

4 March 2024

## **GEOLOGY & MINERALISATION OF LA CRISTINA COPPER-GOLD PROSPECT - SIERRA MAESTRA COPPER BELT, CUBA**

**Antilles Gold Limited ("Antilles Gold" or the "Company") (ASX: AAU, OTCQB: ANTMF) advises it has received the attached Report on the Geology and Mineralisation of the La Cristina copper-gold prospect within the Sierra Maestra copper belt in south east Cuba. The La Cristina concession is held in an Exploration Agreement as are two other concessions in the same region with the three properties totalling 53,710ha.**

The Report was prepared by the Company's Exploration Director, Dr Christian Grainger, and Colombian consulting geologist, Riccardo Sierra, and summarises the results of prospecting activities carried out between July and November 2023.

### **Conclusions and Recommendations**

- **The La Cristina project represents an excellent exploration project with high potential for the discovery of both porphyry copper-gold and high-sulphidation gold-copper deposits.**
- **A major E-W structural corridor has been located between the Borbon and Arabica prospects that measures 4.5 km x 2.2 km. This zone incorporates overlapping pervasive and intense zones of both advanced argillic and phyllic style hydrothermal alteration styles that indicates the presence of a potentially large porphyry system at depth that has a large exposed lithocap and high-sulphidation style halo over very large dimensions at surface.**
- **Numerous zones of high-grade copper-gold mineralization has been identified from initial sampling in numerous historical artisanal underground workings and their immediate vicinities. No detailed exploration has been undertaken within these areas to date and simple surficial exploration programs including surface geochemical sampling and geophysics are expected to return rapid positive results for a following drilling campaign.**
- **A detailed ridge and spur soil sampling campaign is suggested to start as soon as possible to efficiently sample large areas on topographic highs geochemically and to prevent sampling in areas with transported cover.**

- **Stream sediment sampling of active drainages to discover additional anomalous areas is also suggested to rapidly and cheaply define the additional potential of the larger project area.**
- **LIDAR survey of topography with high resolution imagery should be undertaken along with a ground magnetic program over the main mineralized trend of Bourbon-Arabica.**
- **Additional detailed geological mapping of prospects and detailed underground sampling and mapping of all historical workings is essential.**

Mr Brian Johnson, Chairman of Antilles Gold, said "the Company intended to undertake the low cost prospecting campaign recommended by Dr Grainger as soon as practicable provided it did not impact on resources required for the near-term development of the Nueva Sabana gold-copper mine."

END

This announcement has been authorised by the Chairman of Antilles Gold Limited.

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# Geology and Mineralisation - La Cristina Project

## - Sierra Maestra, SE Cuba -

**To: Antilles Gold Inc**

**From: Chris Grainger, Ricardo Sierra**

**February 2024**

**Ref: Geological reconnaissance visit of the Sierra Maestra – Cuba**

The geological reconnaissance was undertaken between July to November in 2023 within the Province of Granma of the Sierra Maestra mountain range in SE Cuba.

### Highlights

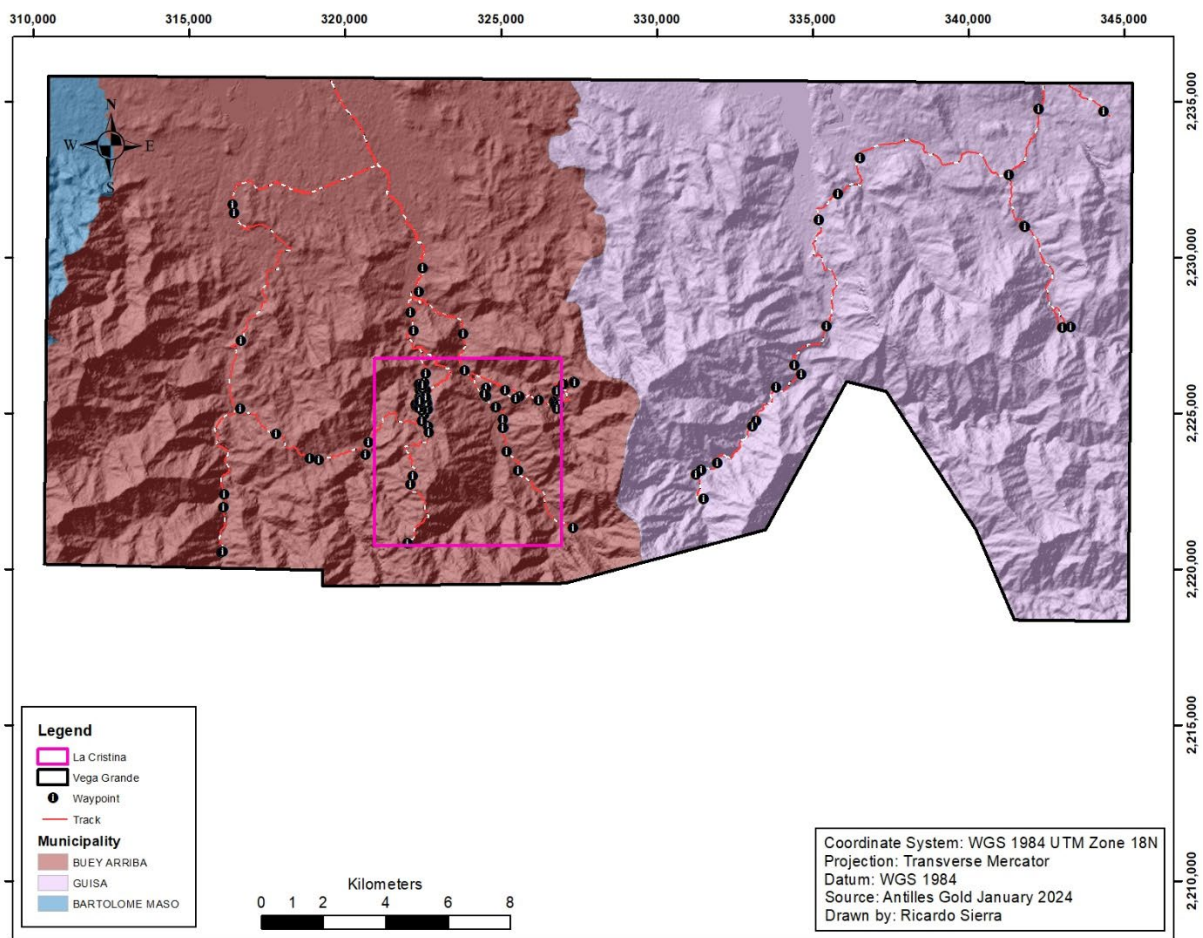
- The Sierra Maestra belt is a Cretaceous age volcanic arc that has been intruded by Eocene/Oligocene age intrusives and represents an outstanding exploration opportunity. The excellent prospectivity for copper porphyry, manto-type and high-sulphidation deposit types is related to the lack of modern systematic exploration over the vast majority of the 200km geological trend, the location of the El Cobre copper-gold deposit that is the oldest copper deposit in the Americas (being mined since the early 16<sup>th</sup> Century) and the age of the intrusives, the source of the metallic mineralization, that shares the same geological period of formation as the Chileno giant copper porphyry deposits. It therefore represents one of the last unexplored Eocene porphyry belts globally
- A remote sensing structural interpretation of the Sierra Maestra region identified major NE-SW, NW-SE, and WSW-ENE fault trends in the **Vega Grande** area with the presence of several circular anomalies that indicate the probable location of porphyry intrusions and associated mineralization
- Field inspection of these target areas has located a number of historical underground workings within the **La Cristina** project area that incorporates +52,550 Ha of tenure and currently includes the prospects **Bourbon** and **Arabica**. Given the size of the target area and amount of surficial visual hydrothermal alteration it is expected more prospects of similar characteristics will be identified rapidly
- The historic **Bourbon** artisanal workings incorporate at least 140m of developed galleries that display intense high-sulphidation style hydrothermal alteration (advanced argillic) in both volcanic and sedimentary rocks which have been intruded by a series of high-level dioritic to quartz-dioritic intrusive stocks. Both copper and gold mineralization is visually associated with pyrite-chalcopyrite-covellite-calcantite mineralization that is generally oxidized and leached at surface
- Within the **Bourbon** prospect initial rock grab sampling has returned gold results of 40 g/t Au and 2.13 g/t Au, while channel sampling has returned intervals of 4m @ 2.38 Au g/t, 1m @ 1.21 Au g/t and 5m @ 0.39 Au g/t. Dioritic porphyry intrusions are widespread within the prospect area along with advanced argillic alteration with internal vuggy silica alteration zones that host the gold mineralization. The area is heavily oxidized and the minor presence of copper oxide minerals at surface indicates the potential of primary copper mineralization at depth accompanying the gold mineralization

- An additional structural trend, also associated with strong surficial hydrothermal alteration associated with a porphyry associated high-sulphidation system cluster, is located at the **Arabica** prospect that is approximately 4 km ESE of the Bourbon artisanal workings

The **Arabica** prospect exhibits the same paragenesis of hydrothermal alteration, with strong advanced argillic alteration affecting a suite of intrusives also of dioritic composition, and volcano-sedimentary host rocks. Preliminary channel sampling has located anomalous copper and gold mineralization associated with strong supergene leaching.

## Summary

The geological reconnaissance was carried out mainly on secondary dirt roads that cross the target areas, that were the original access routes for the artisanal mining that was carried out until the 1950's. The area is composed of steep topography along the northern flanks of the Sierra Maestra mountain range. Reconnaissance focused on identifying areas with the potential to host additional metallic deposits associated with both high-sulphidation and porphyry style mineralization, given the widespread presence of large zones of hydrothermal alteration that indicates the presence of such mineralized systems. In addition, old underground mining workings, drilling platforms, and more recent, but minor artisanal works, were identified. In these places, channel, chip, and panel rock samples were taken, as well as initial topographic survey of three old underground artisanal mine workings.

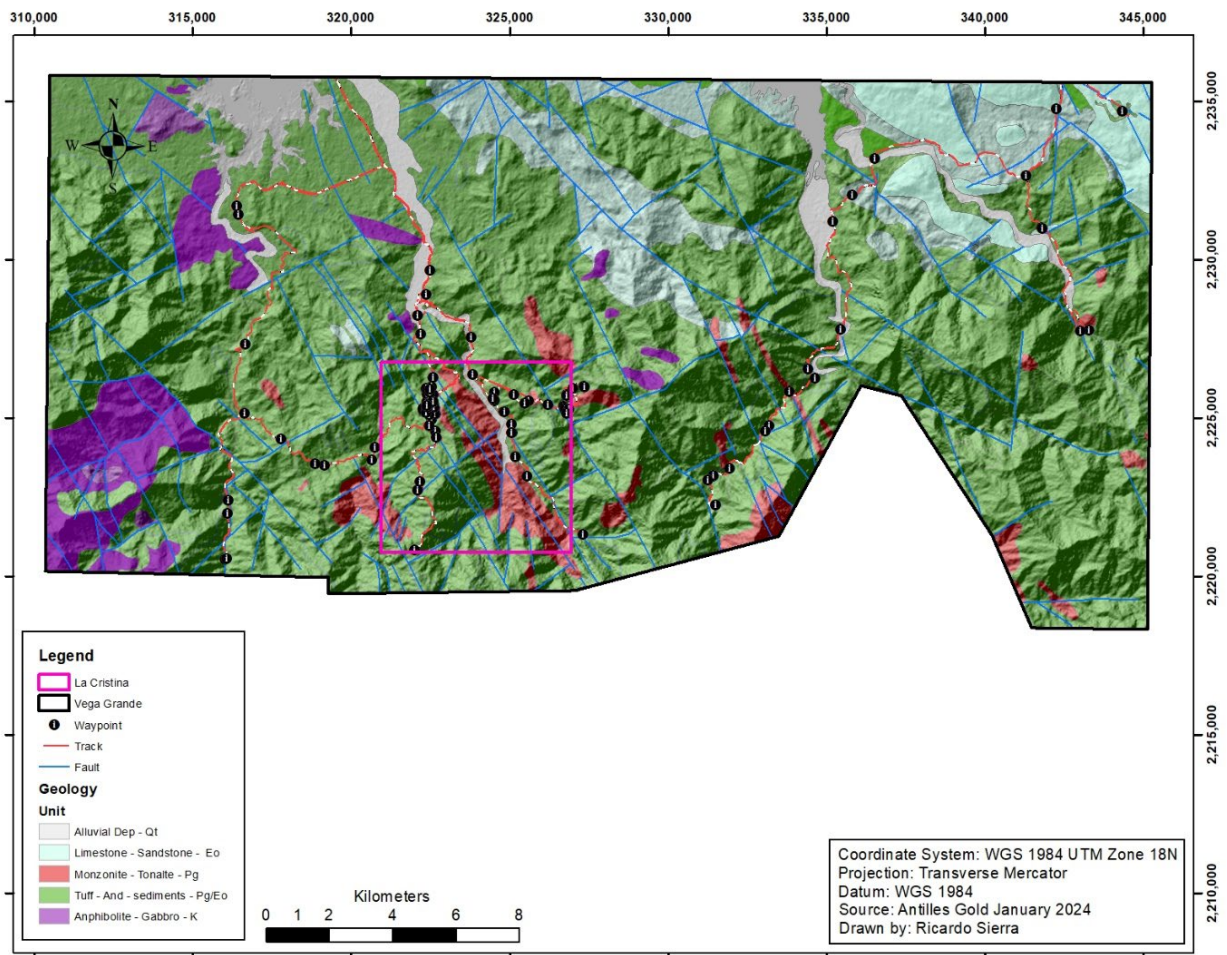


**Figure 1.** Location map of geological surveys carried out during July through November 2023, on the mining concession of La Cristina and Vega Grande, located in the Sierra Maestra mountain range in southern Cuba, on the municipalities of Buey Arriba and Guisa

