A TECHNICAL REVIEW OF THE LOST CITIES – CUTUCÚ EXPLORATION PROJECT, MORONA-SANTIAGO PROVINCE, ECUADOR FOR AURANIA RESOURCES LTD.

prepared by:

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Effective Date: December 21, 2019

Report dated: February 4, 2020
Toronto, Canada

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1. SUMMARY

1.1 INTRODUCTION AND TERMS OF REFERENCE

This Technical Report ("**Report**") has been prepared in accordance with the guidelines of National Instrument 43-101 ("**NI 43-101**") by Watts, Griffis and McOuat Limited ("**WGM**") Senior Associate Geologist, Robert Page, Ph.D., P.Geo. Site visits were carried out by Mr. Page and WGM Associate Geologist, Robert Phillips. Mr. Page is a Qualified Person and a member of the Professional Geoscientists of Ontario ("**PGO**"). Mr. Phillips is not a Qualified Person and the site visit he carried out in Ecuador was done under the guidance of Mr. Page. Both are associates of Watts, Griffis and McOuat Limited.

This Technical Report provides an update on exploration carried out for Aurania Resources Ltd. ("**Aurania**"), through its wholly owned Ecuadorian subsidiary, EcuaSolidus S.A. ("**EcuaSolidus**"), between April 2017, when the initial NI 43-101 Technical Report by Karl John Roa was prepared (Roa, 2017). The Effective Date of this Report is December 21, 2019 (the "**Effective Date**"). During the last week of August 2019, Mr. Page spent 3.5 days at Aurania's Macas field office, and half a day in Quito meeting with Aurania's legal counsel and delivering check samples to the Bureau Veritas sample preparation facility. Mr. Phillips spent 4 days reviewing the Project at Aurania's Macas field office, 7 days in the field visiting 12 target areas, and a half day in Quito delivering check samples to the Bureau Veritas sample preparation facility.

Owing to the large geographic scale of the project, and limited vehicular access to all but the western and southern margins of the Project, Mr. Page was only able to visit a single target area, Crunchy Hill, where Aurania had recently completed its initial drill program. Mr. Phillips, on his trip, was able to carry out site visits to the Awacha and Tsenken target areas. Neither Mr. Page nor Phillips were able to visit most of the target areas covered by this Report. Much of Section 9.5 is based on personal communications with Aurania geologists and consultants.

1.2 PROPERTY DESCRIPTION AND OWNERSHIP

The Lost Cities – Cutucú Exploration project consists of 42 mineral exploration concessions granted to EcuaSolidus S.A. ("**EcuaSolidus**") in December 2016, covering 207,764 Ha of the Cordillera de Cutucú in southeastern Ecuador. Aurania acquired EcuaSolidus from Dr. Keith Barron, Chairman and CEO of Aurania, in February 2017. A legal opinion from Aurania's Quito-based legal counsel, on which the Author is depending, confirms that title to each of the exploration concessions constituting the Project is registered to EcuaSolidus and in good standing as of the Effective Date. Concessions are granted for a 25-year term renewable for 25 more years. The concessions are currently in year 3 of the Initial Exploration phase as defined by Ecuador's Mining Law. Starting in year 5, any concessions not relinquished at the end of year four enter a four-year Advanced Exploration phase. The Economic Evaluation phase starts at the beginning of year nine and lasts for two years, extendable for an additional two years. Parts of concessions can be relinquished throughout these phases. On completion of the Economic Evaluation phase, the remaining concessions enter the Exploitation stage, at which time an exploitation contract is negotiated with the Ecuadorian government.

Most of the Property lies within the 344,002 Ha Kutukú-Shaime Protected Forest area. Mineral exploration and mining activities may be undertaken in this protected forest under basically the same permitting regime with the most significant exception being the number of drill pads for scout drilling being limited to 20 per concession, as opposed to 30 per concession outside of protected forests. Drill pads within protected forest areas are required to be a maximum of 6 m by 6 m, while those outside of forest areas have a maximum limit of 7 m by 7 m. There is no limit on the number of bore holes that can be drilled from each drill pad. Additionally, within a Protected Forest, consultation with landowners is mandated. In practice this is no different from permitting outside a Protected Forest as Aurania will not conduct exploration activities without the permission of landowners. As of the Effective Date, Aurania is compliant with the permitting process. Aurania has reached formal access agreements with multiple indigenous communities and carried out early stage exploration activities including an initial drill program on two target areas.

The Project carries a 2% net smelter return ("**NSR**") payable to Dr. Keith Barron and an additional 3-8% NSR payable to the government of Ecuador; the NSR rate is determined by terms negotiated in a mining contract signed with the government at the completion of the Economic Evaluation stage.

1.3 ACCESS, CLIMATE, INFRASTRUCTURE AND PHYSIOGRAPHY

Access to the city of Macas, Aurania's exploration office, and the project, from Quito is excellent on 375 kilometres ("**km**") of well-maintained highways. Access along the western and southern margins of the Project is also excellent via Highway 45 following the Upano River Valley through a series of large towns, and via the paved road (Highway 40) between Patuca and Santiago, respectively. Access into the interior of the Property is poor, requiring travel by foot on forest paths from roads on the west and south sides of the Property or from landing strips for light aircraft on the east side of the Property. Within the densely forested cordillera the topography is rugged with deeply incised valleys with elevations ranging from 280 m to 2,480 m.

The Project, which lies at the transition from the Andes to the Amazon Basin, receives 2-3 m of rainfall annually, supporting dense tropical vegetation. Year-round temperatures in the town of Macas, where Aurania's field office is located on the northwestern margin of the Property, average 17°-24°C.

1.4 HISTORY

There has been no significant mining or modern exploration in the Cordillera de Cutucú. Aurania's interest in the area comes in part from similarities in the geology of the area with that of the well-mineralized Cordillera del Cóndor to the south, and in part, from archival research documenting a history of gold exploitation in the area during Spanish Colonial times.

1.5 GEOLOGY AND MINERALIZATION

Ecuador lies above the subducting Nazca Plate, a tectonic setting typical of the Andes. This is a setting proven to host porphyry, skarn, iron oxide copper gold ("**IOCG**"), fissure-manto, volcanogenic massive sulphide ("**VMS**"), carbonate replacement ("**CRD**") and epithermal precious metals deposits of Jurassic to Tertiary age. Regionally, the Cordillera de Cutucú is part of the Sub-Andean Zone, a thrust fault bounded terrane separating the high Andes from the 200 km wide, hydrocarbon rich, Oriente Basin.

Owing to lack of access and dense vegetation, the Cordillera de Cutucú geology is largely based on satellite image interpretation supported by limited fieldwork. The geological map shows a setting dominated by north-northeast and north-northwest - trending thrust faults related to the Sub-Andean Thrust system and the Sub-Andean Front to the east. Between these range bounding structures, Triassic to Jurassic sedimentary rocks are believed to make up most of the outcrop area of the Cordillera de Cutucú. Within the Cordillera there appears to be limited outcrop of intrusive rocks, but airborne magnetic data indicate that several batholithic scale bodies are present at depth.

The bulk of the Cordillera de Cutucú is underlain by the Upper Triassic to Lower Jurassic Santiago Formation, composed dominantly of marine sedimentary and volcanic sequences and Mid- to Late- Jurassic rift fill sedimentary and volcanic strata of the Chapiza Formation. Applying the relationships observed in the Cordillera del Cóndor to the south, these are the formations most likely to host porphyry copper or epithermal precious metal deposits in the

Project area. The Santiago Formation comprises 1,000 to 2,700 m of dark limestones, calcareous sandstones, intercalations of bituminous shale and locally extensive andesitic to basaltic volcanic rocks. The overlying Chapiza Formation is up to 4,500 m thick in the adjacent Oriente Basin. The lower part of the Formation has an evaporite sequence which is overlain by a sequence of red-bed sandstones and conglomerates. This is capped by up to 3,000 m of interbedded volcanoclastics and lesser sedimentary intervals of the Misahualli Member, a unit that covers the Fruta del Norte gold deposit in the adjacent Cordillera del Cóndor.

There are no significant known mineral deposits in the Cordillera de Cutucú. However, Aurania's work, covering approximately 50% of the Property through the Effective Date, has identified multiple areas with potentially economic values in hand samples of copper, lead, zinc, and silver. The silver-lead-zinc anomalies appear compatible with Mississippi Valley ("**MVT**"), Irish-type, or carbonate replacement deposits ("**CRD**"). The copper anomalies appear mostly related to sedimentary-hosted copper (copper-silver) - type deposits with copper in soil potentially related to porphyry systems and a single anomaly potentially related to an IOCG system. Epithermal gold has been a primary target model for Aurania and while work to date has identified multiple large areas with anomalies in epithermal pathfinder elements, such as arsenic, antimony, thallium and mercury, accompanying gold and silver values have been relatively low.

1.6 DEPOSIT TYPES

While there are no known significant metal deposits within the Project area, there is potential for multiple types of precious and base metal deposits. This is based on interpretations of airborne magnetic and radiometric data, the rapidly expanding database of stream sediment, soil, and rock chip sampling, geological mapping and comparisons to geology in the adjacent, more intensely explored and well mineralized Cordillera del Cóndor.

The primary target types considered when Aurania acquired the Project were high-grade epithermal vein or bulk tonnage precious metal deposits, gold skarns, and porphyry copper-gold deposits. Those deposit types and their variants remain viable targets, however, the strongest mineralization found in outcrop or float is sedimentary-hosted base metal mineralization. The most prominent and extensive is sedimentary copper-silver followed by silver-lead-zinc manto-type (MVT, Irish, or CRD) replacement deposits.

1.7 EXPLORATION

Aurania began exploration of the Property with a 5,714 line-kilometre airborne geophysical survey covering the entire Property and adjacent area combined with interpretation of satellite imagery to provide a clear framework of the structure and geology of the Cordillera de Cutucú. Field work then focused on building a geochemical database starting with widely spaced stream sediment sampling throughout this cordillera. As of the Effective Date, approximately 50% of the Property had been stream sediment sampled with results returned. Aurania continues with expanding stream sediment sample coverage while also following-up anomalies identified through the aforementioned exploration programs. The follow-up work has consisted of prospecting and rock chip sampling and soil sampling along ridges and on detailed grids. Geologists and prospectors accompanying the sampling teams map geology and collect rock chip samples. Lastly, an initial diamond core drilling program was completed on the road-accessible Crunchy Hill epithermal prospect and a similar scout drilling program is currently underway in the Yawi target area.

Through the Effective Date, Aurania has received analytical results for 2,816 stream sediment samples, 67 pan concentrate samples, 8,209 soil samples, and 1,543 rock chip samples. The Author considers that Aurania's sample collection protocols are well-designed and effective for mineral exploration (see Chapter 11 for details).

The exploration program, through the above referenced geophysical and geochemical surveys, has delineated multiple large target areas potentially related to multiple types of precious and base metal mineralization.

Stream sediment sampling that has been completed over approximately 50% of the Project by the Effective Date, has resulted in Aurania identifying the following targets:

- Three silver-arsenic-antimony-mercury-thallium-zinc anomalies each covering 50-200 km² (Latorre, Apai and Tiria). These anomalies appear to be related to extensive epithermal alteration systems, each containing multiple specific target areas. No coherent gold anomaly has yet been identified within the Latorre area, a feature suspected to be due to the level of erosion being above any gold zone that may be associated with the epithermal system there. Soil sampling from Tiria has partially defined a low level (5-11 ppb gold) but coherent gold anomaly requiring further sampling, while pan concentrate samples at Apai are starting to refine the target there;
- Porphyry copper targets have been identified in the general Kirus, Jempe, Tsenken and Awacha areas. Each of these broad areas host a cluster of discrete targets. Awacha, is characterized by an area of quartz-sericite-pyrite ("**QSP**") alteration, confirmed with short wavelength infrared ("**SWIR**") spectral analysis, in clastic sedimentary rocks that extends

over two clusters of distinct magnetic features each of which could be a target. The broad Tsenken target area is resolving into multiple target areas, the most advanced of which Aurania terms Tsenken N2 and Tsenken N3. Both are characterized by discrete magnetic centres and the Tsenken N2 target has a coincident copper in soil anomaly with scattered outcrops of QSP alteration. No clear porphyry style mineralization, complete with stockwork veining, has yet been found in outcrop in these target areas, and finding such mineralization is a focus of ongoing fieldwork. Brett (2019) identified 64 magnetic features within the Project area that could represent porphyry targets. Of those, he classified 31 as high priority for follow-up;

- The clearest anomalies, with multiple, high-grade values in copper and silver returned from rock chip sampling, are related with sedimentary-hosted mineralization that has been found over a total distance of 23 km;
- Carbonate replacement silver-zinc-lead mineralization, with potentially economic values in lead and zinc, has been found over an area 12 km long; and,
- There is growing evidence of IOCG-style copper-silver mineralization in the broader Tsenken target area. Field relationships show that, as with some of the porphyry targets, such as Tsenken N2 and N3, gabbroic diorite that exhibits IOCG-type alteration, intrudes red-beds of the Mid-Jurassic Chapiza Formation.

1.8 DRILLING

Aurania completed a 9-hole, 3,204 m core drilling program on the Crunchy Hill target between March 3 and May 8, 2019. The program failed to encounter significant values in either silver or gold. However, vein composition, style and pathfinder element anomalies in the core, suggest that the precious metal zone of an epithermal system would lie approximately 500 m beneath the crest of Crunchy Hill, at an altitude of approximately 500 m to 600 m above mean sea level (“**amsl**”).

A second scout drilling program was initiated on the Yawi target area starting with 1,870 m drilled in four holes completed as of the Effective Date. Aurania has not reported analyses from that partially completed program.

1.9 SAMPLE PREPARATION AND QA/QC

Stream sediment, soil, and rock chip samples collected through 2017 and 2018 were prepared at ALS Global in Quito with pulps shipped and analysed at ALS’ laboratory in Lima, Peru. Starting in 2019 samples, including the drill core from Crunchy Hill, have been prepared by an MSALABS affiliate in Cuenca with pulps shipped to the MSALABS laboratory in Vancouver for analysis. Both ALS Global and MSALABS are among the industry leaders in preparing and analysing exploration samples.

Aurania's quality assurance/quality control ("QA/QC") protocols for collecting, preparing and analysing rock, soil, stream sediment, and drill core samples are more than adequate for an early stage exploration program. Aurania's protocols, which are described in Chapter 11, call for inserting geochemical reference material, geochemically barren material, and duplicate samples, at regular intervals such that sample batches have at least two control samples. In the Author's opinion, the geochemical data collected by Aurania may be relied upon.

1.10 DATA VERIFICATION

Review of Aurania's geochemical database for stream sediment, soil, and rock chip samples shows a well-organized Excel Workbook. A comparison of gold, silver, copper, lead, and zinc results contained in 29 Certified Certificates from ALS and MSALABS, and representing several thousand samples, to the values for the same samples in Aurania's database, showed no errors. A review of the drill hole database and logs shows them to be robust and reliable.

The Author and Mr. Phillips, under the guidance of the Author, supervised the collection of 11 samples in an effort to closely match as possible samples collected previously by Aurania and confirm those results. These included a single stream sample, 5 core samples from 5 holes at Crunchy Hill, and 5 rock chip samples from the Tsenken sedimentary-hosted copper target. The results for gold, silver, copper, lead, and zinc from all WGM's samples match within an acceptable range the values from the comparable samples collected by Aurania. Drill collar coordinates for four holes at Crunchy Hill taken by Mr. Page with a handheld GPS unit also matched well with the coordinates in the database. In all aspects Aurania's drill core data collection protocols go beyond what is necessary for an early-stage drill program.

As noted, the Author was unable to visit most of the target areas discussed in this Report and thus are unable to verify sample locations and exposed mineralization. The conclusions provided in this Report are made under the assumption that Aurania's field personnel have accurately reported sample locations and adequately reported their geological context.

1.11 ENVIRONMENTAL AND SOCIAL

Aurania is unaware of any pre-existing environmental liabilities on the Property, and, based on the lack of a mining history on the Property, that assessment is fair. The Project lies within the Kutukú-Shaime Protected Forest in which exploration and production is allowed under slightly more stringent environmental parameters. For example, scout drilling is allowed from 20 drill pads per concession during Initial Exploration, as opposed to 30 drill pads per concession outside of protected forest areas. Permits for use of water for drilling are required on a prospect by prospect basis with permits received for the Crunchy Hill and Yawi target areas.

In addition to governmental permitting, surface use and access rights are negotiated with the local communities. Social engagement is critical to the future of the Project and Aurania has dedicated substantial effort, time and resources to community relations. Formal access agreements have been negotiated and signed with 70% of the 56 communities that lie within the Project area. In addition to providing employment opportunities to indigenous communities, special effort has been directed at working with governmental agencies to improve health, sanitation and education within the Project area.

1.12 CONCLUSIONS

Aurania's approach to exploring the Cordillera de Cutucú is sound, progressing from an airborne magnetic and radiometric geophysical survey and stream sediment sampling to highlight anomalous areas, and following up on the identified targets with detailed soil sampling, prospecting, and geological mapping prior to selecting initial drill targets. If any significant precious or base metal deposit outcrops on the Property, Aurania's program should identify it.

Aurania's program has yet to rediscover one of the gold deposits, dating to Spanish Colonial times, that originally was the driving concept behind the Project. With nearly half the Property yet to be covered by the stream sediment sampling program, these "lost" deposits may yet be found. While an outcropping precious metal deposit has so far eluded Aurania, its geochemical sampling program has outlined at least three, large (50 km^2 plus) areas with elevated arsenic, mercury, antimony and thallium values typical of trace element anomalies found above epithermal precious metal deposits.

In addition, Aurania's airborne magnetic survey highlighted multiple magnetic features with the size and characteristics of porphyry copper - style alteration and mineralization systems. Follow-up exploration identified QSP alteration potentially related to underlying porphyries in the Awacha and Tsenken N2 target areas. However, by the Effective Date, neither the geochemical sampling program nor prospecting had encountered definitive porphyry copper mineralization in classic quartz-stockwork veins. Mapping and sampling on part of the Tsenken anomaly shows features typical of IOCG deposits. As with epithermal gold, an outcropping porphyry deposit may yet be identified as stream sediment sampling coverage extends across the entirety of the Property. Until one is found, Aurania's exploration for epithermal gold or porphyry copper and gold will be based on exploration models in which ore-grade mineralization is blind to surface.

While the search for epithermal gold and porphyry copper deposits has yet to deliver strong gold or copper mineralized outcrops of either type, Aurania's work has identified large areas with high-grade copper, silver, zinc and lead in outcrop or float. The high-grade copper samples are typical of sedimentary-hosted copper deposits and the high-grade zinc-lead samples are of carbonate replacement type. Of these, the sedimentary-hosted copper potential appears the most attractive. Anomalous copper mineralization, now encountered in multiple reduced layers in Chapiza Formation red-beds, extends for 23 km on strike. Rock chip sampling within this trend has returned multiple samples with high-grade values in copper and silver.

1.13 RECOMMENDATIONS AND PROPOSED EXPENDITURES

The Author sees Aurania's highest priority as completing the stream sediment sampling program across the Property to determine if there are any outcropping epithermal gold and copper-gold or copper porphyry deposits on the Property. The second highest priority should be the continuation of the community relations program which has achieved support for the Project in the towns in the Upano River Valley and, most importantly, support from the large number of indigenous Shuar communities within the Cordillera de Cutucú. Without this effort, gaining access to explore the full Project area, or to develop a mine, should a deposit be discovered, is likely to be more challenging.

All additional work on the Project will flow from interpretation of the results of the Property-wide airborne geophysics survey and the stream sediment geochemical survey. If additional alteration-mineralization systems of significant scale are identified by the regional targeting effort, they, along with those target areas covered in this Report, should be prioritized on the basis of commodity, strength of the associated geochemical or geophysical anomaly, the expected deposit model-type, depth to target, access, and strength of community support for that target.

Given the large size of the Property and the large number of targets identified, with additional targets expected from the completion of the stream sediment sampling program, Aurania should consider partnering with other entities to help fund exploration of some of the target areas. Involving one or more partners should help in advancing the program more rapidly to ensure all concessions of potential interest remain in good standing. Additionally, the more rapidly the program advances, the sooner Aurania will be able to reduce the size of the land package and reduce holding costs. With all concessions in year 3 of the four-year Initial Exploration phase, Aurania is required to relinquish part of each concession – although the mining law does not stipulate the minimum area that should be relinquished from each concession. The reduced concession clusters would advance to the next four-year stage of Advanced Exploration.

The Author has reviewed Aurania's proposed exploration program and budget of C$9,000,000 and views both as reasonable and warranted given the scale of the Property and the multiple target areas to be advanced in the timeframes indicated above.

2. INTRODUCTION AND TERMS OF REFERENCE

2.1 INTRODUCTION

This Technical Report (the "**Report**") has been prepared in accordance with the guidelines of National Instrument 43-101 ("**NI 43-101**") covering Standards of Disclosure for Mineral Projects, Form 43-101F1 and Companion Policy 43-101CP of the Canadian Securities Administrators. The Report was prepared for Aurania Resources Ltd. ("**Aurania**") by Watts, Griffis and McOuat Limited ("**WGM**") Senior Associate Geologist, Robert Page, Ph.D., P.Geo., ("**the Author**"). Site visits to Ecuador were carried out by Mr. Page, and Robert Phillips an Associate Geologist with WGM. Mr. Page is a Qualified Person ("**QP**") accredited as a member in good standing of the Professional Geoscientists of Ontario ("**PGO**"). The Author and Mr. Phillips are independent of Aurania.

2.2 TERMS OF REFERENCE

Aurania requested that WGM prepare a NI 43-101 report ("**the Report**") on the Lost Cities – Cutucú Project ("**the Project**"). The Report updates the previous NI 43-101 report titled: NI 43-101 *Technical Report on the Lost Cities – Cutucú Exploration Project, Province of Morona-Santiago, Ecuador,* by Karl John Roa (2017) and having an effective date of April 23, 2017. That report was prepared prior to any significant exploration work being done on the Property. However, sections of that report covering location, climate, infrastructure, history, and regional geological setting are unchanged and the reader is referred to that report for more extensive narrative on those sections.

Since April 2017, Aurania has carried out an exploration program that has incorporated geology, geochemistry, geophysics, limited drilling, environmental permitting and community relations. To the knowledge of the Author, these are the first modern exploration activities carried out in the Cordillera de Cutucú. The Report covers the results of Aurania's exploration and makes recommendations for additional work and an associated budget needed to carry out that work.

2.3 SOURCES OF INFORMATION

Reports, personal communications, and data generated by Aurania and EcuaSolidus, the wholly owned Ecuadorian subsidiary of Aurania, its geologists and its contractors since April 2017, are the primary sources of information in this Report. The Author and Mr. Phillips were unable to visit most of the target areas covered in this Report and the Author relies on reporting from Aurania technical staff for most of Section 9.5. The legal description of the concessions controlled by Aurania (“**the Property**”), its current legal status, and discussion of Ecuadorian mining law, have been provided by the Quito-based law firm of TOBAR ZVS SPINGARN, Aurania’s Ecuadorian counsel. As noted in Section 2.2, Roa (2017) has been relied upon for those sections of the Report where no new information has been generated since April 2017.

2.4 DETAILS OF PERSONAL INSPECTION OF THE PROPERTY

Mr. Page and Mr. Phillips spent a total of 16 days reviewing the Project as follows:

Robert Page spent 3.5 days at Aurania’s field office in Macas, Ecuador, arriving on the afternoon of August 25, 2019. He spent a half day reviewing and sampling drill core and spent a full day in the field at the Crunchy Hill target area. Access to target areas discussed in this Report can take several days owing to lack of roads and the need to traverse mountainous jungle trails. Visiting more than the road accessible Crunchy Hill target was logistically beyond the scope of Robert Page’s visit, who was thus dependant on review of hand samples collected by Aurania’s field crews from the various target areas. Additionally, Robert Page met with Aurania’s legal counsel to review property title and Ecuadorian mining law.

Mr. Phillips arrived in Macas on November 21, 2019 and spent 3 days fly-camping in the Awacha target area and 4 days in the Tsenken sedimentary-copper hosted target area. He spent a further 4 days in Aurania’s field office at Macas.

Additionally, each of Mr. Page and Mr. Phillips, on their return to Quito from the Project, delivered the duplicate samples they collected to Bureau Veritas (“**BV**”) for preparation and onward shipment to Vancouver for assay.

