

31 October 2012

ASX ANNOUNCEMENT

September 2012 Quarter Activity Report and Exploration Update

HIGHLIGHTS

Cerro Blanco Project - Copper Hill Cu-Au-Mo porphyry system

- Four high-priority Mag-IP targets defined in the zone between drill-holes MC-1 and MC-4.
- Mapping and geophysics studies indicate several large zones requiring further evaluation.

San Francisco Project

- A new porphyry-related Cu-Au-Mo system defined measuring 1.4 x 1.6 kilometres in area.
- Fourteen potential targets defined ready to be followed up, in two areas.

Tres Amigos Project

- Argentina Mining assigns its interest in Tres Amigos to New Destiny Mining (**TSX.V:NED**).
- NED to pay US\$50,000 and issue 1.5 million shares within first year.
- NED to assume responsibility for the payment of all remaining instalment payments to the vendor of the property, totalling US\$150,000.
- Argentina Mining retains 1.5% Net Smelter Royalty.

Strategic Alliance (Alianza Minerals P/L)

- Momentum builds in Alianza Minerals P/L project generation alliance with Independence Group NL.
- Regional magnetics data acquired and interpretation underway for new targets.
- New project generation geologist appointed.
- Twelve new exploration targets already identified.

Overview

Argentina Mining Limited (**ASX: AVK**) (**Argentina Mining** or the **Company**) is pleased to report the recommencement of the summer field season on the Company's Andean gold and base metal projects in San Juan Province, Argentina. All field work had been suspended during the winter months but is now ramping up with the onset of spring.

A new phase of mapping and geophysical interpretation has been undertaken at the **Cerro Blanco Project**, with a minimum of four new high-priority target areas being defined. Some field work is being directed towards resolving the complex relationships between mineralization and zones of high magnetic susceptibility and high IP chargeability/low resistivity. Understanding these relationships in a structural context has the potential to significantly expand the potentially mineralized area. A number of new drill locations have been proposed.

Five days were spent by the Company's senior geologist in detailed reconnaissance of the Las Leñas prospect in the south-eastern part of the large **San Francisco Project**. This has led to the discovery of a large hydrothermalized porphyry-related Cu-Au-Mo system measuring approximately 1.4 x 1.6 kilometres. At least 14 potential targets in 2 distinct areas have been defined ready to be followed up.

During the latter part of the September 2012 Quarter, negotiations were undertaken towards signing a Sub-Option and Assignment Agreement relating to the Company's **Tres Amigos Project**, 12 kilometres north-east of the township of Barreal in San Juan Province, Argentina, whereby all rights, title and interest under its agreement with the vendor of the property would be transferred to New Destiny Mining (**TSX.V: NED**)

Following the formalising during the June 2012 Quarter of the new **Alianza Minerals Pty Ltd** project generation partnership with cornerstone investor Independence Group NL (**ASX: IGO**), the Company has made significant advances in meeting the project generation objectives, including the appointment of a new senior geologist fully-dedicated to the partnership and the acquisition of regional geophysical data over large areas of interest.

Twelve new exploration targets have already been identified by the geologist with others being defined by independent interpretation of the regional geophysical data. AVK and IGO representatives plan to visit some of these targets during a field trip in late October-early November, 2012. With an operational base in San Juan, Alianza, on behalf of Argentina Mining and Independence Group is well-placed to take advantage of new project opportunities as they arise.

Exploration activities during the reporting period are summarized below:

CERRO BLANCO PROJECT

Copper Hill Prospect

Further geological mapping and interpretation of the results of results of the late 2011 **IP-Res/3D-Mag** geophysics programs has been undertaken by the Company's senior geologist to refine targeting of future diamond drilling.

In combination with further detailed geological mapping, interpretation of geophysics, surface geochemistry and diamond drill core data, an area of significant mineralization potential which warrants further evaluation has been identified between drill-holes DDH MC-1 and MC-4.

In addition, reinterpretation of the results of the geophysics in the context of the geo-tectonic framework has also identified a large arcuate zone of high magnetic susceptibility interpreted as possibly being an alteration shell enclosing a large porphyry core of lower magnetic susceptibility.

This zone of high magnetic susceptibility is adjacent to and immediately west of the discrete IP anomalism originally targeted by the Company's 2011 drill-holes MC-1 to MC-5 (Figure 1). Current work is now directed towards fully understanding the relationships between mineralization and the zones of high magnetic susceptibility and high IP chargeability with which mineralization appears to have good correlation.

Initial studies have led to four new Mag-IP targets being defined with good mineralization potential between drill-holes MC-1 and MC-4.

This study was ongoing at the end of the September 2012 Quarter with further new targets expected to be defined.