### Regional Geology - Vega Grande

The Vega Grande area is tectonically located 25 km north of the Cayman Trench, on the north western flank of the Sierra Maestra mountain range, where a volcanic-sedimentary sequence of the Island Arc geological sequences, incorporated by mafic and intermediate volcanic rocks (tuffs, basalts and andesites) and sedimentary sequences (limestones, marls, calcareous sandstones, calcareous shales and sandstones) of Cretaceous to Eocene age are intruded by monzonites, tonalites and diorites of Paleocene-Eocene age, as well as recent alluvial deposits.

Ages have been obtained by lithostratigraphic correlations with fossils, reported by different authors, including (Taber, 1934; Lewis and Straczek, 1955; Furrázola-Bermúdez et al, 1976; Nagy et al, 1983; Linares et al, 1985; Pushcharovsky, 1989), among others (Figure 2).



**Figure 2.** Geological map at a scale of 1:250,000 from the year 1988, and tectonic map at a scale of 1:500,000 from the year 1989, digitized in 2003. Location of the tours carried out in July and November 2023 and checkpoints.

### ***Mafic volcanics (Cretaceous)***

Distinguished largely as intermediate to mafic volcanic rocks with minor intercalations of gabbro and biotite amphibolites of potentially older ages (Iturralde-Vinent. M; 2019).

### ***Tuffs, andesite lavas, limestones (Paleocene – Eocene)***

Composed of a volcano-sedimentary sequence with vertical and horizontal facies variations with the presence of ash, lapilli and lithic tuffs, andesitic to dacitic lavas, and basalts interbedded with limestones, sandstones and greywackes. Also observed crosscutting the units described above with compositions varying from basic to acidic intrusives. It has been correlated with the El Cobre Group (Taber, S; 1931); Guama Formation and Naguas Formation (Kosary, M; 1956); El Caney Formation (Sokolova, E; 1966), Chorreron Member and Berracos Member (Alioshin et al; 1982).

### ***Monzonites, Tonalites, Diorites, Hydrothermal Breccias (Paleocene – Middle Eocene)***

Composed mainly of a large number of hypoabyssal bodies composed of diorites, tonalites, granodiorites, and granites that intrude the Paleocene volcanic sequence (Laznicka et al., 1970; Rodríguez-Crombet et al., 1970).

Rojas-Agramonte et al in 2004 conducted a radiometric dating campaign of U-Pb and Ar/Ar in biotite, as well as a compilation of reported dates in the Sierra Maestra for U-Pb and Ar/Ar in biotite and fission traces in zircon and apatite, for a series of plutons in the Sierra Maestra of granodioritic to trondhjemite with ages from 60 to 48 Ma; the oldest ages of the granitoid suites are  $60.2 \pm 2.6$  Ma and  $55.4 \pm 0.7$  Ma and suggest early Paleocene plutonic activity for the PVA (Paleogene Volcanic Arc). The  $^{40}\text{Ar}/^{39}\text{Ar}$  ages for the Nima Nima and Peladero massifs are similar to the SRIMP (Sierra Maestra Intrusives) ages for the same massifs. The younger age of  $48.2 \pm 0.4$  Ma probably defines the termination of plutonic activity in the early middle Eocene. Magmatism in the Sierra Maestra was continuous and lasted between 10 and 12 million years, as suggested by the uniform chemistry and similar ages of zircon (Rojas-Agramonte et al., 2004). Annex 1.

### ***Marine sediments and terrigenous sediments (Middle Eocene)***

Mainly composed of a calcareous sedimentary sequence with a terrigenous component, with the presence of fossiliferous limestones, conglomerates with calcareous cement, polymictic breccias with calcareous cement, polymictic sandstones, calcareous siltstones, calcareous shale and marl. They are correlated with the Farallón Grande and San Luis Formations (Taber, S; 1934), and Charco Redondo (Woodring, W and Daviess, S; 1944).

### ***Recent Alluvial Sediments (Qto)***

These alluvial deposits are located mainly on the banks of the Buey de Yao, Bayamo rivers and their tributaries such as the Vega Grande, Macanacu, El Oro, Limoncito and El Plátano streams, among others. They are made up of conglomerates, gravel, sand and non-compacted silt.

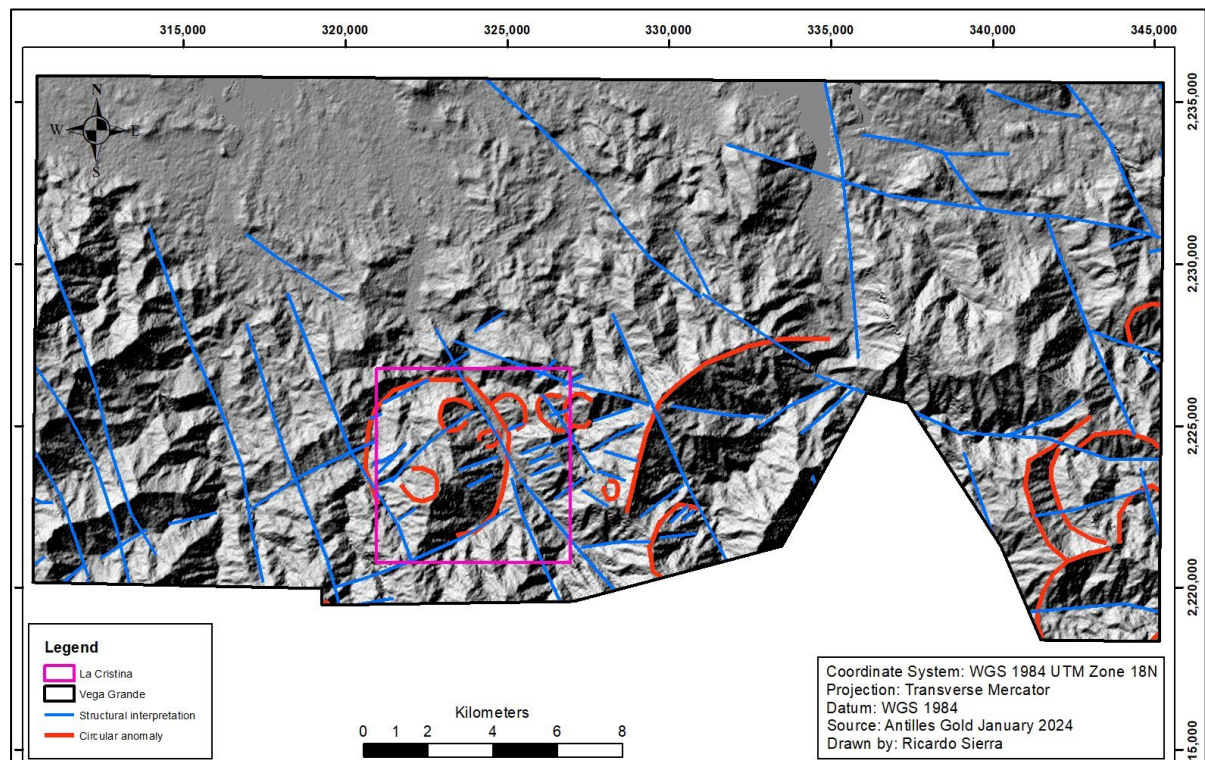
## Structural framework

The Sierra Maestra is located within the NW-SE trending strike-slip extension along the Oriente transform system (Rojas et al., 2005). The Santiago basin of Quaternary Neogene age divides the Sierra Maestra into two main tectonic blocks, one block located to the west and the other block called La Gran Piedra located to the east (Pérez et al., 1997).

Through an analysis of the NASA DEM (Digital Elevation Model) - 2023, the structural interpretation was carried out, evidencing the main structures present in the study area (Figure 3):

- A trend of NW-SE faulting predominates in the Sierra Maestra mountain range, including thrust faults and reactivated extensional basin faults
- A series of sub-circular bodies are evident, reflecting subsurface intrusives aligned mainly with the NW-SE trend. There are also other major bodies located at the intersections with the NW-SE and NE-SW faults
- A series of second-order faults with NE-SW and ENE-WSW tendencies are observed over the target area, which is aligned with the prospective zones of Bourbon and Arabica in the La Cristina area
- A third order of minor faults/fractures are observed with NNE and NNW trends

Additionally, the interpretation of the geophysics provided by Geominera, at a scale of 1:250,000, was carried out using magnetometry (analytical signal, total magnetic field reduced to the pole, first and second derivative in X-Y-Z and pseudogravity), which were used to interpret the main faults and regional structures.



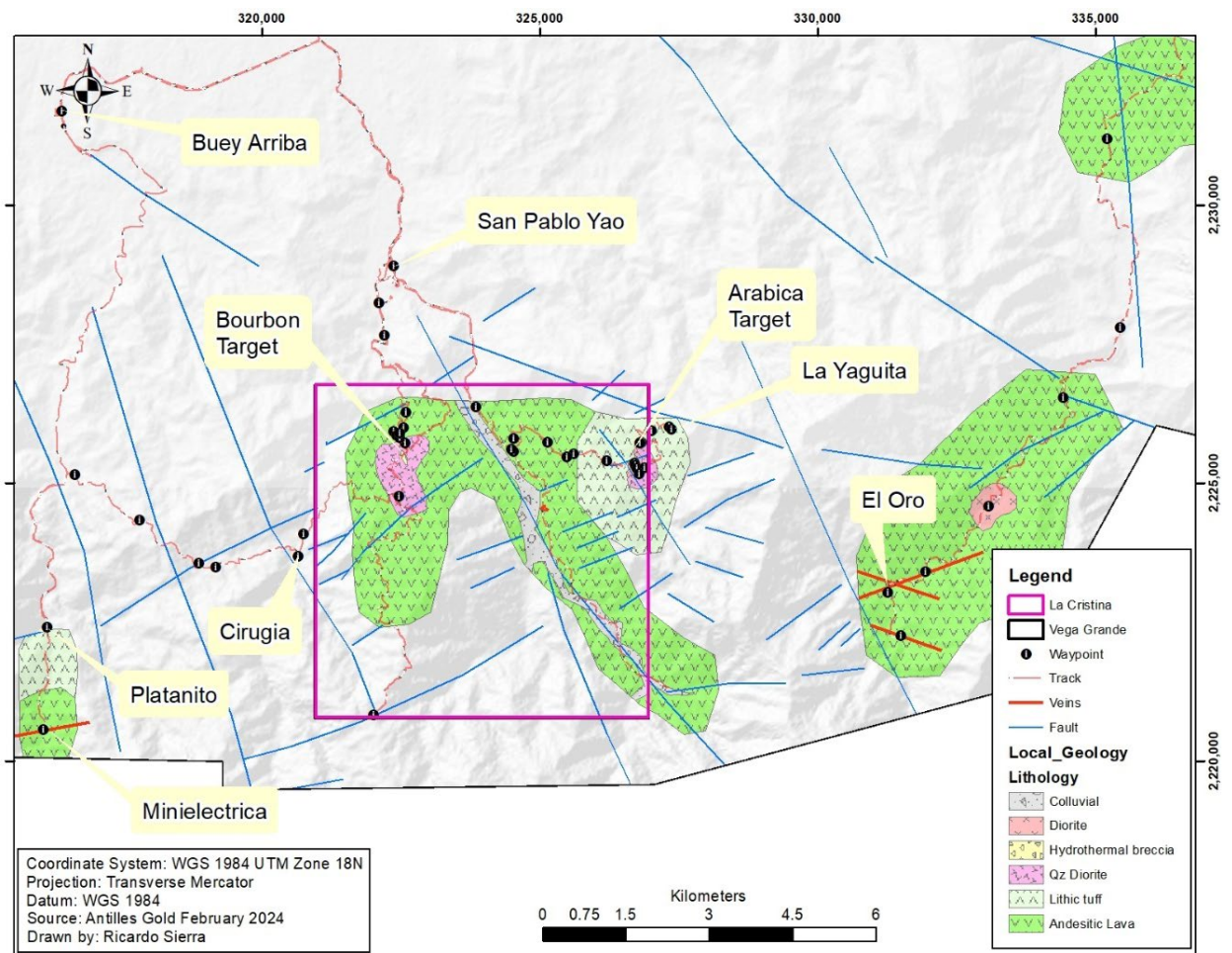
**Figure 3.** Structural interpretation map, with the interpretation of faults in blue and circular anomalies in red, interpreted on NASA's Digital Elevation Map (DEM) – 2023.