Aurania’s field protocols for collection and documentation of samples are thorough and the sample locations are well defined. However, the inability to field check sample locations for geological context, and to gain better appreciation of logistical challenges, has meant that Section 9 on Exploration Results and Interpretation has been largely based on discussions and correspondence with Aurania geologists.

2.5 UNITS AND CURRENCY

All units of weights and measures are metric. All currency amounts are given in United States dollars (“**US$**”) unless otherwise specified. Currency amounts in Canadian dollars are denoted by “**C$**”.

3. RELIANCE ON OTHER EXPERTS

Section 4.2 of the Report, which covers Aurania's mineral rights, is based on information provided by Carlos Zumarraga, senior partner with the Quito-based law firm of TOBAR ZVS SPINGARN ("**TOBAR**"). Zumarraga and TOBAR have extensive experience in Ecuadorian mining law and the Author believes their opinion can be relied upon. Discussions on results and interpretation of the airborne geophysical survey in Section 9, are based on a report prepared by Jeremy Brett, P.Geo, and Senior Geophysical Consultant with MPH Consulting Limited in Toronto, Canada (Brett, 2019). Lastly, Section 20 on environmental permitting and community relations is based on information provided by Aurania and on discussions with consultants Monica Ospina and Fabiano Poester, the Managing Director and the Manager of Operations, respectively, of O-Trade, a consultancy specializing in socio-economic development in the Americas. O-Trade has directed the community relations program for the Lost Cities – Cutucú Project since early 2017.

4. PROPERTY DESCRIPTION AND LOCATION

4.1 LOCATION

The Project is serviced by Aurania's field office in the town of Macas, population ~30,000, located 250 km by air, and 375 km by road, from the capital city of Quito and 360 km by road from Guayaquil, Ecuador's main seaport (Figure 1). Macas lies west of, and adjacent to the northwest end of the Property in the Rio Upano valley. The nearest large city is Cuenca, population ~330,000, 120 km west-southwest of Macas.

4.2 ECUADORIAN MINING LAW

Ecuador's mining law was ratified in 2009 and amended in 2013, 2015 and 2018. The principal components are summarized below from Zumárraga and Bustamante (2013), Wacaster (2015) and Zumarraga & Larrea (2019).

All mineral and non-renewable resources are owned by the Ecuadorian State, which has the constitutional right to delegate exploration for, and extraction of, non-renewable resources, to third parties through the granting of mineral concessions. The granting of a mineral concession confers to the concession holder the exclusive right to explore, exploit, process and sell any metallic mineral that lies within the concession. The law allows for transfer of ownership of mineral concessions with the authorization of the Ministry of Energy and Non-Renewable Natural Resources ("**MENRNR**"). Mineral concessions are administered by the Mining Regulation and Control Agency ("**ARCOM**") under MENRNR.

The mining law distinguishes between small-scale operations processing up to 300 metric tons per day ("**tpd**"), medium-scale (up to 1,000 tpd underground, or 2,000 tpd from an open pit, or 3,000 tpd from an alluvial operation) and large-scale mining operations. Small scale operations are subject to a 3% NSR payable to the State, while medium-scale operations attract an NSR of 4%. The royalty for a large-scale producer is negotiated between 3% and 8%. The Constitution stipulates that, of the NSR payable to the State, an amount equal to a 60% of the NSR due to the State will be paid to the communities within the area of interest of an operating mine.

ARU LCE / ARU_01_Loc_Map.cdr
Last revision date: Wednesday 23 January, 2020

Watts, Griffis and McOuat

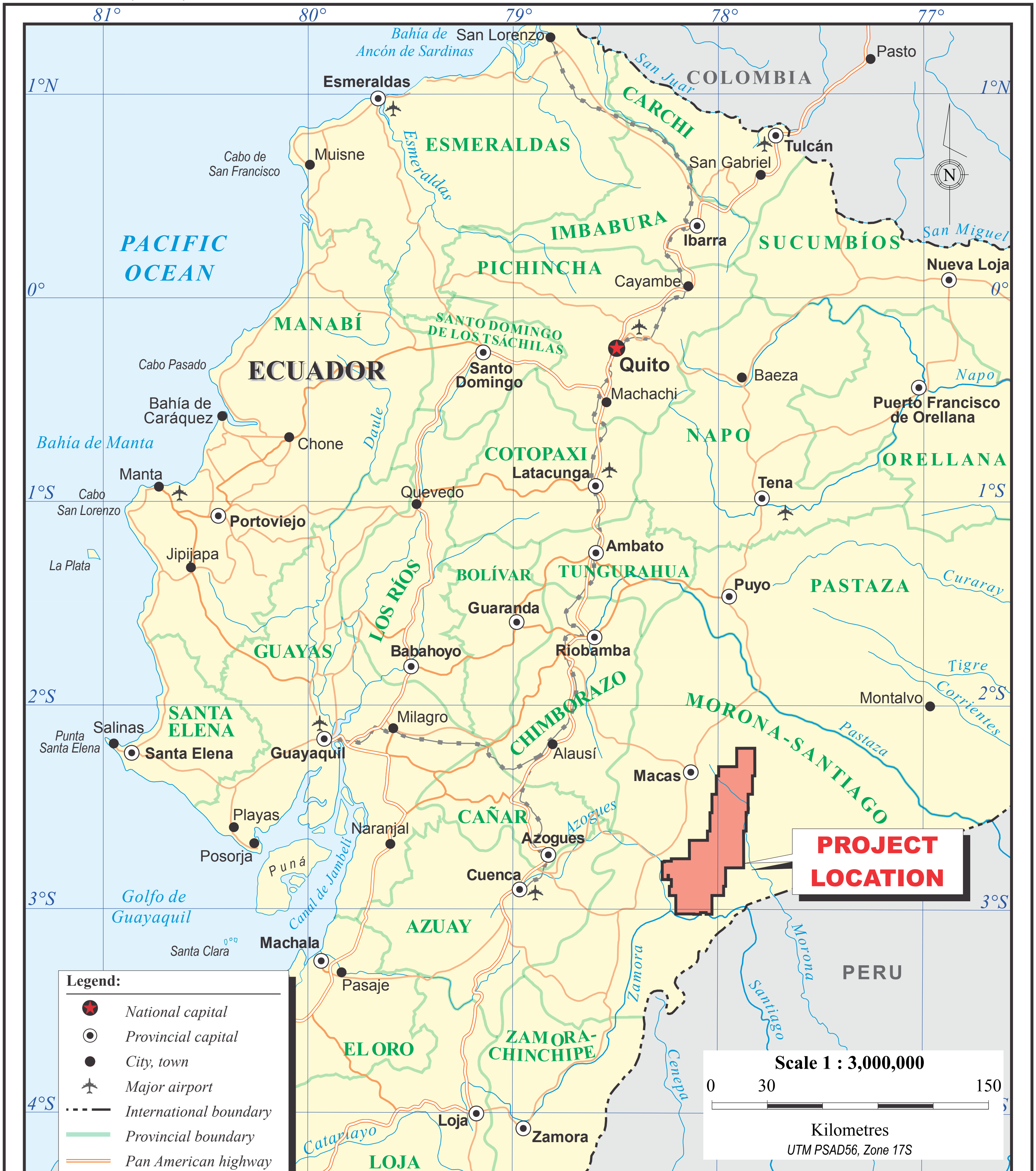


Figure 1.

AURANIA RESOURCES LTD.

Lost Cities - Cutucú Project

Morona-Santiago Province, Ecuador

Project Location Map

4.2.1 MINERAL CONCESSIONS IN ECUADOR

The MENRNR closed the mineral concession application system in January 2018 for administrative purposes and it is expected to reopen in the second quarter of 2020. Prior to granting a mineral concession, the MENRNR determines if the area applied for is indeed open for staking. The Ecuadorian Constitution bans all types of metal mining in protected areas, urban centres and national parks.

4.2.1.1 Application Process

Application for a pre-existing mineral concession that has expired, and has reverted to the State, is made through public auction. Mineral concession applications are made online through a portal administered by ARCOM. A large-scale concession has a minimum size of 500 Ha and a maximum of 5,000 Ha with its corner points defined in UTM coordinates and boundaries orientated north-south and east-west. Applicants must demonstrate their economic and technical capacity to advance mineral concessions.

Once the corner co-ordinates of a mineral concession have been submitted online, the mineral concession application is transmitted to MENRNR, which has 3 business days to check that the application meets all requirements and that the applicant has been properly pre-authorized. The applicant stipulates the exploration expenditure that it will make during the first four years and this information remains sealed and confidential. MENRNR then posts details of the concession application in its portal, and qualified parties have 5 business days to lodge competing bids.

The competing bids are opened by MENRNR in the presence of the applicants and the committed expenditures from each bid announced. If the competing bid is less than that of the original bid, the original bid wins the mineral concession. If the competing bid is greater than the original bid but less than twice the bid made by the original applicant, the original applicant has the right to match the competing bid. If the competing bid's expenditure commitment is more than twice that of the original applicant's, the competing bid wins.

4.2.1.2 Term

Mineral concessions are granted for a term of 25 years, renewable for a further 25 years. The term of a mineral concession is subdivided as follows:

- Initial Exploration: Reconnaissance-stage mineral exploration can be conducted for a maximum of four years. Scout drilling is allowed under Initial Exploration from a maximum of 30 drill platforms per concession except in protected forests where a maximum of 20 platforms are allowed. Once the Initial Exploration phase has been completed, and prior to initiation of the Advanced Exploration phase, at least 1 Ha of each concession must be relinquished;
- Advanced Exploration: Application can be made at any time within the Initial Exploration phase for a change to Advanced Exploration. Otherwise, Advanced Exploration starts after termination of the four-year Initial Exploration period. The Advanced Exploration phase is for a maximum of four years. The intention of this phase is that intense drilling, and potentially resource delineation, is undertaken;
- Economic Evaluation: this is a two-year period, extendable for an additional two years. During the economic evaluation phase, the concession-holder is required to apply for the commencement of the Exploitation phase of the project; and
- Exploitation: Within six months of beginning the Exploitation Phase, the concession-holder is required to sign a mining exploitation contract with the Ecuadorian government. Negotiations regarding that contract may begin during the economic evaluation phase. The exploitation contract stipulates the financial terms governing production, the NSR payable and various tax-related matters.

4.2.1.3 Annual Fees

An annual exploration concession fee per hectare must be paid to the State by March 31st each year to maintain a concession in good standing. The fee is based on a percentage of the minimum wage that is set by the State, and hence fluctuates from year to year. The annual fee is approximately US$10 per Ha.

4.2.1.4 Annual Exploration Expenditure

Under the terms of an exploration license, the title holder is required to make minimum annual exploration expenditures as follows:

- Year 1: US$5 per Ha;
- Year 2: US$5 per Ha;
- Year 3: US$10 per Ha; and,
- Year 4: US$10 per Ha.

The annual fees covered above can be applied towards the annual expenditure requirement on each concession. The annual expenditure report on each concession must be filed with the MENRNR by March 31st of the year after the expenditures were incurred.

4.2.1.5 Annual Technical and Financial Reports

A report on exploration undertaken, results obtained, and expenditures incurred, must be filed for each concession annually by March 31st of the year after the exploration was done. The report is required to include the work program and budget for the subsequent year.

4.2.1.6 Marking of Exploration Concession Boundaries

Mineral resource concessions are applied through map-staking. However, after a concession area is granted, the mining law requires that beacons be placed at the corner points of all concessions. Aurania has marked corner points with concrete-filled 5 cm diameter PVC pipes marked with the concession name and the UTM coordinates (Figure 2).

Figure 2. Example of a mineral concession corner point marker

4.2.1.7 Non-Compliance

Concessions can be cancelled for failure to file an annual report, failure to pay the annual fee, misrepresenting the stage of the licenses' development, excessive environmental impact, irreparable damage to Ecuadorian cultural heritage, or violation of human rights.

4.2.2 SURFACE RIGHTS

Ownership of surface rights and underlying mineral rights are separate under Ecuadorian law. The concession holder must secure easements for access, for the construction of camps and for exploration infrastructure to allow evaluation of mineral concessions. Should easements not be forthcoming from the landowner, the law provides for the State to intervene to negotiate rights of way. The timeframes of such easements are concurrent with those of the associated mineral concession. Surface rights over the approximately 69% of the Cordillera de Cutucú belong to communities of the indigenous Shuar People. Approximately 5% of surface rights are owned by non-Indigenous people and 26% of the area is State Land administered by the Ministry of the Environment.

4.3 PROPERTY DESCRIPTION

EcuaSolidus applied for 86 mineral exploration concessions covering 424,833 Ha on March 1, 2016. The then Ministry of Mines accepted applications for 42 concessions (Figure 3 and Table 1), and since there were no competing bids, the concessions were granted on December 27 and 28, 2016. The remaining 44 applications were "reserved" to be granted to EcuaSolidus at a later date but were subsequently eliminated from the cadaster (see Section 4.3.5 below).

The Lost Cities – Cutucú Project lies in the Cordillera de Cutucú in southeastern Ecuador. The Property extends 90 km north-south and up to 45 km east-west between grid lines 803,100mE to 853,900mE, and 9,755,500mN to 9,665,300mN in UTM zone 17S Provisional South American Datum ("**PSAD**") 56. The centre of the Property is 828,479mE and 9,710,415mN (Zone 17S), corresponding with latitudes -2°37'11"S and -78°2'55"W (Figure 3). The Property covers 207,764 Ha or 2,077.64 km^2.

ARU LCE / ARU_02_Concession_Map.cdr
Last revision date: Wednesday 23 January, 2020

Watts, Griffis and McOuat

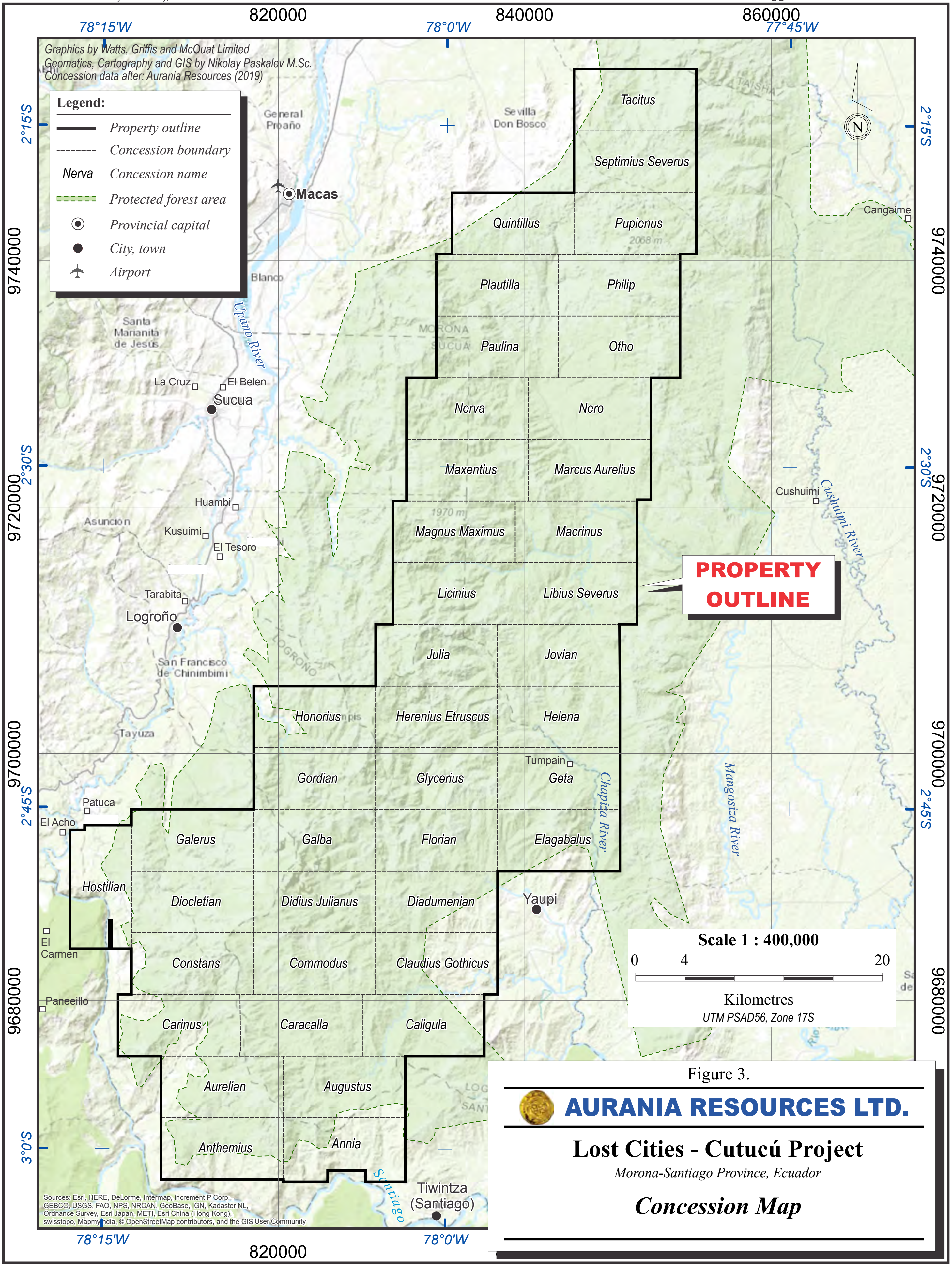


Figure 3.

AURANIA RESOURCES LTD.

Lost Cities - Cutucú Project

Morona-Santiago Province, Ecuador

Concession Map

TABLE 1.
LIST OF CONCESSIONS

N°	Permit Name	Point	X-Y (PSAD 56-Zone 17S)
1	Tacitus	P.P.	844000-9755500
		1	853900-9755500
		2	853900-9750500
		3	844000-9750500
2	Septimius Severus	P.P.	844000-9750500
		1	853900-9750500
		2	853900-9745500
		3	844000-9745500
3	Quintillus	P.P.	834100-9745500
		1	844000-9745500
		2	844000-9740500
		3	834100-9740500
4	Pupienus	P.P.	844000-9745500
		1	853900-9745500
		2	853900-9740500
		3	844000-9740500
5	Plautilla	P.P.	832800-9740500
		1	842700-9740500
		2	842700-9735500
		3	832800-9735500
6	Philip	P.P.	842700-9740500
		1	852600-9740500
		2	852600-9735500
		3	842700-9735500
7	Paulina	P.P.	832800-9735500
		1	842700-9735500
		2	842700-9730500
		3	832800-9730500
8	Otho	P.P.	842700-9735500
		1	852600-9735500
		2	852600-9730500
		3	842700-9730500
9	Nerva	P.P.	830400-9730500
		1	840300-9730500
		2	840300-9725500
		3	830400-9725500
10	Nero	P.P.	840300-9730500
		1	850200-9730500
		2	850200-9725500
		3	840300-9725500
11	Maxentius	P.P.	830400-9725500
		1	840300-9725500
		2	840300-9720500
		3	830400-9720500
12	Marcus Aurelius	P.P.	840300-9725500
		1	850200-9725500
		2	850200-9720600
		3	849100-9720600
		4	849100-9720500
		5	840300-9720500
13	Magnus Maximus	P.P.	829300-9720500
		1	839200-9720500
		2	839200-9715500
		3	829300-9715500
14	Macrinus	P.P.	839200-9720500
		1	849100-9720500
		2	849100-9715500
		3	839200-9715500
15	Licinius	P.P.	829300-9715500
		1	839200-9715500
		2	839200-9710500
		3	829300-9710500
16	Libius Severus	P.P.	839200-9715500
		1	849100-9715500
		2	849100-9710500
		3	839200-9710500
17	Julia	P.P.	827900-9710500
		1	837800-9710500
		2	837800-9705500
		3	827900-9705500
18	Jovian	P.P.	837800-9710500
		1	847700-9710500
		2	847700-9705500
		3	837800-9705500
19	Honorius	P.P.	818000-9705500
		1	827900-9705500
		2	827900-9700500
		3	818000-9700500
20	Herenius Etruscus	P.P.	827900-9705500
		1	837800-9705500
		2	837800-9700500
		3	827900-9700500
21	Helena	P.P.	837800-9705500
		1	847700-9705500
		2	847700-9700500
		3	837800-9700500
22	Gordian	P.P.	818000-9700500
		1	827900-9700500
		2	827900-9695500
		3	818000-9695500
23	Glycerius	P.P.	827900-9700500
		1	837800-9700500
		2	837800-9695500
		3	827900-9695500
24	Geta	P.P.	837800-9700500
		1	847700-9700500
		2	847700-9695500
		3	837800-9695500
25	Galerus	P.P.	808100-9695500
		1	818000-9695500
		2	818000-9690500
		3	808100-9690500
26	Galba	P.P.	818000-9695500
		1	827900-9695500
		2	827900-9690500
		3	818000-9690500
27	Florian	P.P.	827900-9695500
		1	837800-9695500
		2	837800-9690500
		3	827900-9690500
28	Elagabalus	P.P.	837800-9695500
		1	847700-9695500
		2	847700-9690500
		3	837800-9690500
29	Hostilian	P.P.	803100-9693800
		1	804300-9693800
		2	804300-9694200
		3	808100-9694200
		4	808100-9684200
		5	806500-9684200
		6	806500-9686500
		7	806300-9686500
		8	806300-9684200
		9	803100-9684200
30	Diocletian	P.P.	808100-9690500
		1	818000-9690500
		2	818000-9685500
		3	808100-9685500
31	Didius Julianus	P.P.	818000-9690500
		1	827900-9690500
		2	827900-9685500
		3	818000-9685500
32	Diadumenian	P.P.	827900-9690500
		1	837800-9690500
		2	837800-9685500
		3	827900-9685500
33	Constans	P.P.	808100-9685500
		1	818000-9685500
		2	818000-9680500
		3	808100-9680500
34	Commodus	P.P.	818000-9685500
		1	827900-9685500
		2	827900-9680500
		3	818000-9680500
35	Claudius Gothicus	P.P.	827900-9685500
		1	837800-9685500
		2	837800-9680500
		3	827900-9680500

TABLE 1.
LIST OF CONCESSIONS
(continued)

N°	Permit Name	Point	X-Y (PSAD 56-Zone 17S)	N°	Permit Name	Point	X-Y (PSAD 56-Zone 17S)
36	Carinus	P.P.	807000-9680500	**40**	Augustus	P.P.	820400-9675500
		1	816900-9680500			1	830300-9675500
		2	816900-9675500			2	830300-9670500
		3	807000-9675500			3	820400-9670500
37	Caracalla	P.P.	816900-9680500	**41**	Anthemius	P.P.	810500-9670500
		1	826800-9680500			1	820400-9670500
		2	826800-9675500			2	820400-9665500
		3	816900-9675500			3	810500-9665500
38	Caligula	P.P.	826800-9680500	**42**	Annia	P.P.	820400-9670500
		1	836700-9680500			1	830300-9670500
		2	836700-9675500			2	830300-9665300
		3	826800-9675500			3	827100-9665300
39	Aurelian	P.P.	810500-9675500			4	827100-9666200
		1	820400-9675500			5	824000-9666200
		2	820400-9670500			6	824000-9665300
		3	810500-9670500			7	820400-9665300

4.4 MINERAL CONCESSION STATUS AND COMPLIANCE

A legal opinion, on which the Author is depending (Section 3), confirms that title to each of the exploration concessions constituting the Project is registered to EcuaSolidus, and in good standing as of the Effective Date. EcuaSolidus registered the 42 concessions constituting the Property between February 9 and 16, 2017. The registration process was as follows:

- On receipt of title to each concession from the MENRNR, the title was notarized;
- Each notarized document was then registered with ARCOM; and
- Proof of registration with ARCOM was lodged with the regional sub-secretariat of mining. The Properties fall under the jurisdiction of the regional coordination in Macas - Morona Santiago.

In a transaction dated February 27, 2017, EcuaSolidus was acquired by Aurania.

As of the Effective Date, ARCOM's website shows the exploration concessions constituting the Project in good standing (https:// http://geo.controlminero.gob.ec:1026/geo_visor/).