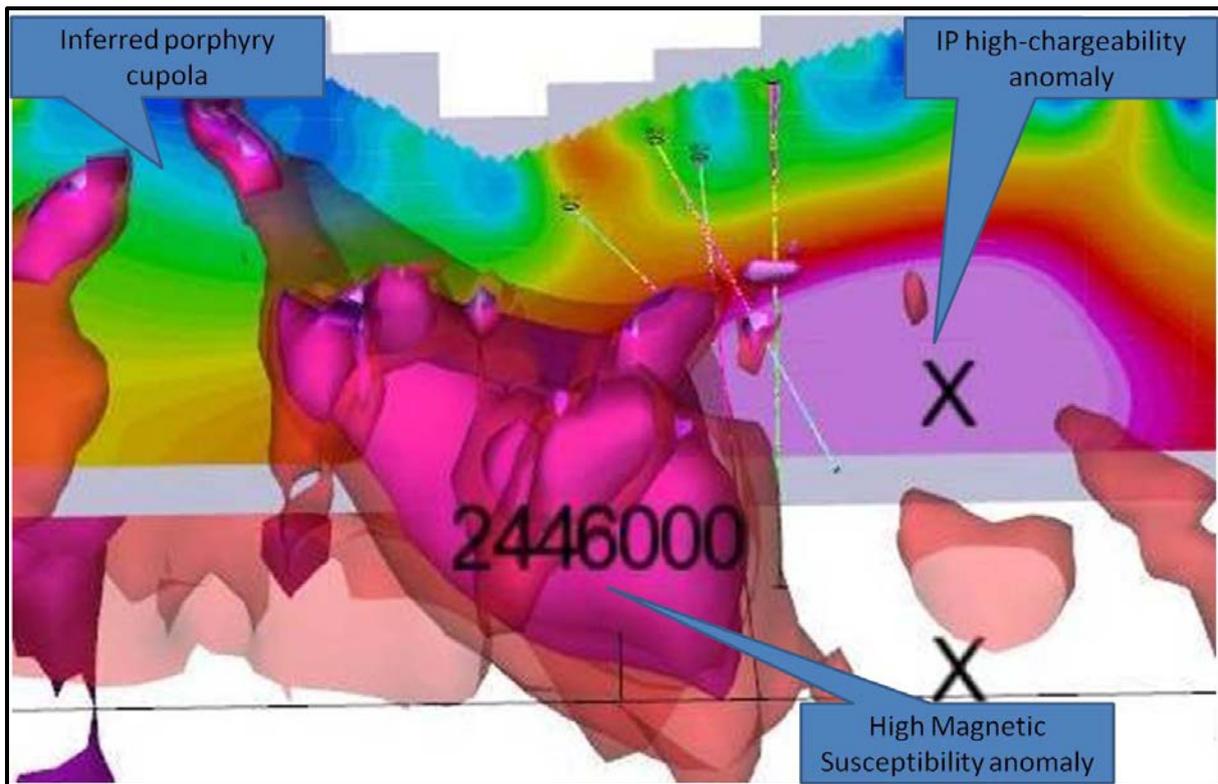


Figure 1 – Vertical east-west view of Cerro Blanco 3-D Magnetic Susceptibility 0.5, 0.6 & 0.7 S.I shells indicating possible porphyry cupola arch, with vertical slice of IP chargeability at 6460200N through drill-holes. Graphic shows apparent displacement of high magnetic susceptibility zones with respect to high IP chargeability zone.

SAN FRANCISCO PROJECT

Las Leñas Prospect

Previous reconnaissance exploration by Argentina Mining (Quarterly Report March 2012) identified, among other targets, a 3,700 metre long NNW-trending epithermal quartz-goethite reef system at the Las Leñas Prospect in the south-eastern part of the large San Francisco Project. A comprehensive follow-up exploration program was planned for the area.

In the latter part of the September 2012 Quarter, five days were spent by the Company’s senior geologist in detailed reconnaissance of Las Leñas, which included the taking of 12 geochemical rock-chip samples. While analytical results were subdued (maximum 0.09ppm Au by Atomic Absorption method), a large porphyry-related Cu-Au-Mo system was defined as a new exploration target area measuring approximately 1.4 x 1.6 kilometres in extent. Sampling by previous explorers has returned results up to 2.8g/t gold.

This system exhibits the geological and hydrothermal characteristics of a large multi-phase porphyry stock. A closely-related sub-cropping flow-rhyolite dome complex indicates probable “cupola level mineralization” with the alteration characteristics of a typical “non-telescoped” porphyry Cu-Mo-Au system.

In this area, outcropping quartz-sulphide stock-works, veins, veinlets, lodes and hydrothermal breccias intrude domed and folded hydrothermalized country quartzites, sandstones, slates and lutite rocks at the “cupola” level. The system appears to characterize a “structural clear-flow

porphyry dome” set in a quartz-sericite zone (quartz-illite-pyrite) with pervasive argillic (hypogene and supergene) alteration.

Intruded and hydrothermalized quartzite country rocks, flow rhyolitic textures, dome structures, slickensides and more than three phases of quartz-sulphide veining occur in the upper levels of a non-eroded or partly-eroded porphyry-related cupola-dome complex; along with evidence of hydrothermal mineralization and tectonic movement, these features confirm the strong exploration potential of the area.

