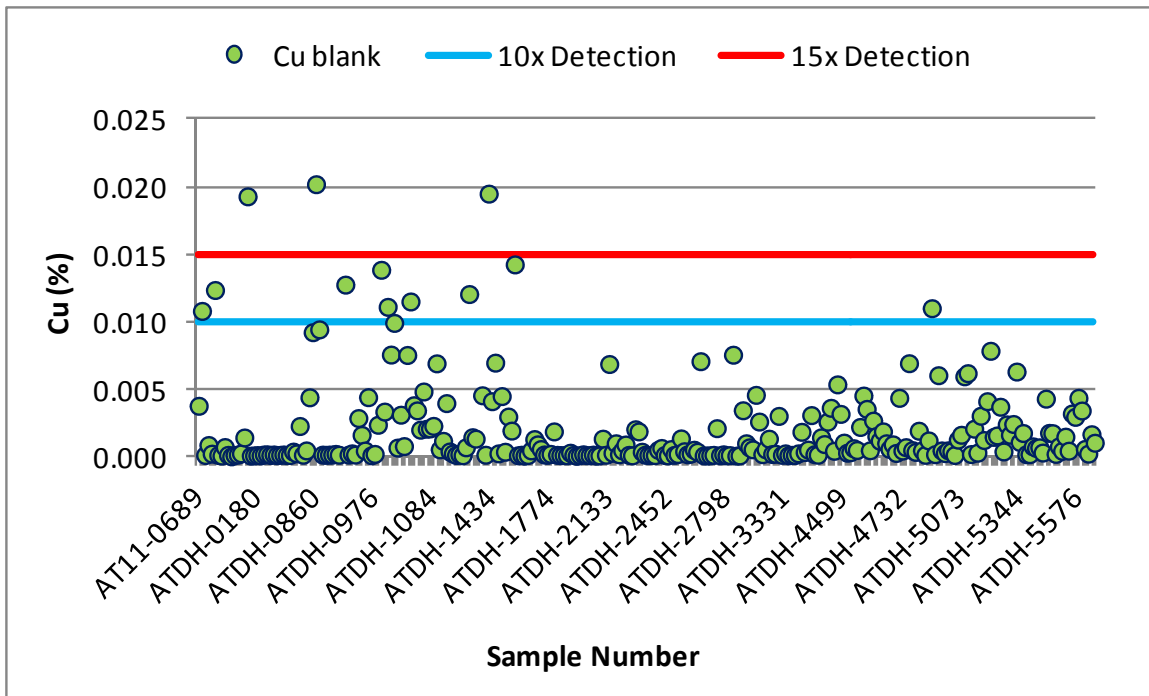
MINER used commercially prepared blanks consisting of quartz gangue that were purchased from SGS. Prior to using the blanks for their QA/QC program MINER sent ten of the SGS blanks to Acme Labs Ltd. (Vancouver, BC) for analysis. The average copper grade for those ten blanks was 1.43 ppm. All ten gold analyses returned less than the detection limit of 2 ppb.

In August 2012 Atico reported apparent failure of copper blanks associated with six sample lots. ALS Chemex investigated and concluded that in some cases high-grade massive sulfide copper samples were contaminating the sample prep equipment. The Chemex standard crusher and pulverizer cleaning protocols (WSH-21 and WSH-22) were insufficient in removing traces of the high-grade massive sulfide material. Upon the completion of their study, Chemex adopted more stringent cleaning measures.

Figures 11-1 and 11-2 show the performance of copper and gold blanks respectively, that were submitted by MINER to ALS Chemex for their 2012 through 2015 drilling campaigns. Figures 11-3 and 11-4 show the performance of copper and gold blanks, respectively, that were submitted to SGS along with various ALS Chemex pulps and rejects that were analyzed as a part of MINER's QA/QC procedures.

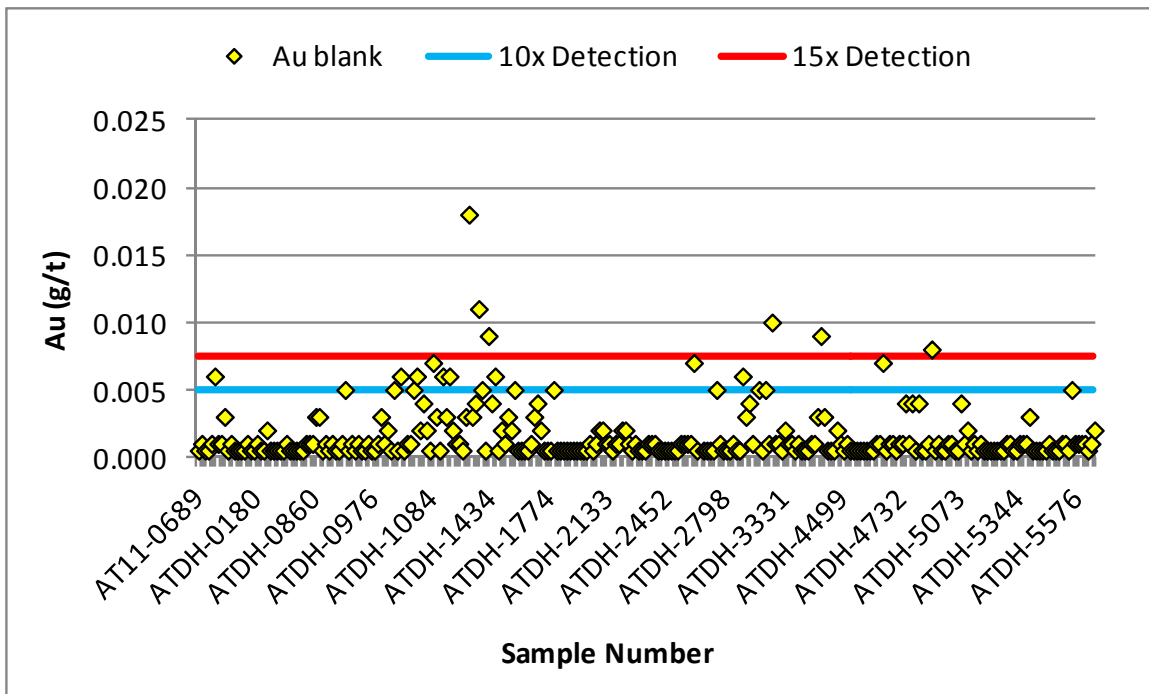


**Figure 11-1: Chemex Copper Blank Performance**



Source: RMI, 2016

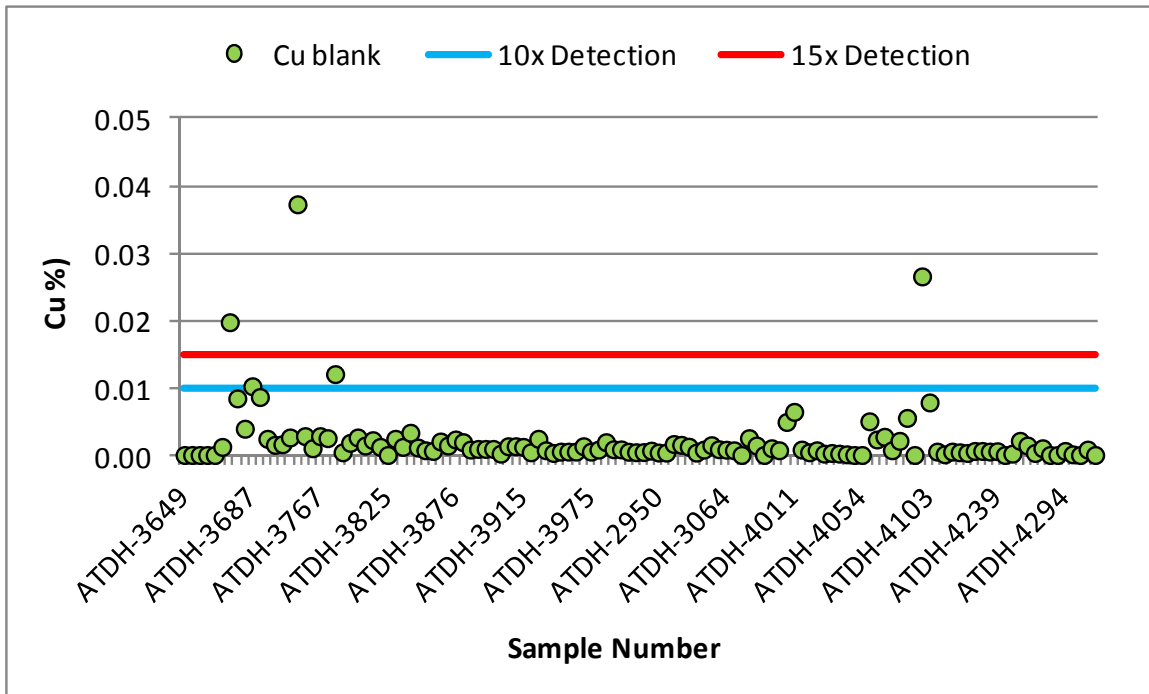
**Figure 11-2: Chemex Gold Blank Performance**



Source: RMI, 2016

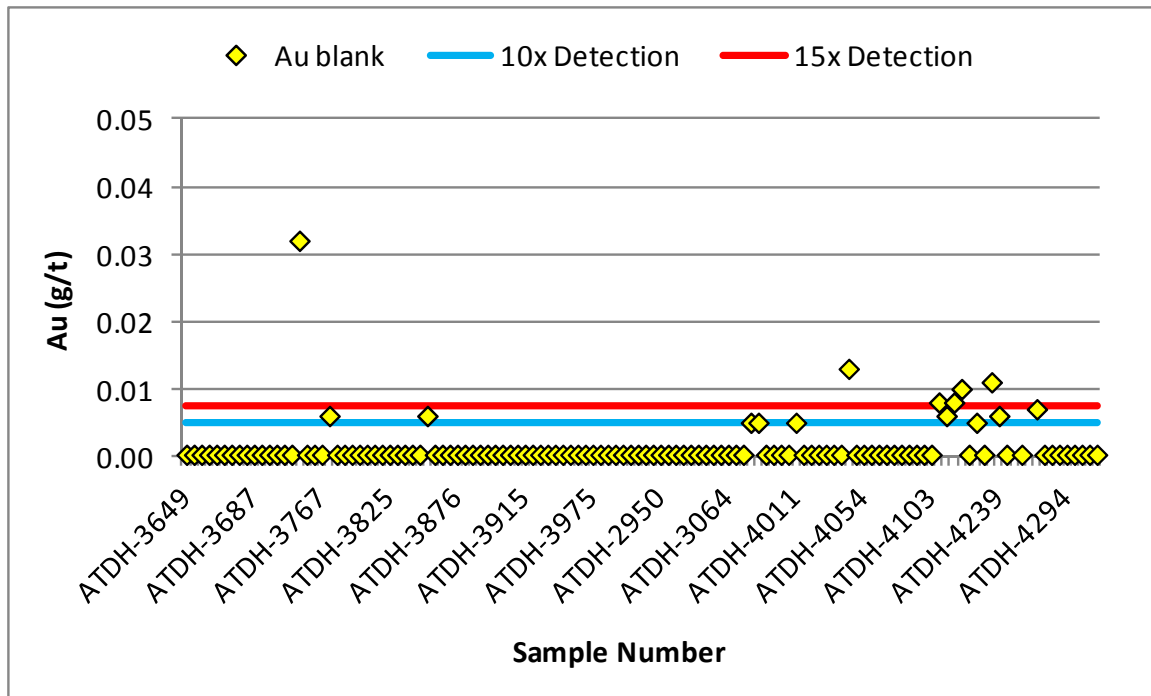
Figures 11-1 and 11-2 show that many of the copper blanks returned values greater than 10 times the detection limit of copper, reflecting the sample prep contamination that occurred in late 2012. The majority of the copper blanks came back around the average of the ten blank samples that were assayed by Acme Labs.

**Figure 11-3: SGS Copper Blank Performance**



Source: RMI, 2016

**Figure 11-4: SGS Gold Blank Performance**



Source: RMI, 2016

### 11.10 SRM Performance

MINER purchased four certified standard reference materials (SRM's) from Ore Research & Exploration Pty. Ltd (Oreas). The four SRM's were routinely submitted with drill core samples and pulps/rejects that were sent to ALS Chemex and SGS at a frequency of one SRM for approximately every 20 core/pulp samples. Table 11-2 summarizes the number of each SRM that was submitted to each lab and their expected values that were established by round robin assaying.

**Table 11-2: SRM Expected Values**

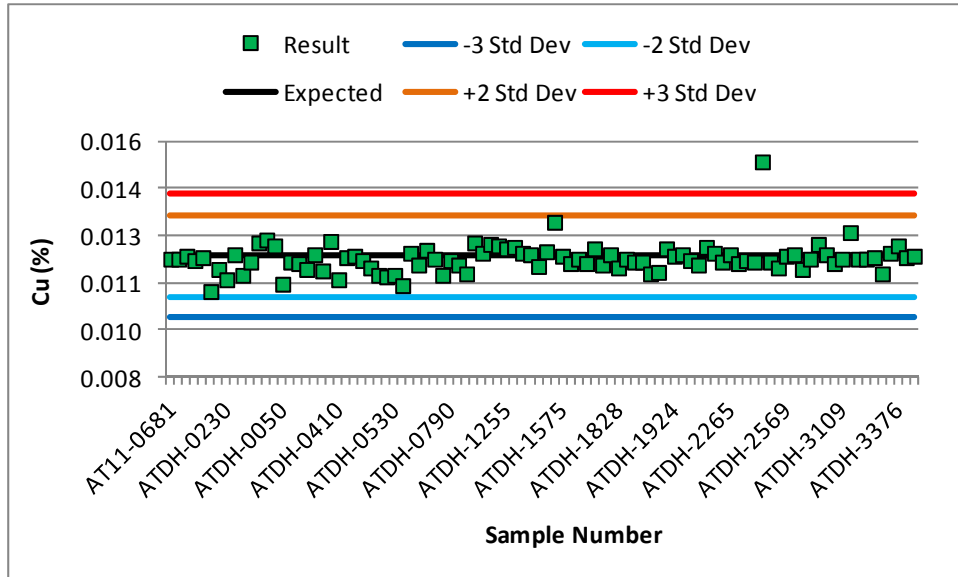
SRM Name	No. Sent to Chemex	No. Sent to SGS	Total Sent	Expected Values				
				Cu (%)	Pb (%)	Zn (%)	Au (g/t)	Ag (g/t)
SRM Oreas 66a	94	18	112	0.0121	n/a	n/a	1.237	18.9
SRM Oreas 68a	44	7	51	0.0392	n/a	n/a	3.89	42.9
SRM Oreas 110	36	7	43	0.1620	0.00362	0.0072	n/a	0.58
SRM Oreas 113	64	21	85	13.5000	0.023	0.4178	n/a	22.6
Total	238	53	291	n/a	n/a	n/a	n/a	n/a

Source: RMI, 2016

The performance of 94 Oreas 66a SRM's that were assayed by ALS Chemex for copper, gold, and silver are shown in Figures 11-5 and 11-7, respectively. Oreas 66a was

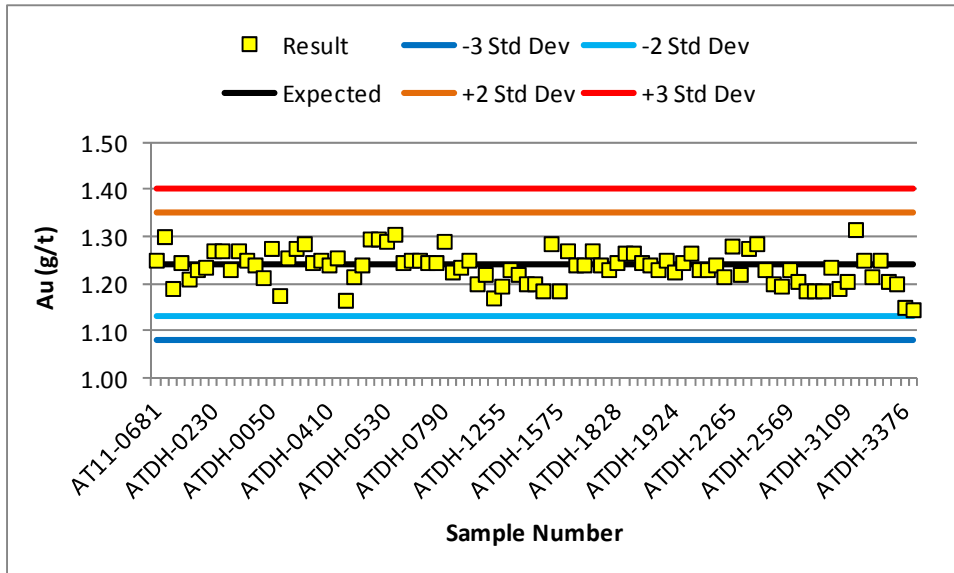
prepared from gold-silver bearing material that was mixed with fresh olivine basalt. This SRM represents a low-grade copper standard with moderate expected gold and silver values.

**Figure 11-5: SRM Oreas 66a Copper Performance - Chemex**



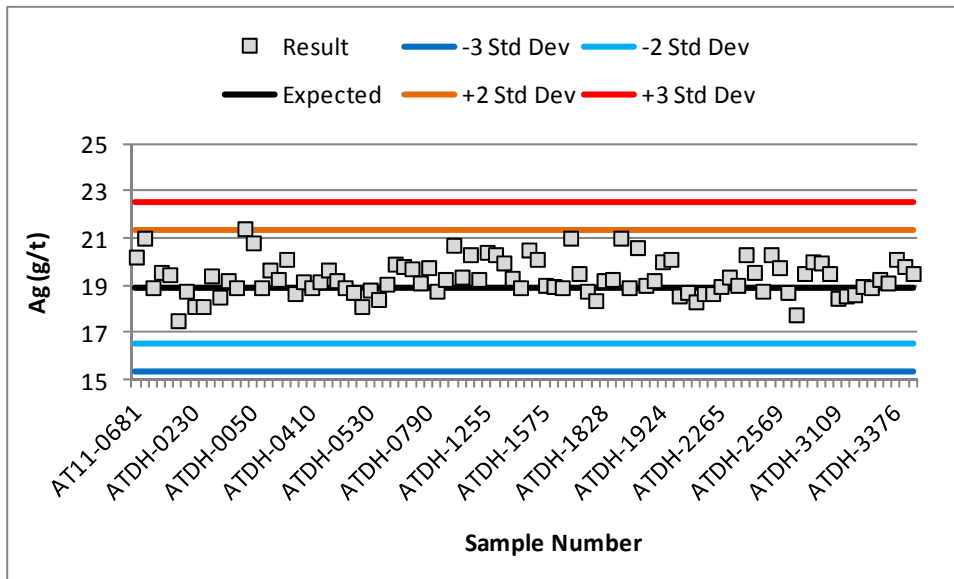
Source: RMI, 2016

**Figure 11-6: SRM Oreas 66a Gold Performance - Chemex**



Source: RMI, 2016

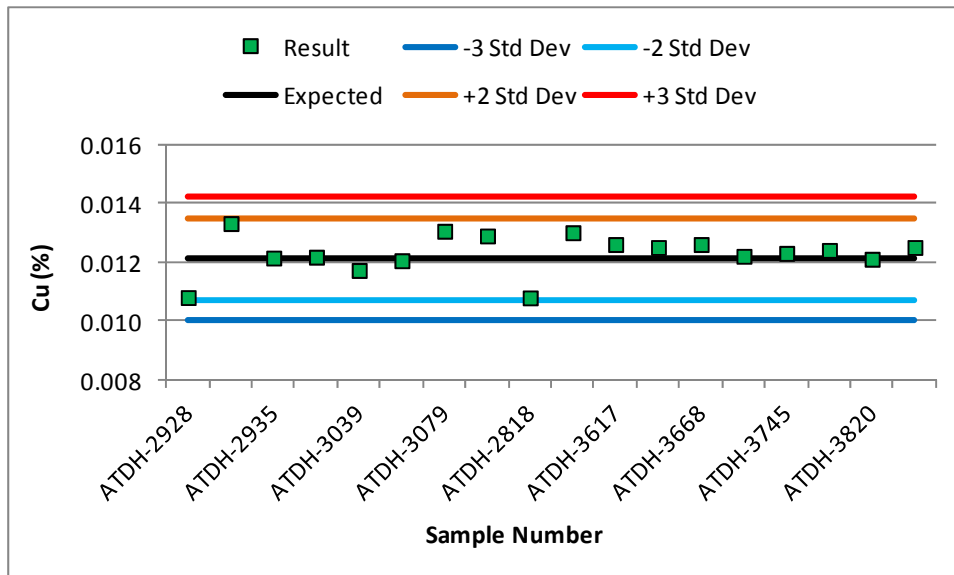
**Figure 11-7: SRM Oreas 66a Silver Performance - Chemex**



Source: RMI, 2016

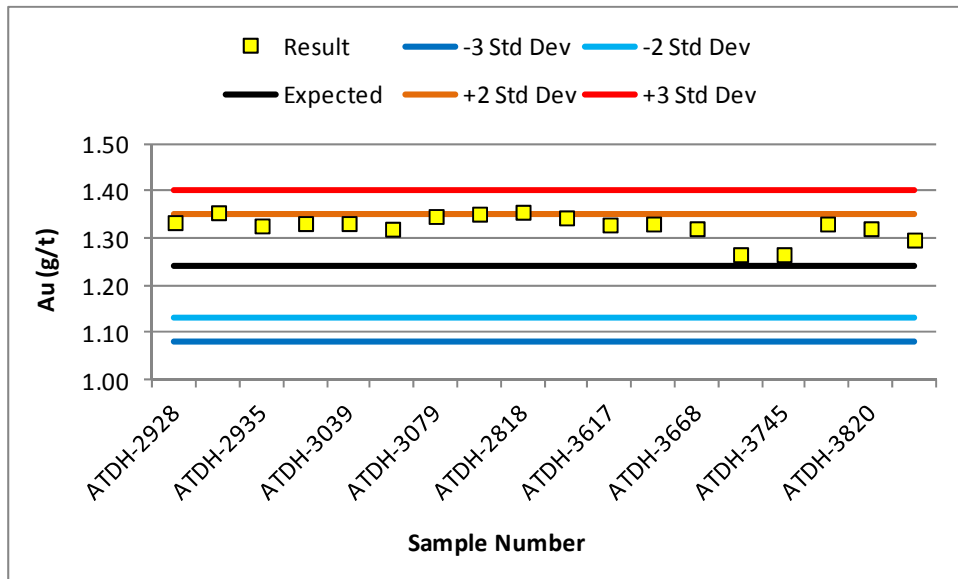
Copper, gold, and silver results for 18 Oreas 66a SRM's assayed by SGS are shown in Figures 11-8 through 11-10, respectively.