Maintenance of the full 42-concession package through the Initial Exploration phase involved the following reporting and expenditure, with projections made for years 3 and 4:

- Year 1 (ended December 2017 and Annual Reports presented to the Ecuadorian authorities by March 31, 2018):
  - Concession fees of US$1,973,198 (US$9.50/Ha) were paid by March 31, 2017; and
  - Expenditure on the concessions was required to have exceeded the larger of the US$5.00/Ha (US$1,038,820) stipulated by law or the US$1,060,000 committed by the Company. In-country expenditure recorded in the annual reports presented to the Ecuadorian authorities for Year 1 was US$3,354,497;
- Year 2 (ended December 2018 and Annual Reports presented to the Ecuadorian authorities by March 31, 2019):
  - Concession fees of US$2,004,923 (US$9.65/Ha) were paid by March 31, 2018; and
  - Expenditure on the concessions was required to have exceeded the larger of the US$5.00/Ha (US$1,038,820) stipulated by law or the US$1,090,000 committed by the Company. The in-country expenditure recorded in the annual reports presented to the Ecuadorian authorities for Year 2 was US$4,396,820;
- Year 3 (up to December 2019, and to be reported by March 31, 2020):
  - Concession fees of US$2,046,475 (US$9.85/Ha) which were paid prior to March 31, 2019; and
  - Expenditure on the concessions must exceed the larger of the US$10.00/Ha (US$2,077,640) required by law or the US$2,098,000 committed by the Company;
- Year 4 (up to December 2020, and to reported by March 31, 2021):
  - Concession fees of approximately US$2,050,000 (US$9.87/Ha) to be paid by March 31, 2020; and
  - Expenditure on the concessions must exceed the larger of the US$10.00 (US$2,077,640) required by law or a higher amount committed by the Company, and to be determined by March 31, 2020. At the end of the first four years from the granting of the concessions, compliance with the amounts committed in the bidding process must be submitted.

In Year 5 and beyond, the Company will be required to conduct Advanced Exploration on selected target areas and these expenditures cannot be estimated at this time.

Of the 86 mineral concessions applied for on March 1, 2016, 42 were granted and 44 were assigned to be "reserved" for issuance to the Company at a later date. On December 22, 2017, at the behest of the then Ministry of Mines, application was submitted for four of the reserved mineral concessions, totaling 19,800 Ha, that are contiguous with the Property. These applications are under review by MENRNR and, if accepted, the concession applications will be gazetted and will go through the concession-granting process, with a possible Swiss Challenge (the process described in Section 4.2.1.1) if other parties submit competing tenders.

In a letter dated January 31, 2018, the then Ministry of Mines informed EcuaSolidus that the remaining 39 reserved concessions had been cancelled. On February 23, 2018, EcuaSolidus submitted a challenge regarding the reserved areas to the MENRNR. This appeal has not been resolved.

4.5 LEGAL ACCESS

The majority of the Property lies within the 344,002 Ha Kutukú-Shaime Protected Forest area (CARE, 2012; Rivandeira Torres, 2012). This Protected Forest was formally declared under official register No. 476 and ministerial resolution No. 402, dated July 3, 1990.

Ecuador's Protected Forests are natural areas that can be comprised of public, private, and community-owned lands and were created to manage and protect river basins and forests. Mineral exploration and mining activities may be undertaken in protected forests under a more stringent permitting protocol for advanced-stage exploration activities. Consultation with local stakeholders is required for exploration planned in protected forests and there is a risk that this consultation may delay access and delay some work programs.

4.6 TAXES AND ROYALTIES

4.6.1 ROYALTIES

The definitive agreement between EcuaSolidus and Aurania stipulates that a 2% NSR on metals and a 2% net sales royalty on non-smelted products, such as aggregate for concrete, are payable to Dr Keith Barron from any production from the Property.

A royalty is also payable to the State. Ecuadorian Mining Law defines a sliding-scale of between 3% and 8%, from large-scale mineral and metal production. Of this amount, the Constitution stipulates that an amount equal to a 60% of the NSR due to the State will be paid to the communities within the area of interest of an operating mine.

4.6.2 TAXES

Taxes applicable to exploitation of minerals and metals are as follows:

- Income tax is 25% payable on income less expenses;
- 3% of profit is payable to employees;
- 12% of profit is to be paid to the State;
- There is a 5% tax on funds sent abroad from mining operations; and
- Value Added Tax ("**VAT**") stands at 12% on goods purchased and services rendered. Mineral and metal exporters recover VAT paid.

A 10% reduction in income tax applies to the proportion of profits that are reinvested in production assets in Ecuador. Further tax incentives are available for operations in economically depressed and/or frontier areas.

5. ACCESS, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

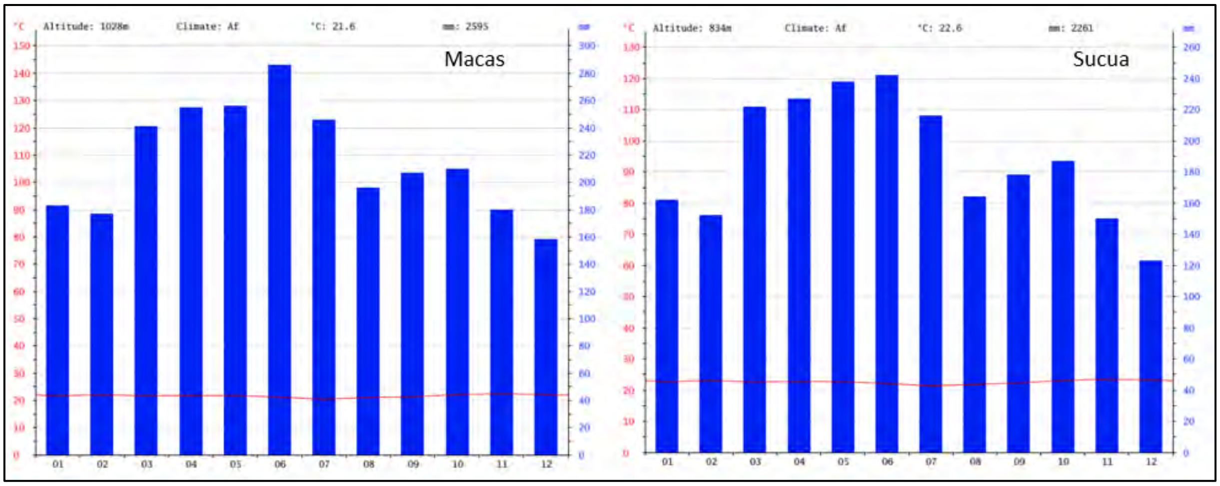
5.1 ACCESS

Until recently there was a commercial jet service between Macas and Quito, however, with a decline in oil exploration in the region those flights have been discontinued. Access to Macas and the Project from Quito is now by chartered aircraft or by vehicle over 375 km mostly on the paved and well-maintained two-lane Highway 45. Highway 45 continues to the south from Macas along the Rio Upano passing through multiple smaller towns and providing jumping off points to the interior of the western flank of the Cordillera de Cutucú.

Another paved, two-way road, Highway 40, links the town of Patuca near the southwestern part of the Property to the town of Santiago, that lies to the southeast of the Property. The Patuca-Santiago road provides easy access to the Crunchy Hill and Yawi target areas where scout drilling has been focused. The Apai target, which has been prioritized for scout drilling, also lies near the Patuca-Santiago road. All other access in the cordillera is by foot along crude trails. On the east side of the cordillera access to jungle trails is via fixed-wing aircraft to jungle airstrips serving Shuar communities. The lack of roads, difficult topography, and dense vegetation have been a deterrent to development in the Cordillera de Cutucú.

5.2 CLIMATE

The Project, which lies at the transition from the Andes to the Amazon Basin, receives high rainfall year-round supporting dense tropical vegetation. Despite a location near the equator, the climate is temperate with temperature varying little, averaging 17°C to 24°C, on a daily or seasonal basis in Macas. Annual rainfall in Macas is just under 2.6 m (Figure 4) and is higher within most of the Cordillera de Cutucú.



(Source: https:/en.climate-data.org)

Figure 4. Annual rainfall and temperature variations in the communities of Macas and the slightly lower elevation, Sucua

Though it rains all year, from March through July the monthly averages exceed 250 mm per month and averages less than 200 mm per month the rest of the year with the lowest rainfall in December. Lower rainfall occurs in areas of lower elevation. Field activities are conducted year-round but can be interrupted for hours due to thunderstorms or days due to high water in rivers that access paths cross.

5.3 LOCAL RESOURCES AND INFRASTRUCTURE

Access and infrastructure in the Rio Upano valley is good. Highway 45, a major two-lane asphalt highway, follows the Upano Valley connecting Macas, Sucua, and Patuca along with several smaller towns and provides access to the west side of the Property. There are farms, ranches, hospitals, schools, government offices, military bases, public transportation, and paved runways in Macas and Patuca. There is no shortage of human resources in the area and various services are available for support of an exploration project.

Further from Highway 45, and particularly on the east flank of the Cordillera de Cutucú, access is a challenge with the many small Shuar communities in the area connected to the larger centres by footpaths and jungle airstrips. Public services within the remote communities are sparse to non-existent. Agricultural activity is generally at the subsistence level.

5.4 PHYSIOGRAPHY

The Cordillera de Cutucú, along with the Cordillera del Cóndor which lies immediately to the south across the Rio Santiago, from the foothills of the Ecuadorian Andes and marks the western boundary of the Amazon Basin. The Cordillera de Cutucú is separated from the main Andes range by the Rio Upano valley that averages 8 km wide. The northern limit of the Cordillera de Cutucú is defined by the Rio Pastaza which flows southeast into the Amazon Basin.

There are two elongate north-south ridge-lines along the crest of the Cordillera de Cutucú separated by the 80 km long Rio Nangosiza. Elevations along the highlands of the cordillera range between 1,800 m and 2,480 m. The valleys on either flank of the range vary from 1,000 m elevation in the north to 280 m in the far southeast.

The eastern flanks of the Cordillera de Cutucú rise abruptly from the Amazonian flatlands as a distinctive escarpment. Within the cordillera the topography is rugged with deeply incised valleys. Some of streams draining the mountain range cross limestones and disappear into underground waterways. There are eight principal fluvial basins within the Project area, and all drain into the Amazon flatlands. Dense jungle vegetation covers nearly the entire Cordillera.

6. HISTORY

Aurania's interest in the Project comes in part from similarities in geology to that of the Cordillera del Cóndor to the south which hosts major gold and copper deposits. It also comes in part from research of documents in various archives in the Americas, Spain and the Vatican which record a history of some 35 years of gold exploitation from two mines from Spanish Colonial times that are believed to lie within the Project area. The reader is referred to the Section 16.2 of Roa (2017), for an extensive review of Spanish exploration and mining activity from that period.

In contrast to the Cordillera del Cóndor, there has been no modern mineral exploration in the Cordillera de Cutucú, and little mining activity since Spanish Colonial times. The region east and north of the Project hosts the Oriente Basin which contains the third largest petroleum resources in South America after Venezuela and Brazil.

7. GEOLOGICAL SETTING AND MINERALIZATION

7.1 REGIONAL, LOCAL AND PROPERTY GEOLOGY

The sections below covering Regional Geology and Local Geology, including the sections on stratigraphy, are largely condensed from the Roa (2017). The reader is referred to that report for a more detailed discussion on the regional and local geological setting.

7.1.1 REGIONAL GEOLOGICAL SETTING

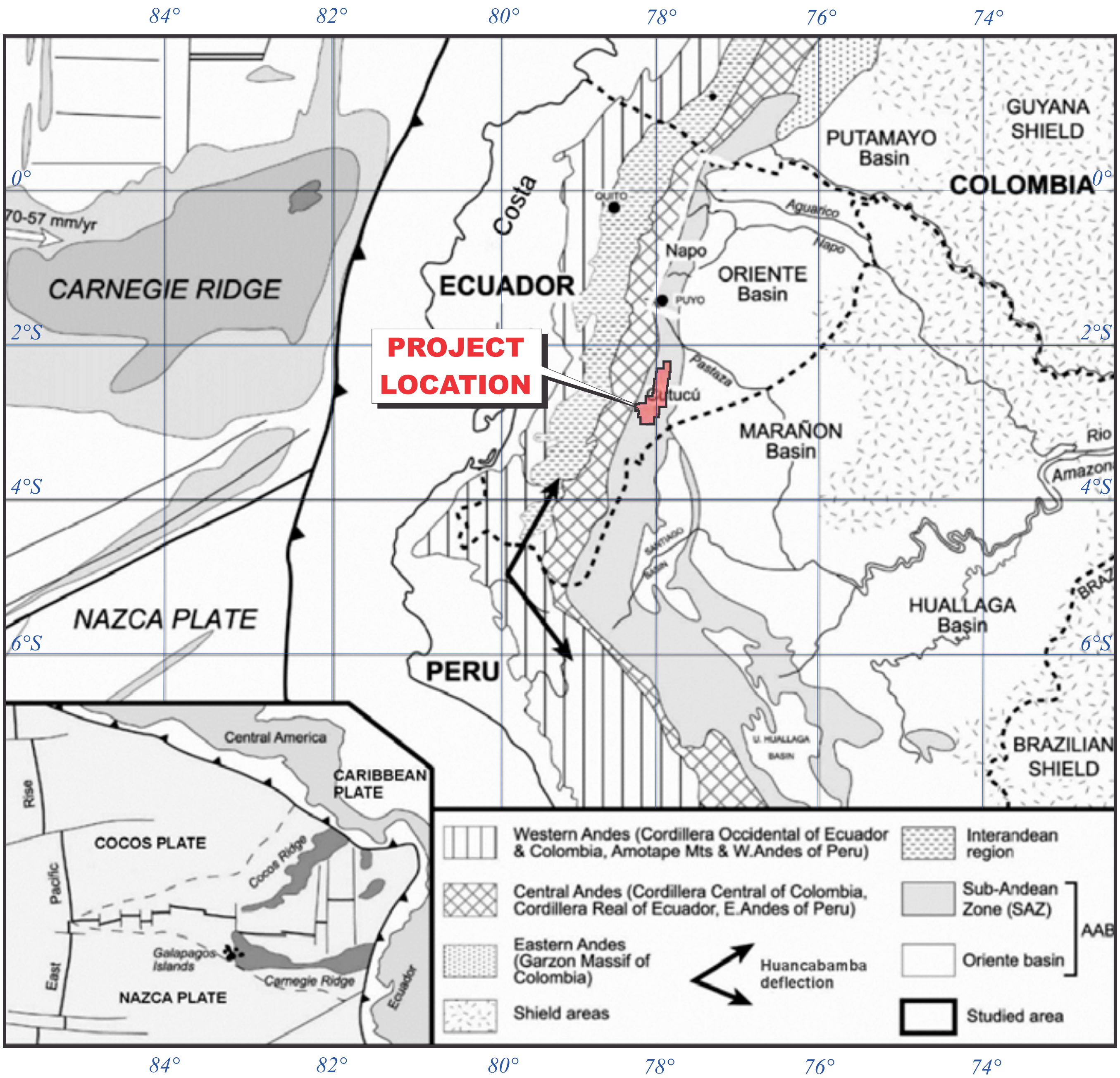
Ecuador lies above the actively subducting oceanic Nazca plate which controls the distribution of the 18 active volcanos. These include the Sangay Volcano, 48 km northwest of the Property, which is active, with fumaroles, lava flows, ash clouds and pyroclastic flows and lahars forming on a daily basis. Ecuadorian geology, between the Pacific Ocean and the Amazon basin, is dominated by a series of trench-parallel terranes composed of at least four Triassic to Tertiary age volcanic island arcs accreted onto South America (Figure 5). This tectonic setting is typical of the setting all along the western continental margin of the Americas; a setting proven to host porphyry, skarn, manto, volcanogenic massive sulphide and epithermal precious metals deposits.

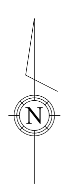
The Cordillera de Cutucú forms part of the Sub-Andean Zone, a thrust fault-bounded terrane separating the high Andes from the 200 km wide Oriente Basin. West-dipping thrust faults define both the western (Sub-Andean Thrust) and eastern boundaries (Sub-Andean Front) of the Sub-Andean Zone. The Oriente Basin, host to major petroleum reservoirs, is a back-arc basin filled with thousands of metres of Mesozoic marine and continental sedimentary strata deposited on Paleozoic to Proterozoic metamorphic rocks of the Amazonian Craton.

7.1.2 LOCAL GEOLOGICAL SETTING

Owing to lack of access and dense vegetation the geological map of the Cordillera de Cutucú is based largely on private compilations from oil exploration programs in the adjacent Oriente Basin, and regional academic studies. Compilation work done by Aurania, including detailed satellite imagery interpretations, has probably produced the best geological map of the Cordillera de Cutucú (Figure 6).

Watts, Griffis and McOuat





Scale 1 : 9,000,000

0 90 450

Kilometres

Figure 5.

AURANIA RESOURCES LTD.

Lost Cities - Cutucú Project

Morona-Santiago Province, Ecuador

Geotectonic Map of Ecuador

Graphics by Watts, Griffis and McOuat Limited
Geomatics, Cartography and GIS by Nikolay Paskalev M.Sc.
Modified after: Ruiz (2002)

Watts, Griffis and McOuat

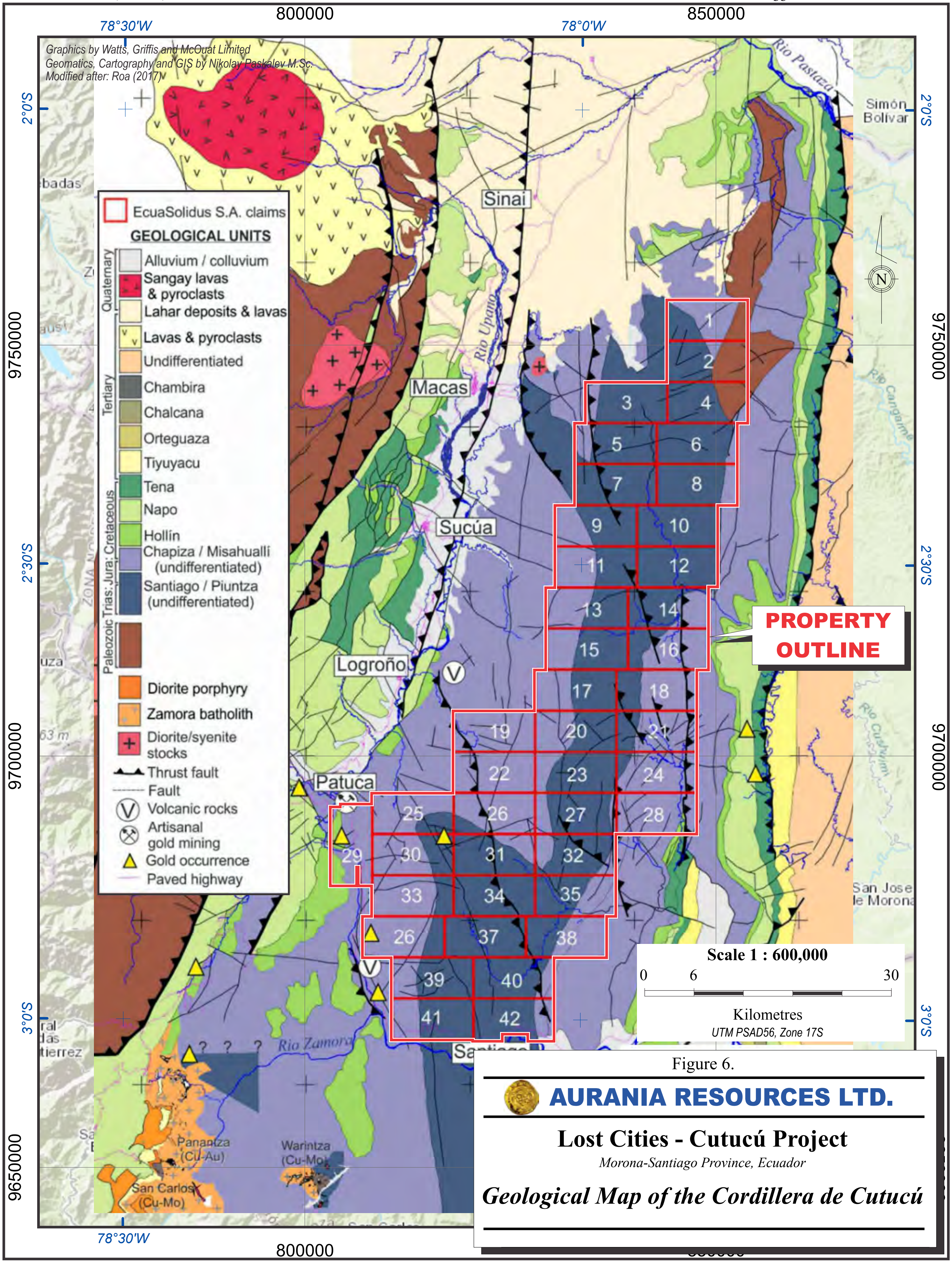


Figure 6.

AURANIA RESOURCES LTD.

Lost Cities - Cutucú Project

Morona-Santiago Province, Ecuador

Geological Map of the Cordillera de Cutucú

The map shows a tectonic setting dominated by north-northeast and north-northwest trending thrust faults related to the Sub-Andean Thrust system on the west and the Sub-Andean Front on the east, producing a series of inverted half grabens. Triassic- to Jurassic- aged sedimentary rocks are believed to make up most of the outcrop area of the Cordillera de Cutucú. Prospecting, mapping, and drilling of the Crunchy Hill target all indicate the geology will be significantly more complex than shown in Figure 6 including the presence of multiple intrusions.

Intrusive bodies in the Cordillera de Cutucú, are less extensive in outcrop in comparison to the Cordillera del Cóndor to the south, where the Zamora Batholith is exposed over hundreds of square kilometres (Figure 7). The difference is attributed by Aurania to a higher erosion level in the Cordillera de Cutucú relative to the Cordillera del Cóndor. The aeromagnetic survey carried out by Aurania supports this conclusion by having provided strong evidence for batholith-scale intrusions at depth under the Cordillera de Cutucú.

7.1.3 STRATIGRAPHY

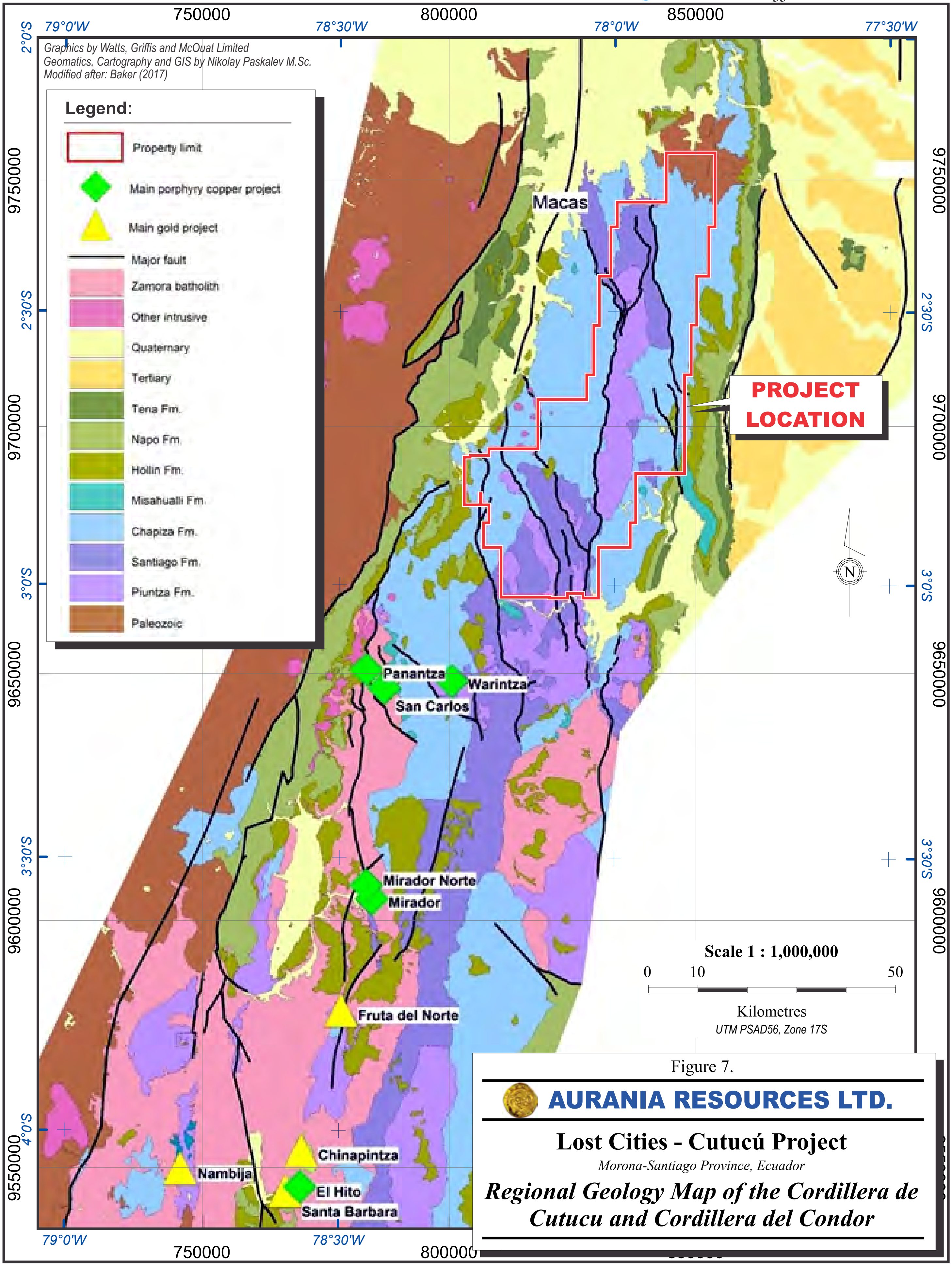
The oldest rocks in the Cordillera de Cutucú are in the Devonian Pumbuiza Formation, a sequence of shales, quartzites and conglomerates metamorphosed to greenschist facies, and in the 1,000 m thick Permian to Carboniferous Macuma Formation. Both formations are limited in outcrop to the northern part of the cordillera.