At least 14 potential targets areas have been defined ready for immediate follow-up. They occur in two clearly defined areas:

- a) outcropping in the Western sector, in a very volcanic environment closely-related to a regional “caldera-diatreme structure” and,
- b) outcropping in the Eastern sector, closely-related to a north-south porphyry Cu-Mo-Au regional trend (“Eastern Indio Mineralized Belt”) where numerous mines are located.

A structural and geological mapping program is currently underway. The area provides strong encouragement for conducting an initial structural definition program of Dipole-Dipole geophysics followed by a scout program of a small number of approximately 300 metre deep exploration holes with the object of testing this potential target at shallow depth.

TRES AMIGOS PROJECT

During the latter part of the September 2012 Quarter, negotiations were undertaken by Argentina Mining’s wholly-owned Argentine subsidiary, Entropy Resources SA (**ERSA**), towards signing a Sub-Option and Assignment Agreement relating to ERSA’s Tres Amigos Project, situated 12 kilometres north-east of the township of Barreal in San Juan Province, Argentina.

Under the terms of the agreement with New Destiny Mining Corporation (**New Destiny**), a Canadian listed company, upon receipt of an option payment of US\$50,000 cash and 1.5 million shares in New Destiny, ERSA would transfer and assign all its rights, title and interest under its agreement with the vendor of the property to New Destiny, with ERSA retaining a 1.5% Net Smelter Royalty. New Destiny is to assume responsibility for the payment of all remaining instalment payments to the vendor of the property, totalling US\$150,000. The Option Agreement will enable Argentina Mining to direct its resources more efficiently towards evaluation of its other projects. This agreement has now been signed, as announced to ASX on 11 October, 2012.

Alianza Minerals Pty Ltd

During the June 2012 Quarter, the formation of a project generation alliance company Alianza Minerals Pty Ltd (Alianza) was completed between Argentina Mining and its major shareholder, Independence Group NL (ASX:IGO).

Alianza has now acquired the services of a highly-experienced Argentina-based geologist to lead a systematic project generation program which will be jointly overseen by both Independence and Argentina Mining staff. Under the terms of the Agreement, this activity does not preclude either party from pursuing exploration and mining opportunities which are introduced independently of the Alliance activities.

The first phase of the Alianza activity involves project generation work principally in San Juan Province, Argentina. Regional geophysical data has been acquired with a number of target areas being indicated from preliminary geophysics interpretation, while twelve new target areas have been defined by the Alianza geologist by the end of the September 2012 Quarter. These targets will be prioritized and systematically followed up at the earliest opportunity.

PLANNED EXPLORATION

Exploration planned, or already underway, for the remainder of 2012 includes:

- Extension of detailed mapping and geochemical sampling at Copper Hill, particularly in target areas defined by recent studies and MAG-IP geophysics interpretation.
- New target prioritization and drilling to test recently-defined potentially higher-grade zones of Copper Hill.
- Resumption of regional stream and rock chip geochemistry at La Fortuna and Despoblados in the southern Cerro Blanco Project area.
- A second phase of reconnaissance structural and geological mapping and geochemistry, including commencement of regional stream geochemistry at San Francisco, including sampling and mapping of the 3.7 kilometre long epithermal reef system identified at Las Leñas.
- Subject to access, follow-up reconnaissance exploration and access development at the East Sancarron, La Ortiga and San Crispin Regional Exploration project areas.

CORPORATE & BOARD RESTRUCTURE

In light of the current economic conditions and to ensure that the Company continues to efficiently utilise its funds, the board of Argentina Mining recently reduced its corporate overheads, resulting in voluntary salary reductions across the full staff range and the role of Executive Chairman being made redundant. Accordingly, Mr Stephen Shedden agreed to resign as a director of the Company. Mr Douglas Bright, the sole independent director on the board of Argentina Mining, agreed to become non-executive Chairman.

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About Argentina Mining Limited

Argentina Mining Limited listed on ASX on 9 March 2011. The Company is exploring a suite of gold and base metal projects in San Juan Province, Argentina. These projects range from the established porphyry copper-gold-molybdenum project at Cerro Blanco, epithermal vein gold and copper mineralisation at Amiches, San Francisco and Tres Amigos and regional exploration projects near Barrick Gold Corporation's major Veladero (Reserves 12Moz Au) and Pascua-Lama (Reserves 17.8Moz) gold operations.

The Company's Phase 1 and 2 exploration drilling programs in 2011 at the Copper Hill Prospect at Cerro Blanco intersected broad zones of porphyry copper-gold-molybdenum mineralisation in five diamond drill holes, confirming the presence of a large mineralised porphyry sulphide and oxide system. The Company is planning follow-up drilling at Copper Hill Porphyry Cu-Au-Mo Prospect, as described in this report.

Competent Person Statement

The information in this report relating to Exploration Results is based on information compiled by Mr Doug Bright, a Member of the Australasian Institute of Mining and Metallurgy and a Director of and geological consultant to Argentina Mining Limited. Mr Bright has sufficient experience relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.' Mr Bright consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.