**Figure 11-8: SRM Oreas 66a Copper Performance - SGS**



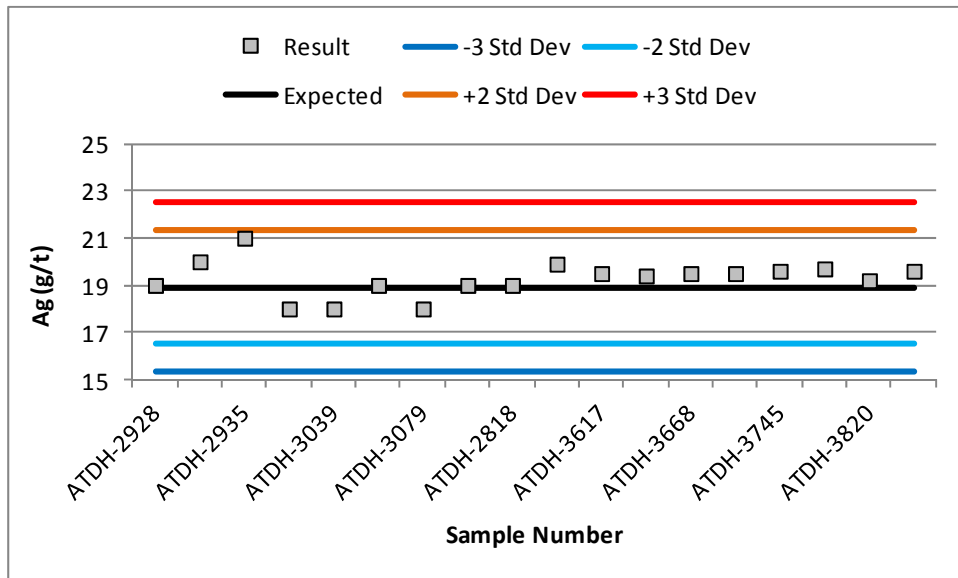
Source: RMI, 2016

**Figure 11-9: SRM Oreas 66a Gold Performance - SGS**



Source: RMI, 2016

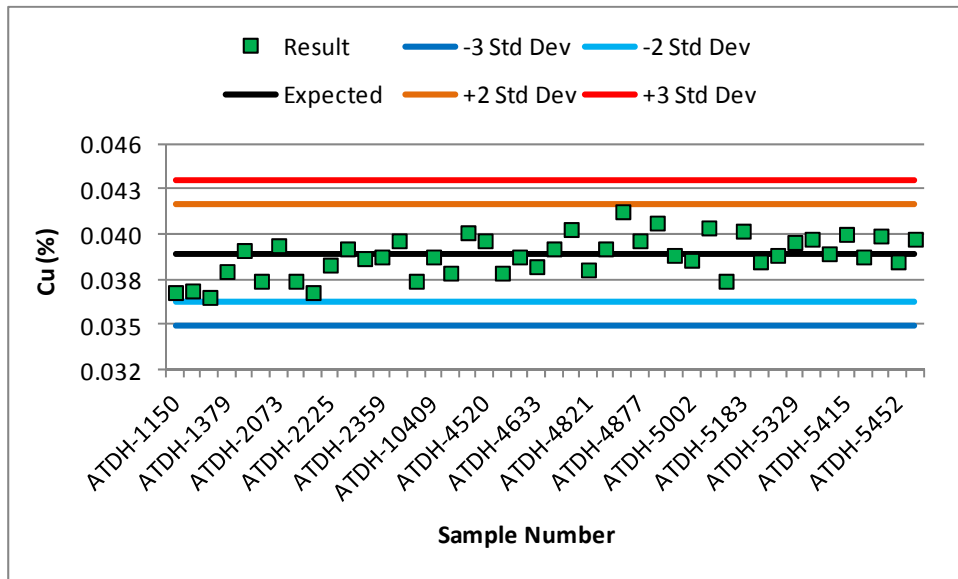
**Figure 11-10: SRM Oreas 66a Silver Performance - SGS**



Source: RMI, 2016

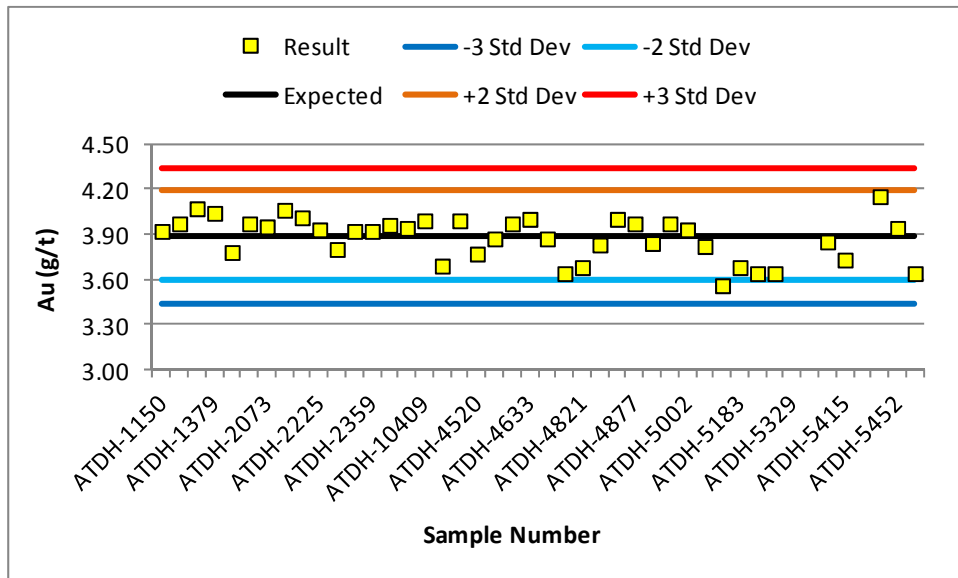
Copper, gold, and silver results for 44 Oreas 68a SRM's assayed by ALS Chemex are shown in Figures 11-11 through 11-13, respectively. Oreas 68a was prepared from gold and silver bearing material that was mixed with fresh olivine basalt. This SRM represents a low-grade copper standard with moderate expected gold and silver values (higher precious metal values than Oreas 66a).

**Figure 11-11: SRM Oreas 68a Copper Performance - Chemex**



Source: RMI, 2016

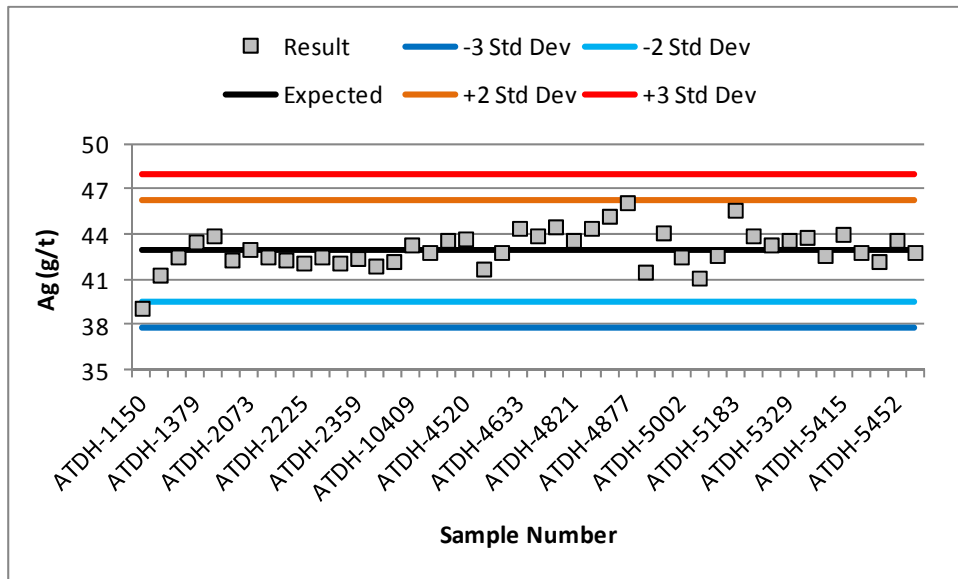
**Figure 11-12: SRM Oreas 68a Gold Performance - Chemex**



Source: RMI, 2016



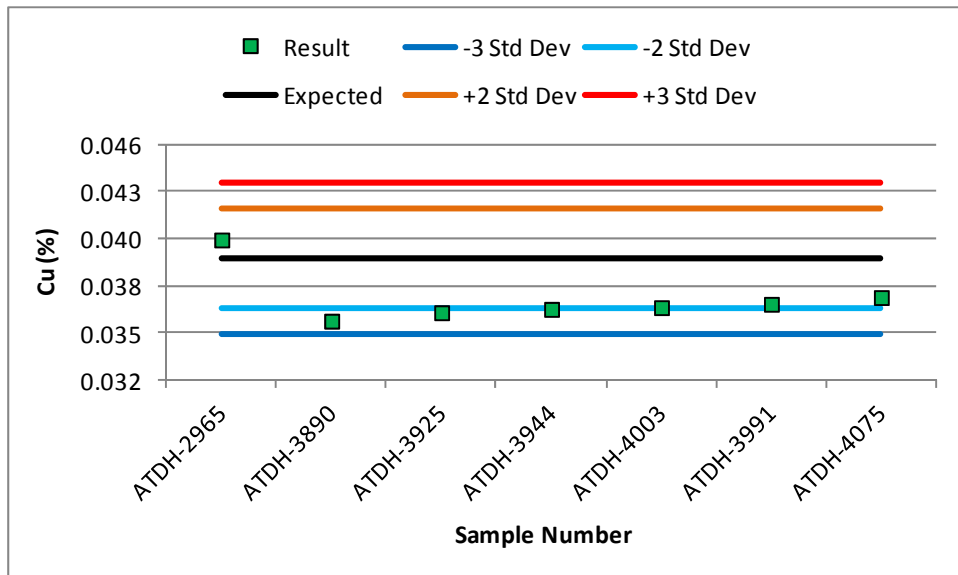
**Figure 11-13: SRM Oreas 68a Silver Performance - Chemex**



Source: RMI, 2016

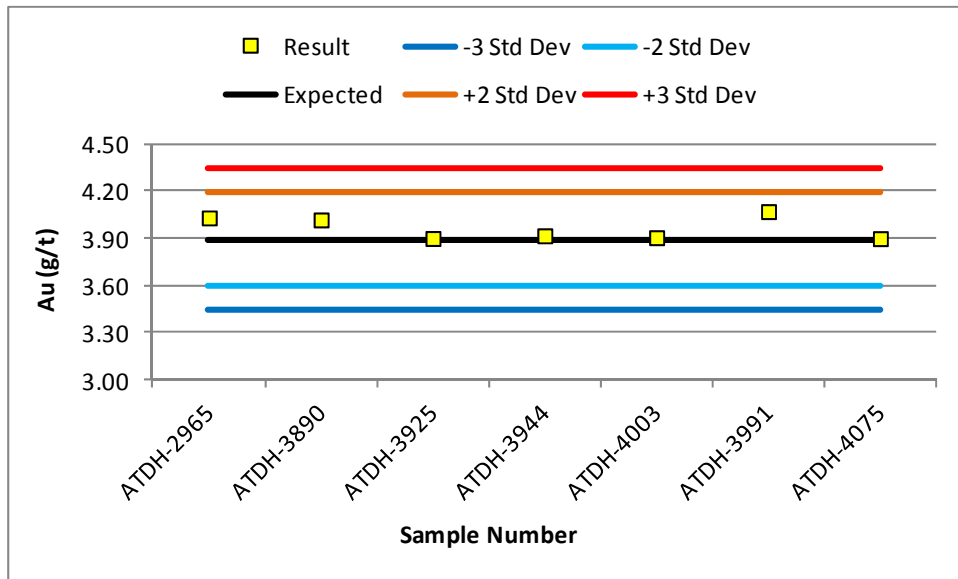
Copper, gold, and silver results for 7 Oreas 68a SRM's assayed by SGS are shown in Figures 11-14 and 11-16, respectively.

**Figure 11-14: SRM Oreas 68a Copper Performance - SGS**



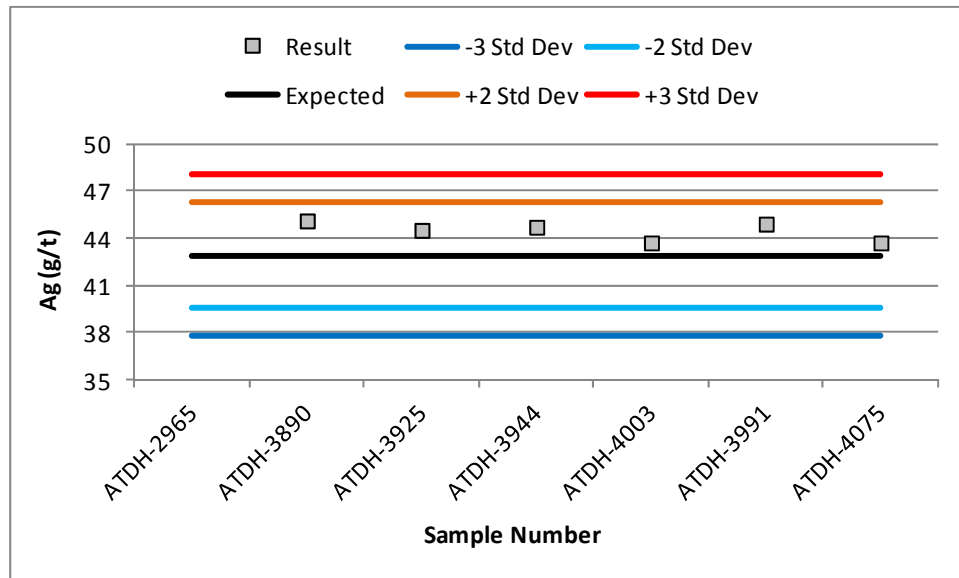
Source: RMI, 2016

**Figure 11-15: SRM Oreas 68a Gold Performance - SGS**



Source: RMI, 2016

**Figure 11-16: SRM Oreas 68a Silver Performance - SGS**

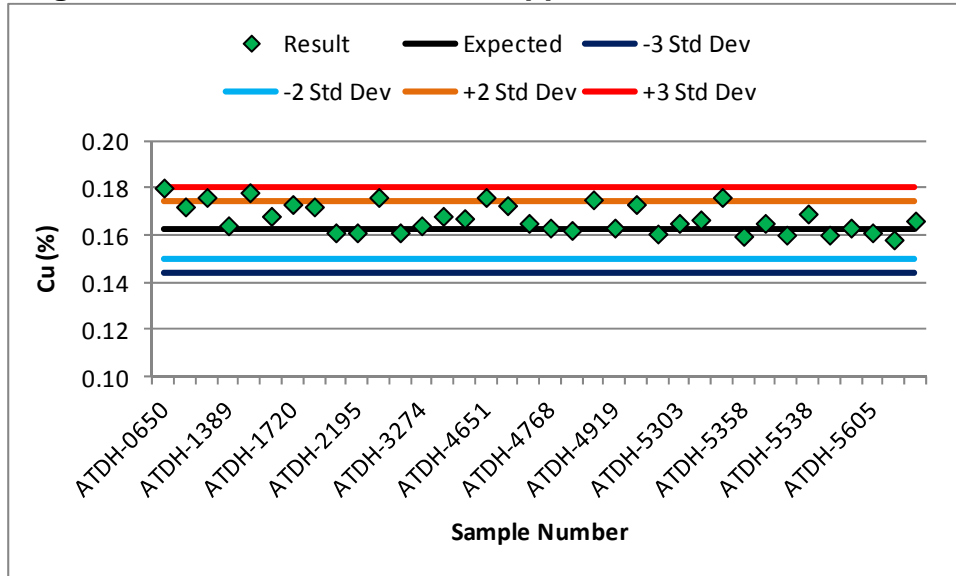


Source: RMI, 2016

Copper and silver results for 36 Oreas 110 SRM's assayed by ALS Chemex are shown in Figures 11-17 and 11-18, respectively. Oreas 110 was prepared from low-grade copper material from the Tritton Copper project located in New South Wales, Australia. This SRM represents a low-grade copper standard with moderate expected gold and silver values (higher precious metal values than Oreas 66a). No certified gold values were

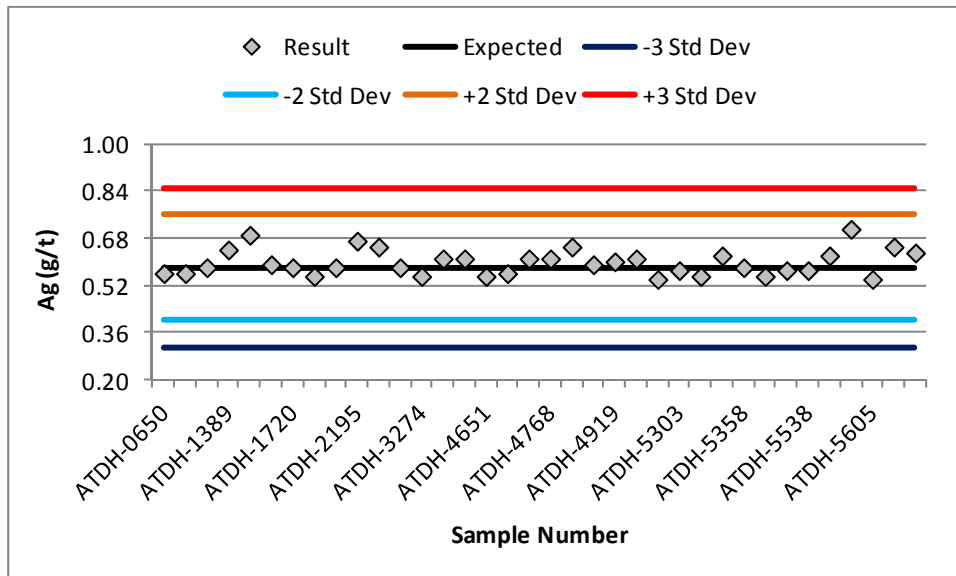
associated with this standard.

**Figure 11-17: SRM Oreas 110 Copper Performance - Chemex**



Source: RMI, 2016

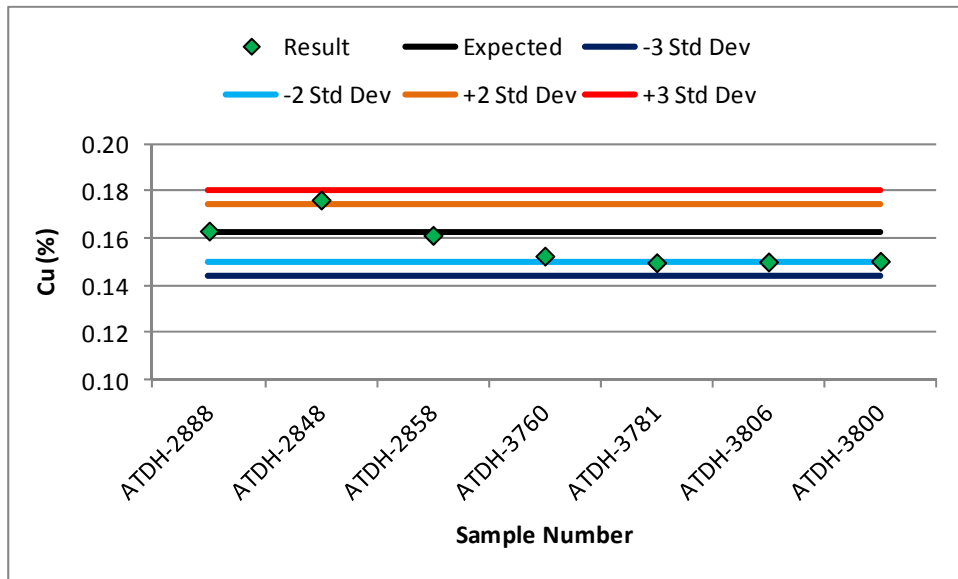
**Figure 11-18: SRM Oreas 110 Silver Performance - Chemex**



Source: RMI, 2016

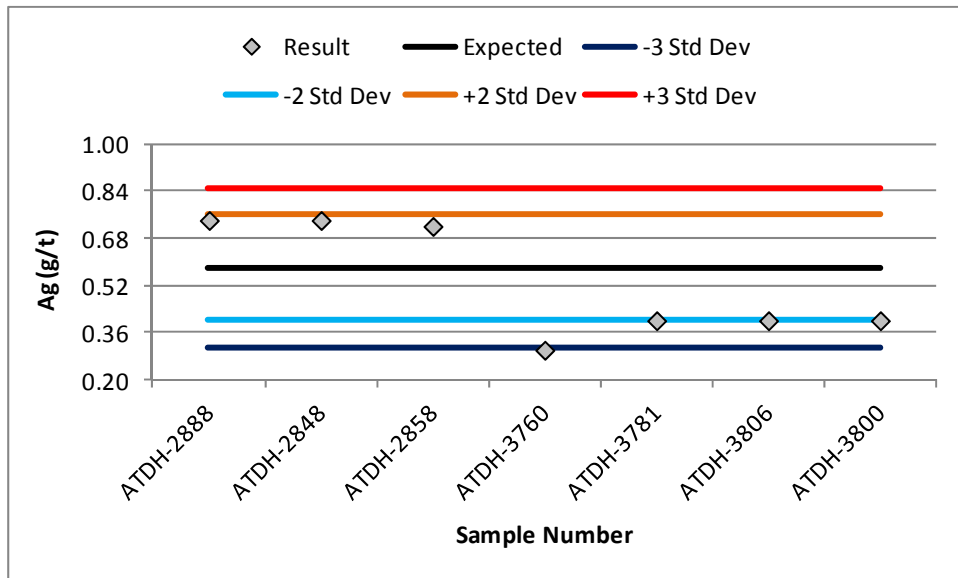
Copper and silver results for 7 Oreas 110 SRM's assayed by SGS are shown in Figures 11-19 and 11-20, respectively.