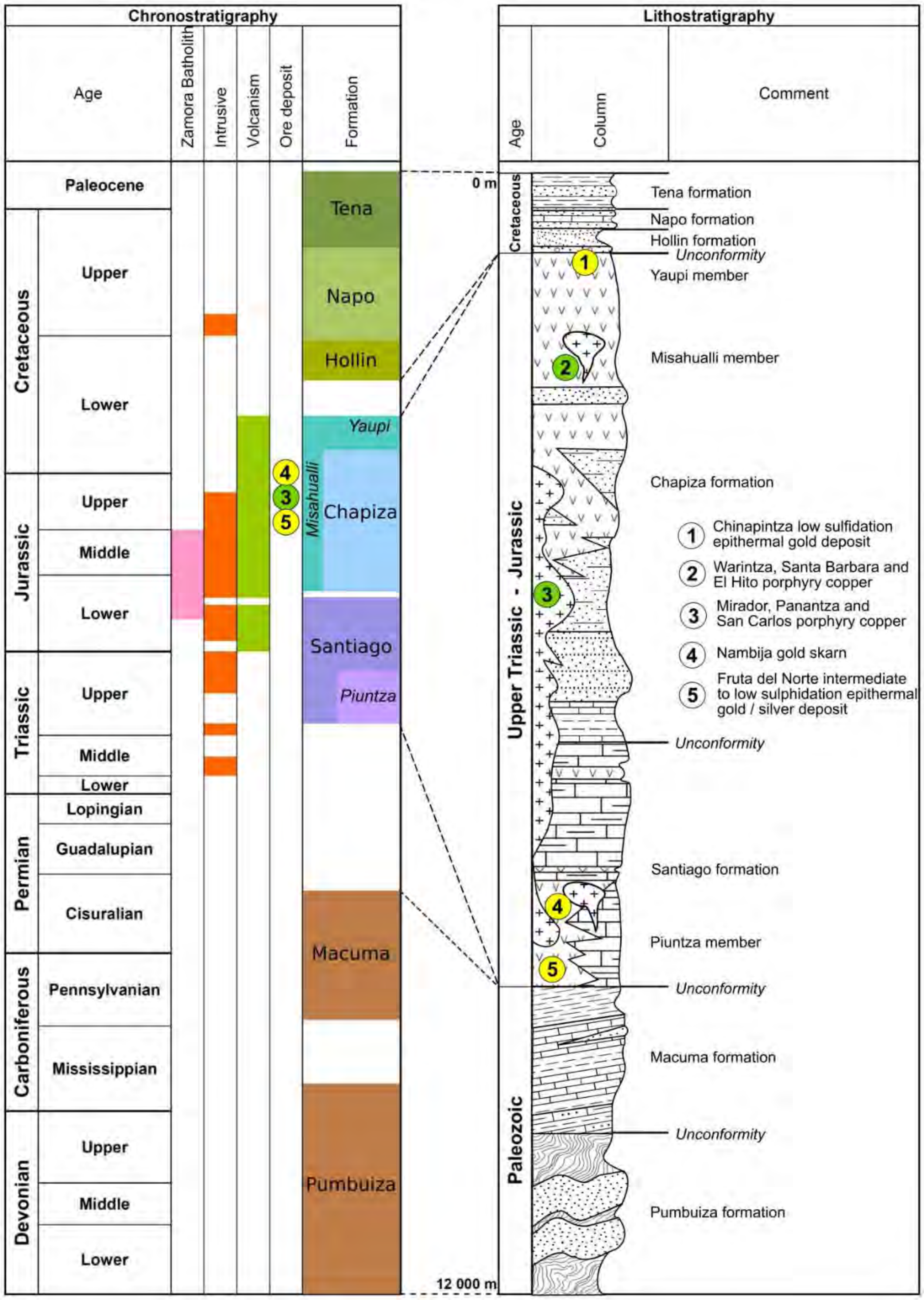
The bulk of the Cordillera de Cutucú is underlain by Upper Triassic to Lower Jurassic Santiago Formation composed primarily of marine sedimentary and volcanic sequences and the Mid- to Late-Jurassic Chapiza Formation rift-fill sedimentary and volcanic sequences. These formations are the most likely to contain, respectively, precious metal epithermal and sedimentary-hosted copper deposits in the Project area (Figure 8).

7.1.3.1 Santiago Formation

The Santiago Formation is constituted by 1,000 m to 2,700 m of dark limestones, calcareous sandstones, intercalations of bituminous shale and locally volcanic rocks. Santiago Formation volcanics include early rift-related continental tholeiitic basalts and later subduction-related, calc-alkaline lavas (Romeuf *et al.,* 1995, Romeuf *et al.,* 1997).

Watts, Griffis and McOuat





(Source: Roa 2017)

Figure 8. Stratigraphic column for the Cordillera de Cutucú and locations in the column for significant deposits in the adjacent Cordillera del Condor

According to Gaibor *et al*. (2005), the Santiago Formation has three members:

- The Santiago River Member with thick grey to black limestone and marl with lesser intra-formational breccias;
- The Yuquianza Member with black calcareous shale and lesser green siltstones; and
- The Patuca Member with thick beds of grey, green and brown siltstones, greywacke and calcareous black shale interbedded with basaltic lavas.

Patuca Member

Detailed mapping and exploration drilling undertaken by Aurania in the area immediately east of Patuca revealed a more comprehensive stratigraphic and tectonic picture of the Patuca Member with two units as described below.

San Simon Unit: The lower part of the Patuca Member consists of finely-laminated mudstone, limestone, siltstone and volcanoclastic sequences. Many of these finer-grained strata contain traces of hydrocarbon. Despite the prevalence of sedimentary rocks mapped at surface, drilling at Crunchy Hill cut a 500 m thick sequence of mafic volcanics, devoid of sedimentary intercalations. These volcanic rocks have a magnesium oxide content of up to 9% and range from high-magnesium tholeiitic basalt, through basalt, andesite and dacite. Texturally, these mafic volcanics are classified as hyaloclastites, implying subaqueous volcanic origin. They are overlain by finely laminated siltstones or volcaniclastics intercalated with limestone units several metres thick. Some of the limestone exhibits tepee structures indicative of desiccation.

Puchimi Unit: A sequence more than 500 m thick of finely laminated black mudstone, with abundant ammonites, is overlain by thinly bedded green volcanoclastic rocks and lesser intermediate to mafic lavas. Finely laminated siltstones and mudstones, with abundant plant fragments and minor proto-coal seams, overlie the volcanics. The siltstones and mudstones in turn are overlain by cross-bedded sandstones and conglomerates. This unit is abruptly overlain by black shales that have abundant ammonites.

The volcanic components of the Santiago Formation have two distinctive magmatic affinities. The first has a continental tholeiitic basaltic affinity that accumulated during rifting. The second suite of interleaved volcanic rocks consists of subduction-related, calc-alkaline lavas possibly corresponding to the first extrusives of the Mesozoic volcanic arc (Romeuf *et al.*, 1995, Romeuf *et al.*, 1997).

Elsewhere in the sub-Andean zone of Ecuador, the Triassic volcanic rocks of the Santiago Formation are designated as the Piuntza Unit (Litherhand *et al.*, 1994), forming a sequence of continental/marine volcanic and volcaniclastic rocks. The Piuntza Unit outcrops as enclaves of supra-crustal rocks within the Zamora Batholith, replete with intrusions (Drobe *et al.*, 2013), and is the principal host for skarn deposits in the Nambija mining district (Fontboté *et al.*, 2004). It has also recently been interpreted as the host for epithermal mineralization at the FDN gold-silver deposit (Leary *et al.*, 2016). The Piuntza Unit is also mapped immediately north of the Panantza porphyry copper deposit (Drobe, 2007).

The Santiago Formation is truncated by an angular unconformity overlain variably by the Jurassic Chapiza Formation (the Misahuallí and Yaupi Members) or by the Cretaceous Hollín Formation.

7.1.3.2 Chapiza Formation

This Mid- to Late- Jurassic formation correlates regionally with the extensive Sarayaquillo Formation in Perú (Benavides, 1968; Gaibor *et al.*, 2008) and the Girón Formation in Colombia (Tschopp, 1953). Oil drilling approximately 40 km to the east of the Project shows the Chapiza Formation can be 4,500 m thick. Evaporites make up the lower part of the formation and are the source for salt domes in the region.

The evaporites are overlain by continental red-bed sandstones and conglomerates. These in turn are overlain by a 1,000 to 3,000 m thick sequence termed the Misahualli Member (Tschopp, 1953). It is composed of calc-alkaline rhyolitic to basaltic flows and volcanoclastic rocks interbedded with minor sedimentary layers. The presence of the Misahualli Member in the Cordillera de Cutucú is significant as this unit overlies and conceals the Fruta Del Norte deposit in the Cordillera del Cóndor (Leary *et al.*, 2016).

7.1.3.3 Cretaceous Formations

The youngest rocks of the Cordillera de Cutucú are Cretaceous-aged continental sedimentary units that transition upward into marine sediments up to 600 m thick divided into three formations:

- Hollin Formation: white, cross bedded sandstones, 150 m thick with carbonaceous shale intercalations. This formation hosts major oil-producing intervals in the Oriente Basin;
- Napo Formation: a sequence of black, organic-rich mudstones, carbonaceous sandstones and limestones conformably overlying the Hollin Formation. Volcanic rocks along a north-northeast trend parallel to the orientation of the Cordillera de Cutucú interrupt Napo Formation sedimentary strata; and

- Tena Formation: up to 300 m of stacked red-beds interspersed with lesser conglomerates and mudstones unconformably overlying the Napo Formation.

7.2 MINERALIZATION

No significant mineral prospects were known from the Cordillera de Cutucú at the time Aurania acquired the Property. Roa (2017) reported that three gold occurrences have been recorded in the Cordillera de Cutucú by FUNGEOMINE, a private company providing exploration and mining data to the minerals industry in Ecuador. There is no information beyond the approximate location of these prospects. One of these sites is Patuca, where gold is sluiced from gravel at an elevation approximately 400 m above the plain of the Upano River immediately adjacent to the southwestern corner of the Property. Elsewhere, artisanal miners are reported to be locally extracting placer gold on a small scale in the Yaupi and Cushuimi streams that drain part of the Cordillera de Cutucú.

8. DEPOSIT TYPES

As noted in Section 7.2, no significant mineral deposits have yet been found in the Cordillera de Cutucú. However, the Project does have potential to host various types of deposits carrying one or more of gold, silver, copper, molybdenum, lead, and zinc. This is based on results from Aurania's work on the Property, and through comparisons with geology of the Cordillera del Cóndor - host to multiple epithermal precious metal, skarn and porphyry copper deposits. Aurania's exploration efforts have shown the presence of clear geological and geochemical indicators potentially related to the deposit types described below except for the skarn and sedimentary-hosted gold types. Indicators for these deposits could still be identified as field work extends across the approximately 50% of the Property for which stream sediment sampling remains to be completed, or which has been completed but for which analyses have not been received.

8.1 EPITHERMAL PRECIOUS METAL DEPOSITS

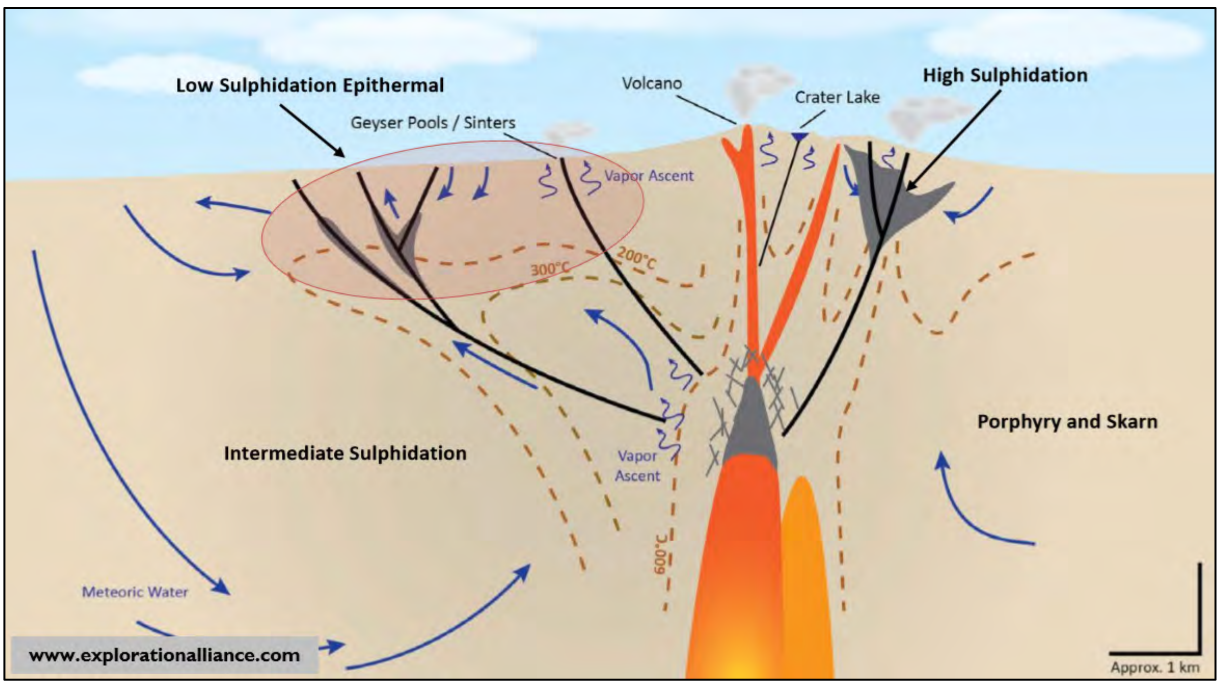
Epithermal gold-silver deposits develop in the relative near-surface environment through hydrothermal activity around intrusive centres in island arc, continental arc, and continental rift environments. Based on multiple factors related to the type of magmatic activity, distance from the associated intrusion, depth to the water table, and nature of the host rocks, these systems have been classified along a spectrum between two end members – low sulphidation and high sulphidation. The differences are related to the composition of the mineralizing fluids which produce quite different mineral and alteration assemblages. What is important is that both types of epithermal systems, and those intermediate between the two have generated major gold-silver deposits around the world and particularly in the Andes.

The footprint of individual deposits, whether as ore shoots along discrete underground mineable veins, or disseminated and fracture-controlled bulk tonnage deposits, tend to be small relative to the scale of the entire hydrothermal system. In both low and high sulphidation cases the limits of the entire hydrothermal system may cover 50 km^2 to well over 200 km^2. The much smaller economically mineralized zones may be difficult to discover but the presence of the hydrothermal system is not. At inception of the Project epithermal gold and porphyry copper were the highest priority target-types for Aurania. Subsequent work, as outlined in Section 9, confirms the presence of at least three, large, low- and/or intermediate-sulphidation epithermal alteration systems though much work remains to demonstrate the presence of potentially economic mineralization.

8.1.1 LOW SULPHIDATION EPITHERMAL DEPOSITS

This class of epithermal deposits is the most distal of intrusion related hydrothermal systems. Ore zones in these systems generally form within 1,000 m of surface and have a limited vertical extent with precious metal grades decreasing sharply below the depth at which rising hydrothermal fluids began to boil (Figure 9). Below that level potentially economic mineralization becomes base metal dominated. The surface expression of such low sulphidation hydrothermal systems are what we see today in hot springs such as those at Yellowstone, Montana or Rotorua, New Zealand.

Low sulphidation epithermal deposits have ore assemblages dominated by a gangue of quartz, with accessory adularia and calcite, and a sulphide content dominated by pyrite or pyrrhotite with accessory galena, sphalerite and minor arsenopyrite. The gold to silver ratio in these deposits may vary from 1:1 to 1:300 within a single district but, in general, each district will have an overall ratio that tends to hold over time as they are fully explored.



(Source: Exploration Alliance (www.ama.org.uk/wp-content/uploads/2013/11/LS-Epithermal_2013_07_AMA.pdf)

Figure 9. Conceptual model for a low sulphidation epithermal system

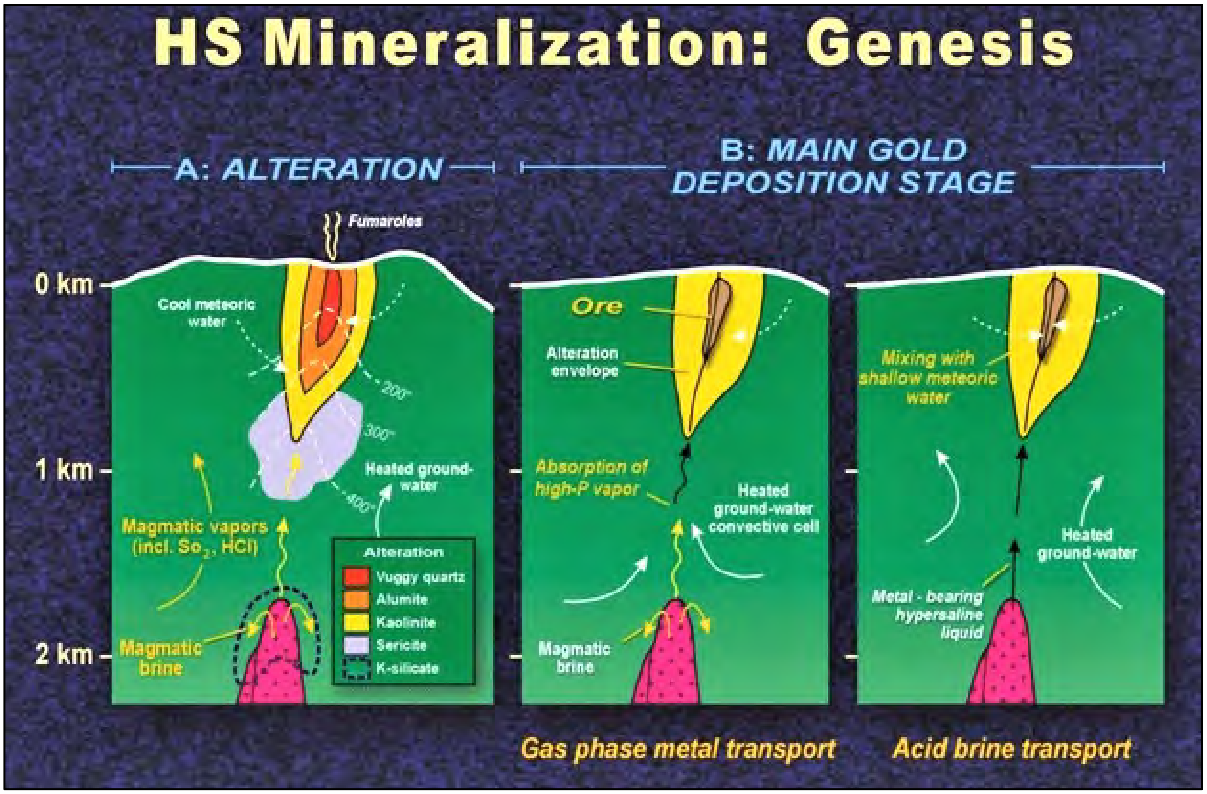
Economic mineralization in low sulphidation epithermal mining districts tend to be either in big underground mineable veins on major structures, which can be followed for kilometres, or as relatively lower grade dispersed mineralization either disseminated through the host rock or as a multitude of narrow veins developed along pervasive fracture systems. In the case of vein-dominated systems, economic mineralization is confined to high-grade ore shoots with dimensions of a few 10's to 100's of metres along strike and 100's of metres down plunge. With vein widths generally less than 10 m thick, and with ore shoots having limited strike and dip extent, these targets require intense drilling. The bulk tonnage targets are simpler to explore, but given the scale and lower grade, may be more problematic to permit for development.

Mineralization of either type generally has a significant component of the gold as free gold or electrum. Silver in the high silver to gold ratio systems occurs as argentite or is in galena and sulfosalts. In most cases these assemblages are not refractory, making for relatively simple metallurgy. Either type of system can produce giant deposits and are attractive targets.

8.1.2 HIGH SULPHIDATION EPITHERMAL DEPOSITS

This class of epithermal deposit forms above the causative intrusive complex in the area of highest heat flow (Figure 10), the most sulphur-rich hydrothermal environment around the intrusion. Sulphur-bearing magmatic fluids mixing with oxidizing ground water become extremely acidic. The acidic fluid reacts strongly with wall rocks, generally volcanic rocks, to produce a core of residual silica (or vuggy silica) in which all rock-forming minerals except silica have been dissolved, flanked by progressively higher pH mineral assemblages typically including quartz-alunite, kaolinite, illite and illite-smectite mixed layer clays respectively. The porous vuggy silica is a favorable host for subsequent gold mineralization.

Mineralization of the high sulphidation type tends to replace the already intensely altered host rock in irregular zones around controlling structures instead of being restricted to large veins. Gold to silver ratios tend to be higher than with the low sulphidation deposits, and some deposits have significant accompanying copper mineralization, such as at Loma Larga, Ecuador. The sulphide assemblage is pyrite-enargite dominant. Unless mineralization of the high sulphidation type has been subjected to oxidation, the gold tends to be refractory, requiring higher grade to support more costly roasting, pressure oxidation, or direct smelting of arsenic-bearing concentrate.



(Source: https://www.911metallurgist.com/blog/high-sulfidation-epithermal-deposits)

Figure 10. Idealized sections showing the progression of alteration and mineralization that goes with high sulphidation gold deposits

8.2 SEDIMENTARY-HOSTED COPPER-SILVER

Sedimentary-hosted copper deposits, including those characterized as red-bed type, were not among the deposit types under consideration by Aurania when exploration of the Project started. However, exploration carried out since 2017 has documented the presence of red-bed type mineralization over at least 23 km of strike along the axis of the Property.

Sedimentary-hosted copper deposits are second only to porphyry deposits in terms of global copper production. Sedimentary-hosted copper deposits are also a significant source of silver. The biggest and highest-grade examples of this class of deposit are located in the famed Central African Copperbelt (“**Copperbelt**”) of the Democratic Republic of the Congo and Zambia. A second major sediment hosted copper province is found in the Kupferschiefer strata of the Zechstein Basin of Germany and Poland. The Copperbelt contained approximately 440 billion pounds (“**Blbs**”) of copper (Hitzman *et al*., 2012) and the Kupferschiefer approximately 133 Blbs (Borg *et al*., 2012).

Hitzman *et al.* (2010) document two periods in earth history, the Neo-Proterozoic and the Permian, when the "super giant" sedimentary copper provinces of Katanga and the Kupferschiefer developed. These authors believe these to be the prime periods in Earth history for forming the largest deposits. Lesser, but still significant, provinces formed during other periods in the Proterozoic (Udokan, Siberia and the Belt Basin of Idaho and Montana) and in the Mesozoic (Kazakhstan). Although not of Neo-Proterozoic or Permian age, the favorable stratigraphy of the Triassic-Jurassic aged Chapiza Formation in the Cordillera de Cutucú has all the geological elements needed for development of the red-bed class of sedimentary-hosted copper deposits.