## Local Geology – La Cristina Project

During the initial reconnaissance, geological mapping at 1:50,000 was carried out on the outcrops located around the access roads within the exploration license, with a more detailed scale in the areas with greater intensity of hydrothermal alteration, presence of oxides mainly as hematite (Hem) and/or strong pyrite (Py) mineralization present towards the upper flanks of the mineralized systems (Figure 4).

\*Qz: Quartz, Epi: Epidote, Chl: Chlorite, Lime: Calcite Sec Bio: Secondary Biotite, Ser: Sericite, Kao: Kaolinite, Pyrite, Cpy: Chalcopyrite, Cc: Chalcosine, Shawl: Calcantite, Pitch: Pitchlimonite, Cv: Coveline, Mt: magnetite.

**Figure 4.** Map of geological cartography at a scale of 1:50,000 and 1:10,000 in the areas of greatest economic interest, carried out mainly on access roads during initial reconnaissance in the months of July through November 2023.



### Tuffs and andesite lavas

On the access roads that connect Vega Grande with Arabica, a sequence of lithic tuffs, ash tuffs and lapilli interspersed with andesitic lavas with strong hydrothermal alteration mainly of sericite + kaolinite were observed, as well as the presence of oxides such as hematite and jarosite; while towards the La Yaguita area, lithic tuffs and andesitic lavas were observed (Figure 4 and Figure 5).





Figure 5. Volcano-sedimentary sequence in the sector of the village of Limonicito via La Yaguita. a) Intercalation of lithic tuffs and andesitic lavas, with alteration of sericite and presence of hematite. b) Andesitic lavas. (c) lithic tuff.

**Dioritic and quartz-dioritic porphyries**

Quartz porphyry with intermineral quartz eyes, with strong advanced argillic alteration that obliterate ferromagnesian minerals and plagioclase were identified at the La Cristiana target. Dioritic porphyry with phenocrysts of biotite and hornblende > 1cm, primary magnetite, are also part of the suite of identified intrusives (Figure 6).

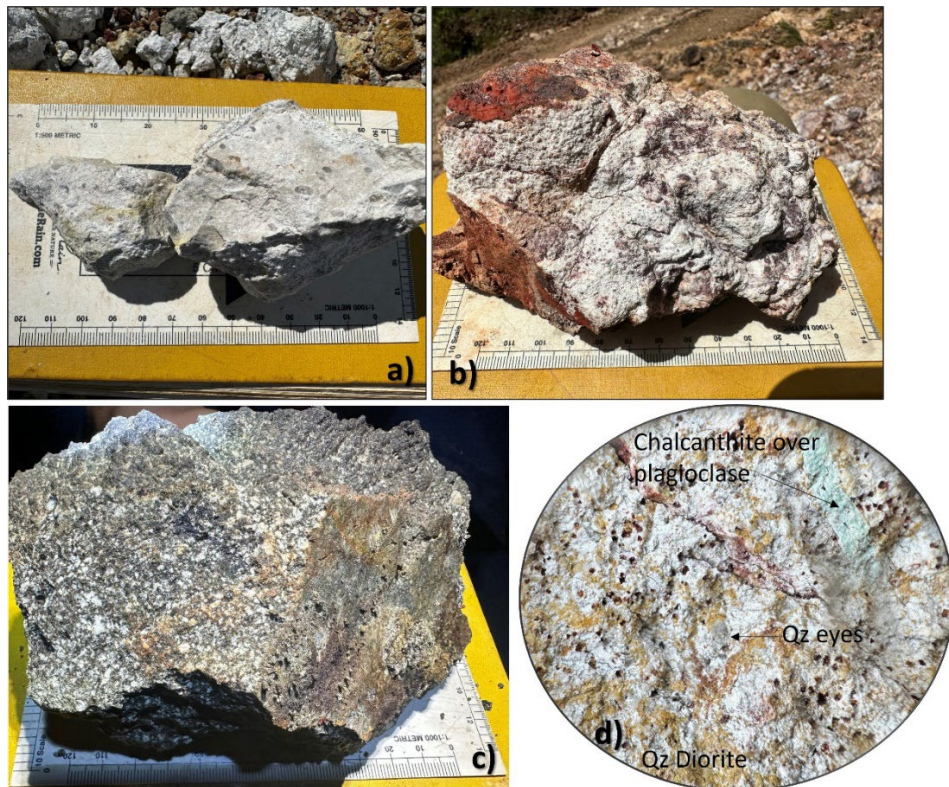
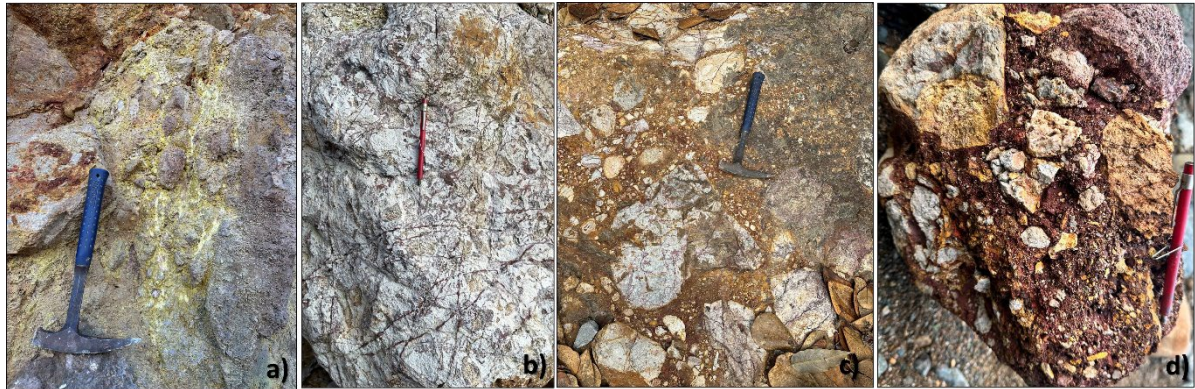


Figure 6. Bourbon prospect. a - b) Dioritic porphyry with quartz eyes. c) dioritic porphyry in the Bourbon workings. d) Dioritic porphyry quartz with quartz eyes.

### Hydrothermal breccias

Outcrops of hydrothermal breccias were identified at surface in the Bourbon prospect and lower part of the Arabica prospect mainly with shatter/crackel and polymictic textures, subangular clasts of low sphericity including clasts of andesitic lavas and dioritic porphyry intrusives with strong alteration to sericite, with silica, Ser + Kao cement, and cemented by pyrite. Blocks and pebbles of these hydrothermal breccias are observed over the Vega Grande basin, mainly cemented by hematite (Figure 7).



**Figure 7.** Hydrothermal breccias identified in the Bourbon and Arabica prospects. a) Crackle breccia cemented by silica. b) crackle breccia cemented by sericite + Py. c) Shatter breccia cemented by goethite + jarosite. d) Shatter Hematite-Cemented Breccia.

On the Limoncito-La Yaguita road, a brownish-grey mudstone was identified with strong alteration of sericite and veining and dissemination of pyrite < 3% cutting the stratification with an AZ 260°/20° NW (Figure 8).



**Figure 8.** Mudstone with strong alteration of sericite (Limoncito village)

### **Alluvial and Colluvial Deposits**

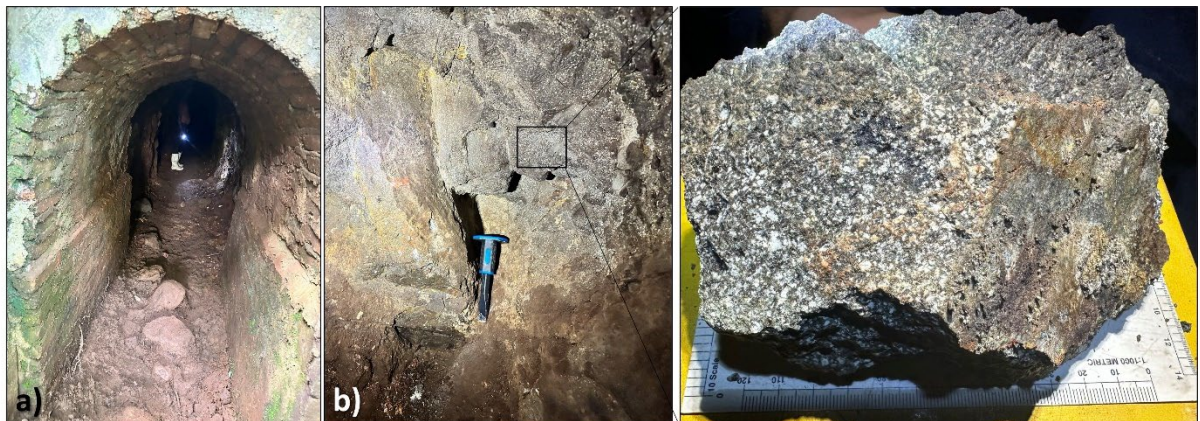
The main alluvial deposits identified in the area are found in the Vega Grande basin, which are adjacent to the entrance roads to the villages of Limoncito, Vega Grande and Vega Hobo. These recent deposits are largely composed of intensely altered country rocks with sericite-kaolin hydrothermal alteration that obscure the in situ geology as remobilized material from higher topographic areas.

### **Hydrothermal Alteration and Mineralization**

The intense and extensive hydrothermal alteration present in the target area is largely composed of argillized zones in the Bourbon zone of 1 km x 1.5 km scale, and in the Arabica zone of 2.5 km x 1.5 km, open in an E-W direction. The presence of disseminated sulphides, and strong presence of oxides such as hematite and goethite-jarosite, secondary copper oxides are typical characteristics of Cu-Au copper porphyry systems (Figure 13).

### **Secondary biotite alteration**

Potassic alteration was observed in the main underground drift of the Bourbon artisanal workings, about 114m from the main portal towards the contact of a quartzdiorite porphyry with equigranular dioritic porphyry. The potassic alteration was associated with the presence of Cpy + Py dissemination < 1% and veins of Qtz + Cpy indicating porphyry style mineralization (Figure 9).



**Figure 9.** a) Entrance to the Bourbon workings. b) Dioritic porphyry with secondary biotite alteration, Cpy + Py diss <1%.