**Figure 11-19: SRM Oreas 110 Copper Performance - SGS**



Source: RMI, 2016

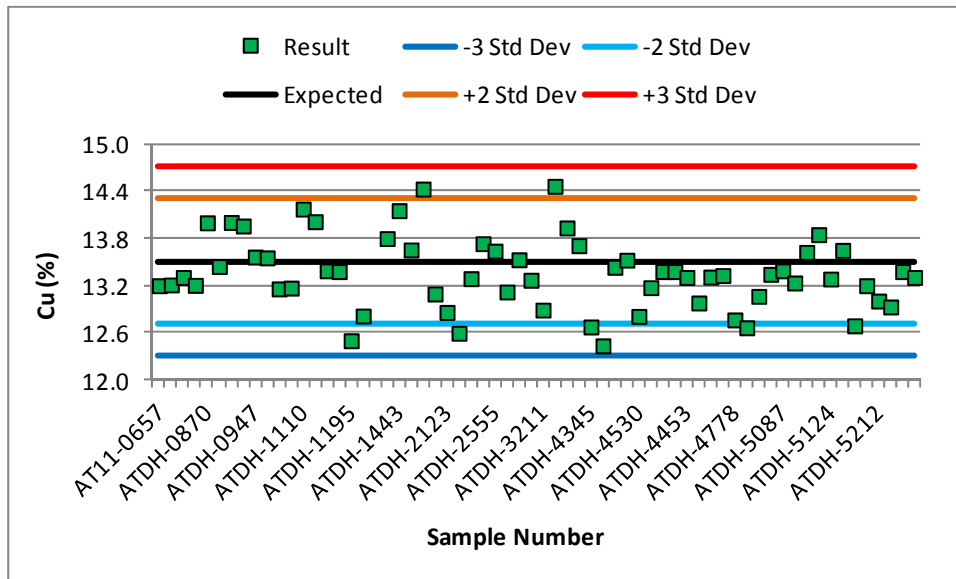
**Figure 11-20: SRM Oreas 110 Silver Performance - SGS**



Source: RMI, 2016

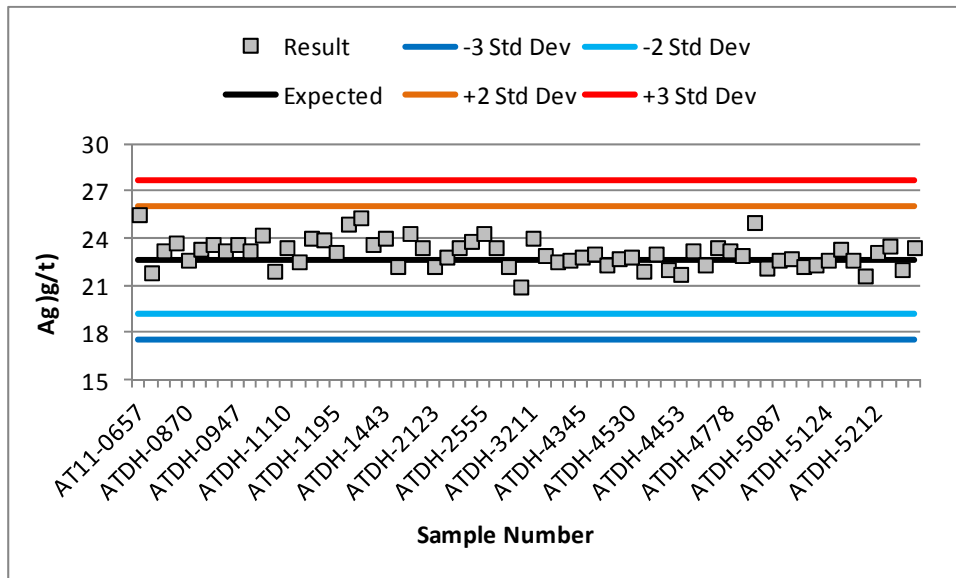
Copper and silver results for 64 Oreas 113 SRM's assayed by ALS Chemex are shown in Figures 11-21 and 11-22, respectively. Oreas 113 was prepared from high-grade copper material from the Tritton Copper project located in New South Wales, Australia. This SRM represents a high-grade copper standard with moderate expected silver values. No certified gold values were associated with this standard.

**Figure 11-21: SRM Oreas 113 Copper Performance - Chemex**



Source: RMI, 2016

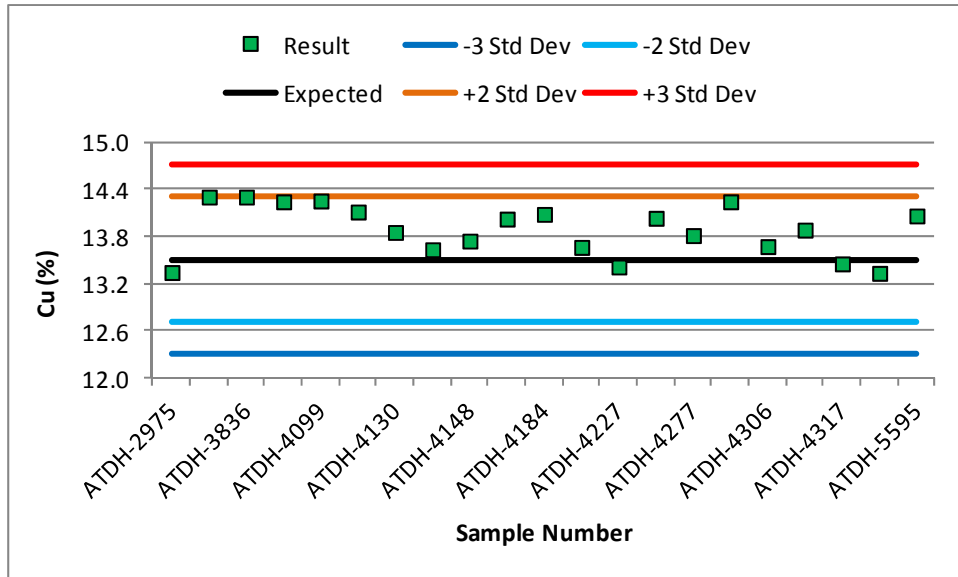
**Figure 11-22: SRM Oreas 113 Silver Performance - Chemex**



Source: RMI, 2016

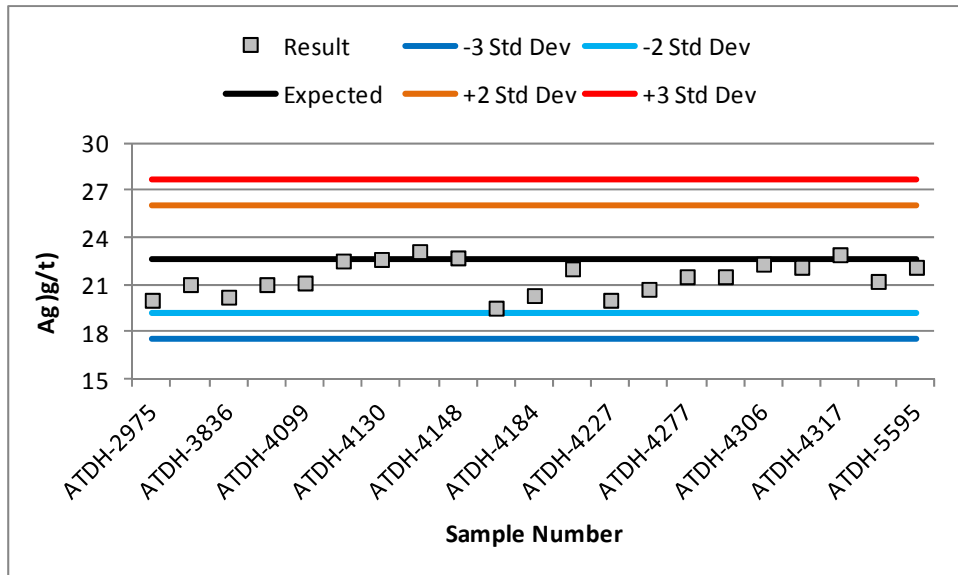
Copper and silver results for 64 Oreas 113 SRM's assayed by SGS are shown in Figures 11-23 and 11-24, respectively.

**Figure 11-23: SRM Oreas 113 Copper Performance - SGS**



Source: RMI, 2016

**Figure 11-24: SRM Oreas 113 Silver Performance - SGS**



Source: RMI, 2016

**11.11 ALS Chemex Duplicate Assay Results**

MINER requested that ALS Chemex prepare a duplicate sample in order to assess possible problems in sample prep and to provide an indication of grade variability. Table 11-3 compares the original and duplicate lab results for 160 original-duplicate sample pairs.

**Table 11-3: Original vs. Duplicate Sample Comparison - ALS Chemex**

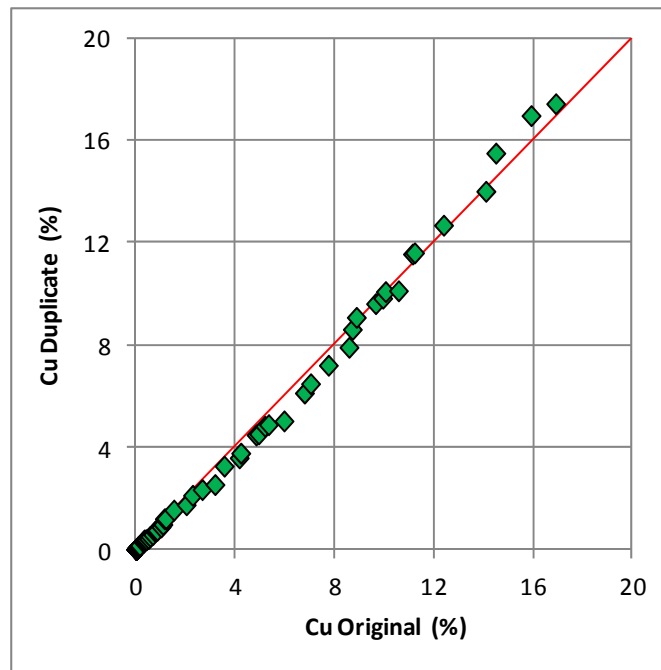
Parameter	Copper (%)		Gold (g/t)		Silver (g/t)	
	Original	Duplicate	Original	Duplicate	Original	Duplicate
Count	160	160	160	160	160	160
Min	0.002	0.002	0.001	0.001	0.01	0.01
Max	19.670	18.650	52.000	37.500	89.60	83.70
1st Q	0.010	0.010	0.032	0.027	1.07	1.01
Mean	2.626	2.551	2.223	1.792	8.50	8.11
Median	0.064	0.061	0.582	0.414	3.29	3.02
3rd Q	3.608	3.303	2.258	2.173	9.13	9.19
Std. Dev.	4.51	4.48	5.45	3.87	14.20	13.04
CV	1.72	1.76	2.45	2.16	1.67	1.61

Source: RMI, 2016

The data in Table 11-3 show that the duplicate lab sample results compare reasonably well for copper and silver, however, the mean grade of the duplicate gold assay is significantly lower than the original.

Figures 11-25 through 11-27 are quantile-quantile (QQ) plots that compare ALS Chemex original (X-axis) and duplicate (Y-axis) grades for copper, gold, and silver, respectively.

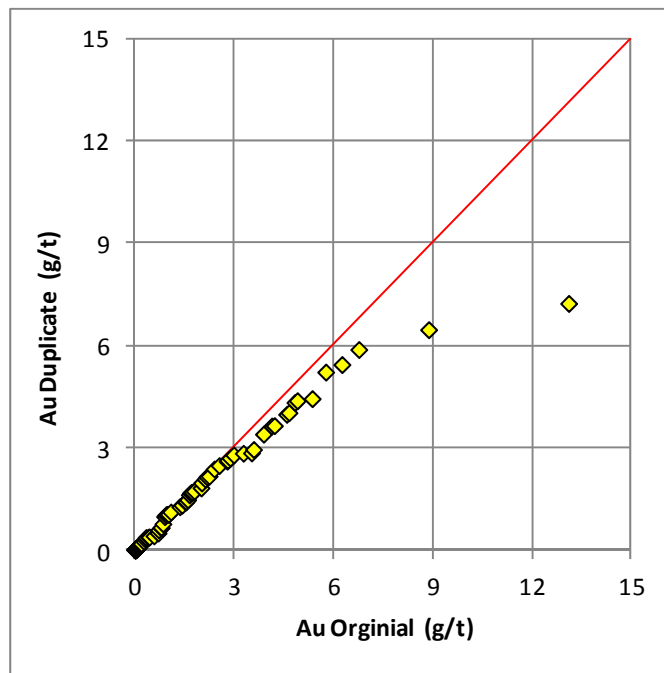
**Figure 11-25: ALS Chemex Original vs. Duplicate Copper Assay QQ Plot**



Source: RMI, 2016

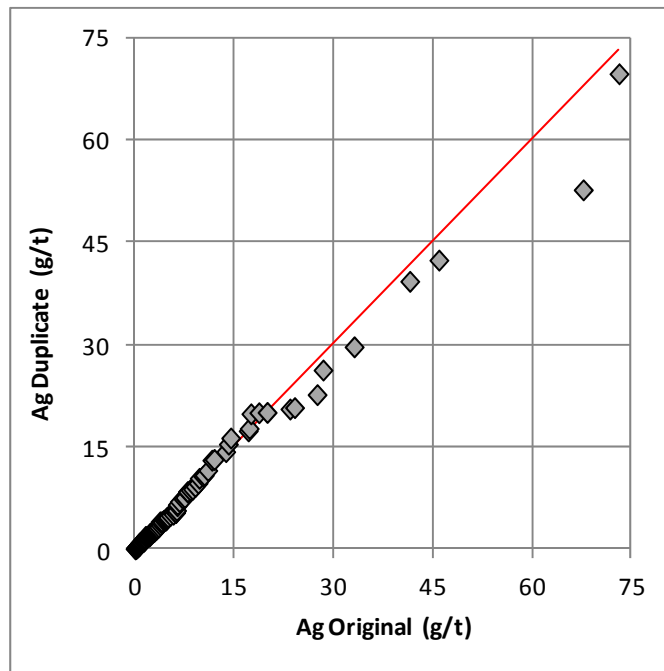


Figure 11-26: ALS Chemex Original vs. Duplicate Gold Assay QQ Plot



Source: RMI, 2016

Figure 11-27: ALS Chemex Original vs. Duplicate Silver Assay QQ Plot



Source: RMI, 2016

### 11.12 SGS Duplicate Assay Results

MINER also requested that SGS prepare duplicate samples upon request in order to assess potential sample preparation problems and to examine grade variability. Table 11-4 summarizes basic statistical parameters associated with 25 original and duplicate sample pairs.

**Table 11-4: Original vs. Duplicate Sample Comparison - SGS**

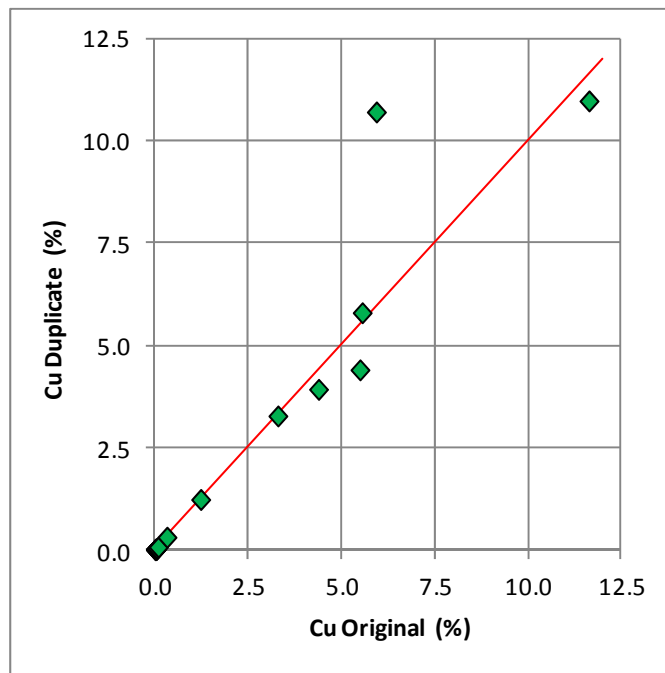
Parameter	Copper (%)		Gold (g/t)		Silver (g/t)	
	Original	Duplicate	Original	Duplicate	Original	Duplicate
Count	25	25	25	25	25	25
Min	0.004	0.006	0.006	0.005	0.02	0.40
Max	12.570	11.650	5.030	5.180	27.10	24.90
1st Q	0.012	0.011	0.026	0.027	2.40	2.64
Mean	2.028	2.100	1.045	1.368	4.94	4.79
Median	0.018	0.018	0.069	0.792	3.73	3.56
3rd Q	3.290	3.270	1.770	2.042	5.63	5.60
Std. Dev.	3.57	3.69	1.41	1.65	5.23	4.85
CV	1.76	1.76	1.35	1.21	1.06	1.01

Source: RMI, 2016

The data in Table 11-4 show that the duplicate lab sample results compare reasonably well for copper and silver, however, the mean grade of the duplicate gold assay is significantly higher than the original, which is the opposite of the relationship shown for gold between the original and duplicate samples analyzed by ALS Chemex.

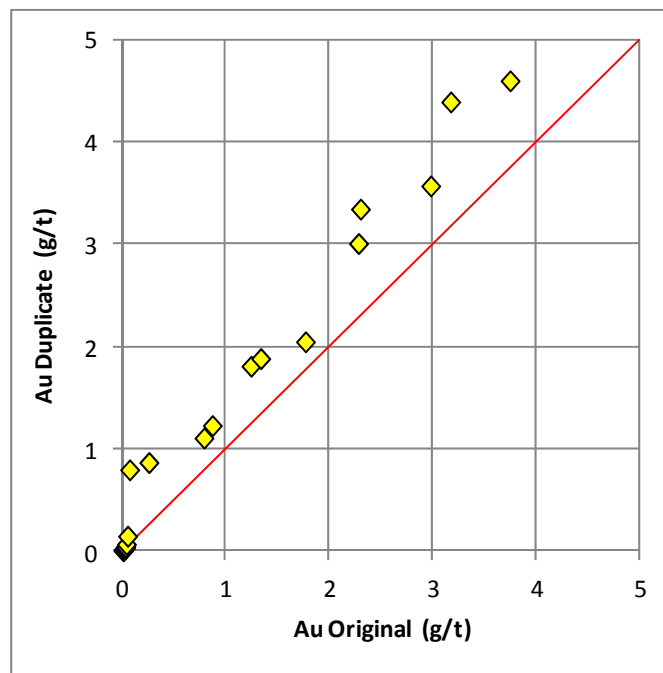
Figures 11-28 through 11-30 are QQ plots that compare SGS original (X-axis) and duplicate (Y-axis) grades for copper, gold, and silver, respectively.

Figure 11-28: SGS Original vs. Duplicate Copper Assay QQ Plot



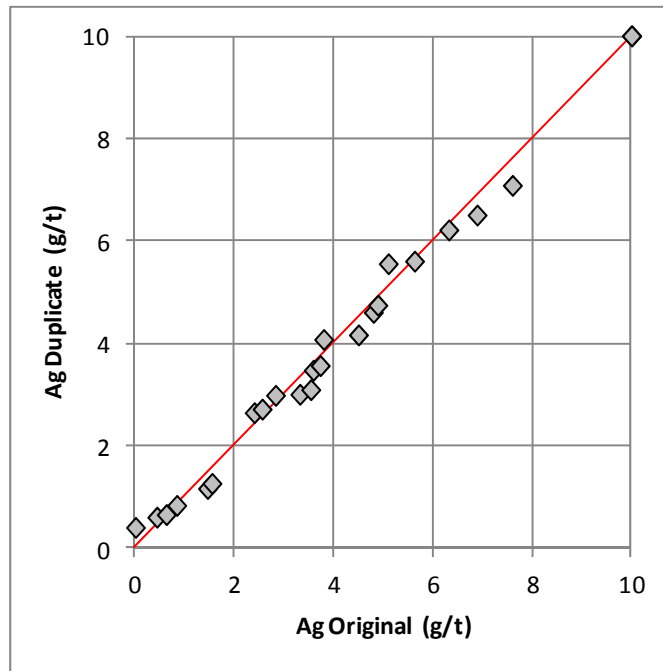
Source: RMI, 2016

Figure 11-29: SGS Original vs. Duplicate Gold Assay QQ Plot



Source: RMI, 2016

**Figure 11-30: SGS Original vs. Duplicate Silver Assay QQ Plot**



Source: RMI, 2016

### 11.13 Reject Check Assay Comparison

MINER submitted 62 coarse reject samples to SGS in Medellin for analysis. The coarse rejects were initially prepared and assayed by ALS Chemex. Table 11-5 summarizes basic descriptive statistics for the two data sets.

**Table 11-5: Original Chemex vs. SGS Coarse Reject Samples**

Parameter	Copper (%)		Gold (g/t)		Silver (g/t)	
	Chemex	SGS	Chemex	SGS	Chemex	SGS
Count	62	62	62	62	62	62
Min	0.005	0.011	0.001	0.005	0.10	0.30
Max	21.170	21.570	49.600	48.180	41.80	50.80
1st Q	0.102	0.114	0.782	0.419	3.43	3.25
Mean	4.112	4.253	2.750	2.696	9.04	9.27
Median	1.621	1.115	1.818	1.644	7.21	6.90
3rd Q	7.156	7.408	2.773	2.788	10.68	11.40
Std. Dev.	4.94	5.16	6.23	6.17	8.19	9.18
CV	1.20	1.21	2.26	2.29	0.91	0.99

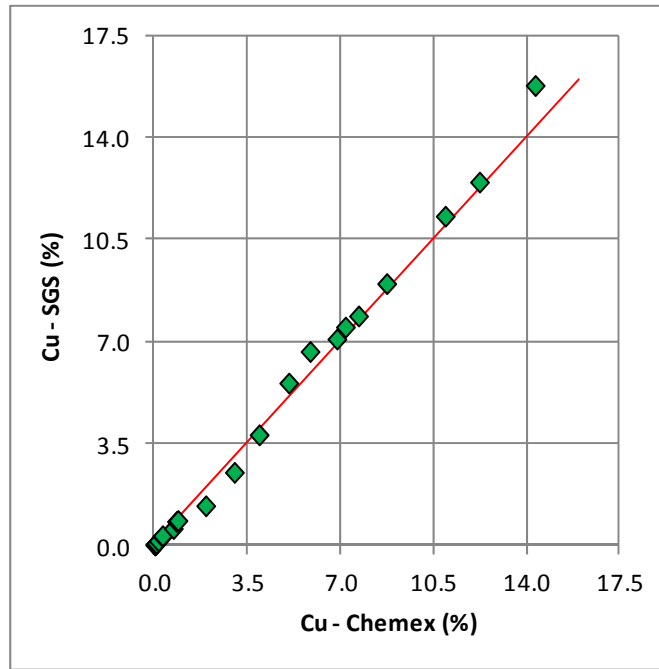
Source: RMI, 2016

The data in Table 11-5 shows that there was a reasonably close comparison between the original sample assayed by ALS Chemex and samples prepared and assayed

from the Chemex coarse reject. The average Cu, Au, and Ag grades differ by two to three percent between the two labs.