The model for sedimentary-hosted copper deposits calls for:

- Dewatering of a large basin of oxidized continental sandstones and conglomerates (red-beds);
- Evaporites to provide the brine needed to strip copper and silver from the sediments and possibly the sulphur ultimately needed to allow deposition of sulphides;
- Reduced sedimentary strata (shale or organic-rich sandstone) at the top of the basin to convert sulphate in the copper-bearing brine to sulphide and precipitate copper sulphides; and
- A structural setting that funnels the metal-rich brine to a deposition site where ore grade mineralization over widths of a metre to tens of metres can develop.

The Chapiza Formation has all of these characteristics. Further exploration for sedimentary copper-silver deposits in the Project is justified based on the above model, sample results and field observations made to date.

8.3 INTRUSIVE-RELATED DEPOSITS

The Andes hosts the most prolific porphyry copper-molybdenum deposits in the world and though not as abundant, significant porphyry copper-gold deposits – particularly in the Ecuador-Colombia sector. These systems have a big footprint and great vertical extent. They may be obscured by post-mineral cover or typically extensive lithocaps. Discovering the economic part of the system may be more difficult, especially when dealing with skarns. However, productive systems will typically throw off a strong and extensive stream sediment anomaly in base metals and have varied but distinctive magnetic signatures.

8.3.1 PORPHYRY COPPER-GOLD AND COPPER-MOLYBDENUM

Porphyry deposits typically form in and around cupolas of intermediate composition calc-alkaline or alkalic magmas through which metal-rich fluids rise as they are expelled from the cooling batholith below. In the most general terms, the hot magmatic fluids precipitate progressively more sulphur-rich assemblages as they rise, cool and react with their wall rocks. This results in a deep metal assemblage of magnetite, bornite and chalcopyrite with little pyrite and accompanied by potassic alteration - in the copper-gold porphyries this is the gold-rich part of the system. The upper reaches of many porphyries are characterized by magnetite-destructive alteration. In the upper part of these systems early, potassic alteration assemblages are overprinted by QSP alteration and the pyrite to copper sulphide ratio rises sharply. This pervasive alteration is hard to hide from even generative scale mapping and may stand out as a magnetic low in aeromagnetic data.

Porphyry deposits have been a prime target for the Project largely based on the assumption that the metallogeny of the Cordillera de Cutucú is similar to that of the Cordillera del Cóndor immediately to the south. The Cordillera del Cóndor uplift contains porphyry copper-gold and porphyry copper-molybdenum deposits including the now producing Mirador open-pit copper-gold mine that started production in mid-2019.

8.3.2 SKARNS

Skarns form adjacent to intrusive stocks where metal-rich magmatic fluids encounter favorable limestone or calcareous sandstone or conglomerates. Hot, acidic, metal-rich hydrothermal fluids associated with the intrusive are neutralized as they migrate through the enclosing rocks. When encountering a permeable limestone unit, the neutralization is much more rapid. This potentially produces higher concentrations of sulphides as the limestone is replaced by calc-silicates, chlorite and sulphides. Gold-bearing skarns are rare relative to gold-bearing porphyries but potential for exceptional grade makes them an attractive target. Owing to reactivity of the host rocks the footprint of the whole system will likely be much smaller than for a typical porphyry deposit.

Potential for gold skarns in the Sub-Andean zone is highlighted by the multi-million-ounce Nambija gold skarn in the Cordillera del Cóndor. Average gold grades are reported to be between 10 g/t and 30 g/t. In 2000, Nambija resources were re-evaluated at between 4 million ounces ("**Moz**") and 5 Moz of gold (Prodeminca, 2000) after significant unofficial gold production since the discovery in 1981.

8.3.3 SANDSTONE HOSTED GOLD

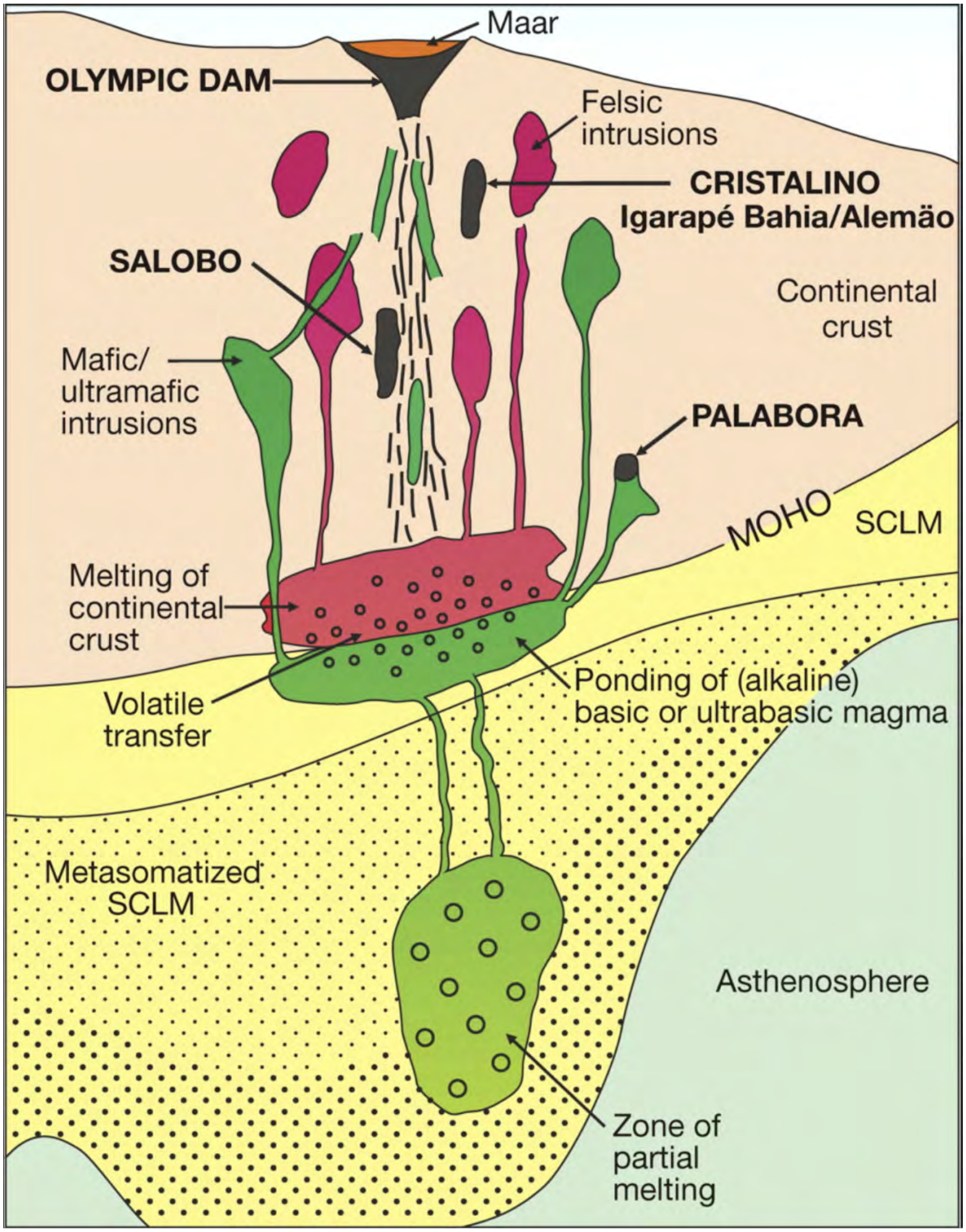
Neither within the Cordillera de Cutucú or the Cordillera del Cóndor has economically significant intrusion-related, sandstone-hosted, gold mineralization been recorded. However, sections of calcareous sandstone of the Santiago Formation, and extensive sandstone sections in the Chapiza Formation, provide favorable hosts for fracture-hosted and disseminated gold mineralization such as that found in northern Peru. Examples include Lagunas Norte, La Arena and Shahuindo, with the latter two lying immediately adjacent to porphyries.

8.4 IRON OXIDE COPPER GOLD ("IOCG")

IOCGs encompass a broad range of hydrothermal deposits generally spatially associated with large intrusive complexes (Figure 11). However, unlike porphyry copper systems there may be no direct link to a mineralizing intrusion (Barton and Johnson, 2000). Globally, the Proterozoic Gawler Craton and Cloncurry District of Australia, the Archean Carajas region of Brazil and the Jurassic Coastal Batholithic belt of Chile and Peru, host the most significant IOCG deposits. Each of these areas host IOCG deposits of greater than 100 million tonnes at grades equal to or better, on average, than porphyry copper-gold deposits (Williams *et al*., 2005).

The contained metal assemblage in IOCGs is associated with sulphur-poor minerals (the dominant iron species are hematite and magnetite), with pyrite being far less intensely developed in IOCGs relative to porphyries. In IOCGs both the intensity of copper and gold mineralization and their ratios can be highly variable.

IOCG alteration systems cover areas many times larger than the associated ore deposits but show alteration zoning broadly concentric around copper-gold mineralization. The bulk of the IOCG alteration system is typically characterized by sodic to calcic alteration producing a suite of albite, chlorite, calc-silicates and carbonates. Alteration intensifies in and near ore zones, with biotite, K-feldspar and amphibole typical of magnetite-rich deposits, and sericite and chlorite in hematite-rich deposits.



(Source: Groves et al., 2010)

Figure 11. Schematic diagram illustrating the diversity of IOCG deposits and their potential tectonic setting

The well mineralized zones of IOCG systems can be found in diverse structural and stratigraphic settings that can focus hydrothermal activity. These result in variable mineralized geometries including stratabound disseminated deposits, massive replacement deposits, high-grade vein-like bodies in fault zones, or large volumes of mineralized breccia.

There remains uncertainty as to the relative contributions of iron, copper and gold from basinal brines relative to those from magmatic fluids, but in most districts, there is significant contribution from basinal brines and magmatic fluids may not be necessary (Barton and Johnson, 2000 and Contreras *et al.*, 2018). If dewatering of basins with volcanic rocks, continental sedimentary rocks, and evaporites are a key element in the genesis of IOCG deposits, then the Cordillera de Cutucú has all of these.

The Cretaceous of northern Chile, where a belt of IOCG deposits is superimposed on a porphyry belt, might offer the best model for potential IOCG exploration in the Cordillera de Cutucú. In the Chilean belt porphyries formed in a continental margin setting which evolved into a back-arc trans-tensional setting where the IOCG deposits formed. The tectonic setting ultimately reverted back into an Andean-style continental arc associated with younger porphyry intrusion (Richards *et al*., 2017).

8.5 LEAD-ZINC-SILVER VEINS AND MANTOS

The metal assemblage found in these deposits places their priority below that of the precious metal and copper target types. However, there is good potential for lead-zinc-silver mantos and veins based on the structural and stratigraphic setting of the Cordillera de Cutucú and limited sampling completed to date.

Lead-zinc-silver deposits are found in multiple deposits types but the two of particular interest, due to their presence in the adjacent northern Peru, are:

- Large veins and carbonate replacement deposits (“**CRD**’s) in the form of mantos or chimneys related to intrusive centres; and
- Carbonate hosted deposits related to basin dewatering – Mississippi Valley (“**MVT**”) or Irish Type deposits.

8.5.1 HYDROTHERMAL VEIN AND CRD’s

Mineralization in porphyry systems is typically zoned from a copper-molybdenum rich centre outwards to a lead-zinc-silver halo with the latter zone seldom achieving economic grades. However, there are cases like Butte, Montana, Bingham Canyon, Utah and Toromocho-

Morococha, Peru, where both the copper-molybdenum centre and lead-zinc-silver halos host major ore deposits. In the case of Butte, the lead-zinc-silver mineralization is in veins up to 10 m wide cutting the Butte Quartz Monzonite. In contrast, the porphyries at Bingham Canyon and Toromocho intruded sedimentary sequences with limestone horizons that were extensively replaced to produce large blanket shaped CRD's (mantos) or pipe-like bodies at structural intersections (chimneys).

The presence of a mineralized copper porphyry is not necessary for the formation of these deposits, unmineralized porphyries can have significant associated lead-zinc-silver mineralization as is the case in multiple districts of central Mexico. The porphyries preliminarily identified in the Cordillera de Cutucú have yet to be shown to have well developed copper porphyry mineralization, but these could still have generated lead-zinc-silver CRD's in carbonates of the Santiago Formation.

CRD's are challenging targets as the host limestones exhibit little alteration outside the actual replacement bodies which tend to be long and narrow, following irregular paths whether horizontal (manto) or steeply dipping (chimney).

In addition to CRD's, low sulphidation epithermal precious metal veins, which are a prime target for the Project, may become base metal-dominant at depth and remain economically viable (e.g. Zacatecas, Mexico).

8.5.2 MISSISSIPPI VALLEY AND IRISH TYPE

The same basin dewatering process discussed in Section 8.2 for copper can lead to formation of large carbonate replacement deposits along major structures and on the margins of a clastic sedimentary basins. A good example is in the Zechstein Basin where deposits of this type are found adjacent to the copper zone of the Kupferschiefer (Borg *et al.*, 2012). These lead-zinc dominated deposits are difficult exploration targets as mineralized replacements can have irregular shapes, limited alteration haloes, and are commonly blind to the surface. Their attractiveness lies in the potential for high-grade (+10% combined lead-zinc), and coarsely crystalline mineralization that, with simple processing, produces attractive lead and zinc concentrates.

The correlative stratigraphy to the Santiago Formation in the Project in northern Peru is the Pucará Group that hosts multiple zinc-dominant MVT deposits in the San Vicente and Bongara Districts.

9. EXPLORATION

9.1 PROCEDURES/PARAMETERS OF SURVEYS AND INVESTIGATION

To better understand structure and geology of Cordillera de Cutucú, Aurania began exploration with an airborne geophysical survey and satellite imagery interpretation. Field work then focused on collecting geochemical data starting with stream sediment sampling at a density of approximately 2.7 samples per km^2 throughout the Cordillera, a program which is approximately 50% complete. Aurania is in the process of following-up anomalies identified through the above exploration programs with prospecting, rock chip sampling and ridge and spur soil sampling, followed by soil sampling on regular grids. Geologists accompanying the sampling teams map geology and alteration mineral assemblages. The objective is to identify targets for any style of mineralization for any commodity, and to provide an initial ranking of the targets for possible scout drilling as the main target evaluation tool. Details of these programs follow in Sections 9.2 and 9.3 with discussion of results in Section 9.4.

9.2 SAMPLING METHODS AND SAMPLE QUALITY

9.2.1 STREAM SEDIMENT SAMPLING

First pass stream sediment samples are collected at 800 m spacing along principal streams or rivers. The second-order drainages adjacent to anomalies produced in the first order drainages are sampled every 400 m using the same protocols. Through the Effective Date of this Report, 2,866 stream sediment samples have been collected with geochemical results returned for 2,816.

Exploration teams collect samples where the strength of the current drops sharply, favouring deposition of heavy minerals. A sampler collects sediment with a pointed shovel, removes cobbles by hand, and feeds the material onto a 5 mesh (4 mm apertures) PVC screen placed on top of a 20 mesh (0.84 mm apertures) PVC screen which is mounted on a 20 litre PVC bucket. A second technician shakes the screens as water is dribbled over the sediment. When the bucket has been filled with muddy water and -20 mesh sediment, the sampler decants about half the water in the bucket by pouring it over a wooden gold pan. As water drains off the pan fine sediment collects in the pan and is returned to the bucket. If the sampler determines that insufficient fine sediment has been collected, the sample-collection process is repeated until approximately 2 kg of -20 mesh material has been collected. The final decanting is done by gradually pouring the muddy water and sediment into a cloth sample bag and squeezing water out through pores in the bag. The entirety of the material in the bucket is collected in the bag.

Photos are taken at each sample site showing the numbered sample bag and a whiteboard with the UTM coordinates of the sample point. Samples are sent in batches of 30 to 200 samples including duplicates, blanks and standards (alternating) inserted every 20th to 25th sample. Through 2018 the samples were shipped to ALS Global's sample preparation lab in Quito in vehicles driven by Aurania's personnel. Starting in 2019 Aurania switched to a sample preparation facility in Cuenca under contract with MSALABS with samples delivered to Cuenca in vehicles driven by Aurania personnel.

At the Quito facility, ALS dried and screened the samples through an 80 mesh screen (0.177 mm apertures) and sent a 250 gram split of the -80 mesh fraction to ALS' analytical laboratory in Lima, Peru. ALS analysed gold by fire assay of a 50 g split with ICP analysis (Au-ICP22). 51 elements (including gold) were determined using aqua regia digestion (a partial digestion) of a 0.5 split followed by ICP-MS analysis (ALS code ME-MS41). Though Aurania switched laboratories in 2019, to MSALABS, for continuity, the preparation procedures and analytical techniques matched closely those used with ALS (MSALABS codes FAS-121 for gold and IMS130 for 51 elements).

9.2.2 PAN CONCENTRATE SAMPLING

Through the Effective Date of this Report, 78 pan concentrate samples have been collected with geochemical results returned for 67. This sampling was initiated since Mr. Page's August site visit. Aurania's intent now is to collect pan concentrates every 400 m to 500 m along streams as has been the case with the previously described stream sediment sampling spacing. Sample sites are selected using the same criteria - where the strength of the current drops sharply favouring deposition of heavy minerals, and coordinates recorded using a handheld GPS unit.

Superficial sediment is removed to a depth of 50-80 cm before collecting the sediment into a bucket. A technician trained in panning techniques prepares a concentrate from the -20 mesh material which is collected in the same way as described for a stream sediment sample. This concentrate is inspected on site for visible gold, and a note made of the number of gold grains, and the concentrate is then placed in a previously labeled plastic bag. If needed, the operation is repeated until a sample of approximately 0.5 kg has been collected for analysis.

Samples including duplicates, blanks and standards (alternating) inserted every 20th to 25th sample are sent to MSALABS and analyzed, for gold by fire assay of a 50 g split with AA finish (MSALABS code FAS-121), and for multi-elements using four-acid digestion and ICP-MS analysis for 48 elements (MSALAB code IMS-235).

9.2.3 SOIL SAMPLING

First pass soil sampling to follow-up stream sediment anomalies starts with collecting samples at 50 m intervals along the crests of ridges and spurs. As results warrant, systematic grid sampling is done typically at a spacing of 25 m or 50 m on lines located 100 m apart. At the start of the program, samplers dug small pits, up to one metre deep, collecting approximately 1 kg of soil from the iron-rich "B" horizon along one side of the hole at each sample point. Currently, samples are collected from the same soil horizon by digging smaller diameter holes with a post hole digging tool. Prior to 2019, samples, including standards and blanks alternately inserted approximately every 20th sample, were delivered by Aurania's personnel in batches of several hundred samples to ALS's preparation lab in Quito. Sample preparation and geochemical analysis followed the same methods and procedures as those applied to stream sediment samples described in Section 9.2.1 above. As with the stream sediment program, starting in 2019, Aurania switched to MSALABS and the affiliated sample preparation facility in Cuenca, following the same sample preparation and analytical procedures as used at ALS.

Through the Effective Date of this Report, Aurania collected 8,937 soil samples with results returned for 8,209.

9.2.4 ROCK CHIP SAMPLING

Geologists and field technicians, trained by Aurania, collect rock chip samples where the geologist or prospector sees evidence of alteration or mineralization in float, cobbles in streams, or in outcrop. The rock chip sampling is not done on a systematic grid basis. The stream sediment and soil sampling programs highlight geochemically anomalous areas and the rock chip sampling tests for significant mineralization. While most of the rock chip samples collected were samples of float or subcrop, Aurania took 822 outcrop samples of which 109 were collected over a measured width, or length and width in the case of panel samples. Most of these samples were taken over lengths of less than a metre.

As with the stream sediment and soil samples, rock chip samples were prepared and analysed by ALS Global through 2018 and through MSALABS starting in 2019. At ALS samples were analyzed for gold using fire assay of a 30 g split with AA finish (ALS code Au-AA25) and for an additional 48 elements using four-acid digestion (complete digestion) of a 0.25 g split with analysis by ICP-MS (ALS code ME-MS61). For samples returning values of copper, lead or zinc exceeding 10,000 ppm (1%) or in the case of silver, 100 ppm, a second analysis was completed on the same pulp using four acid digestion and AA analysis (ALS code AA-OG62, MSALABS code ICF-6). Starting in 2019, samples sent to MSALABS were analysed similarly, for gold fire assay of a 50 g split with AA finish (MSALABS code FAS-121), multi-elements using four-acid digestion and ICP-MS analysis for 48 elements (MSALAB code IMS-235), and over limits with four-acid digestion and AA analysis (MSALABS code ICF-6).

Through the Effective Date of this Report, 1,672 rock chip samples have been collected and analysed with results returned for 1,543.

9.2.5 DRILL CORE SAMPLING

Personnel from the drill contractor, Kluane Drilling Ecuador S.A. ("**Kluane**"), boxed core at the drill rig and local personnel carried the core boxes to the access road for delivery in batches to the core shed by light truck. The open-air core logging facility for the Crunchy Hill and Yawi targets is near the village of Patuca. Given the scale of the Property, other core storage and logging facilities will likely be set up as additional anomalies are drill tested. At the logging facility Aurania technicians lightly wash and then photograph the clean core. A geologist does all the geological and geotechnical logging (core recovery and RQD) and selects intervals to be sampled. The core logger marks sample intervals with a plastic sample tag taped to the side of the core tray at the start of the sample interval. The logger then draws a line along the length of the core for that sample interval with a permanent marker as a guide for the core sawing technician. After sawing, the right side of the core for each sample interval is placed, along with a sample tag, in a large mylar bag with the sample number marked on the outside of the bag. The bags are closed and sealed with locking plastic ties. Samples are stored at the logging and storage facility (which has 24-hour, 7 day a week security) until delivered by Aurania's personnel to MSALABS contract preparation facility in Cuenca.

Alternating blanks and standards are inserted approximately every 20th sample. Sample batches are shipped to the MSALABS affiliated preparation facility in Cuenca for preparation with 250 g pulps sent from the Cuenca to MSALABS laboratory in Langley, B.C., Canada. The analytical methods applied to drill core are the same as for rock samples described above.

Aurania collected 624, mostly 2 m long, samples from the core drilled at Crunchy Hill. Additionally, as of the Effective Date, 623 core samples, also mostly over 2 m intervals, had been taken during the drill program at the Yawi target area.

9.3 RELEVANT INFORMATION

Since 2017, Aurania has carried out stream sediment sampling across approximately 50% of the Property. The geochemical sampling programs described in Section 9.2 provides much of the relevant information on which the interpretations in Section 9.5 are based. In addition, the Company completed satellite image interpretation of the Project and adjacent area, completed a 12,960 line-kilometre heliborne magnetic and radiometric survey, of which 5,714 line-kilometres were flown over the Property, and undertook reconnaissance geological mapping in conjunction with the stream sediment sampling program. Concurrently, Aurania implemented an extensive community relations program. The latter identified 56 indigenous communities in the project area with formal access agreements now secured from 40. Each of these programs is summarized below (except for the community relations program which is covered in Section 20).

9.3.1 SATELLITE IMAGE INTERPRETATION

Aurania, through EcuaSolidus, contracted Michael Baker, an expert in image interpretation in jungle-covered areas, to complete satellite image interpretation over the Cordillera de Cutucú and adjacent Cordillera del Cóndor (Baker, 2017a, b, 2018 and 2019). The first report was delivered in January 2017 with a 1:60,000 scale interpretation of 2001 Landsat images (30 m resolution) covering an area of 7,445 km² that includes the northern part of the adjacent Cordillera del Cóndor. The intent was to compare interpreted geology and structure of the former to that of the latter which hosts the Zamora Batholith and the Mirador, San Carlos, Panantza and Warintza porphyry copper deposits. The study area did not cover the Fruta del Norte epithermal gold deposit or the Nambija gold skarn deposit.

Baker completed more focused satellite imagery interpretations in 2018 and 2019. The 2018 report utilized 1.5 m resolution SPOT imagery and the airborne geophysical data. That study covered 613 km² in the Patuca area of the Project. This is an area where geochemical anomalies indicated the presence of epithermal systems, including Crunchy Hill. The 2019 report utilized March 2015 Landsat8 imagery and the airborne geophysical data to better understand the geology of 766 km² of the Cordillera de Cutucú where field work identified widespread red-bed hosted copper-silver mineralization.