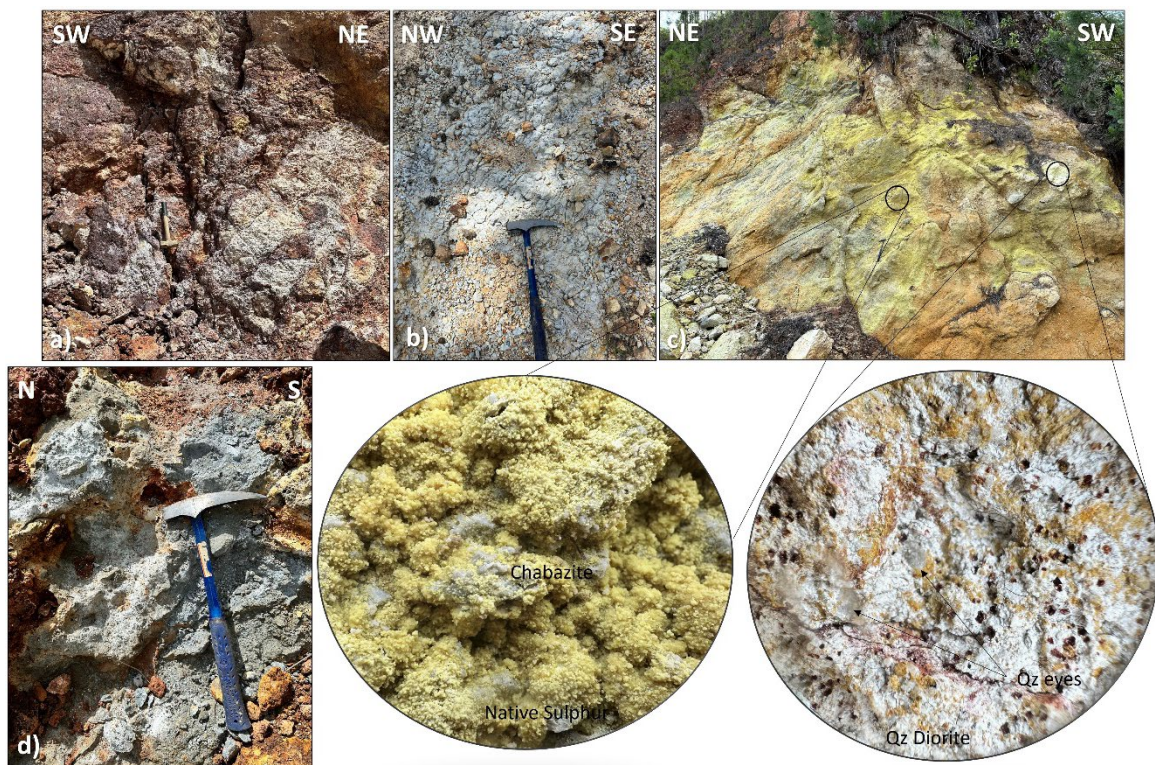
### **Advanced Argillic Alteration**

The presence of lithocap with alteration of sericite + kaolinite, associated with hematite + jarosite oxides (oxidized porphyry D-veins), extends throughout the Bourbon prospect with an approximate extension of 1 km x 15 km, while in the Arabica zone it seems to occur with a greater extension of 2.5 km x 1.5 km and both open in an E-W direction. This alteration and mineralization is located between the juncture of first-order NW-SE faults, and second-order ENE-WSW faults, obliterating the texture of the suite of intrusives and of the volcano-sedimentary hostrocks present in the zones.

More prominent in the Bourbon zone are hydrothermal breccias with clasts and silica cement with vuggy silica textures and the presence of Py <20% disseminated, native sulphur, and copper sulphates such as calcantite, and oxides such as pitchlimonite (Figure 10).



**Figure 10.** Bourbon workings. a) D-veins, alteration Ser + kao, Hem < 30%. b) Alteration Ser + Kao, secondary Cc <10%, Cpy + Py, Cv <3%. Bourbon prospect on surface. c) Hydrothermal breccia with alteration of vuggy silica + Ser + Kao, presence of native sulphur, Calcantite, Py diss < 25%, chabazite veins filling open spaces, this rock chip sample yielded AG\_000024 0.5m x 0.5m@ 40 g/t Au. d) alteration Ser + Kao, Hem <40% diss, D-veins.



**Figure 11.** a) Dioritic porphyry with pervasive sericite. b) Dioritic porphyry with pervasive sericite + disseminated and veined Hem. c) Quartzdiorite porphyry with alteration of vuggy silica + Ser + Kao, presence of native sulphur, Calcantite, Py diss < 30%, D-veins. d) Quartzdiorite porphyry pyrite halo, < 50% disseminated pyrite + Cpy, rock sample in panel AG\_000049 0.5m x 0.5m @ 0.21 Au g/t, 0.149 Cu%.

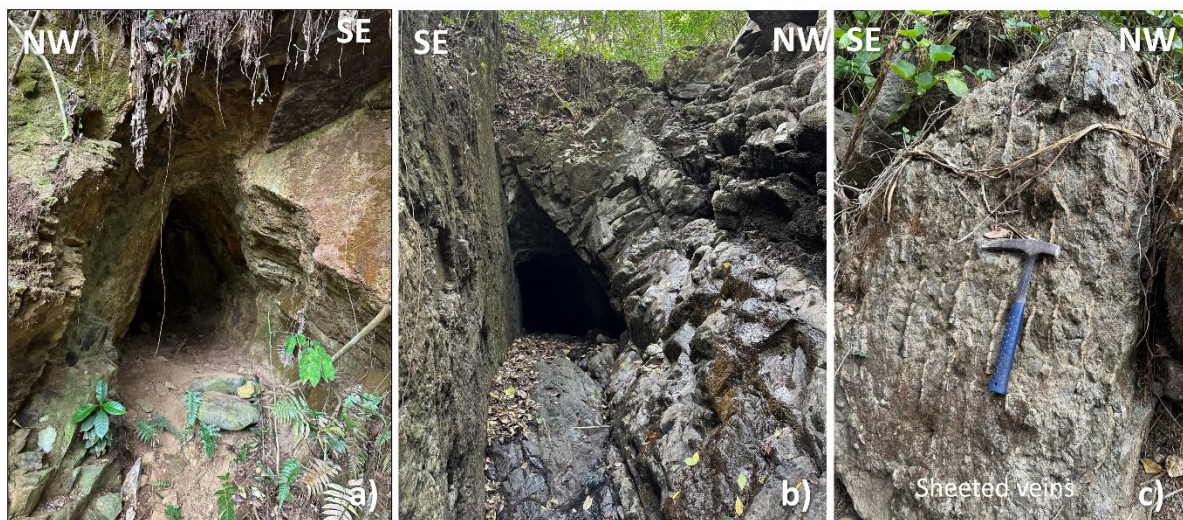
Between Vega Grande and Limoncito village strong alteration of Ser + Kao has been observed, which is altering andesitic lavas and ash and lapilli tuffs, with the presence of disseminated and veined hematite (after pyrite). Pyritic halo zones with a strong presence of native sulphur, chabazite veins, mainly affecting quartz porphyry with quartz eyes, and the presence of vuggy silica in the area where systematic sampling was carried out. Values of the systematic sample

are highly anomalous yielding up to 360ppb Au ppb and 0.149 Cu% reflecting the product of leaching by meteoric waters (Figure 11).

### **Propylitic alteration**

Towards the margins of the hydrothermal system located in the La Yaguita area, and in the upper part of Bourbon to the south of the La Cristina prospects, andesitic lavas and lapilli tuffs were observed, with the presence of epidote + disseminated chlorite and calcite veins, indicating strong propylitic style alteration and the distal parts of the porphyry system.

To the SE of the La Cristina area, in the El Oro and La Plata artisanal workings, extensive zones of quartz-calcite veining with the presence of Cpy + Py, interpreted as the perimeter to the main porphyry systems of Bourbon, Vega Grande and Arabica (Figure 12 and Figure 13)



**Figure 12.** a) Vereda El Oro, Andesitic lava with alt Epi + Chl + Cal, Vn Qz + Cal + Py, Py diss < 3%, Vn 105°/70°SW. b) Minieléctric, Andesitic lava with alt Epi + Chl + Cal, Vn Qz + Cal + Py + + Cpy, malachite, Py diss < 2%, Vn 260°/80° SE. c) Platanito, Andesitic Lava with alt Epi + Chl, Sheeted veins Qz + Cal + Py, Vn 255°/ 80° SE.

### **Geochemistry**

Within the La Cristina project area the most extensive areas of hydrothermal alteration, with the presence of extensive zones of oxides and sulfides accompanying the argillic and sericitic hydrothermal alteration zones, are located within the Bourbon and Arabica propsects, however additional lesser zones are widespread. These prospective targets have, to date, returned consistent zones of highly anomalous copper and gold mineralization in saprolitic material and underground artisanal workings as sulphide mineralization (Figure 13, Annex 2).

The areas with the greatest economic potential are described below:

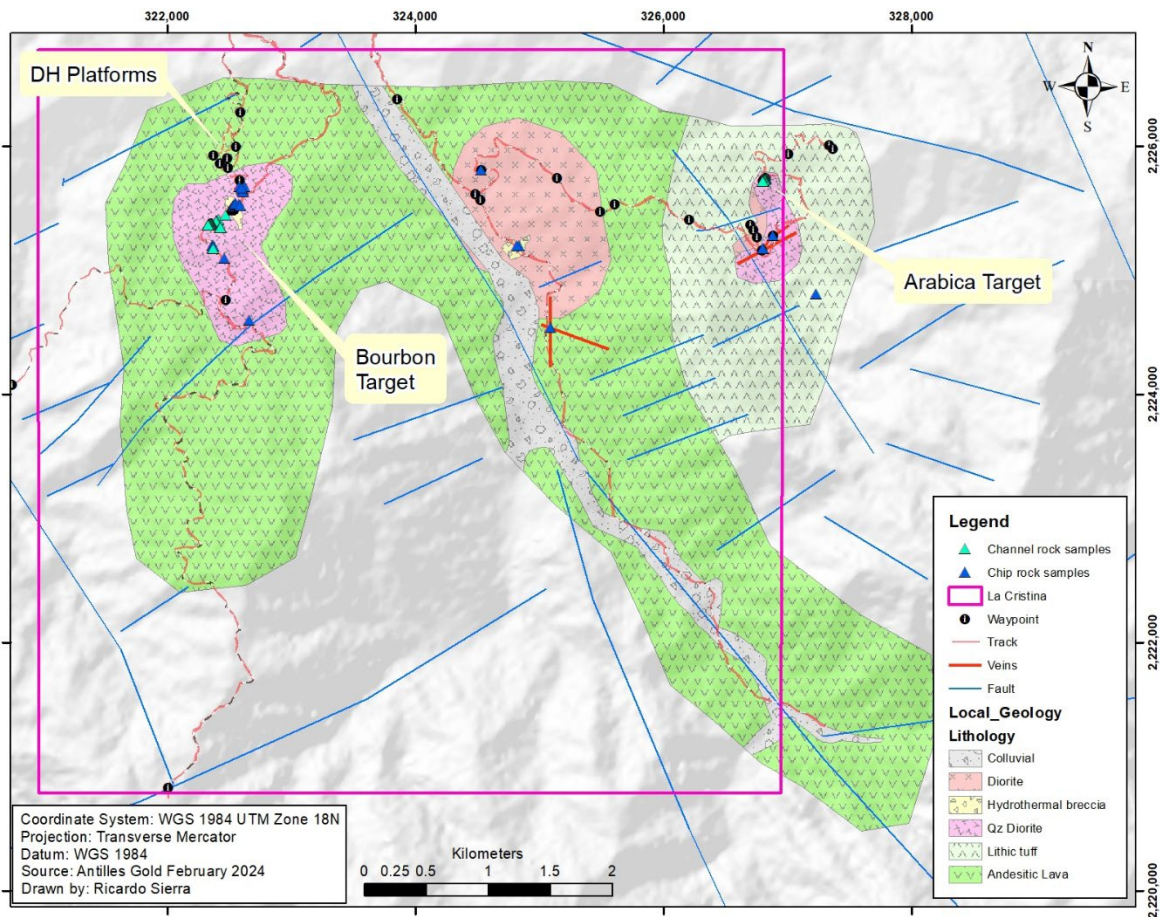


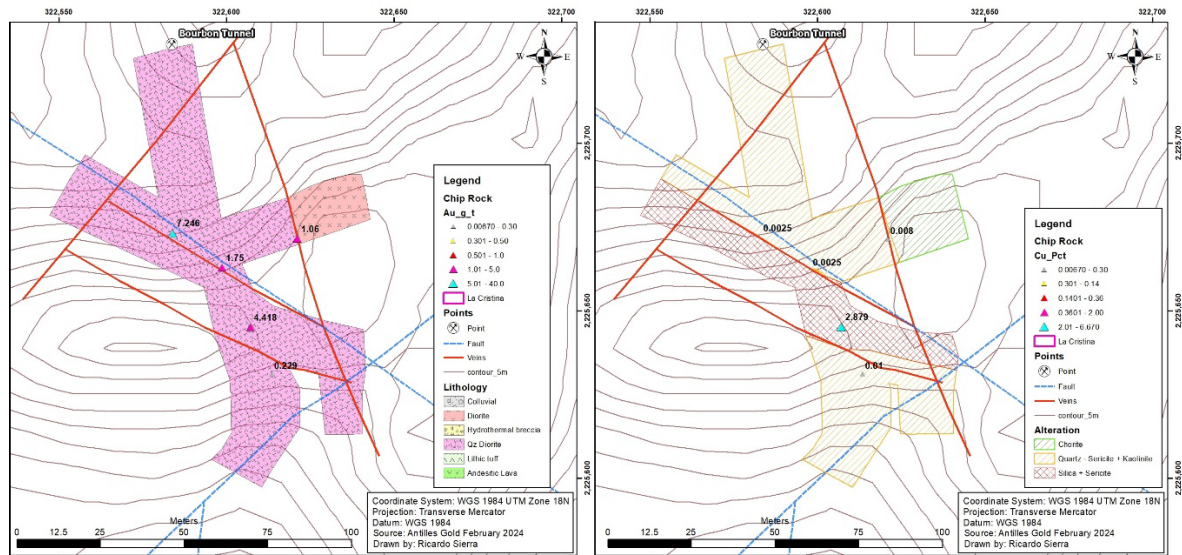
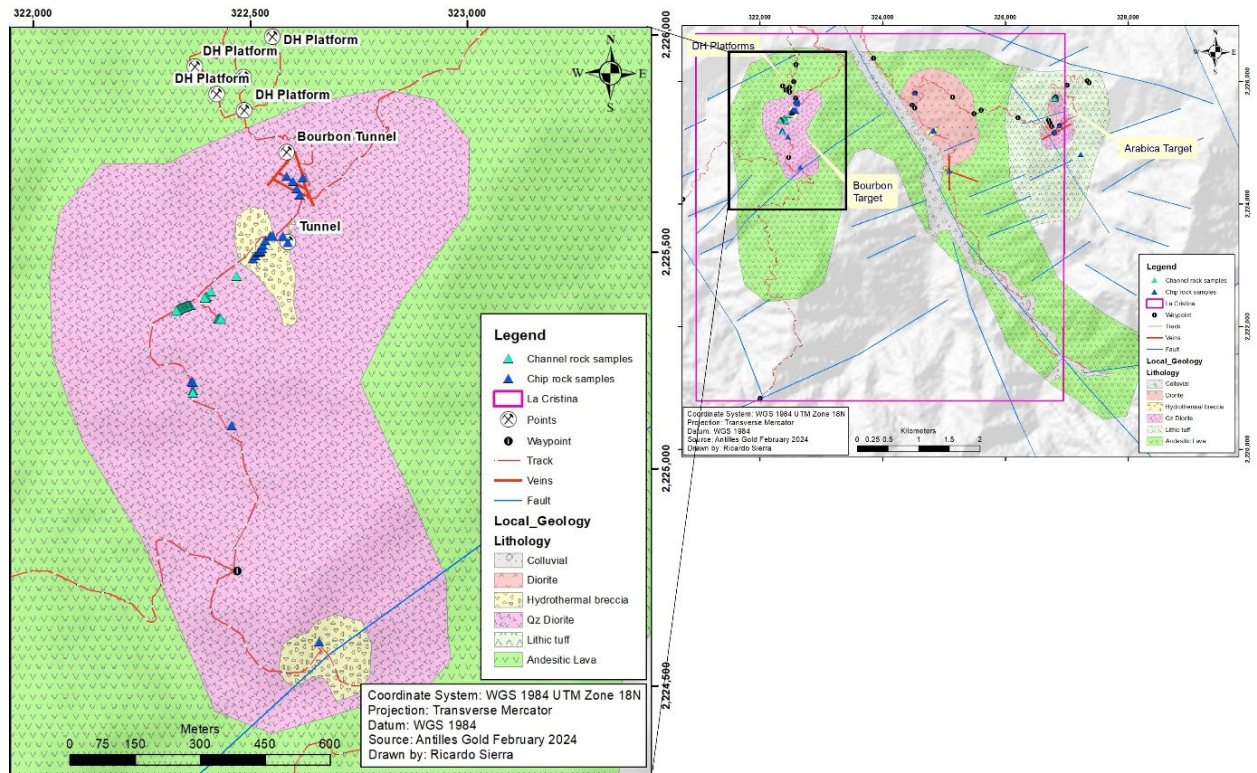
Figure 13. Location of Bourbon and Arabica prospects.

### Bourbon Prospect

Located in the NW of the La Cristina concession, the Bourbon prospect incorporates three artisanal underground workings (Figure 14). The copper-gold mineralization is located at the contact between two dioritic porphyry intrusions that display strong sericite-kaolinite alteration with silicified zones, quartz veining and quartz-sulphide stockworks trending AZ 210°/60° NW, with additional multi-direction lesser structures 330°/50° NE, 305°/80° NW and 115°/85° SW (Figure 15). Initial channel and grab sampling results include gold grades of 7.25 g/t Au, 4.42 g/t Au, 1.75 g/t Au and 1.06 g/t Au with up to 2.88% Cu associated with stockworks of quartz veining with chalcopyrite-covellite-chalcocite mineralization. Peripheral to the main mineralized zones are distal quartz-hematite-gypsum zones of finer stockwork veining.

The adjacent surficial areas display a number of outcrops of dioritic to quartzdioritic composition with pervasive alteration of sericite + kaolinite and hydrothermal breccias with strong silicification + sericite + kaolin ± native sulphur. Mineralization of chalcopyrite-pyrite-chalcocite, and secondary oxides such as calcantite + pitchlimonite were identified, that cut volcano-

sedimentary rocks including lapilli tuffs, lithic tuffs and andesitic lavas. Colluvial deposits partly cover the main outcrops given the topography of the region.



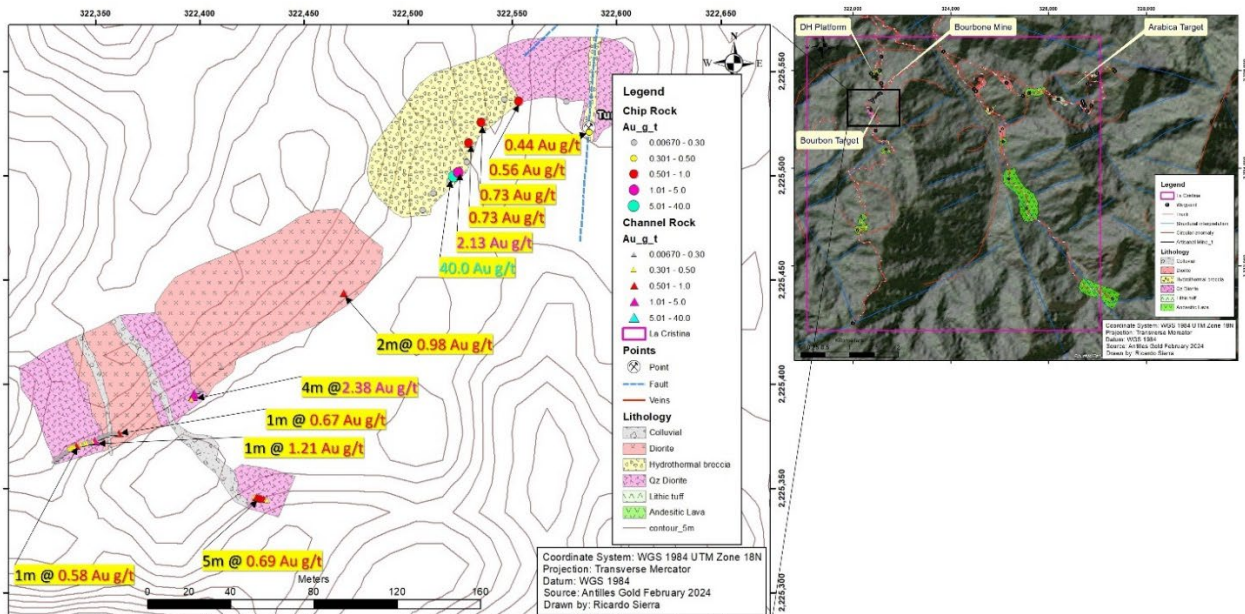
Surface sampling was carried out over the outcropping zones of intense hydrothermal alteration noted above indicating large zones of very anomalous through high-grade mineralization of both gold and copper. Panel sampling of outcrops has returned gold values of 40 g/t Au and 2.13 g/t

Au with channel sampling intervals including 4m @ 2.38 Au g/t, 1m @ 1.21 Au g/t and 5m @ 0.39 g/t Au (Figure 16 and Figure 17).

Copper results from the channel sampling yielded 2m @ 6.67% Cu as a maximum value, it is estimated that due to the strong surficial oxidation and weathering of the sulphide minerals indicates the copper, that is highly mobile in such environments, has been leached to lower levels of the saprolite at depth (Figure 18).



**Figure 16.** Rock sampling at the Bourbon prospect. Rock chip sampling from AG\_000023 sample to AG\_000032; Channel rock sampling from AG\_000074 to AG\_000076 and from AG\_000150 to AG\_000196.



**Figure 17.** Lithology map and rock chip values and systematic sampling of channel rock with Au g/t values.



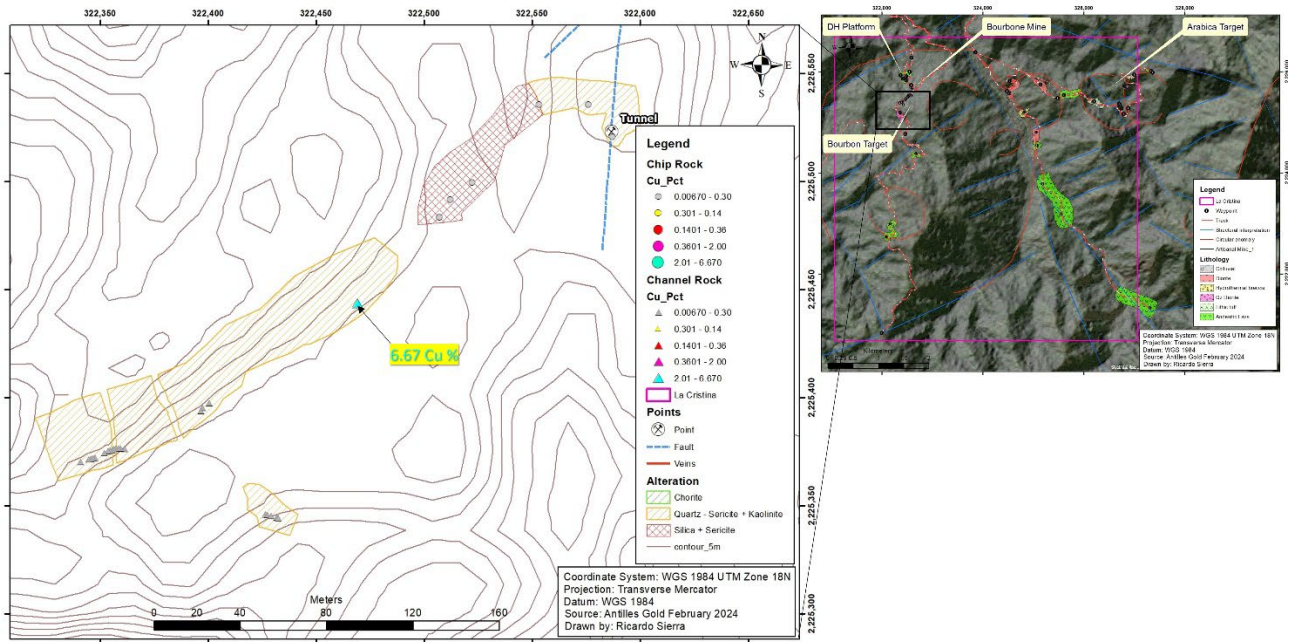


Figure 18. Map of hydrothermal alteration and the values of rock chip and systematic sampling of rock in channel with Cu% values.