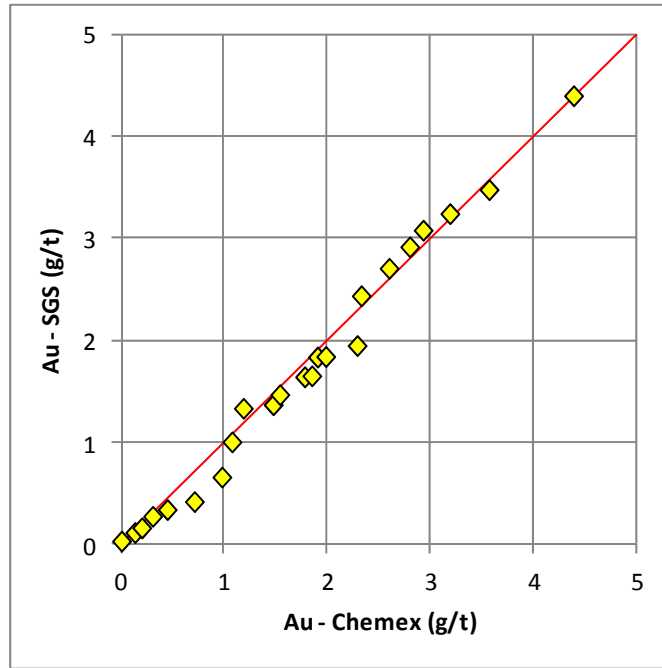
The data shown in Table 11-5 are graphically compared in QQ plots for copper, gold, and silver in Figures 11-31 through 11-33, respectively.

**Figure 11-31: Chemex Original Cu vs. SGS Cu Reject Sample**



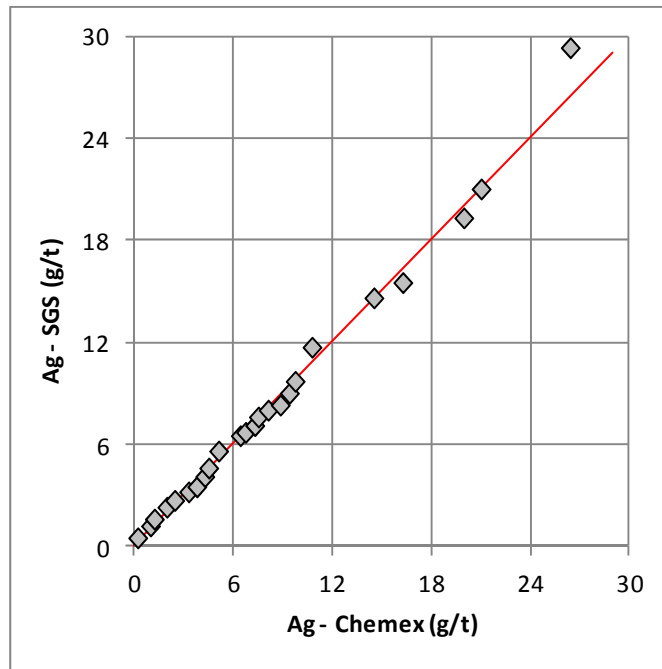
Source: RMI, 2016

**Figure 11-32: Chemex Original Au vs. SGS Au Reject Sample**



Source: RMI, 2016

**Figure 11-33: Chemex Original Ag vs. SGS Ag Reject Sample**



Source: RMI, 2016

### 11.14 Pulp Check Assay Comparison

MINER submitted 62 pulp samples to SGS in Medellin for analysis. The pulps were initially prepared and assayed by ALS Chemex. Table 11-6 summarizes basic descriptive statistics for the two data sets

**Table 11-6: Original Chemex vs. SGS Pulp Samples**

Parameter	Copper (%)		Gold (g/t)		Silver (g/t)	
	Chemex	SGS	Chemex	SGS	Chemex	SGS
Count	62	62	62	62	62	62
Min	0.004	0.005	0.007	0.019	0.09	0.30
Max	16.320	16.660	21.500	19.910	75.70	79.00
1st Q	0.372	0.306	1.056	1.000	3.38	3.33
Mean	4.330	4.606	2.559	2.382	10.70	10.10
Median	2.901	3.247	1.598	1.491	6.67	6.10
3rd Q	7.084	7.730	2.783	2.526	15.65	14.33
Std. Dev.	4.52	4.68	3.13	2.96	12.08	12.09
CV	1.04	1.02	1.22	1.24	1.13	1.20

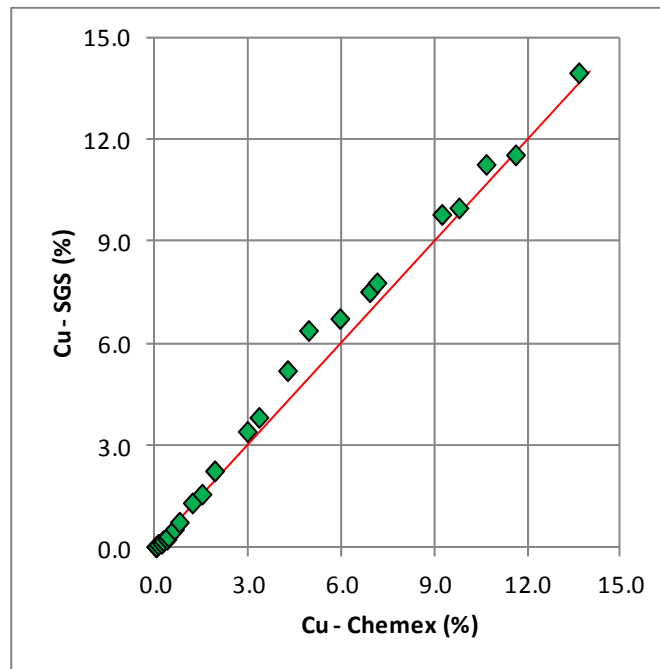
Source: RMI, 2016

The data in Table 11-6 show that there was a reasonably close comparison between the original sample assayed by ALS Chemex and samples assayed from the Chemex pulp. The average Cu, Au, and Ag grades differ by six to seven percent between the two labs. Normally the variance between assays from the same pulp would be less than the variance between an original sample and an analysis made from the coarse reject.

The data shown in Table 11-6 are graphically compared in QQ plots for copper, gold, and silver in Figures 11-34 through 11-36, respectively.

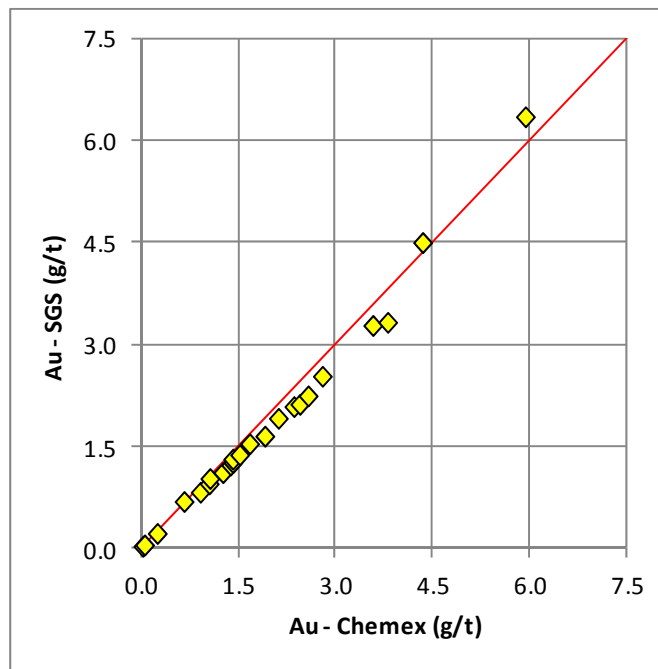


Figure 11-34: Chemex Original Cu vs. SGS Cu Pulp Sample



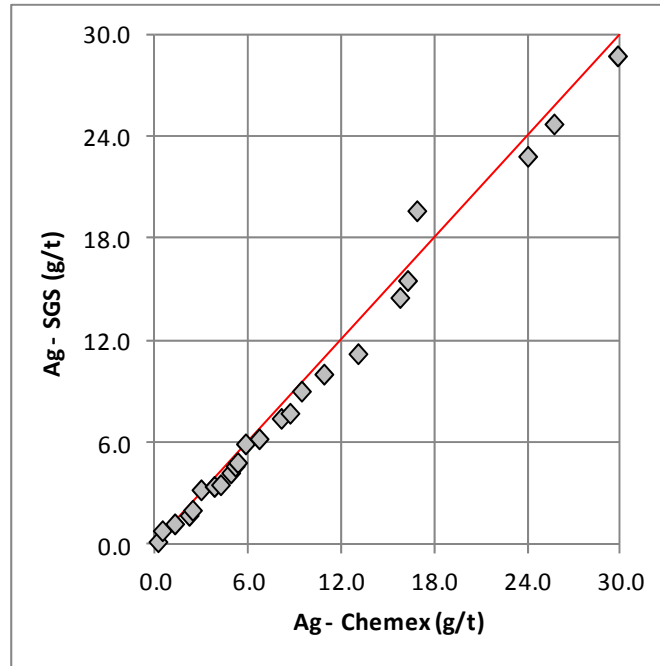
Source: RMI, 2016

Figure 11-35: Chemex Original Au vs. SGS Au Pulp Sample



Source: RMI, 2016

**Figure 11-36: Chemex Original Ag vs. SGS Ag Pulp Sample**



Source: RMI, 2016

### 11.15 Discussion

In the opinion of the Qualified Persons, the sample preparation, security, and analytical procedures implemented by MINER and their primary analytical lab (ALS Chemex) were adequate. The poor performance of blank material appears to have been addressed by Chemex by virtue of more rigorous cleaning of the sample prep equipment between individual samples and sample batches.

The Qualified Persons recommend that MINER closely monitor the comparison between field duplicates and original samples for all future drilling campaigns.

The Qualified Persons recommend that MINER submit at least five percent of the pulps that were prepared and analyzed by ALS Chemex to another accredited lab. The selection of which pulps should be analyzed can be done on a random basis or samples selected based on a number of grade ranges.

## 12.0 DATA VERIFICATION

In 2013, the Qualified Person responsible for this section verified a number of drill hole assays that were collected by Atico and their predecessor company, MINER. MINER's geologic staff recently compared a number of assay records stored in their database with hard copy lab records. The Qualified Person also verified a number of assays from MINER's 2014-2015 drilling campaigns.

### 12.1 Pre-2014 Drill Hole Assay Verification

Assay certificates for a representative number of pre-2014 Atico and MINER drill holes were obtained. Copper, gold, and silver assay grades stored in MINER's database were compared to signed ALS Chemex certificates. Approximately 13% and 8% of the pre-2014 Atico and MINER assays, respectively, were verified by comparing MINER's electronic database with signed assay certificates from ALS Chemex. No errors were discovered. The data that were verified are summarized in Table 12-1.

**Table 12-1: Pre-2014 Drill Hole Assay Verification**

Drill Hole	No. Intervals	Meters	Company
ATDHR-04	69	137.70	Atico
ATDHR-17	122	174.92	Atico
ATDHR-26	109	185.67	Atico
ATDHR-28	123	260.95	Atico
MEI-113I	10	21.00	MINER
MEI-114I	13	21.60	MINER
Grand Total	446	801.84	n/a

*Source: RMI, 2015*

### 12.2 2014-2015 MINER Drilling Confirmation

MINER's geologic staff members recently compared 946 randomly selected assay results stored in the Access database against 19 signed ALS Chemex and SGS certificates. This review included drilling results from 2012 through 2015. No significant discrepancies were identified.

Assay certificates for a representative number of 2014-2015 MINER drill holes and channel samples were obtained by the Qualified Person responsible for this Item 12.0. Copper, gold, and silver assay grades stored in MINER's database were compared against signed ALS Chemex and SGS certificates. No errors were encountered, although the Qualified Person did discover that silver over-limit values for about 60 SGS ICP assays were entered at their maximum value of 10 g/t instead of the slightly higher values generated after re-assaying via fire assay with a gravimetric finish. MINER personnel were alerted and those changes have since been made. The over-limit silver assay

discrepancies are not considered to be material. The 2014-2015 data that were verified are summarized in Table 12-2. Approximately 25% of the Zeus drill hole data were verified by the Qualified Person responsible for this section.

**Table 12-2: 2014-2015 Drill Hole Assay Verification**

Drill Hole	No. Intervals	Meters	Assay Lab
ATD-0001	107	136.30	SGS
ATD-0007	92	128.35	ALS Chemex
ATD-0011	31	43.60	ALS Chemex
ATD-0014	105	128.00	ALS Chemex
Grand Total	335	436.25	n/a

*Source: RMI, 2015*

### 12.3 Other Data Verification Results

In addition to verifying a significant proportion of the assay database, the Qualified Persons responsible for this amended Technical Report also examined and independently performed independent checks on a variety of other data. Both Qualified Persons responsible for this amended Technical Report examined drill core and compared that core with drill hole logs that were generated by Atico's geologic staff. Those checks confirmed that the lithologic, alteration, mineralization, and structural attributes were accurately logged and reflect the overall geologic framework of the El Roble deposit.

A number of randomly selected down-hole survey records were compared against the supplied electronic drill hole database. No errors were discovered. Independent core recovery and RQD calculations were completed by the Qualified Persons responsible for this amended Technical Report. No discrepancies were discovered.

During a tour of the underground operation, the Qualified Persons responsible for this amended Technical Report noted the location of monumented drill hole collars. Those drill hole collars appeared to be properly located based on their location relative to level maps and cross sections.

### 12.4 Discussion

Based on various assay database checks, a review of core logging accuracy, randomly selected down-hole survey data, independent verification of core recovery and RQD calculations, and verification of underground drill hole collar locations and monumenting, no significant errors were encountered, and it is the opinion of the Qualified Persons responsible for this Item 12.0 that the El Roble data are suitable and adequate for estimating Mineral Resources.

### 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

As summarized in Item 6.0, the existing processing plant at El Roble has a rated nominal throughput capacity of 650 tonnes per day. The processing methods consist of conventional crushing, grinding, and flotation to produce a copper-gold concentrate. Grinding is to 80% passing 200 mesh for flotation feed. Four banks of six flotation cells each generate concentrates which are subsequently thickened, filtered and stored on site for shipping via highway truck to the Pacific coast port of Buenaventura. Process tailings are deposited in an impoundment facility situated along the banks of the Rio Atrato next to the processing plant, or in a separate tailings impoundment located downstream of the processing plant. Process waste water is decanted in a series of ponds and then released (at a pH of 10.2) into the Rio Atrato.

The process recoveries realized during 2014 (the last full year of production prior to the date of this amended Technical Report) were 91.4% for copper, 66.7% for gold and 48.8% for silver. Concentrate grades for 2014 averaged 21.2% Cu and 15.3 g/t Au. The only penalty metal known to the Qualified Person responsible for this amended Technical Report that occasionally exceeds maximum limits is mercury. Current smelter charges are US\$80 per dry metric tonne. Refining charges are US\$0.08 per payable pound of copper, US\$6.00 per payable ounce of gold, and US\$0.35 per payable ounce of silver. Payables are specified in the concentrate sales contract as the copper content minus 1%, 95% of the contained gold and 75% of the contained silver. The current sales contract specifies that copper concentrate grades must be maintained between 18% and 24% Cu, gold grades between 8 g/t and 30 g/t Au, and silver grades between 5 g/t and 60 g/t Ag.

The metallurgical recoveries assumed for the Measured, Indicated and Inferred Mineral Resource estimation update that is the focus of this amended Technical Report are 93.5% for copper and 73% for gold. The slightly higher copper recovery assumed is based on plant copper recovery improvements reported for the Third Quarter 2015 year-to-date that averaged 94.4%. The higher gold recovery assumed is based on steadily improving plant gold recoveries (68.5%) and the results of metallurgical testwork done by SGS Laboratories (SGS) in Lima, Peru, under the supervision of MINER metallurgical consultants (Wuest, 2013). These tests for direct flotation of copper and gold achieved gold recoveries from combined rougher #1 and rougher #2 concentrates that ranged from 47.05% to 93.85%, with lower gold recoveries found to be due to encapsulation of some of the gold in pyrite. Although finer grinding did improve gold recoveries, it also greatly increased the amount of slimes. As an alternative to finer grinding, SGS achieved higher recoveries on the order of 75% to 80% mainly through the addition of reactive collectors. In the opinion of the Qualified Persons responsible for this amended Technical Report, the results of this test work, coupled with the historic production at the El Roble mine described in Item 6.0 and the more recent production results achieved by MINER since its acquisition by Atico in November 2013 provide firm support for the copper and gold recovery assumptions used for the update to the El Roble Mineral Resources that are the focus of this amended Technical Report.

## 14.0 MINERAL RESOURCE ESTIMATES

Mr. Michael J. Lechner, President of Resource Modeling Inc., is the Qualified Person responsible for this section. Mr. Lechner was contracted by MINER to review resource estimates for five VMS bodies located within the El Roble mine complex. The resource estimates were prepared for MINER by José Enrique Gutiérrez Ramírez, MAusIMM (CP 314606), a Senior Resource Geologist with Geotecnologías Aplicadas (GTC) from Lima, Peru.

GTC developed separate rotated models for each of the six VMS bodies and estimated block grades by ordinary kriging and inverse distance methods using Datamine software. Approximately 94% of the Measured and Indicated resources that are the subject of this report are contained in two VMS lenses, Zeus (86%) and Maximus (8%). The other four deposits only contribute six percent of the resource. For that reason, The Qualified Person focused the review on the Zeus and Maximus resources. The Qualified Person examined data associated with those two resources and constructed independent models and compared them with the GTC estimates.

After examining the Zeus and Maximus models, the Qualified Person responsible for this section believes that those models are reasonable and suitable to be used for mine planning purposes.

### 14.1 Sample Data

GTC and the Qualified Person responsible for this section were provided with various electronic drill hole and channel sample data for the El Roble deposit by MINER personnel. These data (drill hole collars, down-hole surveys, assays, lithology, alteration, mineralization, density, etc.) were provided as ASCII CSV files. The underlying Microsoft Access databases, one for diamond drill holes and another for the channel samples were also provided. The drill hole and channel sample files were imported into MineSight®, a commercial mine planning software package, by the Qualified Person responsible for this section for subsequent review and analysis.

Details about the drill hole and channel sample data were discussed in Item 10. The majority of the sample data that were used to estimate resources were diamond drill core (94%) and the remainder underground channel samples. All of this data was collected by Atico personnel prior to and after their acquisition of the El Roble project from MINER.

### 14.2 El Roble Massive Sulfide Exploratory Data Analysis

Both GTC and the Qualified Person for this section completed various statistical analyses of the diamond core and channel sample data that tested six VMS bodies at the El Roble mine. Basic length weighted assay statistics for copper, gold, and silver are tabulated in Table 14-1 for the various VMS bodies.

**Table 14-1: Uncapped Assay Statistics**

Orebody	Grade	Count	Minimum	Maximum	Mean	Variance	Std. Dev.	Coef. Var.
<b>Goliat</b>	Cu (%)	915	0.002	27.61	4.60	28.46	5.33	1.16
	Au (g/t)	915	0.001	62.96	1.76	11.28	3.36	1.91
	Ag (g/t)	915	0.1	277.30	8.00	221.81	14.89	1.86
<b>Maximus</b>	Cu (%)	1716	0.002	31.86	3.35	25.95	5.09	1.52
	Au (g/t)	1716	0.001	250.00	4.73	163.11	12.77	2.70
	Ag (g/t)	1716	0.01	175.50	11.18	213.26	14.60	1.31
<b>Maximus Sur</b>	Cu (%)	267	0.002	11.46	0.92	5.37	2.32	2.53
	Au (g/t)	267	0.001	30.77	1.88	11.56	3.40	1.81
	Ag (g/t)	267	0.1	100.20	11.18	371.76	19.28	1.72
<b>Perseo Norte</b>	Cu (%)	123	0.002	12.16	1.54	9.74	3.12	2.03
	Au (g/t)	123	0.001	5.76	1.25	2.65	1.63	1.30
	Ag (g/t)	123	0.1	109.00	8.79	279.12	16.71	1.90
<b>Zeus</b>	Cu (%)	2763	0.002	23.76	3.46	20.42	4.52	1.30
	Au (g/t)	2763	0.001	74.00	2.70	16.25	4.03	1.49
	Ag (g/t)	2763	0.01	208.00	9.07	179.74	13.41	1.48
<b>Perseo Sur</b>	Cu (%)	92	0.002	22.19	4.95	31.60	5.62	1.14
	Au (g/t)	92	0.001	20.81	3.41	27.92	5.28	1.55
	Ag (g/t)	92	0.1	63.70	6.58	203.59	14.27	2.17

Source: GTC, 2015

The data in Table 14-1 show that the coefficient of variation for the Zeus and Maximus zones is approximately 1.5 for copper, gold, and silver, the exception being gold in the Maximus zone.

Assay statistics were run for various geologic attributes like lithology, alteration, mineralization style, etc. for samples located inside and outside of the massive sulfide wireframes. At this stage of the project it would be difficult to sub-divide the massive sulfide wireframes by lithology, alteration, or mineralization type. A more detailed geologic model may be possible with additional drill hole data completed from better underground drill platforms.

### 14.3 Massive Sulfide Wireframes

Wireframes representing individual VMS lenses were constructed by MINER's geologic staff based on their interpretation of diamond core holes, underground channel sampling and underground mapping information. Copper equivalent grades were also used in defining the VMS wireframes. A copper price of US\$6,171.90/tonne (US\$2.80/lb)

and a gold price of US\$1,200/troy ounce were used in determining the copper equivalent grade using the following expression:  $CuEQ = Cu (\%) + [Au (g/t) * 0.4829]$ . Copper and gold recoveries of 93.5% and 73%, respectively were used along with the metal prices in determining an equivalency factor for the gold component.