9.3.2 GEOPHYSICS

The airborne geophysical survey, carried out by MPX Geophysics, Ltd. ("**MPX**"), covered the 2,077 km^2 Property with east-west lines spaced 400 m apart and north-south orientated tie lines spaced 4 km apart, collecting magnetic, radiometric, and digital elevation data. All lines were flown by helicopter with a mean terrain clearance of 60 m. The survey data was quality assured and interpreted by Jeremy S. Brett, M.Sc., P.Geo., Senior Geophysical Consultant with MPH Consulting Limited in Toronto, Canada. Mr. Brett assessed the quality of the MPX survey data as 'industry standard', considering the severe topography and weather conditions on the Property (Brett, 2019).

9.4 RESULTS AND INTERPRETATION OF EXPLORATION

After acquiring the exploration rights over the Property, Aurania initiated exploration to identify large, potentially mineralized target areas. This work included the airborne magnetics and radiometric survey and the well advanced, yet to be completed, stream sediment sampling program. These programs produced multiple geophysical and geochemical anomalies potentially related to a variety of deposit types. As the program identified anomalies Aurania began evaluating these through soil sampling, prospecting (rock chip sampling) and geological mapping of creek beds. The intent is to advance this targeting work on individual anomalies to support initial scout drilling programs. As of the Effective Date one target area, Crunchy Hill, had advanced through an initial drill program and scout drilling had been started on the Yawi target.

This overall approach to advancing exploration over a large property position is standard in the exploration industry. Discussion of results from the various programs is provided below.

9.4.1 GEOPHYSICAL PROGRAM

The focus of the airborne survey was to identify magnetic and radiometric anomalies potentially related to intrusive-related copper deposits (such as porphyries and IOCGs). The magnetic and potassium radiometric responses from these deposit types are highly varied, depending on the depth of erosion, and type and scale of alteration and mineralization patterns. Brett's processing of the magnetic data included (Brett, 2019):

- Reduction to Pole ("**RTP**") of the Total Magnetic Intensity ("**TMI**") data provided by MPX. This process reshapes anomalies to appear as if the data were measured at the magnetic north pole, where magnetic anomalies are symmetrical and centred over their causative sources. This simplifies interpretation. The RTP product was used to identify large magnetic features which are likely to be related to porphyry systems or clusters of porphyries or IOCG systems;

- First Vertical Derivative ("**1VD**") processing of the RTP data is used to highlight near-surface features;
- High and Low Pass filters, set to multiple wavelengths, were applied to the RTP data to produce a series of maps enhancing anomalies related to large/deep and subtle/shallow geological features; and
- Inversions of the TMI data were done over specific magnetic anomalies to estimate the size, shape and depth extent of causative bodies.

Processing of radiometric data included:

- Potassium ("**K**"), equivalent thorium ("**eTh**"), and equivalent uranium ("**eU**") response maps with data windowed to remove low amplitude signal, leaving just anomalous responses as follows:
    - For uranium, windowed to 0.75 ppm uranium (showing only response above that background level);
    - For thorium, windowed to 3.0 ppm thorium; and
    - For potassium, windowed to 1.1% potassium.

- eU/eTh and K/eTh ratio maps, with values windowed above 0.35 and 0.50, respectively, to indicate anomalies above normal crustal abundance and potential for potassic alteration or an intrusive with a high potassium content.

The potassium response is of the most interest with potassic alteration characteristic of the core of porphyry deposits (secondary biotite and potassic-feldspar) and for muscovite and illite in the core of low sulphidation epithermal systems. Thorium is useful as the element is not mobile and using it in ratio with potassium can sharpen the detail of a zone with elevated potassium.

Processing of the heliborne digital elevation data produced a model useful for interpreting structure in detail that is not as apparent in the magnetic data.

The final products of the geophysical work include Property-wide maps showing the location of potential porphyry, and other target types, that have been provisionally ranked for follow-up. Brett (2019), combining the various magnetic and radiometric responses, produced interpretations of subsurface geology throughout the Property. Significantly, his geological interpretation indicates that there are more volcanic sequences and intrusions in the Cordillera de Cutucú than were mapped from satellite imagery. Brett's most significant regional interpretations include:

- Two large (up to 40 km in diameter), batholithic-scale intrusions at depth beneath the Cordillera de Cutucú;
- A north-south - trending alignment of magnetic responses typical of andesitic volcanic magmatism in the Cordillera de Cutucú, an environment favorable for porphyry and epithermal deposits;
- Multiple, generally elongate, northwest - or north-northeast - oriented potassium radiometric anomalies are present throughout the Property. Areas where potassium anomalies coincide with magnetic features may indicate areas of potassic alteration related with porphyries. Narrow, elongate radiometric anomalies, especially those that coincide with fault zones, may derive from kaolinite and/or illite alteration related with epithermal systems; and
- Identifying 64 magnetic and 189 radiometric anomalies, of which 48% and 63% are ranked as high priority, respectively.

The Cordillera de Cutucú, based on the digital elevation model ("**DEM**"), shows well-defined north and northwest - trending lineaments not apparent in the various magnetic map products. Furthermore, the DEM, in combination with the RTP data, shows porphyry targets on the edge of topographic highs.

9.4.2 GEOCHEMICAL PROGRAM

The geochemical database made available to the Author on the Effective Date (Aurania database version 123) contains data for the following:

- Stream sediments - the most recent sample collected November 11, 2019; last sample for which geochemical results have been received were collected on October 7, 2019;
- Soils - the most recent sample collected November 11, 2019; last sample for which geochemical results are posted was collected on September 9, 2019; and
- Rock chips - the most recent sample collected November 23, 2019; last sample for which geochemical results are posted were collected on October 5, 2019.

While significant numbers of stream sediment, soil, and rock chip samples have not been posted to the database available to the Author, the geochemical database is large and relevant. These geochemical results remain the primary support for carrying out further work on the target areas discussed in this Section 9. A summary of the number of samples in the database available on the Effective Data are given in Table 2.

TABLE 2.
SAMPLES COLLECTED AND POSTED TO VERSION 123 OF THE PROJECT GEOCHEMICAL DATABASE

Sample Type	Results Posted					Results Pending				
	#	Dups	Stds	Blanks	Control%	#	Dups	Stds	Blanks	Control%
Soils	8209	126	207	212	6.2%	728	13	19	19	6.5%
Soils (MMI)	166	3	0	0	1.8%	0	0	0	0	0.0%
Stream Sed.	2816	45	70	92	6.8%	50	1	2	2	9.1%
Pan Conc.	67	0	2	1	4.3%	11	0	1	1	15.4%
Rock Chips	1543	0	57	49	6.4%	131	0	6	4	7.1%
Whole Rock	45	0	0	0	0.0%	13	0	0	0	0.0%

Note that the duplicate numbers include both samples of each pair

9.4.2.1 Stream Sediments

Aurania's geochemical database shows results for 2,816 stream sediment samples covering approximately 50% of the drainage basins on the Property. Figure 12 shows the distribution of stream sediment samples taken.

9.4.2.2 Soils

Follow-up work on geochemical anomalies identified by stream sediment sampling included soil sampling along ridges and spurs and in detailed grids. The grid sampling programs were done where results from stream sediment sampling, the ridge and spur sampling, or prospecting, indicated this more detailed sampling to be appropriate. A discussion of results on specific anomalies follows in Section 9.5.

ARU LCE / ARU_09_Stream_Sediment_Sample.cdr
Last revision date: Monday 3 February 2020

Watts, Griffis and McOuat

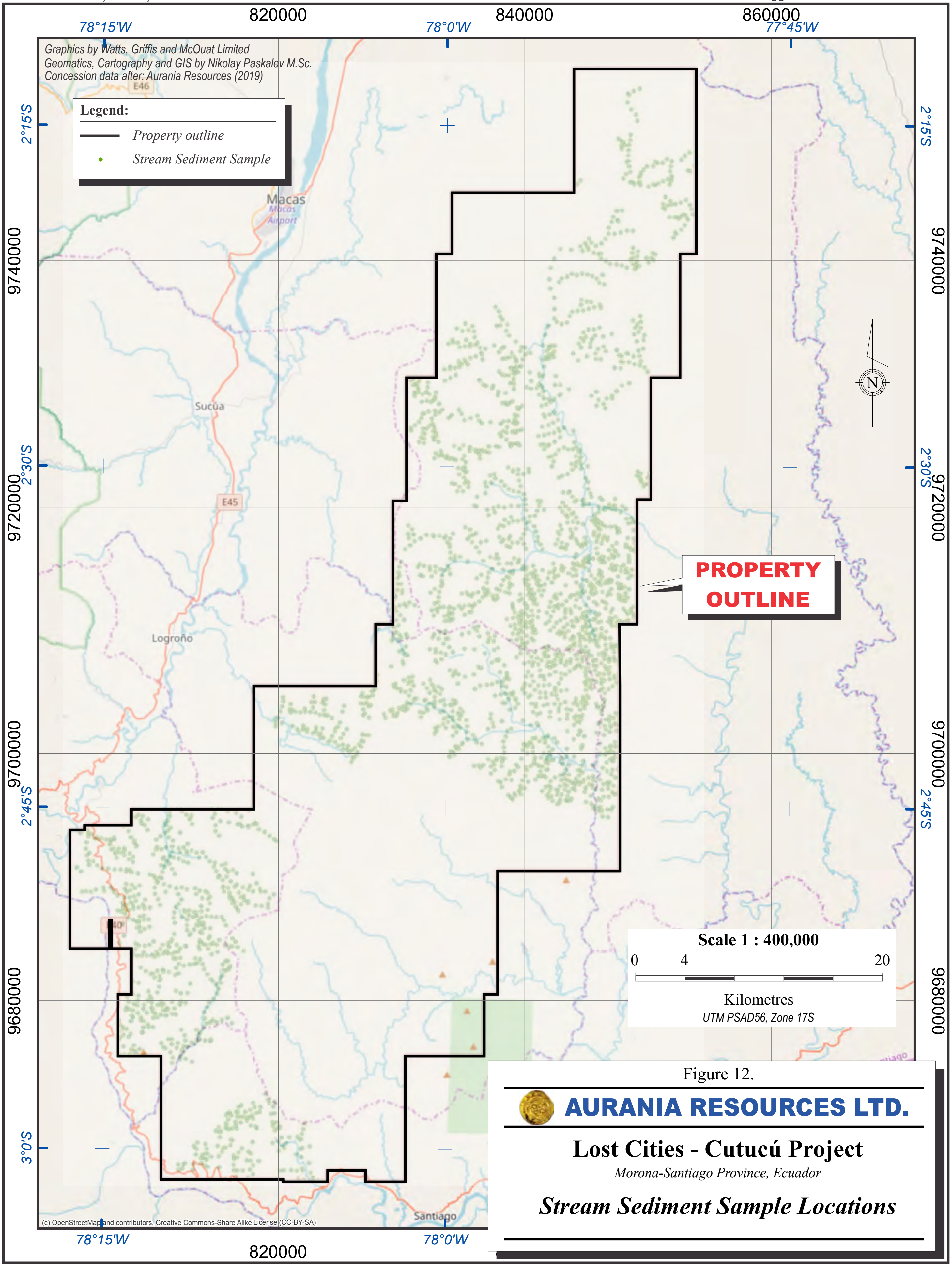


Figure 12.

AURANIA RESOURCES LTD.

Lost Cities - Cutucú Project

Morona-Santiago Province, Ecuador

Stream Sediment Sample Locations

9.4.2.3 Rocks

Aurania's prospectors and geologists sampled float and outcrop exhibiting alteration or mineralization. Numerous samples returned potentially economic values in copper, lead and zinc and to a lesser extent silver as described in Section 9.5.

9.5 INTERPRETATION OF INDIVIDUAL TARGET AREAS

9.5.1 EPITHERMAL TARGETS

9.5.1.1 Latorre Cluster – Crunchy Hill

Stream Sediment Sample Results

The Latorre anomaly cluster, based on the distribution of arsenic (>11 ppm) and antimony (>3.2 ppm) anomalies, covers over 100 km² (Figure 13). Within the cluster, the Crunchy Hill target has seen the most work. Crunchy Hill was identified through stream sediment samples anomalous in volatile elements such as arsenic, antimony, selenium and thallium, typically associated with low and intermediate sulphidation epithermal mineralization, along with silver and molybdenum (Figure 13). Additionally, banded chalcedony veinlets in cobbles in streams and float blocks with up to 52.6 g/t silver, are consistent with the low and intermediate sulphidation epithermal models.

Soil Sampling Results

Soils in the Crunchy Hill area comprise a black organic-rich layer that overlies a homogenous, 5-10 m thick, clay-rich, orange-coloured B-horizon. Samples were taken from the upper 50 cm of the B-horizon. Soil samples were taken at 25 m intervals on lines spaced 100 m apart, that were then infilled along 50 m-spaced lines over the core of the anomalous area. A description of the way in which soils are sampled, prepared and analysed from the Project is provided in Sections 9.2 and 11.

Results from pathfinder elements in the soil samples (e.g. arsenic, antimony, mercury, silver, tellurium and thallium) delineate linear zones of enrichment that coincide with lead, zinc and molybdenum anomalism (Figure 14). Aurania interprets manganese enrichment in the core of the geochemical anomaly to be consistent with an intermediate sulphidation epithermal system in which rhodochrosite is commonly associated with gold-silver mineralization.

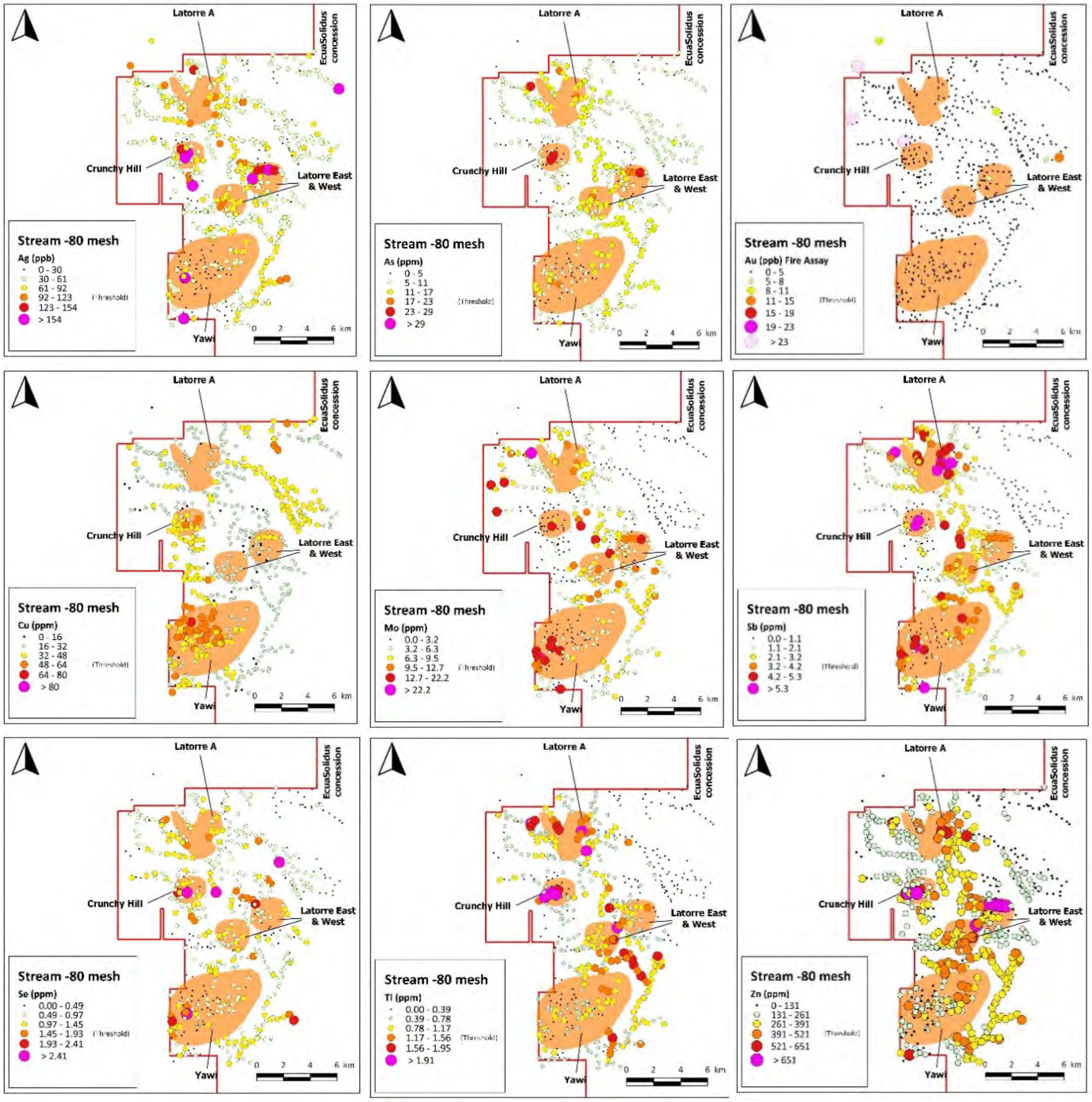


Figure 13. Geochemical results from stream sediment (-80 mesh) samples in the Latorre area

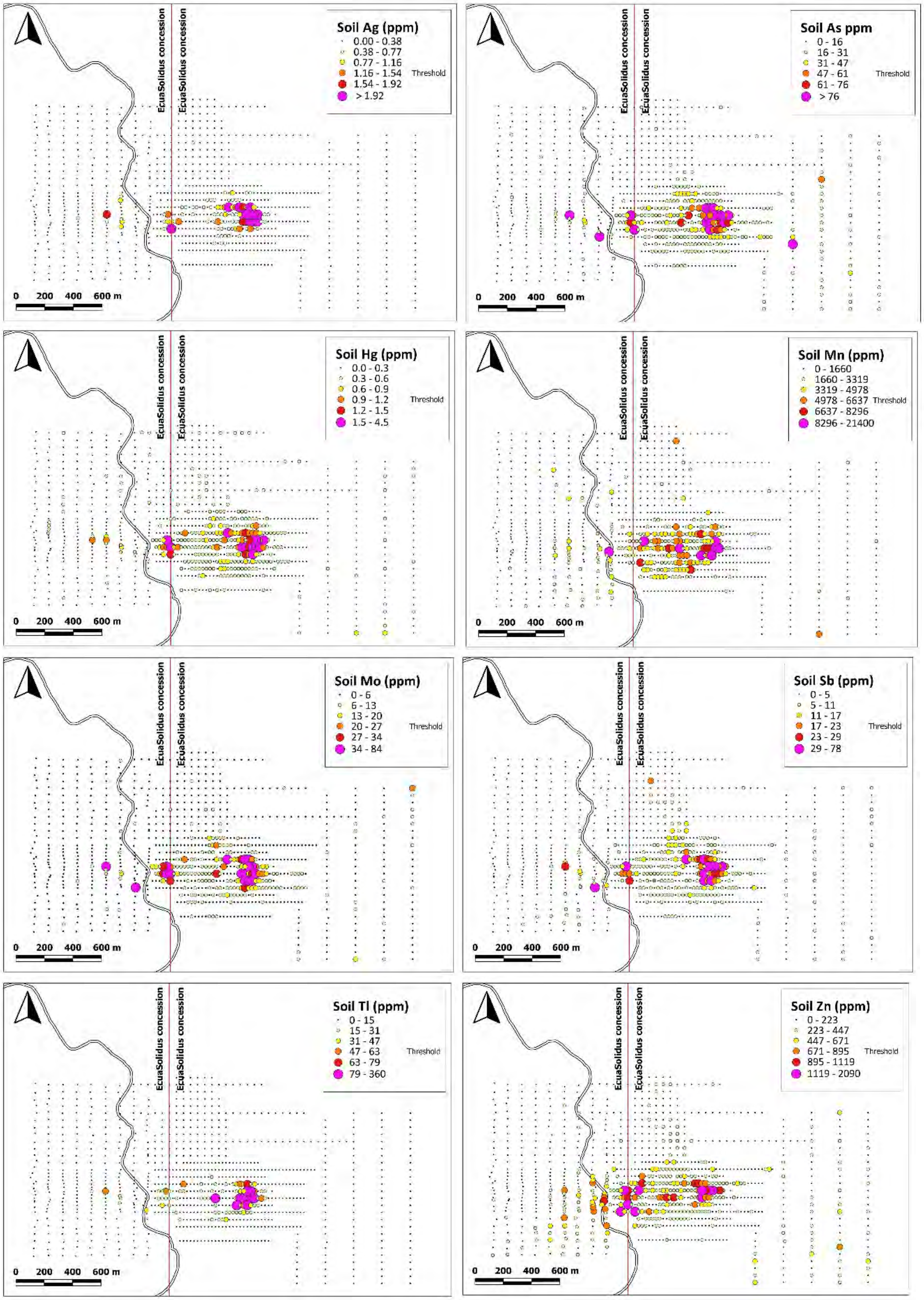


Figure 14. Soil sample geochemical results from the Crunchy Hill sample grid

The narrow corridors in which the pathfinder elements occur, within the broad one kilometre trend, is reminiscent of a typical vein system in which the individual veins are inclined to one another. Molybdenum is not significantly mobile in acid environments generated from the oxidation of pyrite in the tropical soil profile found in southeastern Ecuador and is used as a tool that potentially marks the position and shape of the underlying vein system from which it was derived (Figure 15). The confinement of other pathfinder elements, such as antimony and mercury, to coincident corridors with molybdenum supports the interpretation that the elongate zones of enrichment in pathfinder elements represent mineralized structures at depth.