### Arabica Prospect

The Arabica prospect is located in the NE zone of the la Cristina project where two artisanal historical mines were located (Figure 19). The prospect area, and where the historical underground mining has taken place, incorporates a series of dioritic intrusives that have intruded intermediate volcanic rocks. Intense sericite-kaolinite hydrothermal alteration is noted over large areas throughout the prospect with disseminated pyrite < 5%, and hematite < 3%.

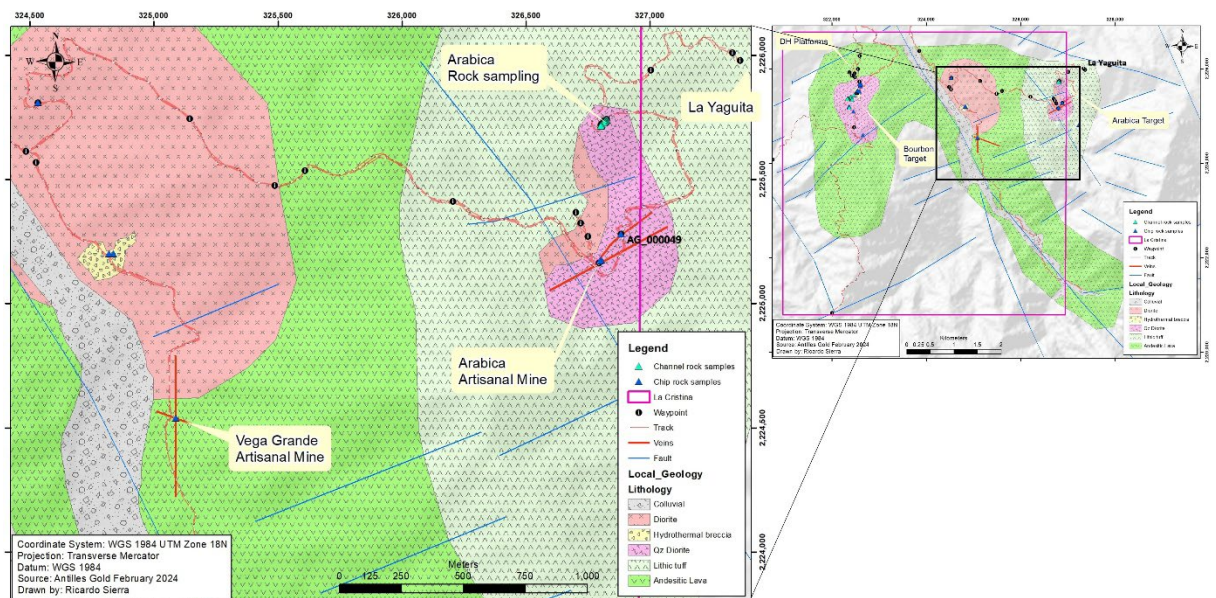


Figure 19. Location of the Arabica target, to the NE of the La Cristina project.

Anomalous sampling to date includes a panel sample of 0.5m x 0.5m @ 0.21 g/t Au and 0.15% Cu. The sample represents strong alteration of Ser + Kao with very strong pyrite alteration, which could correspond to the pyritic halo (Figure 19 and Figure 20). A further 550m NNW of the Arabica artisanal mine workings, systematic rock channel sampling was carried out on a quartzdioritic porphyry intrusive, also with pervasive alteration of Ser + kao, native sulphur, and local presence of calcantite + Cpy. A total of 17 rock samples were taken with values being highly anomalous, including a rock sample in a channel with up to 360 Au ppb in sample AG000064 (Figure 20).



**Figure 20.** a) Systematic channel rock sampling at the Arabica prospect. b) Quartz porphyry outcrop with advanced argillic alteration, disseminated Py <50% + Cpy, located 450m SSE of systematic rock sampling.

### Schematic section

A corridor of at least 4.5 km x 2.2 km of E-W orientation has been identified, along the Bourbon to Arabica prospects trend, where strong hydrothermal alteration is pervasive and related to advanced argillic alteration (sericite-kaolinite) and phyllic style sericite-pyrite alteration zones. Additional zones of vuggy silica and sulphides associated with hydrothermal breccias and the presence of dioritic stocks and large zones of disseminated and stringer veinlet sulphide mineralization are related to the known surficial copper-gold mineralization noted to date. This exposed alteration and copper-gold mineralization is the insitu lithocap to a buried porphyry system that is the source of all the metallic mineralization and high-sulphidation style mineralization noted to date. Notably the highest topographic zones where the Arabica and Bourbon prospects are located relate to the upper parts of the preserved hydrothermal-magmatic system where the high-sulphidation style mineralization is located, and so it is expected for the porphyry style mineralization to be exposed in the lower topographic areas where valleys are currently located (refer Figure 21)

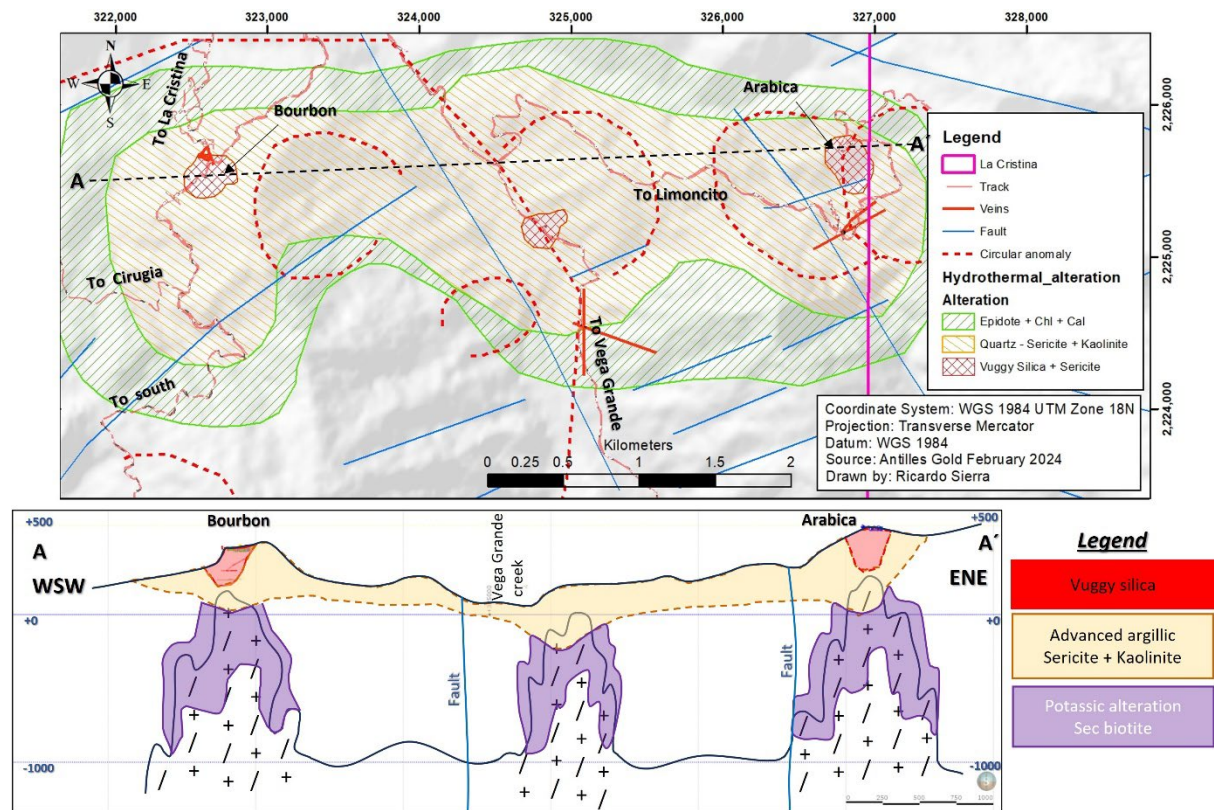


Figure 21. Schematic section with WSW – ENE orientation, from the Bourbon through Arabica prospects.

## Conclusions and recommendations

- The La Cristina project represents an excellent exploration project with high potential for the discovery of both porphyry copper-gold and high-sulphidation gold-copper deposits
- A major E-W structural corridor has been located between the Bourbon and Arabica prospects that measures 4.5 km x 2.2 km. This zone incorporates overlapping pervasive and intense zones of both advanced argillic and phyllic style hydrothermal alteration styles that indicates the presence of a potentially large porphyry system at depth that has a large exposed lithocap and high-sulphidation style halo over very large dimensions at surface
- Numerous zones of high-grade copper-gold mineralization has been returned from initial sampling in numerous historical artisanal underground working and their immediate vicinities. No detailed exploration has been undertaken within these areas to date and simple surficial exploration programs including surface geochemical sampling and geophysics are expected to return rapid positive results for a following drilling campaign.
- A detailed ridge and spur soil sampling campaign is suggested to start as soon as possible to efficiently sample large areas on topographic highs geochemically and to prevent sampling in areas with transported cover
- Stream sediment sampling of active drainages to discover additional anomalous areas is also suggested to rapidly and cheaply define the additional potential of the larger project area

- LIDAR survey of topography with high resolution imagery is also requested along with a ground magnetic program over the main mineralized trend of Bourbon-Arabica

- Additional detailed geological mapping of prospects and detailed underground sampling and mapping of all historical workings is essential

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## 1. Annexes

Anex 1 Compilation of age determinations for Sierra Maestra intrusive rocks. Rojas-Agramonte et al., 2004.

Method	Locality	Rock type	Age (Ma)	Reference
K-Ar	Massif Daiquiri	Gabbro	76 ± 3.8	Rodríguez-Crombet et al., 1997
	Massif Daiquiri	Tonalite	44 ± 4	Eguipko and Pérez, 1976
	Massif Daiquiri	Tonalite	54 ± 5	Alioshin et al., 1975
	Massif Daiquiri	Quartz diorite	39 ± 4	Alioshin et al., 1975
	Massif Daiquiri	Quartz diorite	49 ± 6	Laverov and Cabrera, 1967
	Nima-Nima Massif	Plagiogranite	46 ± 6	Laverov and Cabrera, 1967
	Nima-Nima Massif	Quartz diorite	42 ± 5	Eguipko and Pérez, 1976
	Nima-Nima Massif	Quartz diorite	58 ± 5	Laverov and Cabrera, 1967
Conventional U-Pb	Massif Daiquiri	Quartz diorite	49.8 ± 0.2	Kysar et al., 1998
	Massif Daiquiri	Gabbro-diorite	50.2 ± 0.1	Kysar et al., 1998
	Massif Daiquiri	Andesite	50.6 ± 0.1	Kysar et al., 1998
	Massif Daiquiri	Dacite flow	49.7 ± 0.3	Kysar et al., 1998
	Guamá Massif	Quartz diorite	46.9 ± 0.1	Kysar et al., 1998
	Turquino Massif	-	56 (no error provided)	Kysar et al., 1998
U-Pb SRIMP	Massif Daiquiri	Tonalite	50.1 ± 0.5	Rojas-Agramonte et al., 2004
	Massif Daiquiri	Tonalite	310.8 ± 3.4	Rojas-Agramonte et al., 2004
	Nima-Nima Massif	Tonalite	50.5 ± 0.5	Rojas-Agramonte et al., 2004
	Nima-Nima Massif	Tonalite	50.1 ± 0.5	Rojas-Agramonte et al., 2004
	Peladero Massif	Tonalite	48.2 ± 0.4	Rojas-Agramonte et al., 2004
	Turquino Massif	Tonalite	55.4 ± 0.7	Rojas-Agramonte et al., 2004
	Turquino Massif	Trondhjemite	60.2 ± 2.6	Rojas-Agramonte et al., 2004
Ar <sup>40</sup> Ar	Nima-Nima Massif	Tonalite	54 ± 4	Rojas-Agramonte et al., 2004
	Peladero Massif	Tonalite	50 ± 2	Rojas-Agramonte et al., 2004
Zircon Fission track	Massif Daiquiri	Tonalite	36 ± 4	Rojas-Agramonte et al., 2004
	Nima-Nima Massif	Tonalite	39 ± 4	Rojas-Agramonte et al., 2004
	Nima-Nima Massif	Tonalite	32 ± 3	Rojas-Agramonte et al., 2004
	Nima-Nima Massif	Tonalite	41 ± 3	Rojas-Agramonte et al., 2004
	Peladero Massif	Tonalite	44 ± 4	Rojas-Agramonte et al., 2004
Apatite Fission track	Nima-Nima Massif	Tonalite	44 ± 13	Rojas-Agramonte et al., 2004
	Turquino Massif	Tonalite	31 ± 10	Rojas-Agramonte et al., 2004