Table 14-2, summarizes the volume and tonnage of the MINER massive sulfide lens wireframes.

**Table 14-2: Massive Sulfide Wireframe Volumes**

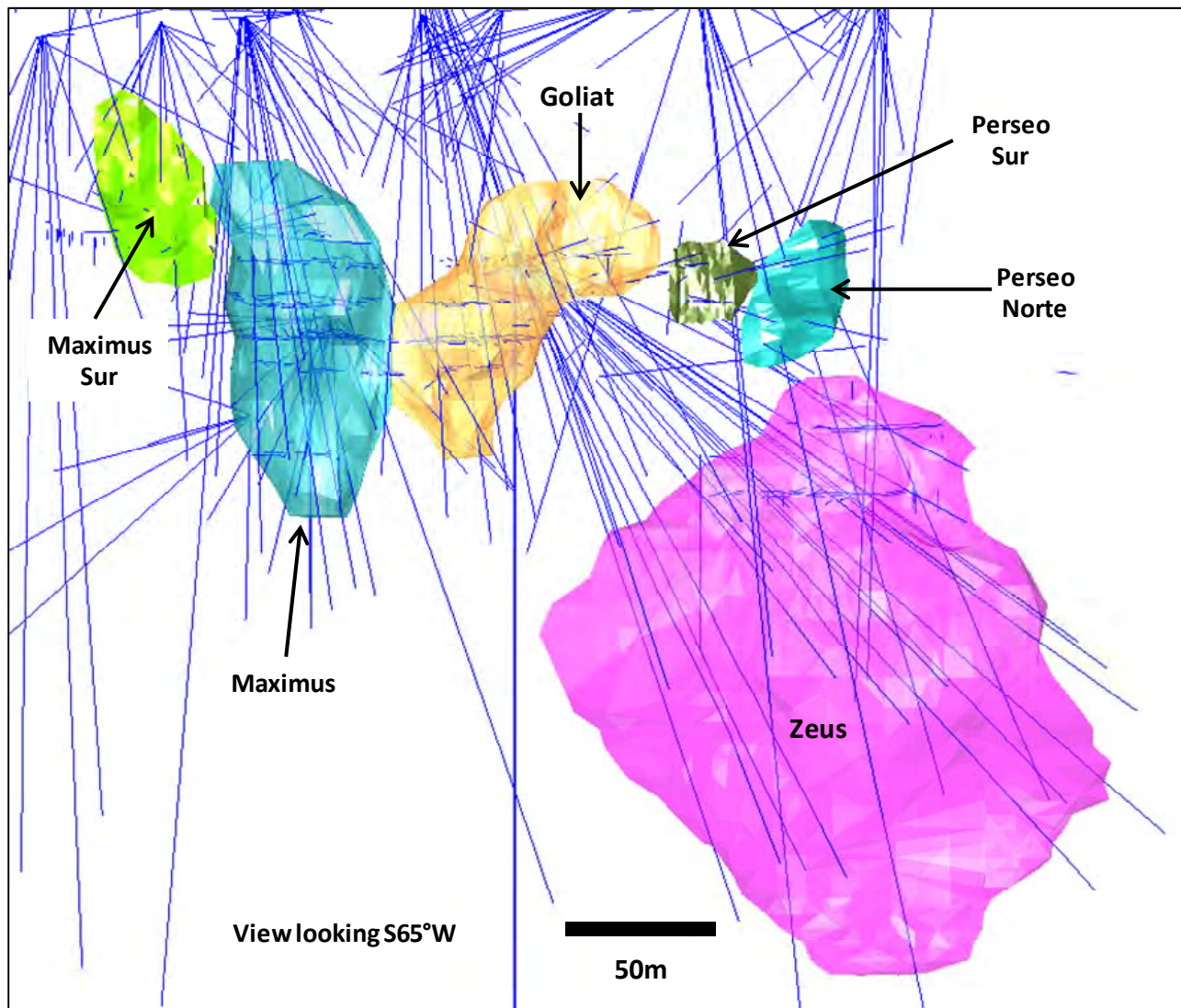
Deposit	SG	Volume (m <sup>3</sup> )	Tonnes	% of Tonnes
Zeus	3.5	556,092	1,946,323	81.7%
Maximus	3.5	76,366	267,279	11.2%
Goliat	3.4	32,109	109,171	4.6%
Maximus Sur	3.5	11,470	40,145	1.7%
Perseo Norte	3.5	3,863	13,520	0.6%
Perseo Sur	3.5	1,593	5,577	0.2%
Total	n/a	681,493	2,382,015	100.0%

*Source: RMI, 2015*

Figure 14-1 is a perspective view looking southwesterly that shows the six VMS wireframes that were used in estimating Mineral Resources. Drill hole and channel sample traces are shown in blue.



**Figure 14-1: Perspective View of El Roble Massive Sulfide Wireframes**



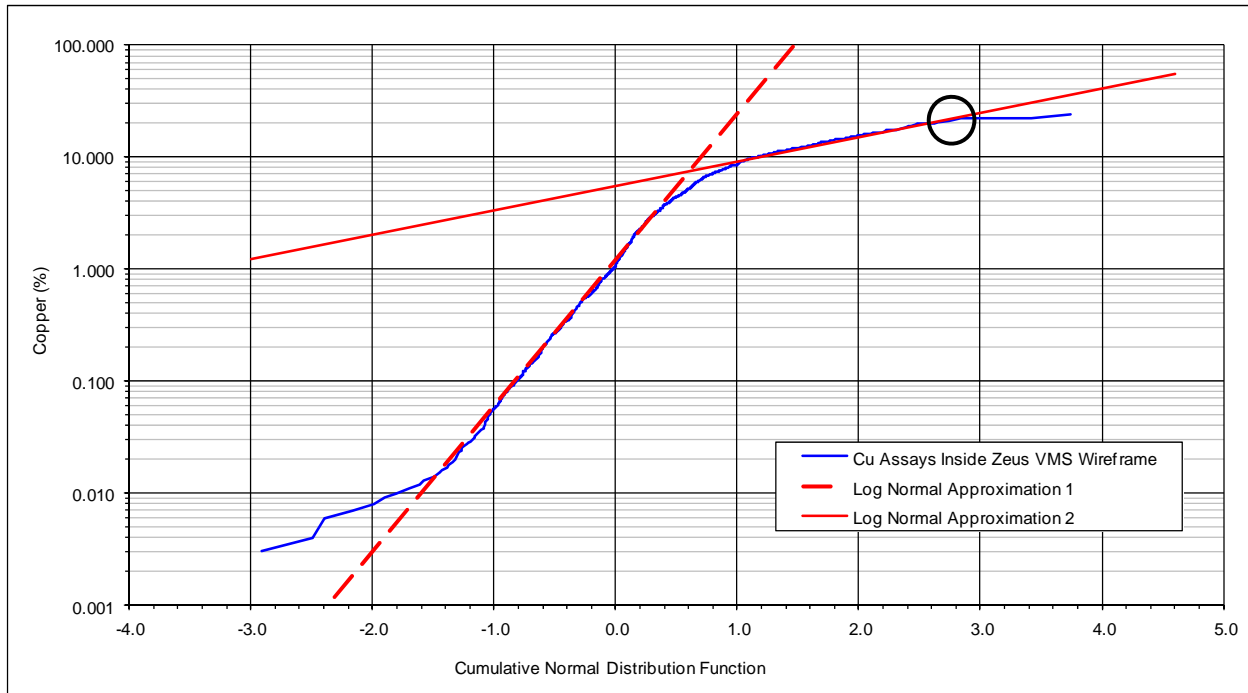
Source: RMI, 2016

#### 14.4 High-grade Outliers

GTC examined cumulative probability plots and decile/percentile distributions of the original sample data in determining reasonable capping limits for copper and gold for each VMS body. The Qualified Person for this section generated independent cumulative probability plots and generally concurred with the limits recommended by GTC. Figures 14-2 and 14-3 are examples of cumulative probability plots for copper and gold, respectively, for the Zeus VMS that were generated by the Qualified Person. Both of these probability plots illustrate that the samples within the Zeus wireframe display a bimodal-like distribution, particularly for copper. The shape of the distribution curves are influenced by

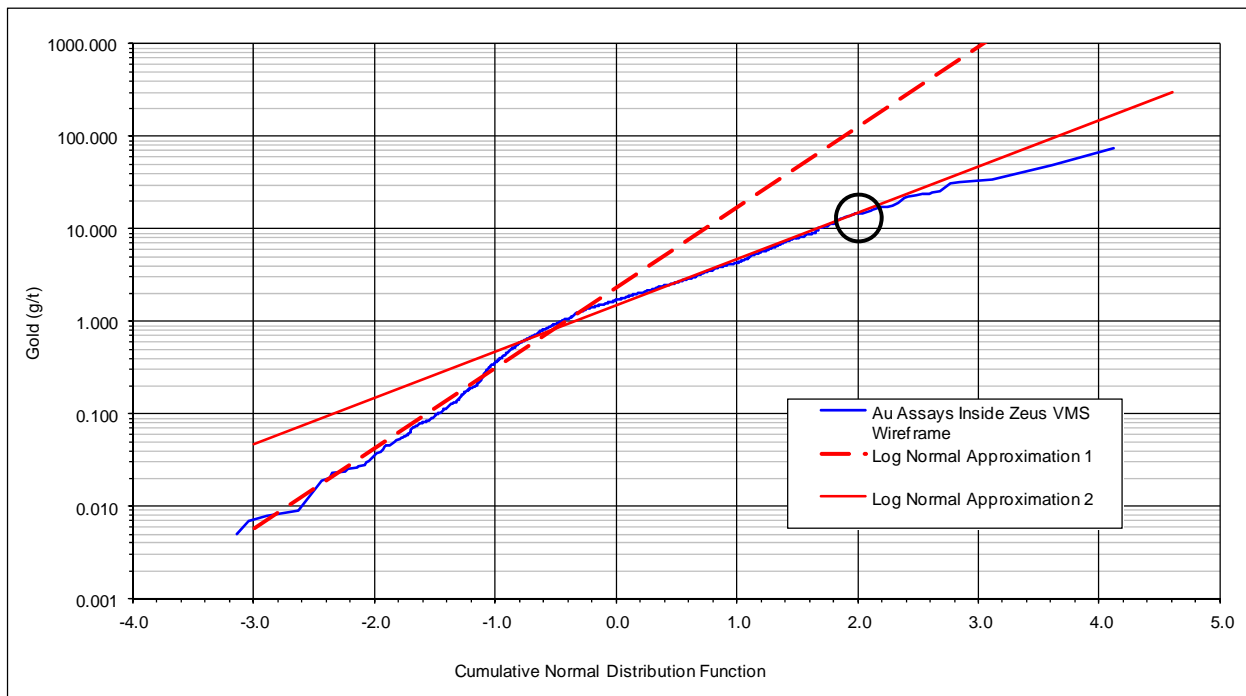
the inclusion of lower grade material. For example, 49% of the copper assays in the Zeus wireframe are below a 1% cutoff and 33% of the gold assays are below a 1 g/t cutoff. This internal dilution is incorporated into the block grade estimate.

**Figure 14-2: Cu Cumulative Probability Plot - Zeus VMS**



Source: RMI, 2015

**Figure 14-3: Au Cumulative Probability Plot - Zeus VMS**



Source: RMI, 2015

Table 14-3 summarizes the final capping limits that were established and used by GTC.

**Table 14-3: Grade Capping Limits by VMS Body**

VMS	Au (g/t)	Cu (%)
Goliat	8	18
Maximus	18	20
Maximus Sur	9	5
Perseo Norte	-	10
Perseo Sur	15	15
Zeus	17	17

Source: GTC, 2015

#### 14.5 Sample Compositing

GTC determined that 4-metre-long composites would be most suitable for estimating block grades for the various VMS bodies. After capping high-grade outliers, the original drill hole and channel samples were coded with the VMS wireframes and then the

intervals inside of the wireframes were composited into 4-metre lengths. Only samples located inside of the wireframe were used in the estimation process.

The Qualified Person for this section agrees with the compositing strategy the GTC developed. That composite length provides reasonable support for model blocks that measure 4 metres in each dimension.

Table 14-4 tabulates basic descriptive statistics for uncapped copper, gold, and silver composites for each VMS body.

**Table 14-4: Uncapped Composite Statistics by VMS Body**

VMS	Grade	Count	Minimum	Maximum	Mean	Variance	Std. Dev.	Coef. Var.
<b>Goliat</b>	Cu (%)	195	0.002	21.86	4.41	16.49	4.06	0.92
	Au (g/t)	195	0.001	31.81	1.76	6.88	2.62	1.49
	Ag (g/t)	195	0.10	124.46	8.22	135.25	11.63	1.41
<b>Maximus</b>	Cu (%)	399	0.002	27.52	3.38	18.19	4.27	1.26
	Au (g/t)	399	0.001	128.97	4.6	68.1	8.25	1.79
	Ag (g/t)	399	0.10	81.66	11.12	126.25	11.24	1.01
<b>Maximus Sur</b>	Cu (%)	42	0.002	5.24	0.8	2.03	1.42	1.78
	Au (g/t)	42	0.001	8.78	1.7	3.65	1.91	1.12
	Ag (g/t)	42	0.10	62.88	9.71	153.74	12.4	1.28
<b>Perseo Norte</b>	Cu (%)	20	0.006	8.53	1.59	5.52	2.35	1.48
	Au (g/t)	20	0.041	4.41	1.28	1.43	1.2	0.93
	Ag (g/t)	20	0.68	31.05	8.63	77.65	8.81	1.02
<b>Perseo Sur</b>	Cu (%)	26	0.002	13.91	4	18.86	4.34	1.09
	Au (g/t)	26	0.001	18.44	2.94	19.14	4.37	1.49
	Ag (g/t)	26	0.10	42.46	5.72	127.08	11.27	1.97
<b>Zeus</b>	Cu (%)	464	0.002	15.75	3.48	15.4	3.92	1.13
	Au (g/t)	464	0.001	21.21	2.7	9.91	3.15	1.16
	Ag (g/t)	464	0.10	81.2	9.07	122.47	11.07	1.22

Source: GTC, 2015

#### 14.6 Massive Sulfide Variography

GTC and the Qualified Person generated a number of grade variograms and correlograms for the various El Roble massive sulfide zones. GTC used Snowden's Supervisor v. 8.5 for generating and modeling variograms. Table 14-5 summarizes key variogram parameters as interpreted by GTC for three of the VMS bodies for which reasonable variograms could be generated. The parameters shown in Table 14-5 were used in the estimate of block grades by GTC.

Several examples of normalized variogram plots for copper and gold are shown in

Figures 14-4 through 14-6. Major (direction 1), semi-major (direction 2), and minor axis (direction 3) variogram plots are shown along with contoured variance of the major axis vector in each of the figures.

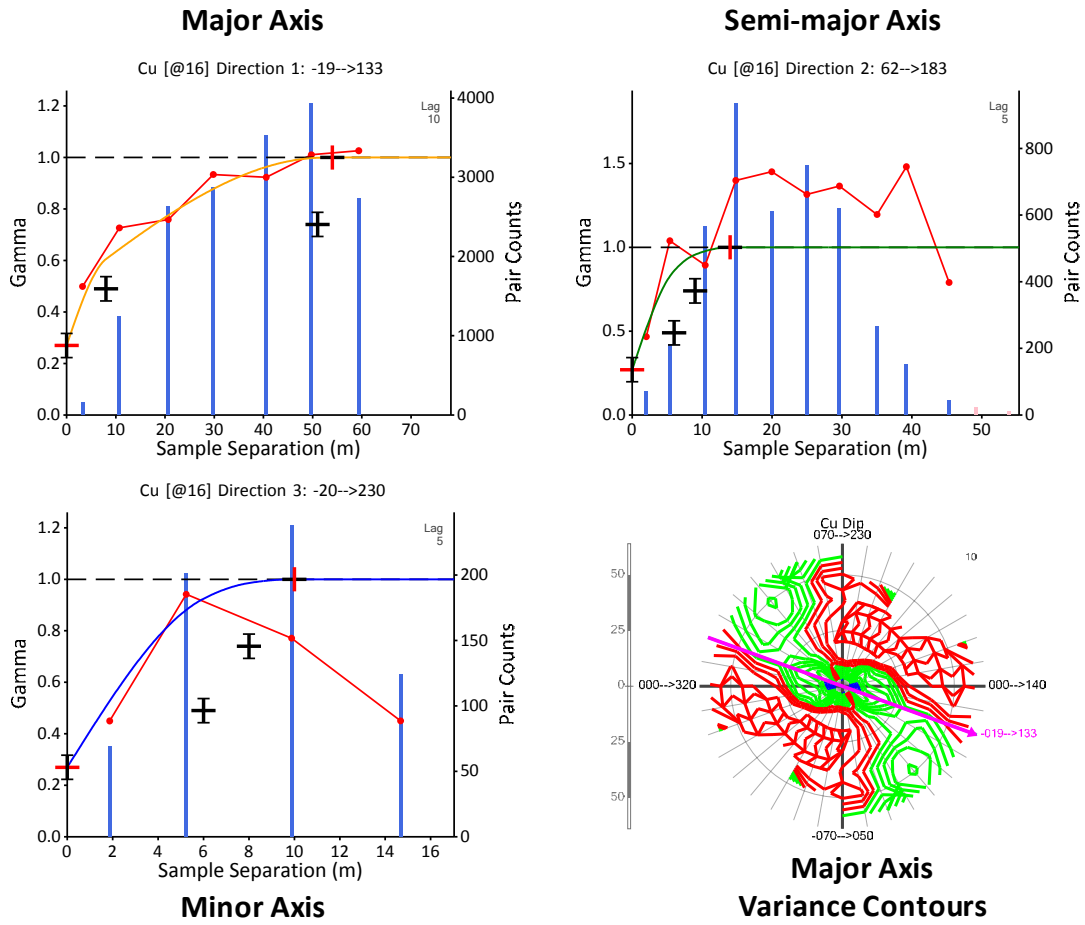
**Table 14-5: Variogram Parameters by VMS Body**

VMS	Metal	Major axis orientation	C <sub>0</sub> <sup>§</sup>	C <sub>1</sub> <sup>§</sup>	Ranges	C <sub>2</sub> <sup>§</sup>	Ranges	C <sub>3</sub> <sup>§</sup>	Ranges
Goliat	Ag	210°	0.2	0.2	2,1,6	0.3	10,7,12	0.2	50,42,12
	Cu	133°	0.3	0.2	8,6,6	0.2	51,9,8	0.2	54,14,10
	Au	136°	0.2	0.2	1,1,6	0.5	11,4,10	0.2	50,10,12
Maximus	Ag	0° → 355°	0.2	0.3	11,9,18	0.5	42,28,26		
	Cu	250°	0.2	0.8	30,27,15				
	Au	324°	0.5	0.3	33,9,8	0.2	53,42,26		
Zeus	Ag	100°	0.1	0.4	9,10,8	0.4	10,11,12	0.2	14,16,15
	Cu	60° → 080°	0.1	0.3	39,4,28	0.3	43,16,38	0.2	47,36,46
	Au	20° → 194°	0.1	0.3	8,9,4	0.4	16,15,5	0.2	38,18,8

Note: <sup>§</sup> variances have been normalised to a total of one; <sup>†</sup> ranges for major, semi-major, and minor axes, respectively; structures are modelled with a spherical model