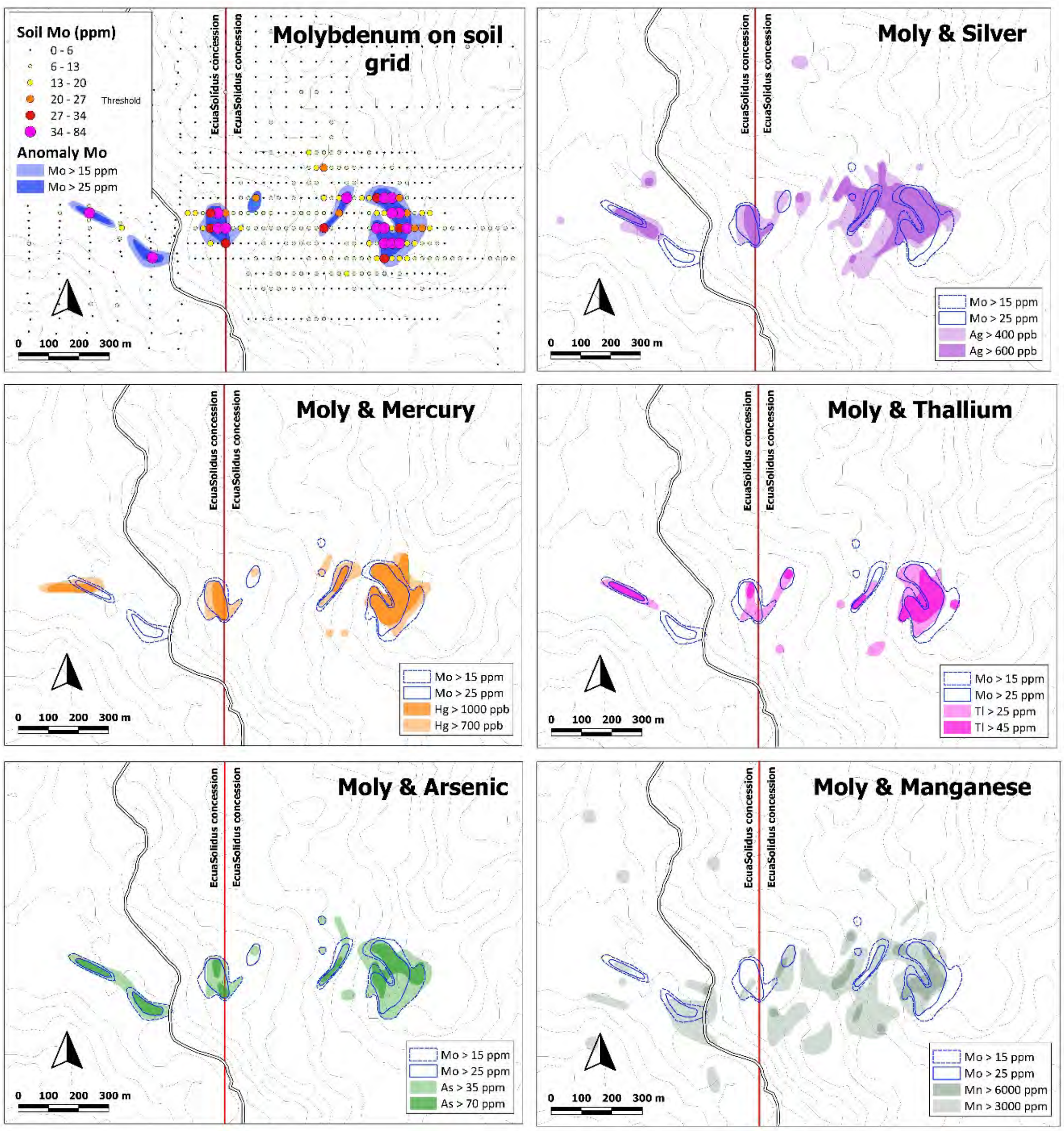
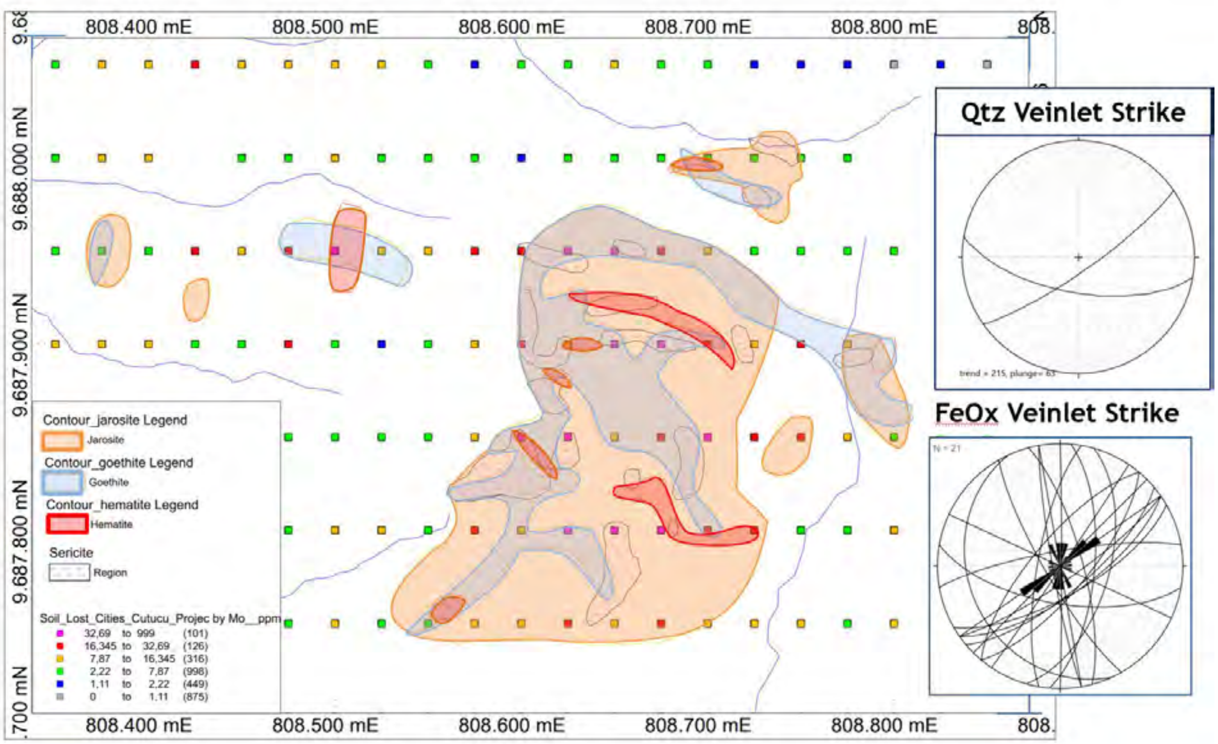


Figure 15. Distribution of pathfinder element anomalies in soils at Crunchy Hill

Alteration Mapping

Since outcrop is minimal over the area of anomalous soil geochemistry, float blocks and boulders were mapped and sampled for later SWIR spectral analysis. Of the iron-bearing secondary minerals, jarosite was the most widespread, occurring over 200 m by 150 m in the core of the area of pathfinder anomalism (Figure 16). Goethite has a more restricted distribution, confined to northeast- and northwest -striking zones within the jarosite zone. Hematite has a more restricted distribution still, confined to northwest-trending corridors.

Veinlets filled with hematite, jarosite and goethite strike predominantly northeast with a steep dip to the southeast, with a smaller population striking north with a near-vertical dip (Figure 16). Only two chalcedony veinlets were found in outcrop and these strike east to northeast and dip to the north-northwest.



Inset are lower hemisphere projections of chalcedony and iron oxide/hydroxide veinlets.

Figure 16. Distribution of jarosite, goethite and hematite from SWIR spectral analysis of specimens collected over the Crunchy Hill soil grid displayed on molybdenum values from the soil grid

Lithology

Diamond drilling, details of which are provided in Section 10, intersected a sequence of sedimentary and volcano-sedimentary rocks near surface, overlying a volcanic-dominated sequence (Figure 17). The central part of the stratigraphic sequence is made up of two distinct fragmental volcanic facies each approximately 100 m thick, interpreted by Aurania as hyaloclastites. These mafic volcanic rocks are characterised by rounded clasts up to 30 cm in diameter enclosed within a volcanic matrix of similar composition. The upper hyaloclastite unit contains mafic clasts, and is termed "basaltic hyaloclastite", while the lower unit that contains paler clasts with quartz eyes, is termed "dacitic hyaloclastite". The hyaloclastites overlie a sequence of lavas without interbedded sedimentary or volcanoclastic units.

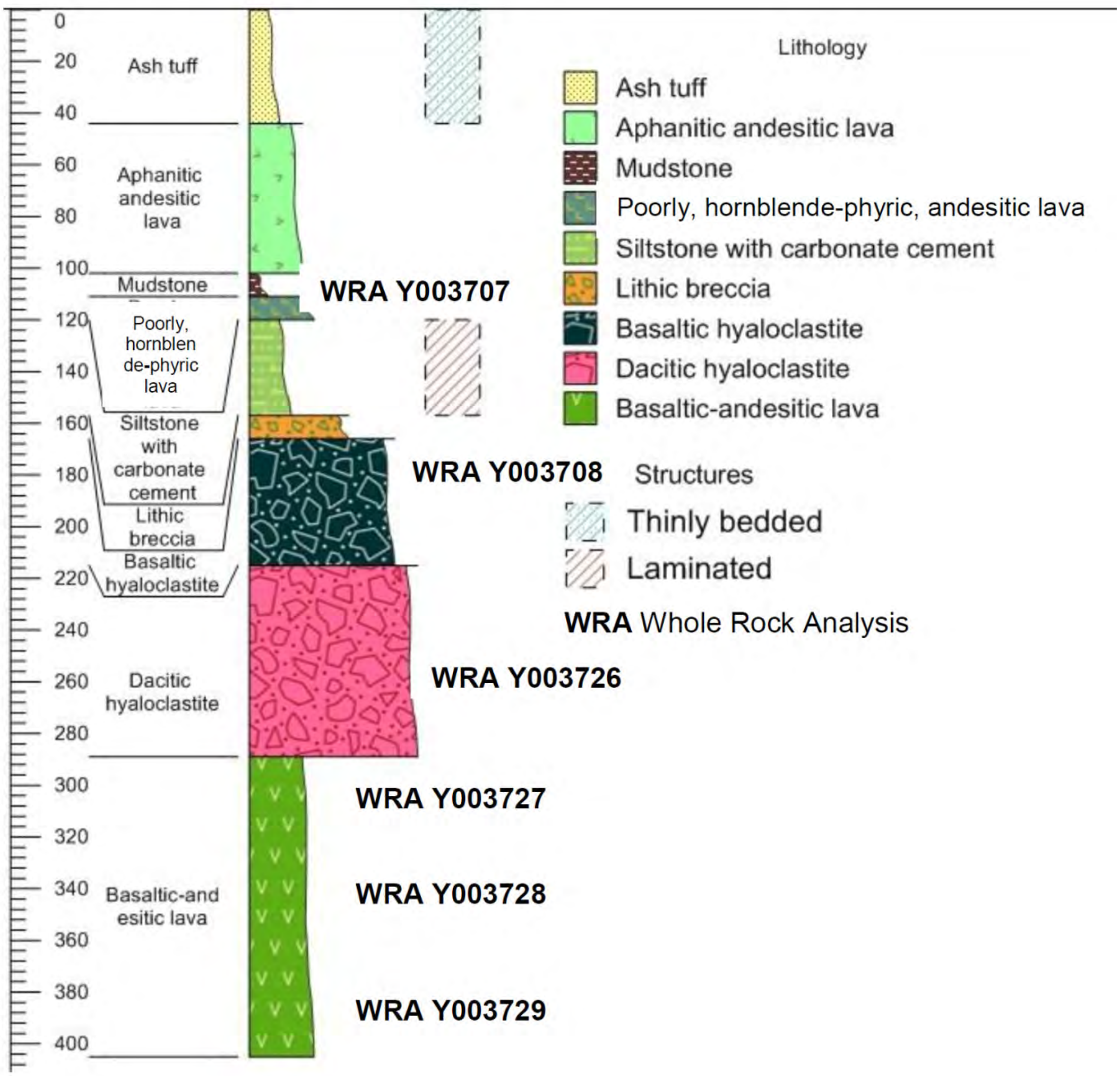


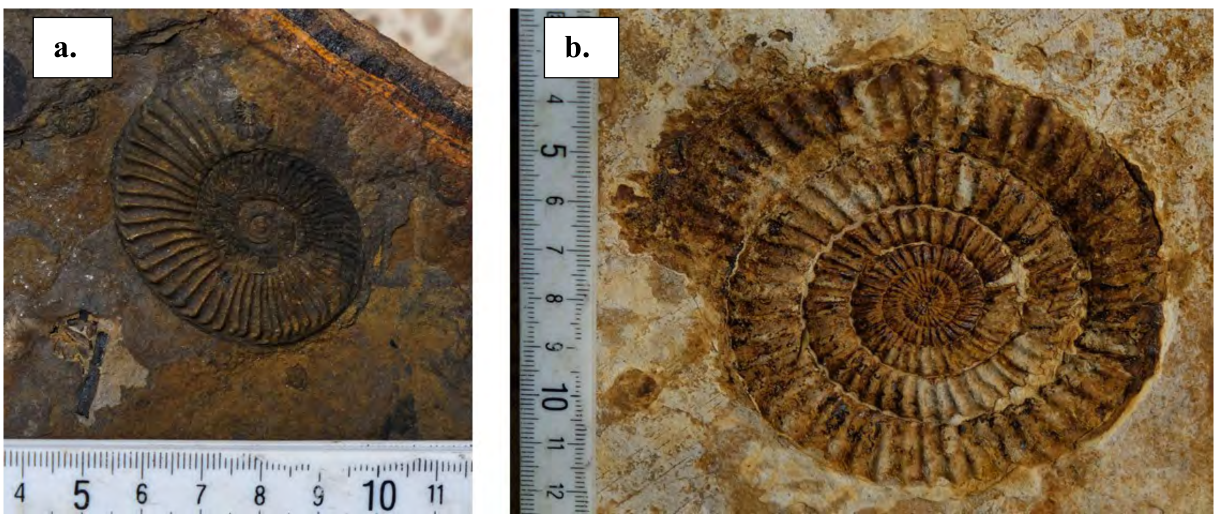
Figure 17. Stratigraphic column for the Crunchy Hill target based on drill intercepts

Based on their whole rock geochemistry, the volcanic rocks at Crunchy Hill range from high-magnesium tholeiitic basalt, through basalt, andesite and dacite. The nature of the stratigraphic sequence drilled at Crunchy Hill is consistent with a calc-alkaline continental volcanic arc developed in a marginally emergent or shallow subaqueous environment.

Drilling
Details of the scout drilling undertaken at Crunchy Hill are provided in Section 10.

9.5.1.2 Latorre Cluster - Latorre A

Geology
The area is characterized by the presence of volcano-sedimentary units in the lower part of the Jurassic Santiago Formation, developed in a marine environment as evidenced by ammonites identified to be from the Arietitidae family (Figure 18a) and the Echioceras genus (Figure 18b).



a. Arietitidae family (Lower Sinemurian) b. Echioceras genus (Upper Sinemurian).

Figure 18a, b. Ammonites from black marl beds in the Latorre A area indicating a Lower Jurassic age

The sequences observed in the area consist of black shale interlaminated with siltstone, fine sandstones, limestones, lapilli tuff and ignimbrite. The volcanic units are more abundant to the southeast and east of the area. The strata strike northwest and dip at 10° to 30° to the northeast.

In the area of the Latorre A soil anomaly the sequence is gently folded adjacent to faults striking approximately 040°. These structures show discrete smectite and kaolinite alteration with fine pyrite and locally traces of chalcopyrite, sphalerite and galena. Immediately north of the Latorre A target area, outside of the Property, gold is exploited by artisanal miners from fluviatile gravel and sandstone of unknown age at an elevation of approximately 400 m above the main Upano River.

Stream Sediment Sample Results

Latorre A target is characterised by stream sediment anomalies in antimony, thallium and zinc on both flanks of a 3 km long hill (Figure 19). Several of the streams draining the area are anomalous in epithermal pathfinders including arsenic, silver, mercury and selenium (see Figure 13). Around the Latorre A target, gold is present in streams cutting sandstones and conglomerates overlying the Jurassic units.

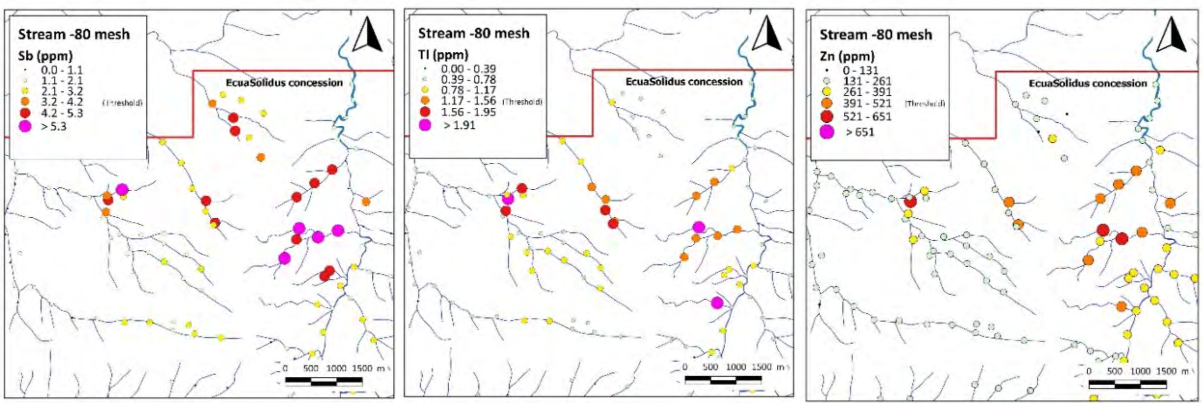


Figure 19. Stream sediment geochemical anomalies in Latorre A present on both flanks of a hill

Soil Sampling Results

The preliminary spur and ridge soil survey highlighted three areas with epithermal pathfinder anomalies (Figure 20).

- A large area in the northern part of the stream system is anomalous in mercury and bismuth with arsenic, molybdenum and selenium;
- Anomalies in arsenic, molybdenum, antimony and selenium lie to the west, forming a southwest extension of the first anomaly; and
- The soil anomaly detected by ridge and spur sampling in the south was covered with a 50 m by 100 m grid. Grid sampling revealed a silver anomaly over an area of 1 km^2 coincident with, or enclosed by, molybdenum, antimony, arsenic, selenium and thallium anomalies. Zinc and cadmium anomalies partially rim the core anomaly. Three samples show slight anomalism in gold.

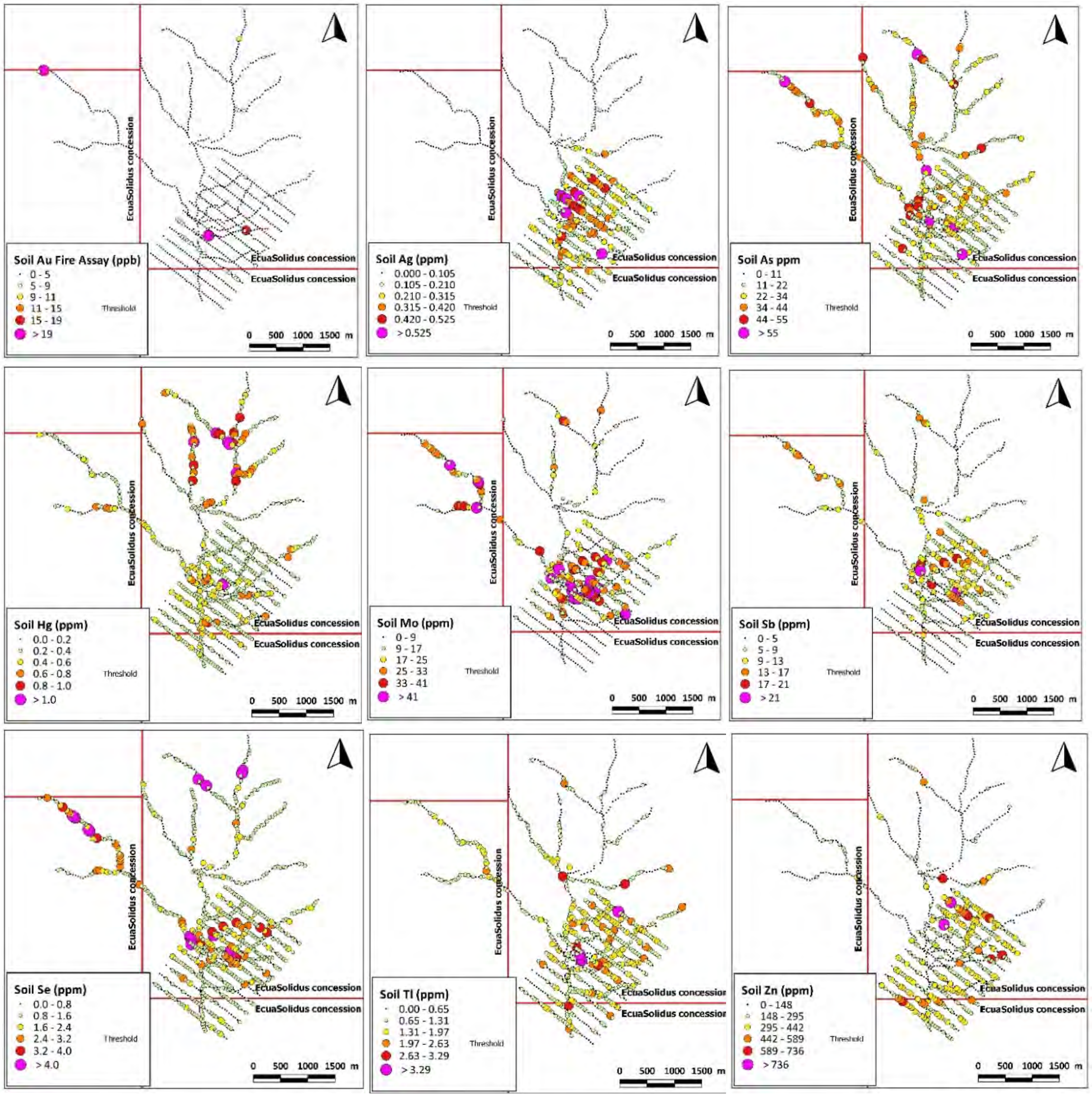
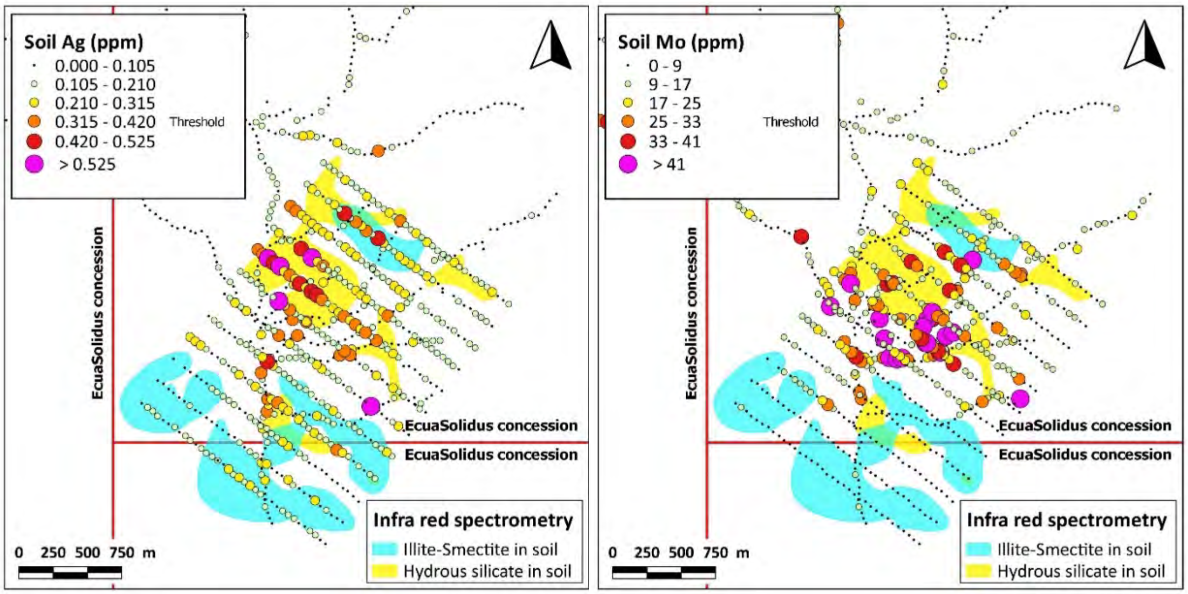


Figure 20. Latorre A stream sediment sampling anomalies

Alteration Mapping

SWIR spectral analysis of soil samples from Latorre A shows a central area with silica alteration surrounded by an illite-smectite mixed-layer clay alteration zone. Silver anomalies in soil are concentrated in the core of the main silica alteration zone (Figure 21a) while other elements, such as molybdenum, are located on its margins (Figure 21b). The silica-silver area is considered a target for epithermal gold-silver at depth.



a) silver in soil b) molybdenum in soil

Figure 21a, b. Distribution of silica and illite-smectite alteration based on SWIR spectral analysis of soil samples from the southern area of the Latorre A target shown with (a) silver in soil, and (b) molybdenum in soil

9.5.1.3 Yawi

Stream Sediment Sample Results

Stream sediment sampling detected anomalous levels of volatile elements, plus silver and molybdenum, in several parts of the main drainage basin in the Yawi area (Figure 22). Two groups of anomalies have been defined by the stream sample assays (Figure 22):

- To the southwest of the main river, the stream sediment sampling shows molybdenum, antimony and selenium anomalies and isolated silver, arsenic, copper and mercury anomalies – typical of epithermal systems; and
- On the north side of the basin a copper anomaly is associated with cobalt, gallium, nickel, scandium and vanadium and is potentially related to a porphyry system.