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**Table 2: Sample Location**

Northing	Easting	rL	Waypoint	Type	Sample ID	Location
2,225,483	322,507	444.4	133	Panel	AG_000023	LA CRISTINA
2,225,491	322,512	445.3	134	Panel	AG_000024	LA CRISTINA
2,225,497	322,520	447.6	135	Panel	AG_000025	LA CRISTINA
2,225,499	322,522	445.7	136	Panel	AG_000026	LA CRISTINA
2,225,501	322,524	445.6	137	Panel	AG_000027	LA CRISTINA
2,225,506	322,528	447.7	138	Panel	AG_000028	LA CRISTINA
2,225,515	322,529	449.3	139	Panel	AG_000029	LA CRISTINA
2,225,525	322,535	449.2	140	Panel	AG_000030	LA CRISTINA
2,225,536	322,546	447.4	141	Panel	AG_000031	LA CRISTINA
2,225,535	322,553	446.9	142	Panel	AG_000032	LA CRISTINA
2,225,535	322,576	452.8	143	Panel	AG_000033	LA CRISTINA
2,225,202	322,365	494.1	144	Grab	AG_000034	LA CRISTINA
2,225,199	322,369	489.7	145	Grab	AG_000035	LA CRISTINA
2,225,180	322,368	493.4	146	Grab	AG_000036	LA CRISTINA
2,225,100	322,458	497.2	147	Grab	AG_000037	LA CRISTINA
2,224,600	322,659	586.8	148	Panel	AG_000038	LA CRISTINA
2,225,520	322,587	464.1	152	Rock Chanel	AG_000039	LA CRISTINA
2,225,200	324,837	309.9	158	Panel	AG_000040	VEGA GRANDE
2,225,200	324,819	324.8	157	Panel	AG_000041	VEGA GRANDE
2,224,538	325,088	316.0	159	Panel	AG_000042	VEGA GRANDE
2,225,729	322,582	402.0	249	Rock Chanel	AG_000043	EUREKA MINE
2,225,663	322,599	400.7	249	Rock Chanel	AG_000044	EUREKA MINE
2,225,673	322,584	400.4	249	Rock Chanel	AG_000045	EUREKA MINE
2,225,645	322,607	400.4	249	Rock Chanel	AG_000046	EUREKA MINE
2,225,631	322,614	400.2	249	Rock Chanel	AG_000047	EUREKA MINE
2,225,808	324,532	340.0	253	Rock Chanel	AG_000048	RAFAEL TUNNEL
2,225,280	326,884	476.0	260	Panel	AG_000049	LIMONCITO
2,225,163	326,795	462.0	262	Rock Chanel	AG_000050	LIMONCITO TUNNEL
2,225,742	326,825	585.0	263	Rock Chanel	AG_000051	LIMONCITO
2,225,741	326,824	587.8	264	Rock Chanel	AG_000052	LIMONCITO
2,225,740	326,823	589.0	265	Rock Chanel	AG_000053	LIMONCITO
2,225,738	326,822	589.3	266	Rock Chanel	AG_000054	LIMONCITO
2,225,737	326,821	588.9	267	Rock Chanel	AG_000055	LIMONCITO
2,225,737	326,821	588.3	267	Rock Chanel	AG_000055	LIMONCITO
2,225,737	326,820	587.7	268	Rock Chanel	AG_000056	LIMONCITO
2,225,736	326,819	587.3	268	Rock Chanel	AG_000056	LIMONCITO
2,225,735	326,818	587.1	269	Rock Chanel	AG_000057	LIMONCITO
2,225,735	326,818	587.2	269	Rock Chanel	AG_000057	LIMONCITO
2,225,733	326,817	587.5	270	Rock Chanel	AG_000058	LIMONCITO
2,225,732	326,817	587.9	271	Rock Chanel	AG_000059	LIMONCITO
2,225,730	326,815	588.3	272	Rock Chanel	AG_000060	LIMONCITO
2,225,729	326,814	588.6	273	Rock Chanel	AG_000061	LIMONCITO
2,225,727	326,814	589.0	274	Rock Chanel	AG_000062	LIMONCITO
2,225,722	326,804	594.0	275	Rock Chanel	AG_000064	LIMONCITO
2,225,719	326,804	594.8	276	Rock Chanel	AG_000065	LIMONCITO
2,225,717	326,803	595.2	277	Rock Chanel	AG_000066	LIMONCITO
2,225,715	326,802	595.5	278	Rock Chanel	AG_000067	LIMONCITO
2,225,714	326,802	595.3	279	Rock Chanel	AG_000068	LIMONCITO
2,225,409	322,411	450.0	286	Rock Chanel	AG_000071	LA CRISTINA
2,225,398	322,401	464.0	287	Rock Chanel	AG_000072	LA CRISTINA

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2,225,396	322,399	464.2	288	Rock Chanel	AG_000073	LA CRISTINA
2,225,395	322,397	463.6	289	Rock Chanel	AG_000074	LA CRISTINA
2,225,394	322,397	462.4	290	Rock Chanel	AG_000075	LA CRISTINA
2,225,393	322,396	461.6	291	Rock Chanel	AG_000076	LA CRISTINA
2,225,376	322,363	471.0	292	Rock Chanel	AG_000150	LA CRISTINA
2,225,376	322,361	471.6	293	Rock Chanel	AG_000151	LA CRISTINA
2,225,376	322,360	471.8	294	Rock Chanel	AG_000152	LA CRISTINA
2,225,376	322,359	472.0	295	Rock Chanel	AG_000153	LA CRISTINA
2,225,377	322,358	472.0	296	Rock Chanel	AG_000154	LA CRISTINA
2,225,376	322,357	472.0	297	Rock Chanel	AG_000156	LA CRISTINA
2,225,376	322,356	472.0	298	Rock Chanel	AG_000157	LA CRISTINA
2,225,376	322,356	472.1	299	Rock Chanel	AG_000158	LA CRISTINA
2,225,375	322,355	472.4	300	Rock Chanel	AG_000159	LA CRISTINA
2,225,375	322,354	472.4	301	Rock Chanel	AG_000160	LA CRISTINA
2,225,375	322,353	472.4	302	Rock Chanel	AG_000161	LA CRISTINA
2,225,374	322,352	472.4	303	Rock Chanel	AG_000162	LA CRISTINA
2,225,374	322,351	472.2	304	Rock Chanel	AG_000163	LA CRISTINA
2,225,373	322,350	472.0	305	Rock Chanel	AG_000164	LA CRISTINA
2,225,373	322,349	471.8	306	Rock Chanel	AG_000165	LA CRISTINA
2,225,372	322,349	471.6	306	Rock Chanel	AG_000166	LA CRISTINA
2,225,372	322,348	471.4	306	Rock Chanel	AG_000167	LA CRISTINA
2,225,372	322,347	471.3	306	Rock Chanel	AG_000168	LA CRISTINA
2,225,372	322,346	471.1	306	Rock Chanel	AG_000169	LA CRISTINA
2,225,371	322,345	470.9	306	Rock Chanel	AG_000170	LA CRISTINA
2,225,371	322,344	470.8	306	Rock Chanel	AG_000171	LA CRISTINA
2,225,371	322,343	470.6	306	Rock Chanel	AG_000172	LA CRISTINA
2,225,371	322,342	470.4	306	Rock Chanel	AG_000173	LA CRISTINA
2,225,370	322,341	470.2	306	Rock Chanel	AG_000174	LA CRISTINA
2,225,370	322,340	470.1	306	Rock Chanel	AG_000175	LA CRISTINA
2,225,370	322,339	469.9	306	Rock Chanel	AG_000176	LA CRISTINA
2,225,369	322,338	469.7	306	Rock Chanel	AG_000177	LA CRISTINA
2,225,369	322,337	469.5	306	Rock Chanel	AG_000178	LA CRISTINA
2,225,368	322,337	469.4	306	Rock Chanel	AG_000179	LA CRISTINA
2,225,368	322,336	469.2	306	Rock Chanel	AG_000180	LA CRISTINA
2,225,367	322,335	469.0	306	Rock Chanel	AG_000181	LA CRISTINA
2,225,366	322,334	468.8	306	Rock Chanel	AG_000182	LA CRISTINA
2,225,366	322,333	468.7	306	Rock Chanel	AG_000183	LA CRISTINA
2,225,365	322,333	468.5	306	Rock Chanel	AG_000184	LA CRISTINA
2,225,365	322,332	468.3	306	Rock Chanel	AG_000185	LA CRISTINA
2,225,364	322,331	468.1	306	Rock Chanel	AG_000186	LA CRISTINA
2,225,364	322,330	468.0	306	Rock Chanel	AG_000187	LA CRISTINA
2,225,175	322,369	502.0	307	Rock Chanel	AG_000188	LA CRISTINA
2,225,346	322,426	439.0	308	Rock Chanel	AG_000189	LA CRISTINA
2,225,346	322,427	438.4	308	Rock Chanel	AG_000190	LA CRISTINA
2,225,345	322,428	437.9	308	Rock Chanel	AG_000191	LA CRISTINA
2,225,345	322,429	437.5	308	Rock Chanel	AG_000192	LA CRISTINA
2,225,345	322,430	437.1	308	Rock Chanel	AG_000193	LA CRISTINA
2,225,345	322,431	436.7	308	Rock Chanel	AG_000194	LA CRISTINA
2,225,344	322,432	436.3	308	Rock Chanel	AG_000195	LA CRISTINA
2,225,344	322,433	435.8	308	Rock Chanel	AG_000196	LA CRISTINA
2,225,444	322,470	453.0	309	Chip rock	AG_000197	LA CRISTINA

**Table 3: Au and Cu Assays**

Sample ID	From	To (m)	Au (g/t)	Cu (%)
AG_000023	0	1	0.18	0.07
AG_000024	0	1	0.18	0.05
AG_000025	0	1	0.29	0.00
AG_000026	0	1	40.00	0.09
AG_000027	0	1	2.13	0.01
AG_000028	0	1	0.08	0.00
AG_000029	0	1	0.72	0.00
AG_000030	0	1	0.74	0.00
AG_000031	0	1	0.22	0.00
AG_000032	0	1	0.56	0.01
AG_000033	0	1	0.28	0.01
AG_000034	0	0.5	0.28	0.13
AG_000035	0	0.5	0.10	0.09
AG_000036	0	0.5	0.01	0.03
AG_000037	0	0.5	0.03	0.00
AG_000038	0	1	0.39	0.01
AG_000039	0	1.2	0.45	0.02
AG_000040	0	1	0.01	0.01
AG_000041	0	1	0.01	0.00
AG_000042	0	1	0.02	0.01
AG_000043	0	1	1.06	0.01
AG_000044	0	1	1.75	0.00
AG_000045	0	1	7.25	0.00
AG_000046	0	1	4.42	2.88
AG_000047	0	1	0.23	0.01
AG_000048	0	0.5	0.03	0.00
AG_000049	0	0.5	0.21	0.15
AG_000050	0	1	0.03	0.01
AG_000051	1	2	0.02	0.00
AG_000052	2	4	0.07	0.00
AG_000053	4	6	0.09	0.00
AG_000054	6	8	0.07	0.00
AG_000055	8	9	0.11	0.01
AG_000055	9	10	0.11	0.01
AG_000056	10	10.9	0.01	0.00
AG_000056	10.9	12	0.01	0.00
AG_000057	12	13.2	0.03	0.00
AG_000057	13.2	14	0.03	0.00
AG_000058	14	16	0.01	0.00
AG_000059	16	18	0.02	0.01
AG_000060	18	20	0.01	0.00
AG_000061	20	21.5	0.01	0.00
AG_000062	21.5	23.1	0.03	0.00
AG_000064	0	2	0.04	0.00