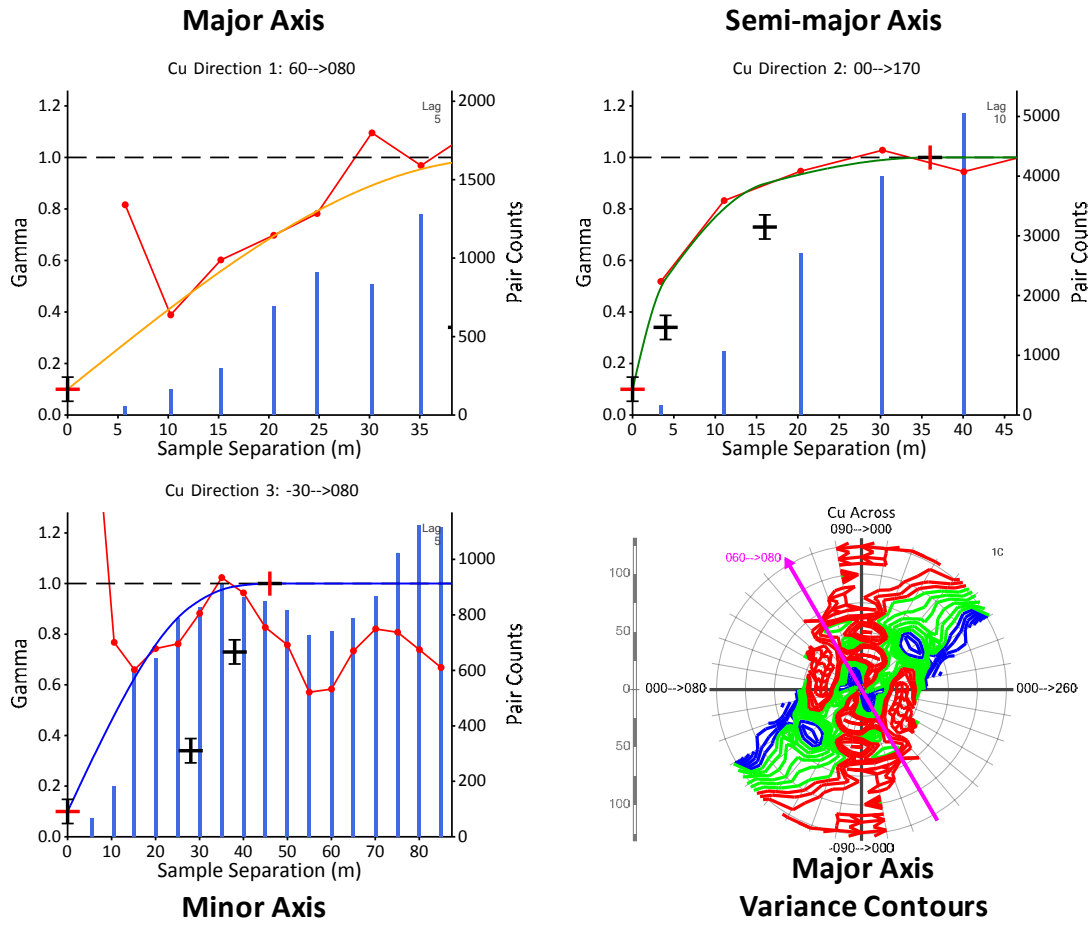
Source: GTC, 2015

**Figure 14-4: Goliat Copper Variograms**



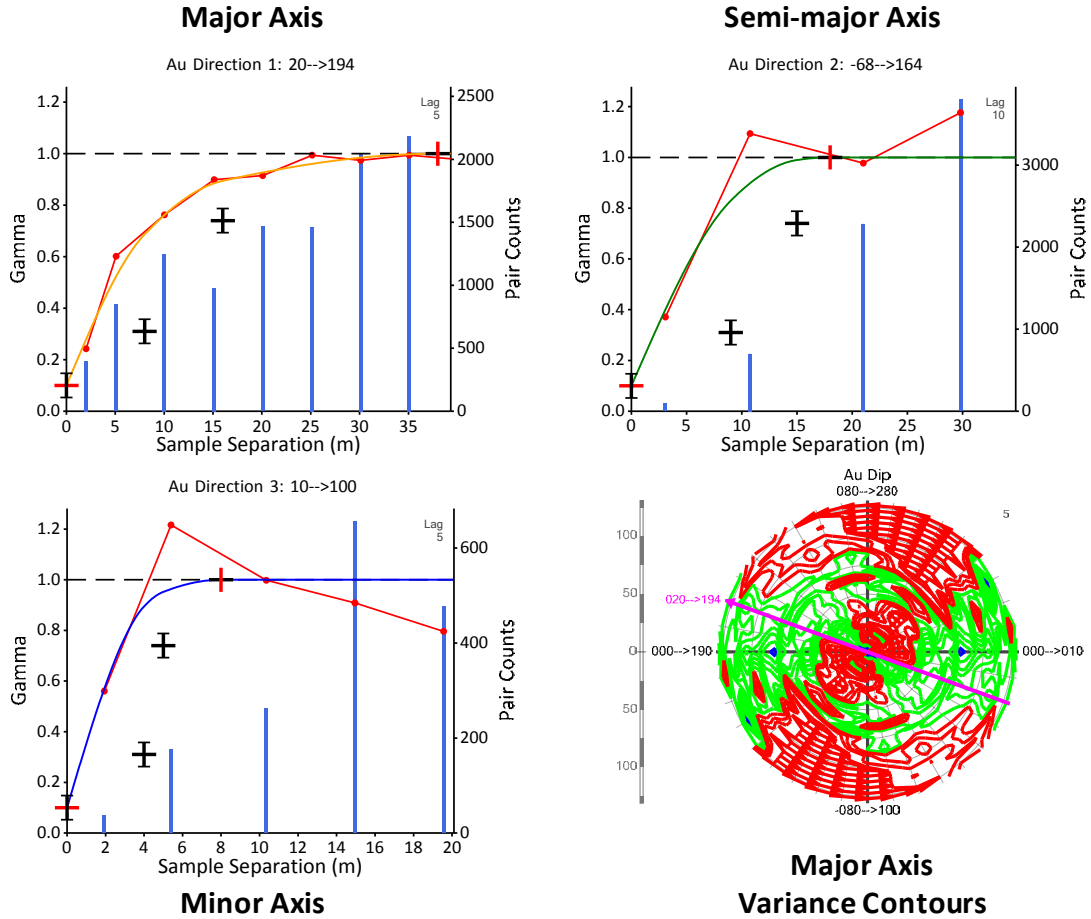
Source: GTC, 2015

Figure 14-5: Zeus Copper Variograms



Source: GTC, 2015

**Figure 14-6: Zeus Gold Variograms**



Source: GTC, 2015

### 14.7 Block Model Grade Estimation

GTC constructed six individual block models in Datamine (ver. 3.24.73) for each of the currently identified VMS lenses. Those models were rotated so the new Y-axis of the model approximated the strike azimuth of the steeply plunging VMS bodies. Table 14-6 tabulates the orientation of the various Datamine block models.



**Table 14-6: El Roble Block Model Orientations**

VMS	Rotation	Direction	Minimum	Maximum	Size (m)
Goliat	45	X	374,908	374,970	4
		Y	655,634	655,707	4
		Z	1,857	1,949	4
Maximus	60	X	374,954	374,990	4
		Y	655,577	655,636	4
		Z	1,837	1,957	4
Maximus Sur	35	X	374,983	375,025	4
		Y	655,548	655,581	4
		Z	1,916	1,984	4
Perseo Norte	35	X	374,832	374,875	4
		Y	655,720	655,745	4
		Z	1,880	1,924	4
Zeus	65	X	374,803	374,915	4
		Y	655,651	655,856	4
		Z	1,682	1,874	4
Perseo Sur	45	X	374,861	374,884	4
		Y	655,699	655,722	4
		Z	1,896	1,920	4

Source: GTC, 2015

The Qualified Person for this section setup MineSight® models for the Zeus and Maximus VMS bodies using the same parameters that were established by GTC. The GTC block data was then imported into MineSight® for various visual and statistical reviews.

GTC completed a quantitative kriging neighborhood analysis (QKNA) on the various El Roble VMS bodies in order to determine optimal search parameters for estimating block grades. Those studies resulted in the following generalized observations:

- 1) A search range of approximately 20m to 35m along strike and down dip were indicated with a shorter (10m to 15m) search perpendicular to strike;
- 2) The search ellipses used to define the extents of the search neighborhoods tend to have the same orientation as the continuity vectors observed in modeling variograms.

GTC elected to use a three pass estimation strategy that used successively longer search ellipses. Once a block was estimated it was flagged and ineligible to be estimated by subsequent passes. Ordinary kriging and inverse distance (third power) estimation methods were used by GTC. Table 4-7 summarizes which estimation method was used for each of the VMS bodies.

**Table 14-7: Estimation Methods by VMS Body**

VMS	Estimation Method
Goliat	Inverse Distance (power = 3)
Maximus	Inverse Distance (power = 3)
Maximus Sur	Inverse Distance (power = 3)
Perseo Norte	Ordinary Kriging
Perseo Sur	Ordinary Kriging
Zeus	Ordinary Kriging

Source: GTC, 2015

As mentioned above, a three pass interpolation plan was used for each VMS body. The estimation parameters (ranges, min/max number of composites, etc.) for each estimation pass are summarized for copper, gold, and silver in Tables 14-8 through 14-10, respectively.

**Table 14-8: Cu Estimation Parameters by VMS Body**

VMS	Direc.	First Search			Second Search			Third Search			Min Comps per Octant	Max Comps per Octant	Max Comps per hole
		Range (m)	Min Comps	Max Comps	Range (m)	Min Comps	Max Comps	Range (m)	Min Comps	Max Comps			
Goliat	1	35	3	7	70	3	12	105	3	14	2	3	2
	2	20	3	7	40	3	12	60	3	14	3	3	2
	3	15	3	7	30	3	12	45	3	14	3	3	2
Maximus	1	30	3	7	60	3	12	90	3	16	2	3	2
	2	30	3	7	60	3	12	90	3	16	3	3	2
	3	15	3	7	30	3	12	45	3	16	3	3	2
Maximus Sur	1	25	3	7	50	3	12	100	3	16	3	3	2
	2	20	3	7	40	3	12	80	3	16	3	3	2
	3	15	3	7	30	3	12	60	3	16	3	3	2
Perseo Norte	1	35	3	9	70	3	12	140	3	16	3	3	2
	2	20	3	9	40	3	12	80	3	16	3	3	2
	3	15	3	9	30	3	12	60	3	16	3	3	2
Perseo Sur	1	20	3	12	40	3	16	80	3	24	3	3	2
	2	20	3	12	40	3	16	80	3	24	3	3	2
	3	15	3	12	30	3	16	60	3	24	3	3	2
Zeus	1	25	3	9	50	3	16	75	3	20	3	3	2
	2	25	3	9	50	3	16	75	3	20	3	3	2
	3	20	3	9	40	3	16	60	3	20	3	3	2

Source: GTC, 2015

**Table 14-9: Au Estimation Parameters by VMS Body**

VMS	Direc.	First Search			Second Search			Third Search			Min Comps per Octant	Max Comps per Octant	Max Comps per hole
		Range (m)	Min Comps	Max Comps	Range (m)	Min Comps	Max Comps	Range (m)	Min Comps	Max Comps			
Goliat	1	35	3	7	70	3	12	105	3	14	2	3	2
	2	20	3	7	40	3	12	60	3	14	2	3	2
	3	15	3	7	30	3	12	45	3	14	2	3	2
Maximus	1	30	3	7	60	3	12	90	3	16	2	3	2
	2	30	3	7	60	3	12	90	3	16	2	3	2
	3	15	3	7	30	3	12	45	3	16	2	3	2
Maximus Sur	1	25	3	7	50	3	12	100	3	20	2	3	2
	2	20	3	7	40	3	12	80	3	20	2	3	2
	3	15	3	7	30	3	12	60	3	20	2	3	2
Perseo Norte	1	35	3	9	70	3	12	140	3	16	2	3	2
	2	20	3	9	40	3	12	80	3	16	2	3	2
	3	15	3	9	30	3	12	60	3	16	2	3	2
Perseo Sur	1	20	2	12	40	3	16	80	3	24	3	3	2
	2	20	2	12	40	3	16	80	3	24	3	3	2
	3	15	2	12	30	3	16	60	3	24	3	3	2
Zeus	1	35	3	7	70	3	16	105	3	20	2	3	2
	2	20	3	7	40	3	16	60	3	20	2	3	2
	3	12	3	7	24	3	16	36	3	20	2	3	2

Source: GTC, 2015

**Table 14-10: Ag Estimation Parameters VMS Body**

VMS	Direc.	First Search			Second Search			Third Search			Min Comps per Octant	Max Comps per Octant	Max Comps per hole
		Range (m)	Min Comps	Max Comps	Range (m)	Min Comps	Max Comps	Range (m)	Min Comps	Max Comps			
Goliat	1	40	3	7	80	3	12	120	3	14	2	3	2
	2	30	3	7	60	3	12	90	3	14	2	3	2
	3	20	3	7	40	3	12	60	3	14	2	3	2
Maximus	1	30	3	7	60	3	12	90	3	16	2	3	2
	2	30	3	7	60	3	12	90	3	16	3	3	2
	3	15	3	7	30	3	12	45	3	16	3	3	2
Maximus Sur	1	40	3	7	80	3	12	160	3	20	3	3	2
	2	30	3	7	60	3	12	120	3	20	3	3	2
	3	15	3	7	30	3	12	60	3	20	3	3	2
Perseo Norte	1	40	3	9	80	3	12	160	3	16	3	3	2
	2	30	3	9	60	3	12	120	3	16	3	3	2
	3	20	3	9	40	3	12	80	3	16	3	3	2
Perseo Sur	1	40	3	12	80	3	16	160	3	24	3	3	2
	2	30	3	12	60	3	16	120	3	24	3	3	2
	3	20	3	12	40	3	16	80	3	24	3	3	2
Zeus	1	35	3	9	70	3	16	105	3	20	3	3	2
	2	25	3	9	50	3	16	75	3	20	3	3	2
	3	15	3	9	30	3	16	45	3	20	2	3	2

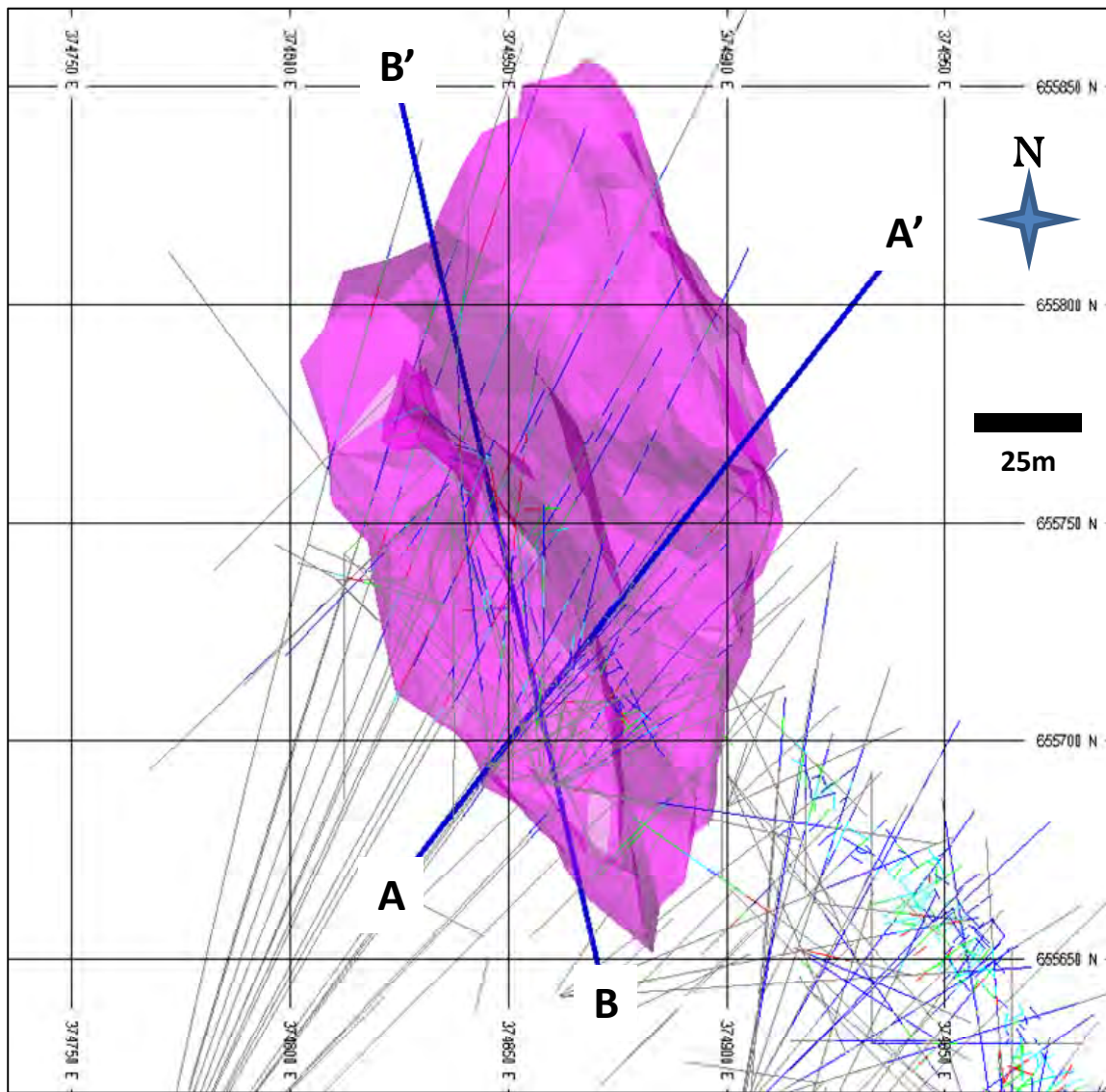
Source: GTC, 2015

The VMS wireframes, model blocks, and drill hole samples were sub-divided into two parts, reflecting hangingwall and footwall domains. It has been long recognized that higher grade mineralization within the El Roble VMS bodies is often localized along either the footwall and/or hangingwall contacts. GTC incorporated that sub-domaining into the grade estimation plan which allowed blocks located along the main contacts to be informed by composites located along the same contact area. The Qualified Person for this section agrees with that treatment.

#### **14.8 El Roble Grade Model Verification**

The estimated block grades were verified by visual and statistical methods. The block grades were compared with the drill hole composite grades in section and plan. Figure 14-7 is a plan map showing the Zeus VMS wireframe, drill hole/channel sample traces, and two lines of section.

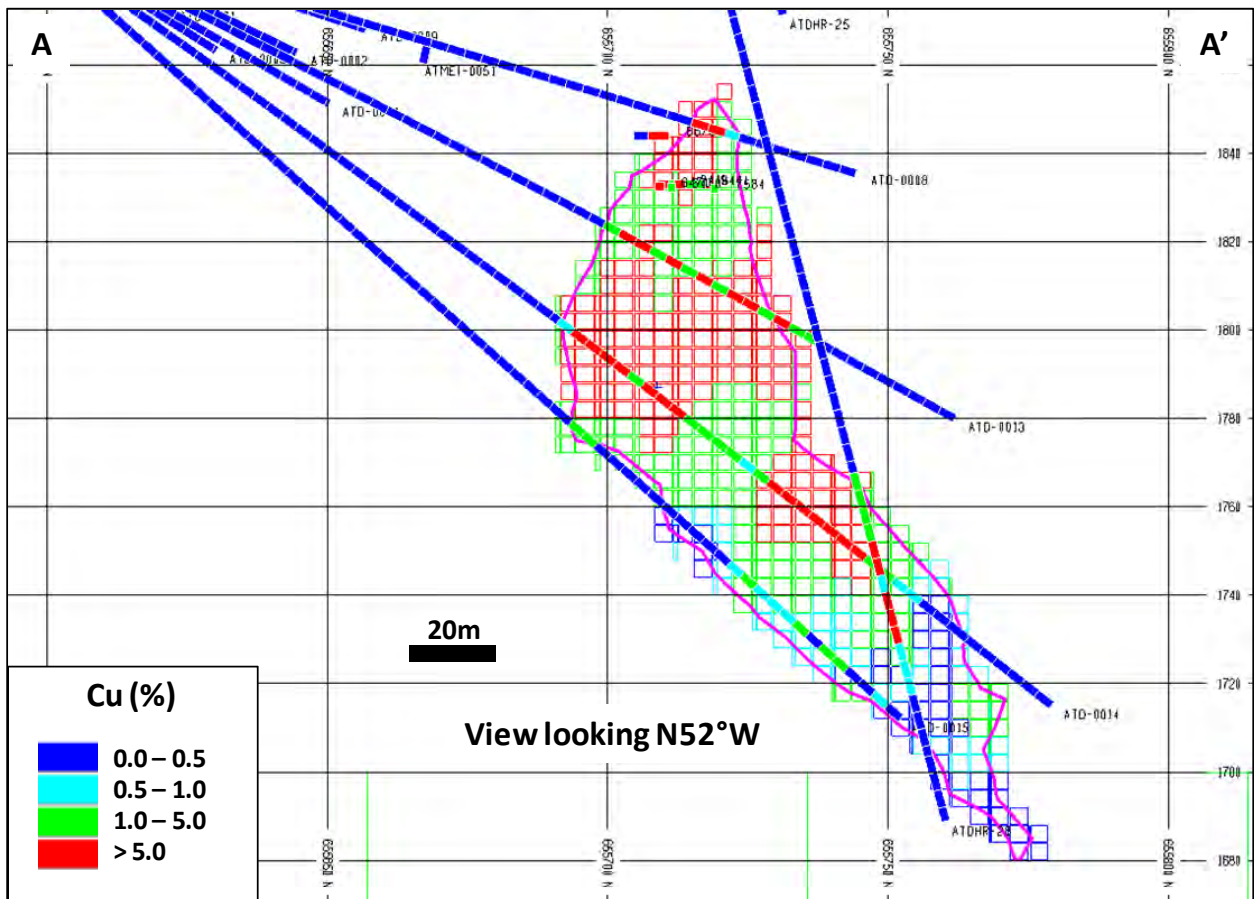
Figure 14-7: Plan Map of Zeus VMS



Source: RMI, 2016

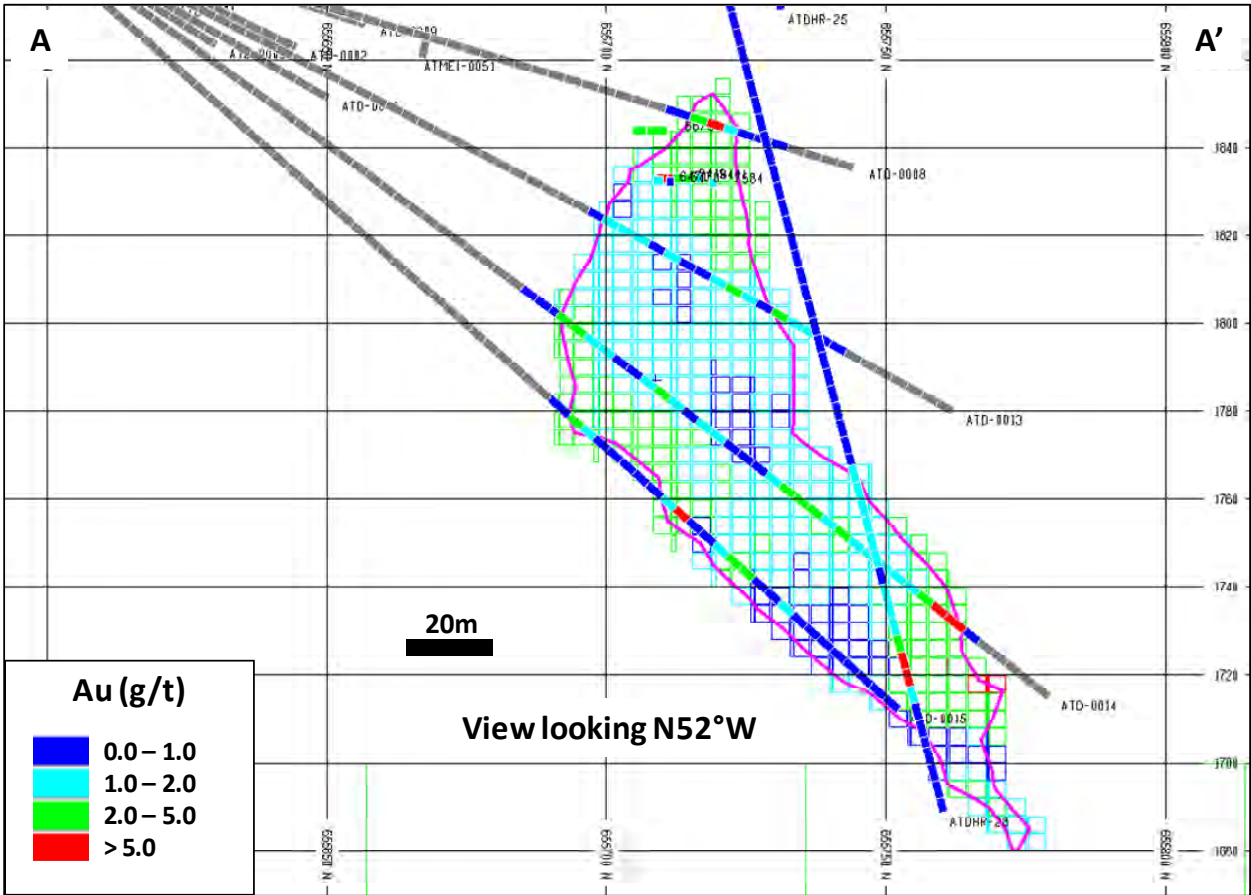
Figures 14-8 and 14-9 are copper and gold sections (A-A') respectively, through the Zeus block model showing drill hole and block grades. Figures 14-10 and 14-11 are copper and gold sections (B-B') respectively, through the Zeus block model showing drill hole and block grades.