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AG_000065	2	4	0.03	0.00
AG_000066	4	6	0.03	0.00
AG_000067	6	8	0.03	0.00
AG_000068	8	9.4	0.02	0.00
AG_000071	0	2	0.10	0.01
AG_000072	0	1.6	0.02	0.04
AG_000073	1.6	3.6	0.23	0.01
AG_000074	3.6	5.6	3.69	0.03
AG_000075	5.6	7.6	1.06	0.01
AG_000076	7.6	8.8	0.34	0.01
AG_000150	0	1.3	0.21	0.00
AG_000151	1.3	2.3	0.67	0.01
AG_000152	2.3	3.3	0.17	0.00
AG_000153	3.3	4.3	0.07	0.01
AG_000154	4.3	5.3	0.11	0.02
AG_000156	5.3	6.3	0.08	0.01
AG_000157	6.3	7.3	0.12	0.02
AG_000158	7.3	8.3	0.07	0.02
AG_000159	8.3	9.3	0.09	0.03
AG_000160	9.3	10.3	0.13	0.01
AG_000161	10.3	11.3	0.05	0.00
AG_000162	11.3	12.3	0.15	0.01
AG_000163	12.3	13.3	0.16	0.00
AG_000164	13.3	14.3	0.49	0.00
AG_000165	14.3	15.3	1.21	0.00
AG_000166	15.3	16.3	0.39	0.01
AG_000167	16.3	17.3	0.25	0.02
AG_000168	17.3	18.3	0.21	0.01
AG_000169	18.3	19.3	0.41	0.01
AG_000170	19.3	20.3	0.30	0.01
AG_000171	20.3	21.3	0.27	0.01
AG_000172	21.3	22.3	0.35	0.00
AG_000173	22.3	23.3	0.23	0.01
AG_000174	23.3	24.3	0.58	0.01
AG_000175	24.3	25.3	0.44	0.00
AG_000176	25.3	26.3	0.46	0.00
AG_000177	26.3	27.3	0.37	0.00
AG_000178	27.3	28.3	0.38	0.00
AG_000179	28.3	29.3	0.22	0.00
AG_000180	29.3	30.3	0.23	0.00
AG_000181	30.3	31.3	0.17	0.00
AG_000182	31.3	32.3	0.20	0.00
AG_000183	32.3	33.3	0.16	0.01
AG_000184	33.3	34.3	0.11	0.01
AG_000185	34.3	35.3	0.10	0.00
AG_000186	35.3	36.3	0.11	0.00
AG_000187	36.3	37.3	0.09	0.00

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AG_000188	0	2	0.09	0.36
AG_000189	0	1	0.31	0.02
AG_000190	1	2	0.58	0.02
AG_000191	2	3	0.68	0.00
AG_000192	3	4	0.60	0.02
AG_000193	4	5	0.83	0.01
AG_000194	5	6	0.74	0.00
AG_000195	6	7	0.25	0.01
AG_000196	7	8	0.48	0.02
AG_000197	0	2	0.98	6.67

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>• <i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sampling undertaken consisted of rock chip samples, panel rock samples and channel rock samples</li> <li>• Rock chip samples were taken in a series of chips each 5cm over a continuous or semi-continuous band using a hammer and chisel, across 0.5 meter to one meter on the rock boulders, outcrop and sub outcrop locations.</li> <li>• Channel rock samples involved cutting a channel across the rock faced by hammer and chisel to bedrock around 3cm deep, around 10 cm to 15 cm wide, sampled length was 1m to 2m along of the outcrop.</li> <li>• Panel rock samples comprise multiple chips spaced each 5 to 10cm across a pane area generally of 0.5m x 0.5m</li> <li>• Sample weights ranged from 1.5kg to 2kg</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>• <i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable – no drilling results reported.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable – no drilling results reported</li> </ul>

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Criteria	JORC Code explanation	Commentary
<i>Logging</i>	<ul style="list-style-type: none"><li>• <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li><li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li><li>• <i>The total length and percentage of the relevant intersections logged.</i></li></ul>	<ul style="list-style-type: none"><li>• Not Applicable – no drilling results reported</li></ul>

Criteria	JORC Code explanation	Commentary
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable – no drilling results reported</li> </ul>

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Criteria	JORC Code explanation	Commentary
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All sample preparation was undertaken at LACEMI in Havana.</li> <li>• Au and Cu analysis for samples AG_000023 to AG_000070 were undertaken at LACEMI in Havana</li> <li>• Analysis for gold is via 30g fire assay with AA finish. Over range Au assays are repeated with Fire Assay and a gravimetric finish.</li> <li>• Cu is analysed by 2 acids HNO3-HCL, and measurement by ICP.</li> <li>• Both Fire Assay and 2 acid digest are considered total assay methods for the elements of interest.</li> <li>• Au and Cu analysis for samples AG_000071 to AG_000076, and AG_000150 to AG_000197 were undertaken as SGS in Lima utilising FGAA313 and FAG303 for Au, and ICP40B for Cu.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable – no drilling results reported</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample locations as per Table 2</li> <li>• Coordinates obtained utilising Garmin 64s GPS with accuracy of +/- 5m with WGS 1984 UTM Zone 18N</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>• <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></li> <li>• <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The concession registrations are made in the name of GeoMinera SA, which are allocated to the Los Llanos International Economic Association (IEA). The Los Llanos IEA is an agreement between Antilles Gold Inc (a 100% subsidiary of Antilles Gold Limited) and Gold Caribbean Mining SA, which is a subsidiary of the Cuban State owned mining company Geominera SA.</li> <li>• <b>Note</b> – Antilles Gold has no economic interest in the Sierra Maestra concessions until they are transferred to a Joint Venture</li> <li>• The Reconnaissance Permit Buey Cabón encompasses 1,110 Ha and is located in the</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>topographic sheets at scale 1: 50 000 Asuradero (4975-I) and Ciudadamar (5075-IV)</p> <ul style="list-style-type: none"> <li>• The Reconnaissance Permit Vega Grande encompasses 49,000 Ha and is located in the topographic sheets at scale 1: 50 000 Yara (4876-IV), Guisa (4876-I), Baire (4976-IV), Matías (4976-III), Pico Bayamesa (4876-II) and Bartolomé Maso (4876-III)</li> <li>• The Geological Investigation Concession La Christina encompasses 3,600 Ha and is located in the topographic sheet at scale 1: 50, 000 Pico Bayamesa (4876-II)</li> <li>• The Concessions are all located in the Province of Granma, west of the city of Santiago de Cuba, south east Cuba.</li> </ul>
<p><i>Exploration done by other parties</i></p>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No previous exploration work is known of and only limited historical underground workings are present (pre 1950)</li> </ul>
<p><i>Geology</i></p>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Las Cristina and Buey Cabón copper-gold-molybdenum porphyry systems are hosted within a Cretaceous age volcanic island arc setting that is composed of mafic to intermediate composition tuffs, ash and volcanoclastic rocks that are intruded by Eocene age granodiorite and diorite intrusive stocks.</li> <li>• The geological setting is very similar to the many prospective volcanic island arc geological environments that are related to porphyry style mineralization, and associated epithermal systems.</li> <li>• The Las Cristinas and Buey Cabon systems have shown both overlapping hydrothermal alteration styles, and complex multiple veining events that is common with the emplacement of a mineralized porphyry copper-gold-</li> </ul>



Criteria	JORC Code explanation	Commentary
		molybdenum system.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>• <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample locations are as per Table 2</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>• <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li>• <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable – no drilling results being reported</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable – no drilling results being reported</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Location maps included in report</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Assay data as per Table 3</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Initial planned work will be geological mapping, and stream and rock chip sampling.</li> </ul>

**Competent Person – Christian Grainger PhD. AIG**

**Competent Person – Ricardo Sierra BSc Geology, MAusIMM**

The information in this report that relates to exploration results and observations are based on information reviewed by Dr Christian Grainger, a Competent Person who is a member of the Australian Institute of Geoscientists (AIG), and Mr Ricardo Sierra, a Competent Person who is a member of the Australian Institute of Mining and Metallurgy.

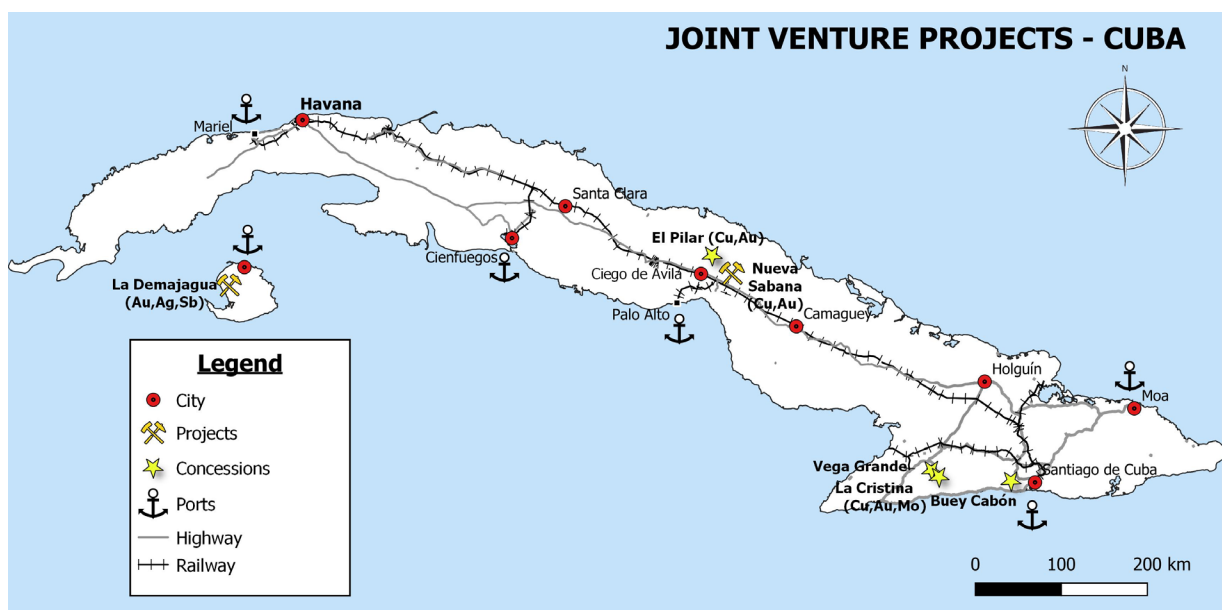
Dr Grainger and Mr Sierra are Consultants to the Company and have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and exploration activity being undertaken, to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

Dr Grainger and Mr Sierra consent to the inclusion of the Exploration Results based on the information and in the form and context in which it appears

## ABOUT ANTILLES GOLD LIMITED:

Antilles Gold's strategy is to participate in the successive development of previously explored gold, silver, and copper deposits in mineral rich Cuba.

- The Company is at the forefront of the emerging mining sector in Cuba and expects to be involved in the development of several projects through its joint venture with the Cuban Government's mining company, GeoMinera SA.
- The first project expected to be developed by the 50:50 joint venture company, Minera La Victoria SA, is the proposed Nueva Sabana mine based on the El Pilar gold-copper oxide deposit which overlays a large copper-gold porphyry system in central Cuba.



- The second project is expected to be the development of the La Demajagua open pit mine on the Isle of Youth in south-west Cuba to produce gold arsenopyrite, and gold antimony concentrates. It is planned to process the high arsenic concentrate at a plant incorporating a 200tpd two stage fluid bed roaster, and a 275tpd CIL circuit to produce gold doré.
- The joint venture partners intend to invest part of the expected surplus cash flow from early mine developments to fund exploration of major copper targets, including the El Pilar copper-gold porphyry system, and three highly prospective properties within the Sierra Maestra copper belt in south east Cuba.

- Antilles Gold is comfortable operating under the applicable law on Foreign Investment in Cuba, and the realistic Mining and Environmental regulations, and has been granted a generous fiscal regime by the Government which is supportive of its objectives.
- The existing joint venture agreement includes the requirement for all funds to be held in a foreign Bank account with the only transfers to Cuba being for local expenses, which will obviate country credit risk for foreign lenders and suppliers.



Drilling - El Pilar