Figure 14-8: Zeus Block Model Section A-A' - Copper



Source: RMI, 2016

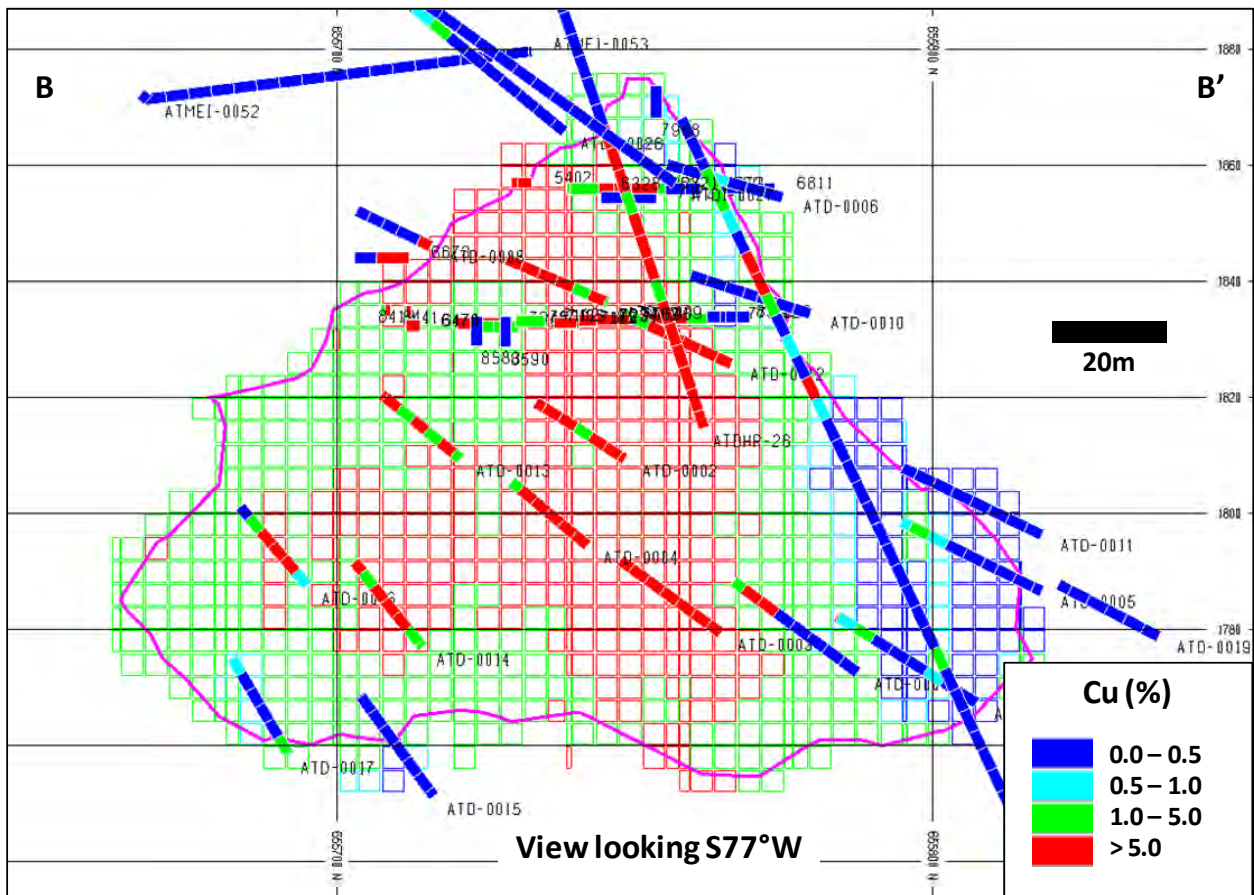
Figure 14-9: Zeus Block Model Section A-A' - Gold



Source: RMI, 2016



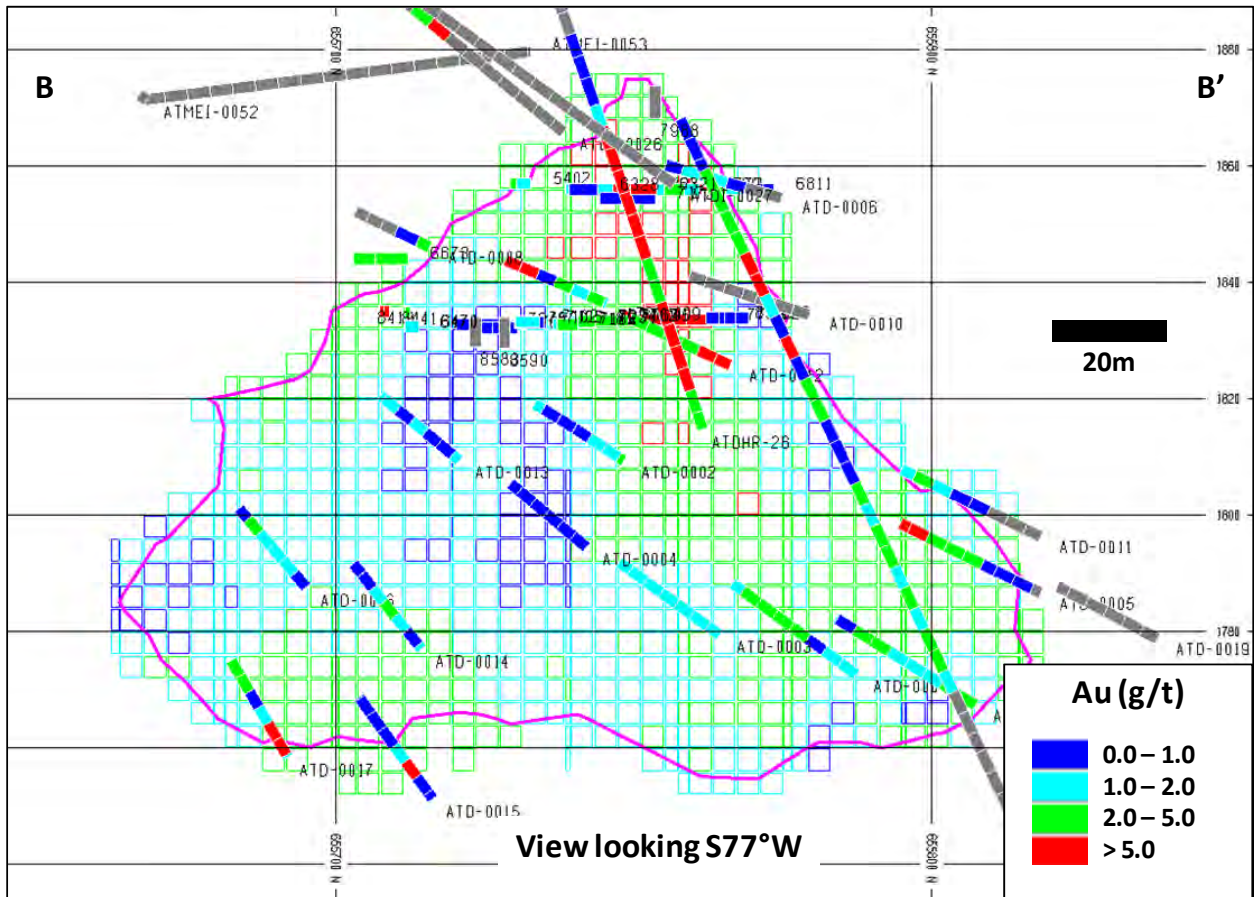
Figure 14-10: Zeus Block Model Section B-B' - Copper



Source: RMI, 2016



Figure 14-11: Zeus Block Model Section B-B' - Gold



Source: RMI, 2016

It is the opinion of the Qualified Person responsible for this section that the block grades look reasonable when compared with the sample data.

Nearest neighbor models for copper, gold, and silver were generated by GTC and independently by the Qualified Person. These nearest neighbor models were used to validate the grade model and to check for possible grade biases in the block model. The ordinary kriged and nearest neighbor grades were compared for all estimated blocks inside of the Zeus wireframe at a zero cutoff grade. Table 14-11 compares MINER's ordinary kriged grades against their nearest neighbor grade (NN).

**Table 14-11: El Roble Global Bias Check**

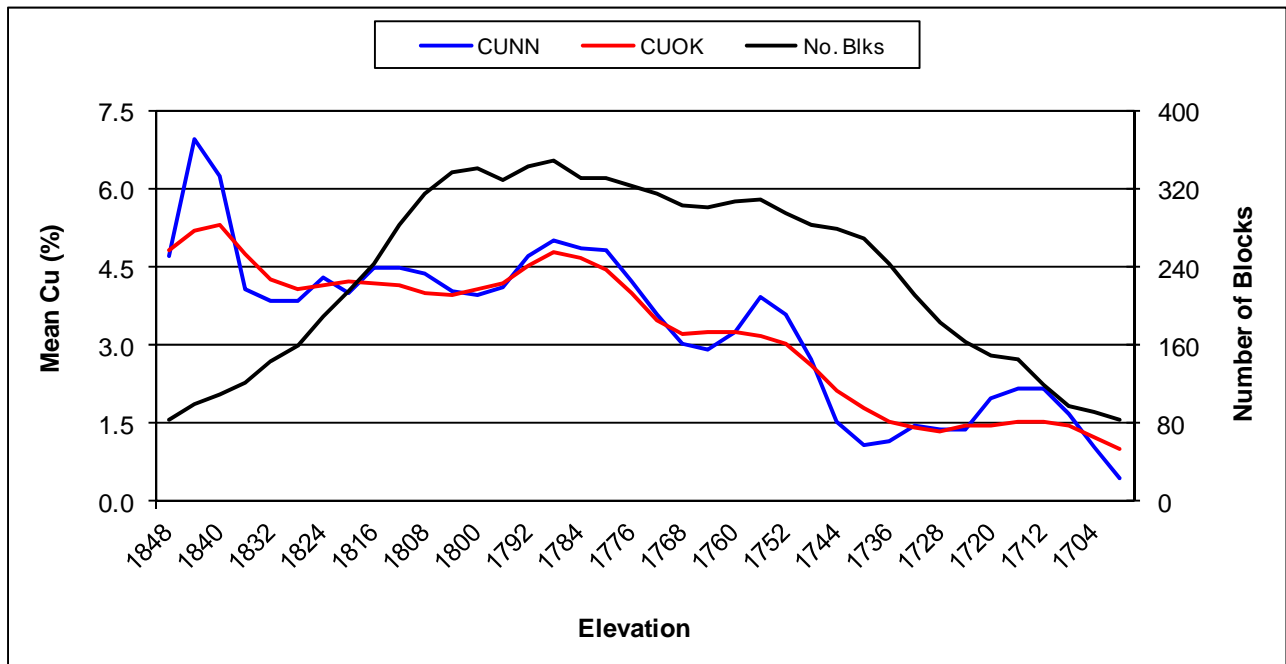
Metal	Kriged Grade	NN Grade	% Difference
Copper (%)	3.47	3.57	-3%
Gold (g/t)	2.02	1.97	2%
Silver (g/t)	8.16	7.77	5%

Source: RMI, 2016

The MINER ordinary kriged copper grade is about 3% lower than the nearest neighbor grade but the kriged gold and silver grades are slightly higher than the nearest neighbor grades. The percent differences between the kriged and nearest neighbor grades are within reasonable tolerances but the silver grade should be closely monitored during production.

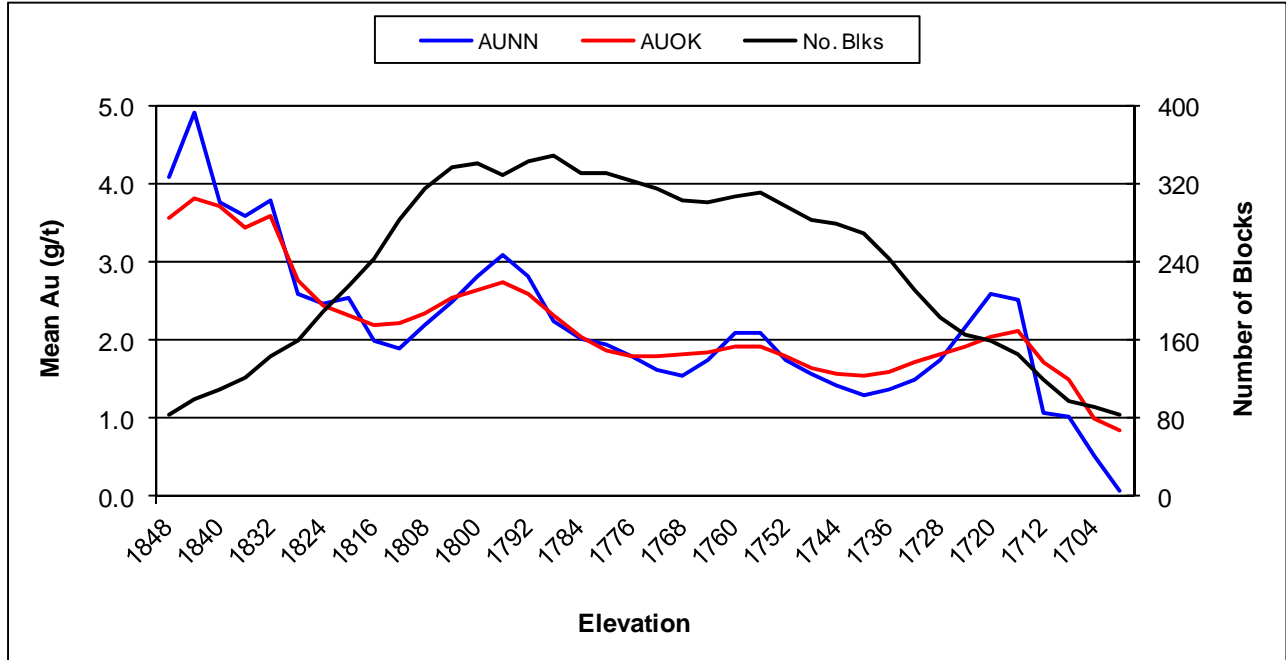
The Qualified Person also checked for local biases by creating a series of slices or "swaths" through MINER's grade models by columns (eastings), rows (northings), and levels (elevations) comparing the ordinary kriged and nearest neighbor grades. Figure 14-12 is an example of a swath plot that shows the local variation in grade between the ordinary kriged and nearest neighbor copper models at a zero cutoff grade by elevation. The ordinary kriged grade (cuok) is shown in red, the nearest neighbor grade (cunn) is shown in blue and the number of blocks per "swath" is shown by the black line which is read from the right side Y-axis. Figure 14-13 is a similar swath plot that compares ordinary kriged gold (auok) and nearest neighbor gold (aunn).

**Figure 14-12: Zeus Block Model Copper Swath Plot - Elevation**



Source: RMI, 2016

**Figure 14-13: Gold Swath Plot - Elevation**



Source: RMI, 2016

The swath plots presented as Figures 14-12 and 14-13 show that there is a reasonable comparison between the inverse distance and nearest neighbor grades. Usually where the two grades vary significantly there are a limited number of blocks.

Based on a visual examination and comparisons with a nearest neighbor model, it is the opinion of the Qualified Person responsible for this section that MINER's grade models are globally unbiased and represents a reasonable estimate of undiluted in-situ resources.

**14.9 El Roble Density Data**

MINER's geologic staff have been making bulk density measurements from drill core and also sending out samples to commercial laboratories for confirmation. As of June 2015, about 1,330 bulk density determinations have been made on a variety of lithologies. The core was weighed in air and then weighed while submerged in water. A relative bulk density calculation was then made (bulk density = weight in air/ (weight in air - weight in water)). About 1,000 of the bulk density samples were sent out for volumetric analysis (pycnometer) and 331 were sent to ALS Chemex where the paraffin method was employed. Average bulk density values were established for each of the VMS bodies and that value was then assigned to the appropriate block model. Table 14-12 summarizes the bulk density values that were used for each VMS resource.

**Table 14-12: Bulk Density Values**

VMS Body	Density assignment for 2015 models (t/m <sup>3</sup> )
Goliat	3.4
Maximus	3.5
Maximus Sur	3.5
Perseo Norte	3.5
Perseo Sur	3.5
Zeus	3.5

Source: GTC, 2015

The Qualified Persons recommend that MINER continue to collect more bulk density samples from all representative lithologic units with special attention given to mineralized material.

#### 14.10 El Roble Resource Classification

GTC classified the estimated block grades for each VMS resource into Measured, Indicated, and Inferred categories. Mineralized continuity, data density, and proximity of underground development were the primary factors that were considered in classifying the resources. The actual assignment of the resource categories to the blocks was completed by requiring that a minimum number of composites were used to estimate the block and at least one drill hole was within a specified distance to the block. Table 14-13 summarizes the parameters that were used by GTC in classifying the El Roble resources.

**Table 14-13: Mineral Resource Criteria**

Category	Number of composites	Distance to nearest sample
Measured	>6	<0.4 Major axis range
Indicated	>4	<0.8 Major axis range
Inferred	>2	All estimated blocks

Source: GTC, 2015

#### 14.11 El Roble Resource Summary

A cutoff grade of 0.93% copper equivalent grade was used to define undiluted Mineral Resources. The cutoff grade was established by using a copper price of US\$2.80

per pound, a gold price of US\$1200/oz. Metallurgical recoveries for copper and gold were assumed to be 93.5% and 73%, respectively. Payable metal recoveries were assumed to be 96% and 95% for copper and gold, respectively. As mentioned in Item 14.3, a copper equivalent grade was calculated for each block using the following expression:

$$\text{CuEQ} = \text{Cu} (\%) + [\text{Au} (\text{g/t}) * 0.4829].$$

The metal prices and recoveries listed above were used in determining an equivalency factor for the gold component (i.e. 0.4829). The total cost per tonne was estimated to be US\$53.45, which includes mining, processing, and G&A. Using the parameters from above the following expression was used to calculate the copper equivalent break-even cutoff grade (BECOG):

$$\text{BECOG} = \$53.45 / (\$2.80 \times 1.102 \times 20 \times 0.935) = 0.93\% \text{ Copper Equivalent}$$

Table 14-14 summarizes El Roble undiluted Mineral Resources at a 0.93% copper equivalent cutoff grade by VMS body and resource category.

**Table 14-14: El Roble Undiluted Mineral Resources**

Category	VMS Body	Tonnes (000)	CuEq (%)	Cu (%)	Au (g/t)	Ag (g/t)	Cu Lbs (000)	Au oz (000)	Ag oz (000)
Measured Resources	Goliat	56.5	4.34	3.45	1.84	8.11	4,296	3	15
	Maximus	148.1	5.33	3.60	3.57	10.42	11,764	17	50
	Maximus Sur	21.6	2.09	1.22	1.81	11.12	580	1	8
	Perseo Norte	9.7	3.42	2.55	1.81	10.60	546	1	3
	Perseo Sur	1.2	4.29	3.24	2.19	6.79	89	0	0
	Zeus	553.7	5.04	3.84	2.47	10.12	46,914	44	180
<b>Total Measured Resources</b>		<b>791</b>	<b>4.94</b>	<b>3.68</b>	<b>2.61</b>	<b>10.06</b>	<b>64,189</b>	<b>66</b>	<b>256</b>
Indicated Resources	Goliat	2.8	3.30	2.35	1.98	5.16	145	0	0
	Maximus	3.8	5.56	3.71	3.84	10.13	309	0	1
	Maximus Sur	8.2	2.01	1.02	2.05	18.04	186	1	5
	Perseo Norte	0.3	4.04	2.87	2.41	8.19	21	0	0
	Zeus	1,059	4.29	3.31	2.02	7.92	77,363	69	270
<b>Total Indicated Resources</b>		<b>1,074</b>	<b>4.27</b>	<b>3.29</b>	<b>2.02</b>	<b>8.00</b>	<b>78,023</b>	<b>70</b>	<b>276</b>
<b>Total Measured + Indicated</b>		<b>1,865</b>	<b>4.55</b>	<b>3.46</b>	<b>2.27</b>	<b>8.87</b>	<b>142,212</b>	<b>136</b>	<b>532</b>
Inferred	Zeus	255	4.75	4.10	1.34	5.21	23,042	11	43
<b>Total Inferred Resources</b>		<b>255</b>	<b>4.75</b>	<b>4.10</b>	<b>1.34</b>	<b>5.21</b>	<b>23,042</b>	<b>11</b>	<b>43</b>

Source: GTC, 2015

Note: Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. Inferred Mineral Resources are estimated on the basis of limited geologic evidence and sampling. It is reasonably expected that the majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

The combined measured and indicated resources for all VMS bodies are combined in Table 14-15 and shown at a variety of copper equivalent cutoff grades. The reported resources at the 0.93% copper equivalent cutoff are highlighted in yellow. The inferred resources (Zeus only) are summarized at a variety of copper equivalent cutoff grades in Table 14-16 with the reported inferred material highlighted in yellow.

**Table 14-15: El Roble Undiluted Measured+Indicated Mineral Resources**

Category	Cutoff CuEq (%)	Tonnes (000)	CuEq (%)	Cu (%)	Au (g/t)	Ag (g/t)	Cu Lbs (000)	Au oz (000)	Ag oz (000)
Measured Resources	0.50%	804	4.87	3.63	2.58	10.00	64,264	67	259
	0.60%	802	4.88	3.63	2.58	10.02	64,255	67	258
	0.70%	799	4.90	3.65	2.59	10.03	64,239	67	258
	0.80%	795	4.92	3.66	2.60	10.05	64,213	66	257
	0.90%	792	4.94	3.68	2.61	10.06	64,192	66	256
	<b>0.93%</b>	<b>791</b>	<b>4.94</b>	<b>3.68</b>	<b>2.61</b>	<b>10.06</b>	<b>64,189</b>	<b>66</b>	<b>256</b>
	1.00%	786	4.96	3.70	2.61	10.09	64,155	66	255
	1.10%	780	4.99	3.73	2.62	10.10	64,107	66	253
	1.20%	772	5.04	3.76	2.64	10.12	64,023	65	251
	1.30%	763	5.08	3.80	2.65	10.13	63,936	65	249
	1.40%	752	5.13	3.85	2.66	10.14	63,812	64	245
Indicated Resources	0.50%	1,125	4.11	3.16	1.98	7.95	78,254	72	287
	0.60%	1,122	4.12	3.16	1.99	7.95	78,246	72	287
	0.70%	1,116	4.14	3.18	1.99	7.96	78,225	71	285
	0.80%	1,102	4.19	3.22	2.00	7.98	78,168	71	283
	0.90%	1,080	4.25	3.28	2.02	7.99	78,058	70	278
	<b>0.93%</b>	<b>1,074</b>	<b>4.27</b>	<b>3.29</b>	<b>2.02</b>	<b>8.00</b>	<b>78,023</b>	<b>70</b>	<b>276</b>
	1.00%	1,059	4.32	3.34	2.03	8.00	77,942	69	272
	1.10%	1,034	4.40	3.41	2.04	8.02	77,747	68	266
	1.20%	1,007	4.48	3.49	2.06	8.03	77,507	67	260
	1.30%	983	4.56	3.56	2.07	8.06	77,245	65	255
	1.40%	963	4.63	3.63	2.08	8.08	76,984	64	250
1.50%	940	4.71	3.70	2.09	8.08	76,650	63	244	
<b>Mea + Ind</b>	<b>0.93%</b>	<b>1,865</b>	<b>4.55</b>	<b>3.46</b>	<b>2.27</b>	<b>8.87</b>	<b>142,212</b>	<b>136</b>	<b>532</b>

Source: GTC, 2015

Note: Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.

**Table 14-16: El Roble Undiluted Inferred Mineral Resources**

Category	Tonnes (000)	CuEq (%)	Cu (%)	Au (g/t)	Ag (g/t)	Cu Lbs (000)	Au oz (000)	Ag oz (000)	Ag oz (000)
Inferred Resources	0.50%	265	4.60	3.97	1.31	5.26	23,135	11	44
	0.60%	264	4.61	3.98	1.32	5.26	23,129	11	44
	0.70%	262	4.65	4.01	1.32	5.25	23,108	11	44
	0.80%	259	4.69	4.04	1.33	5.23	23,085	11	43
	0.90%	256	4.73	4.09	1.34	5.21	23,052	10	42
	<b>0.93%</b>	<b>255</b>	<b>4.75</b>	<b>4.10</b>	<b>1.34</b>	<b>5.21</b>	<b>23,042</b>	<b>10</b>	<b>42</b>
	1.00%	254	4.77	4.12	1.34	5.21	23,027	10	42
	1.10%	251	4.81	4.16	1.34	5.20	22,989	10	41
	1.20%	247	4.86	4.21	1.35	5.18	22,946	10	41
	1.30%	244	4.91	4.26	1.34	5.16	22,907	10	40
	1.40%	242	4.93	4.28	1.34	5.15	22,884	10	40
1.50%	241	4.95	4.30	1.34	5.14	22,864	10	39	

Source: GTC, 2015

Note: Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. Inferred Mineral Resources are estimated on the basis of limited geologic evidence and sampling. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

#### 14.12 General Discussion - El Roble Mineral Resource

The Qualified Person is not aware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other factors that could materially affect the El Roble Mineral Resources discussed in this report.

## **15.0 MINERAL RESERVE ESTIMATES**

There are no Mineral Reserves currently identified at the El Roble Project.



## **16.0 MINING METHODS**

This section does not apply to this report. Mining methods associated with the current operation are discussed in Item 6.0.

## **17.0 RECOVERY METHODS**

This section does not apply to this report. Recovery methods associated with the current operation are discussed in Item 6.0 and Item 13.0.

## **18.0 PROJECT INFRASTRUCTURE**

This section does not apply to this report. Infrastructure associated with the current operation is discussed in Item 4.0.

## **19.0 MARKET STUDIES AND CONTRACTS**

This section does not apply to this report. Market contracts associated with the current operation are discussed in Item 6.0 and Item 13.0.

**20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT**

This section does not apply to this report. Environmental studies, permitting, and social or community impact associated with the current operation are discussed in Item 4.0.

## **21.0 CAPITAL AND OPERATING COSTS**

This section does not apply to this report. Capital and operating costs associated with the current operation are discussed in Item 6.0.

## **22.0 ECONOMIC ANALYSIS**

This section does not apply to this report.

### **23.0 ADJACENT PROPERTIES**

The Qualified Persons responsible for this amended Technical Report are not aware of any known VMS deposits or prospects located adjacent to the El Roble Project. There are no known exploration or mining activities located adjacent to the El Roble mineral titles as of the effective date of this amended Technical Report. The closest deposit similar to El Roble, the Equis VMS, is located twenty-five kilometres southwest of El Roble but it is not in production. Its current exploration status is unknown.



#### **24.0 OTHER RELEVANT DATA AND INFORMATION**

The Qualified Persons responsible for this amended Technical Report are not aware of any other relevant data or information that might affect the interpretation, conclusions, and recommendations presented in this amended Technical Report.

## 25.0 INTERPRETATION AND CONCLUSIONS

Since the June 18, 2013 effective date of the 2013 Technical Report titled, "Amended Technical Report, August 23, 2013", MINER has completed significant infill drilling from underground drill stations. These holes have intersected the VMS lenses at acute angles to the trends of the mineralization that are acceptable for the adequate definition of the thicknesses of the lenses, allowing the classification of Measured and Indicated Mineral Resources, as well as Inferred Mineral Resources in peripheral areas where drill hole intercept spacing is too wide. In the opinion of the Qualified Persons responsible for this amended Technical Report, these Mineral Resources, as estimated by GTC with the assistance of MINER technical personnel, meet the definitions established by the CIM Standing Committee on Reserve Definitions (and adopted by the CIM Council on May 10, 2014), which states:

*"A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geologic evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve."*

*"An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geologic evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geologic and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve."*

*"An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geologic evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration."*

The Qualified Persons responsible for this amended Technical Report note that the

+20-year history of successful mining of the El Roble VMS deposit by MINER under its former ownership prior to November 2013 and since the acquisition of MINER and its assets by Atico, together lend significant support to the updated Mineral Resource estimate that is the focus of this amended Technical Report. However, the Qualified Persons stress that these Mineral Resources are not Mineral Reserves, and thus by definition do not have demonstrated economic viability. Although MINER has been mining and processing material from the El Roble VMS deposit for over 20 years, the company has yet to complete the work required to estimate NI 43-101 compliant Mineral Reserves that are based on a detailed Life of Mine (LOM) plan. However, the Qualified Persons responsible for this amended Technical Report understand that the MINER technical staff has plans to complete a Mineral Reserve estimate in 2016.

As of the effective date of this amended Technical Report, MINER had scaled back its exploration efforts on land it controls in the area of the El Roble mine operations, instead focusing its efforts on increasing mill throughput, underground development of the VMS lenses below the 1885 level, and improving operations infrastructure. However, in the opinion of the Qualified Persons responsible for this amended Technical Report, the exploration work completed by MINER as of the effective date of this amended Technical Report indicates that there is very good potential for additional VMS discoveries, both along strike and down dip of the VMS lenses delineated thus far and along the 10-kilometer strike length of prospective ground covered by the El Roble mineral concessions. This opinion is based on the following observations, most of which were initially proposed by G. Smith and D. Pohl, Qualified Persons responsible for the January 2012 Technical Report, and on the results of MINER's exploration effort since 2012:

- Confirmation of the black chert (the "host" to the El Roble VMS mineralization) as an exhalative horizon with highly elevated levels of copper, gold, and silver;
- Identification of the grey chert (a silicified felsic ash tuff unit) as a marker bed that, due to its stratigraphic position above the black chert unit, is a marker bed which can be used to help ascertain the location and trend of the black chert across the El Roble mineral concessions;
- The affinity of the VMS mineralization for the contact between the black chert/gray chert and the basalt/andesite volcanics;
- The well-documented tendency for VMS deposits around the world to occur in clusters, which, coupled with the high levels of copper, gold, and silver in the black chert, provide for a number of favorable exploration targets on the El Roble mineral concessions;
- A growing assemblage of anomalous copper and gold data from surface rock chip samples and geochemical soil surveys;
- IP/Resistivity and magnetic anomalies on the El Roble mineral concessions.

## **26.0 RECOMMENDATIONS**

### **26.1 Status of Previous Recommendations**

In the January 24, 2012 Technical Report titled, “Technical Report on the El Roble Project, Chocó Department, Colombia” by Greg Smith, a number of recommendations were made for an aggressive two-phase exploration effort designed to discover additional VMS deposits on MINER’s El Roble mineral concessions. In the opinion of the Qualified Persons responsible for this amended Technical Report, MINER has acceptably addressed the recommendations made in the January 24, 2012 Technical Report.

In their earlier 2013 Technical Report titled, “Amended Technical Report, El Roble Copper-Gold Project, Chocó Department, Colombia, August 23, 2013”, the same Qualified Persons responsible for that Technical Report and this amended Technical Report recommended that it was necessary to reduce (infill) the drill hole spacing in the El Roble VMS lenses to 20m-25m in order to define the continuity of the mineralization at an adequate level for classification of Indicated Mineral Resources. This spacing was recommended due to suspected disruptions to the mineralization continuity caused by felsic dikes and minor faults, the presence of which had been documented during mining by MINER above the 2000m level (prior to Atico’s acquisition of MINER in November 2013) and in drilling completed by Atico as part of its option to purchase agreement with the former owners of MINER. The Qualified Persons responsible for the 2013 Technical report were also of the opinion that infill drilling alone would not be sufficient to allow any of the then-Inferred Mineral Resources to be classified as Measured Mineral Resources - drifting in the mineralization at projected sublevel elevations to confirm continuity would be required. In the opinion of the Qualified Persons responsible for this amended Technical Report, MINER completed sufficient infill drilling and sublevel development in mineralization to adequately define the continuity, tonnes, and grade for the estimation and classification of the Measured and Indicated Mineral Resources that are the focus of this amended Technical Report.

### **26.2 Current Recommendations**

#### **Estimation of Mineral Reserves and Development of a Life of Mine (LOM) Plan**

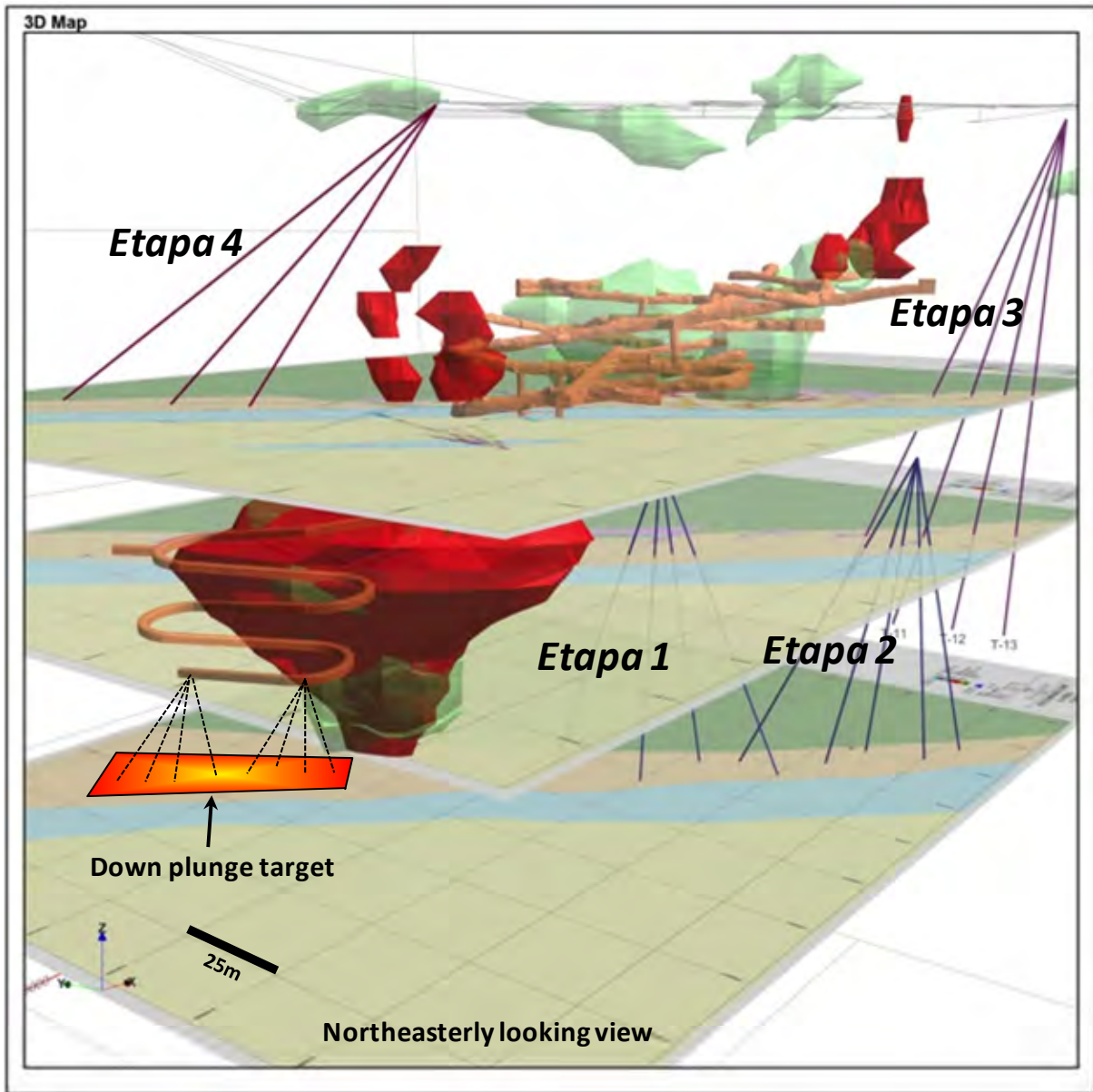
The single most important task that the Qualified Persons responsible for this amended Technical Report are recommending is for MINER to complete an estimation of NI 43-101-compliant Mineral Reserves for the El Roble deposit and a Life of Mine (LOM) plan based on that Mineral Reserve estimate. In the opinion of these Qualified Persons, MINER has completed sufficient infill drilling, ramp access, secondary portal access, sublevel development in mineralization, and production stoping in the Maximus, Goliat, and Zeus VMS lenses to demonstrate successful mining of the El Roble deposit based on realistic unit operating costs and metal recoveries. The Qualified Persons note that while MINER can complete a Mineral Reserve estimate in-house, because MINER does not meet the requirements of a “producing issuer”, as defined on Page 2 of Item 1.1 –

Definitions, in Part I – Definitions and Interpretation, Standards of Disclosure for Mineral Projects, National Instrument 43-101, an audit of the in-house Mineral Reserve will have to be completed by independent mining and mineral processing engineers who meet the requirements for Qualified Persons defined on Page 3 of the above reference. The Qualified Persons responsible for this amended Technical report estimate that the cost of an independent audit of the Mineral Reserve and LOM Plan will range from US\$100,000 to US\$125,000.

#### Underground Exploration Drilling

As of the effective date of this amended Technical Report, MINER was nearing completion of the first two “etapas” (Phases 1 & 2) of a four-phase underground exploration drilling effort designed to locate new VMS lenses in the vicinity of the main lenses (Maximus, Goliat, Zeus). MINER has plans to complete Phases 3 and 4 in 2016. Phase 3 will consist of four holes drilled from the 2000 Level, each 250 meters in length, totaling 1,000 meters, as shown in Figure 26-1. Phase 4 will include three holes drilled from the 2000 Level (each 300 meters in length) totaling 900 meters, as shown in Figure 26-1, designed to test two VMS lens targets. The total cost of this exploration (including direct drilling costs, sample assaying, and exploration office expenses that include salaries, etc.) estimated by MINER is \$US492,000. In the opinion of the Qualified Persons responsible for this amended Technical Report, the targets to be investigated by drilling Phases 3 and 4 warrant testing.

Figure 26-1: Exploration Targets



### 26.3 General Recommendations

The Qualified Persons responsible for this amended Technical Report recommend that MINER modify the derivation of their QA/QC field duplicate samples for all future exploration drilling campaigns. Initially, Atico submitted ¼ core "original" and ¼ core "field duplicates" for approximately every 40 to 50 regular diamond core samples. That protocol was changed in 2014 by requesting that the commercial lab (ALS Chemex or SGS) prepare another pulp sample from the coarse rejects that were generated from the initial sample. The cost for this recommendation is estimated to be in the range of US\$5,000 to US\$7,500 for a 1,000 sample infill drilling program, depending on how many duplicate samples are submitted.

## 27.0 REFERENCES

Franklin, J.M., Gibson, H.L., Jonasson, I.R., and Galley, A.G., 2005. Volcanogenic massive sulfide deposits. In: Hedenquist, J.W., Thompson, J.F.H., Goldfarb, R.J., and Richards, J.P. (eds.). *Economic Geology*, 100th Anniversary Volume, 523-560.

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Smith, G., 2011, Technical Report on the El Roble Deposit, Chocó Department, Colombia, Canada National Instrument 43-101 Technical Report, 60 p.

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Ortiz, F., Gaviria, A.C., Parra, L. N., Arango, J.C., Ramirez, G., 1990, Guías geológicas para localización de metales preciosos en las ofiolitas del occidente de Colombia. In Fonbonte, L., Amstutz, G.C., Cardozo, M., Cedillo, E. and Frutos, J., (eds.), *Stratabound ore deposits in the Andes*, Springer-Verlag, p. 379-387.

Wuest, Juan Zegarra, 2013, Proyecto Mina El Roble - Estudios Metalurgicos en Laboratorio SGS - 1 ER Informe de Avance, report prepared for by J. Wuest for Atico, 16 p.

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## 28.0 DATE AND SIGNATURE PAGE

I, Michael J. Lechner HEREBY CERTIFY THAT:

1. I am a consulting geologist and President of Resource Modeling Incorporated (RMI), an Arizona corporation with a business address of 124 Lazy J Drive, PO Box 295, Stites, ID 83552;
2. I am a graduate of the University of Montana with a B.A. degree in Geology (1979);
3. From 1979 to the present I have been actively employed in various capacities of the mining industry. I have worked as an exploration geologist exploring for precious and base metals throughout western North America (8 years), a mine geologist working at precious metal mines in California and Nevada (10 years), and a geologic consultant during which time I have estimated Mineral Resources for numerous precious and base metal deposits located throughout the world (16 years);
4. I have read the definition of a "Qualified Person" set out in Canada National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, past relevant professional experience, and affiliation with the following professional associations: Geologist in the State of Arizona (#37753), a Certified Professional Geologist with the American Institute of Professional Geologists (#10690), a P. Geo. with British Columbia (#155344), and a Registered Member of SME (#4124987RM);
5. I am a co-author of the report titled "Amended Updated Mineral Resource Estimate, El Roble Copper-Gold Project, Chocó Department, Colombia" dated April 11, 2016 and effective as of December 7, 2015 (the "Technical Report") ;
6. My most recent personal inspection of the property was on September 22-24, 2015;
7. I am responsible for Items 1.6, 1.8, 1.10, 1.11, 1.12, all of 10.0, all of 11.0, all of 12.0, all of 14.0, , all of 25.0, 26.2, 26.3, and all of 27.0 in the Technical Report;
8. I am independent, as described in Item 1.5 of National Instrument 43-101, of Atico Mining Corporation, the corporation for which I prepared the Technical Report;
9. I have had prior involvement with this project as a co-author of a Technical Report dated August 27, 2013;



10. I have read National Instrument 43-101 and this Technical Report has been prepared in compliance with National Instrument 43-101; and
11. As of the date of this Certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed and Sealed (*Michael J. Lechner*)

"Michael J. Lechner"

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Michael J. Lechner

President

Resource Modeling Inc.

Dated this 11th day of April, 2016

I, Donald F. Earnest, do HEREBY CERTIFY THAT:

1. I am the President of Resource Evaluation, Inc., 1955 W. Grant Rd., Suite 125X, Tucson, AZ. 85745, USA;
2. I am a graduate of The Ohio State University with the degree of Bachelor of Science, Geology, 1973;
3. Since 1973, I have worked for various mining companies as a Mine Geologist, Senior Mine Geologist, Mine Resident Manager, and Corporate Manager – Exploration. I have also served as Vice President, Geology for a major mining consulting firm, and I have been President of Resource Evaluation Inc., a mining geology consulting firm, since 2001;
4. I have read the definition of a "Qualified Person" set forth in Canada National Instrument 43-101 ("NI 43-101") and certify that I fulfill the requirements to be a "Qualified Person" (QP) for this amended Technical Report by reason of my education, past relevant professional experience, my professional registration with state departments of technical registration (Registered Geologist #36976 - Arizona Department of Technical Registration, Registered Geologist #746 - Idaho State Board of Technical Registration), and my membership with the Society for Mining, Metallurgy, and Exploration, Inc. (SME) as a Registered Member (#883600RM);
5. I am a co-author of the report titled, "Amended Updated Mineral Resource Estimate, El Roble Copper-Gold Project, Chocó Department, Colombia", dated April 11, 2016 and effective as of December 7, 2015 (the "Technical Report");
6. My most recent personal inspection of the property took place from September 22-24, 2015;
7. I am responsible for all of Items 1.1 through 1.5, 1.7, 1.9, 1.11, 1.12, all of Items 2.0 through 9.0, all of Item 13.0, all of Items 15.0 through 27.0 of the Technical Report;
8. I am independent, as described in Section 1.5 of National Instrument 43-101, of Atico Mining Corporation, for which I prepared the Technical Report;
9. I have had prior involvement with this project as a co-author of a Technical Report dated August 27, 2013;
10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

11. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that are required to be disclosed to make the Technical Report not misleading;

Signed and Sealed (*Donald F. Earnest*)

"Donald F. Earnest"

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Donald F. Earnest

President

Resource Evaluation Inc.

Dated this 11th day of April, 2016