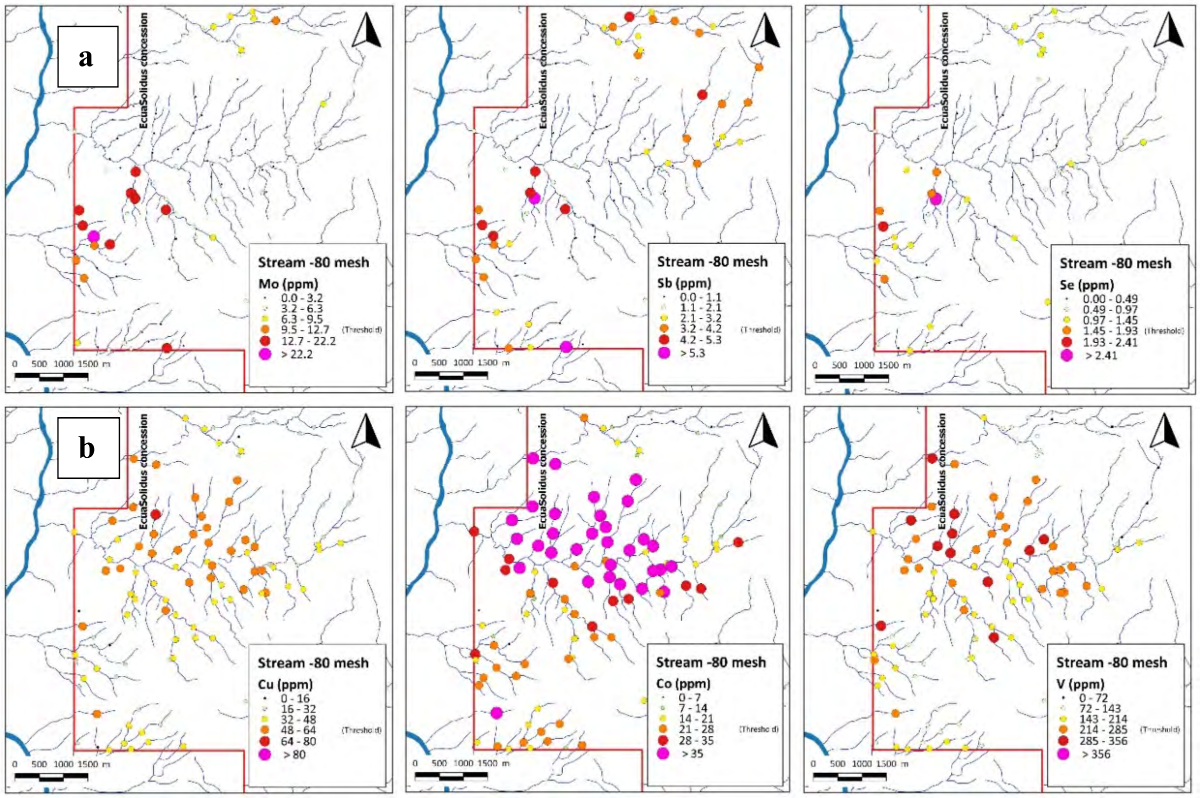


Figure 22a, b. Stream sediment geochemistry results for selected elements in the Yawi area: (a) southwest area anomalous elements; (b) north area main anomalous elements

Soil Sample Results

Ridge and spur soil sampling were done over the parts of the drainage basin in the Yawi area in which stream sediment results detected elevated levels of epithermal pathfinder elements. Aurania has identified six target areas based on the ridge and spur soil sampling, five of which have been advanced with more detailed grid soil sampling (Figure 23). Volatile elements including arsenic, antimony, mercury and selenium are anomalous over extensive, and generally coincident areas. Silver and molybdenum are associated with many of the volatile element anomalies and a low-level, but coherent gold anomaly is found with Targets A and C (Figure 24). The target defined by ridge and spur soil samples in the northeast, and the sixth target in the southeast, has yet to be mapped and grid soil sampled.

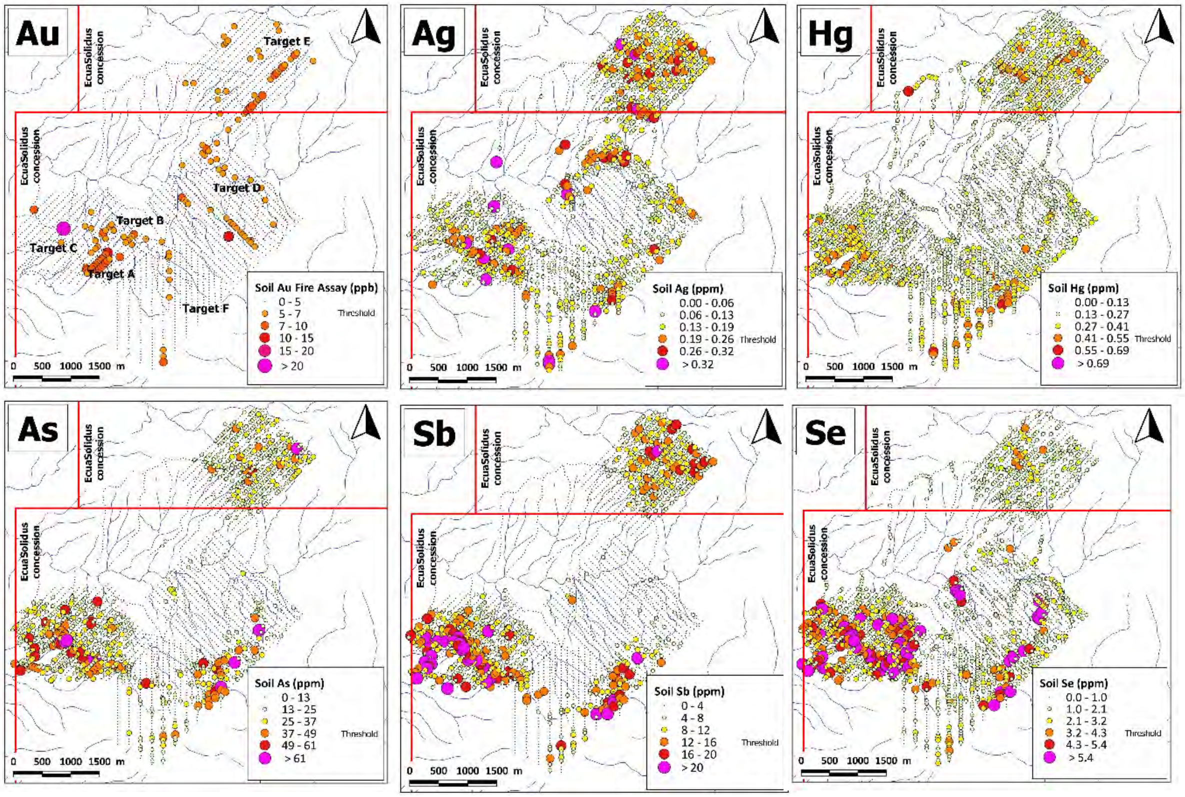


Figure 23. Soil geochemical results from the Yawi grid shown on topographic map

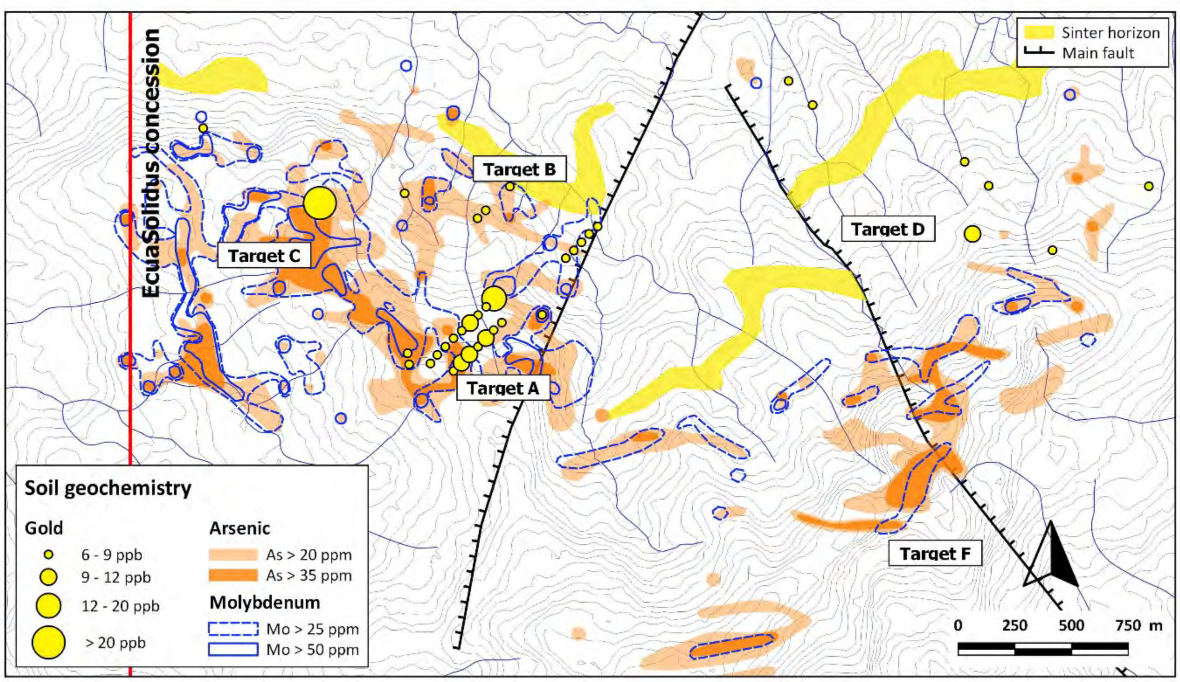


Figure 24. Distribution of arsenic, molybdenum and gold in relation to the interpreted sinter horizon at Yawi

Alteration

Illite alteration mapped at Yawi, and confirmed through spectral analysis, broadly coincides with the volatile element, silver and molybdenum anomaly in Targets A and C (Figure 25). Quartz distribution inferred by spectral analysis, is closely associated with the low-level gold anomaly in soils in Target A (Figure 25).

Pyrite and marcasite occur within the dominantly volcanic unit where some veinlets host local massive sulphide fillings. Banded chalcedonic veinlets have crustiform to colloform textures and some breccias show cockade banding. The chalcedonic veins occur mainly in the volcanic sequence and are rarely in the laminated sedimentary or volcano-sedimentary sequence.

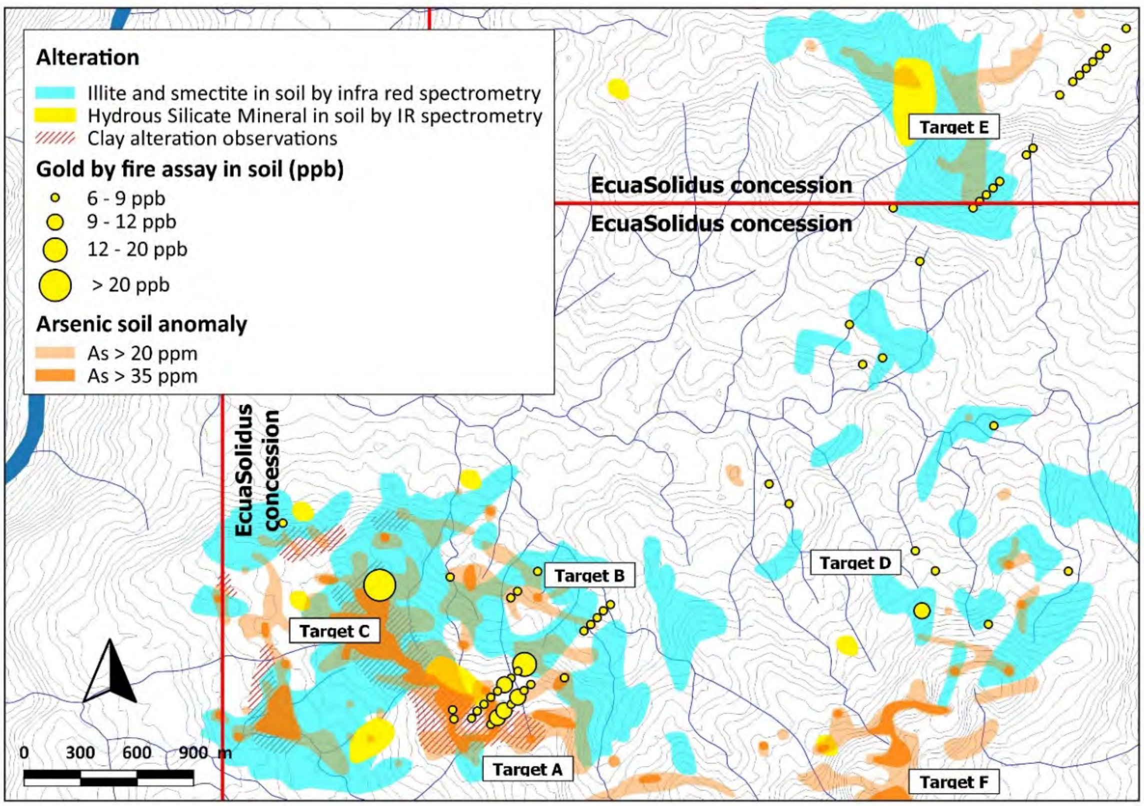
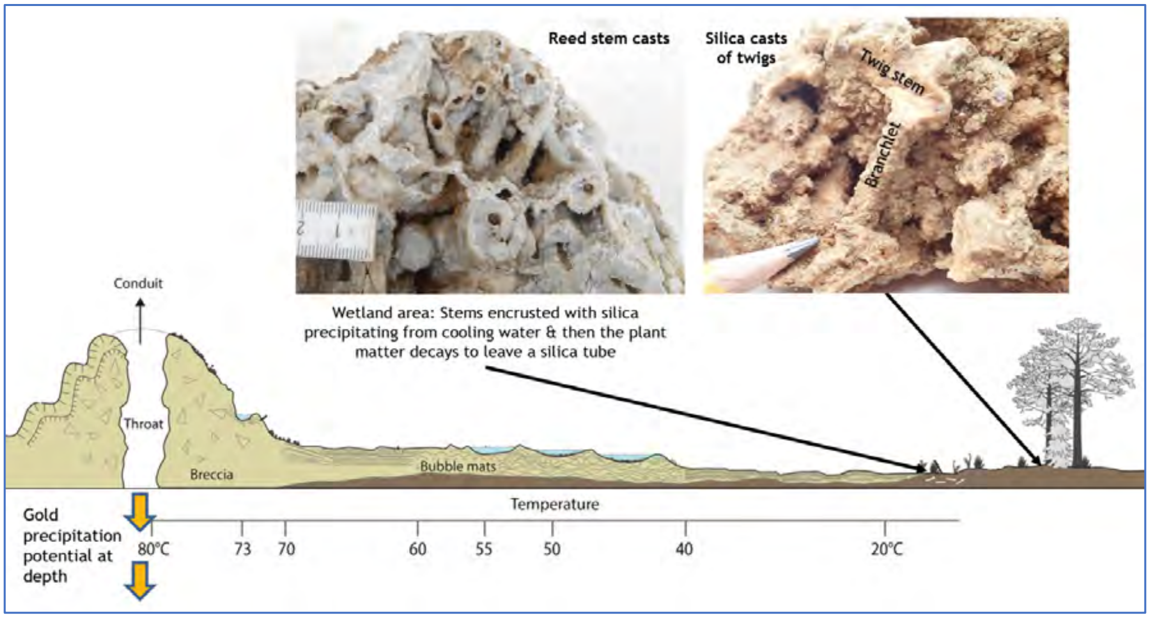


Figure 25. Distribution of alteration minerals in the Yawi target relative to the soil anomalies

Blocks and subcrops of sinter occur sporadically over a narrow altitude range. Some blocks show delicate encrustation of branches and reed stems (Figure 26), while others show vertically orientated, finger-like silica structures cored by marcasite and interpreted as silica encrustations on reed tips (Figure 27). The sinter blocks and outcrops are located near the top of the mafic volcanic dominated stratigraphic sequence and underlie the stratified sediment and volcano-sediment dominated sequence.



(modified from Hamilton et al., 2017)

Figure 26. Sinter blocks from the Yawi target and the interpretation of their formation in a sinter apron

Figure 27. Outcropping, vertically-orientated chalcedonic structures interpreted as silica encrustations on reeds and forming part of the Yawi sinter complex

Geology

The Yawi area hosts calc-alkaline volcanic rocks ranging in composition from basalt to rhyolite and is divided by Aurania's mapping into three principal geological units that dip gently southward in the western part of the area and southeast in the eastern area (Figure 28). The central unit is an eastward-thinning mafic volcanic breccia similar to the hyaloclastite unit at Crunchy Hill. A sequence of laminated fine-grained mudstones, siltstones, or laminated volcanoclastic rocks both underlies and overlies the mafic volcanic breccia with a discontinuous carbonate breccia at the top of the mafic unit. Additionally, elongate dioritic intrusive bodies occur in the eastern part of the target area and a southeast-trending sill occurs in the central part of the target area.

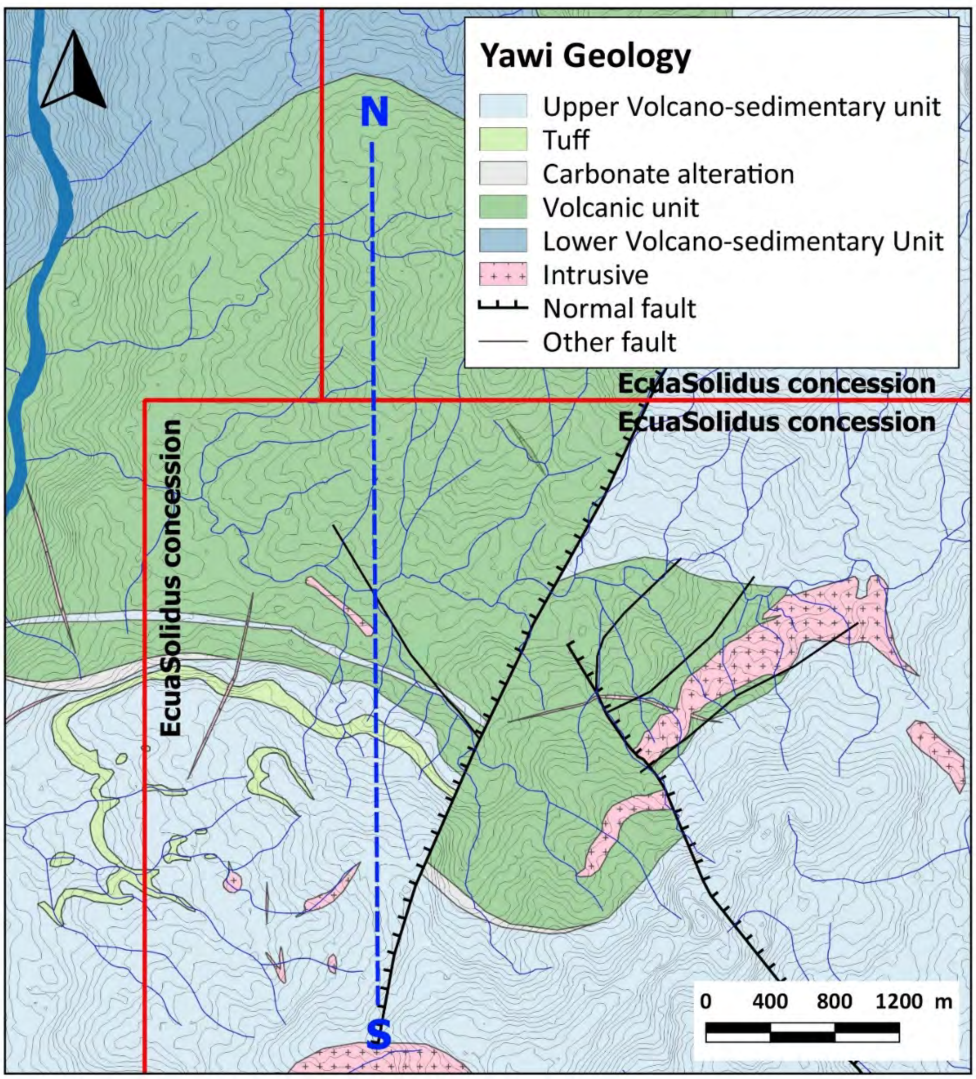


Figure 28. Geological map of the Yawi area with location of the cross section in Figure 29

Drill Target Concept

The sinter blocks and outcrops are located approximately 300 m below the crest of the ridge that hosts coincident illite alteration, volatile element anomalies and silver and molybdenum anomalies in soils (Figure 29). Typically, sinters would be found above the zone of illite alteration which could be explained by the illite zone being elevated by faulting or, alternatively two epithermal systems may be superimposed. The six targets identified are described below.

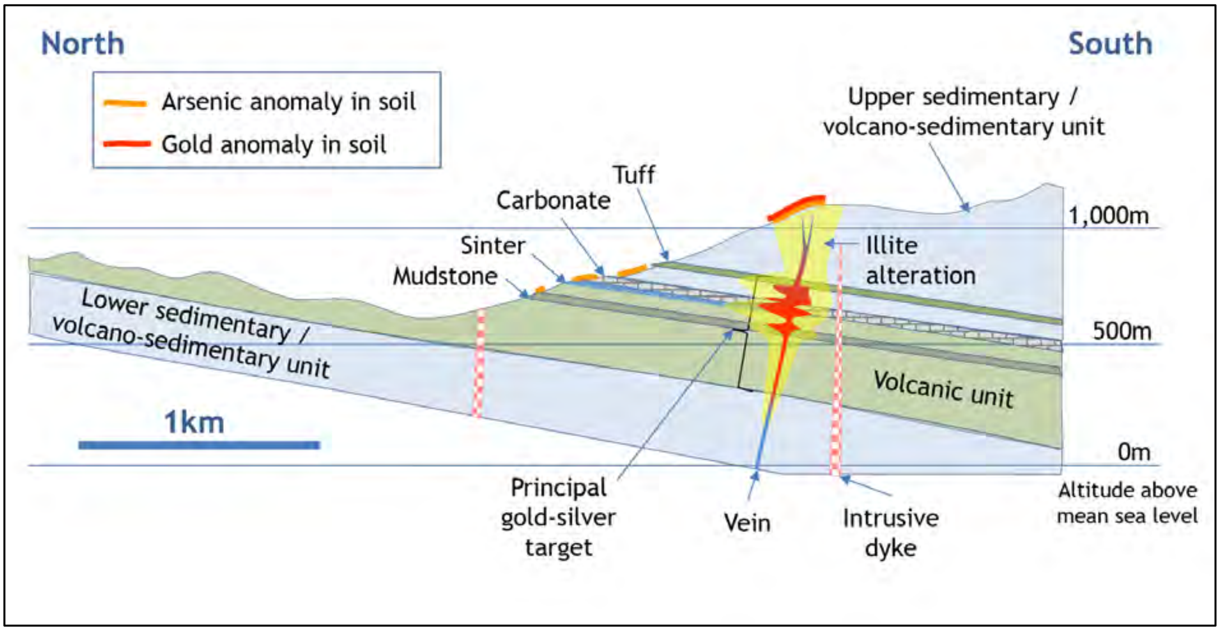


Figure 29. Cross section illustrating the target concept for Yawi Target A

Target A is located in the eastern part of the illite zone where the laminated unit hosts low, but consistent, levels of gold in soil (Figure 25). Soil anomalies and alteration define northwest and northeast striking trends approximately 300 m above the sinter elevation. Aurania interprets the gold – volatile element anomaly at the 1,100 m elevation (Figure 29) as leakage from a vein at depth, while the volatile element anomalies in soil between 700 m to 900 m elevation are interpreted to be from leakage along contacts in the laminated sedimentary and volcano-sedimentary sequence up-dip from a mineralized structure. In this model, the sedimentary – volcano-sedimentary sequence is a target for disseminated, stratabound mineralization, while the more brittle underlying mafic volcanic unit is more likely to host mineralization in veins.

Target B (Figure 25) has an arsenic, silver, molybdenum, selenium, zinc anomaly, with low gold values, enclosed within an area of sinter. Bore holes in Target B will test lower elevations than those tested in Target A.

Target C (Figure 25) is along trend and to the west-northwest of Target A and is similarly defined by a volatile element anomaly coincident with illite in outcrop and enveloped by an extensive area of illite-smectite in soil. Initial bore holes will test the illite-bearing zone and coincident geochemical anomaly at depth.

Target D (Figure 25) lies to the east in an area underlain by the mafic volcanic unit hosting intense chalcedonic quartz veining. The veins strike northeast with planned drill holes inclined to cut the veinlets at depth in the volcanic unit.

Target E lies in the northern part of the Yawi area and at the highest elevations of the area. The target is defined by an extensive thallium anomaly and southeast and east-northeast trending mercury anomalies. Scattered anomalous antimony values were also returned from the ridge and spur soil sampling.

Target F lies in the southeast to the Yawi area where grid soil sampling defined a northeast trending zone of anomalous silver, arsenic, mercury, antimony and thallium. Detailed geological follow-up is pending.

9.5.1.4 Apai

Geology

The Apai target is underlain by a sedimentary unit of the Santiago Formation that lies west of two major north-south orientated faults. Country rocks consist of alternating sandstones, mudstones and limestones that dip shallowly to the southwest. The sedimentary sequence is overlain in the western part of the target area by mafic volcanics of the Piuntza Unit of the Santiago Formation (Figure 30).

Scattered boulders and subcrops of opal and chalcedony, interpreted to have been derived from a sinter (Figure 31a), occur over a relatively flat 1.2 km by 0.5 km area. The opal and chalcedony zone appears to pass beneath younger cover to the northeast and the sinter could be more extensive than it appears from surface mapping. The sinter is enclosed by a zone 1 km to 3 km wide area in which blocks of epithermal veins with cockade textures and breccias with chalcedony cement occur (Figure 32).

Weathered blocks of silicified granite, that are interpreted to have derived from steam-heating – near surface alteration that takes place in epithermal systems, occur in streams approximately 1 km north of the sinter zone.

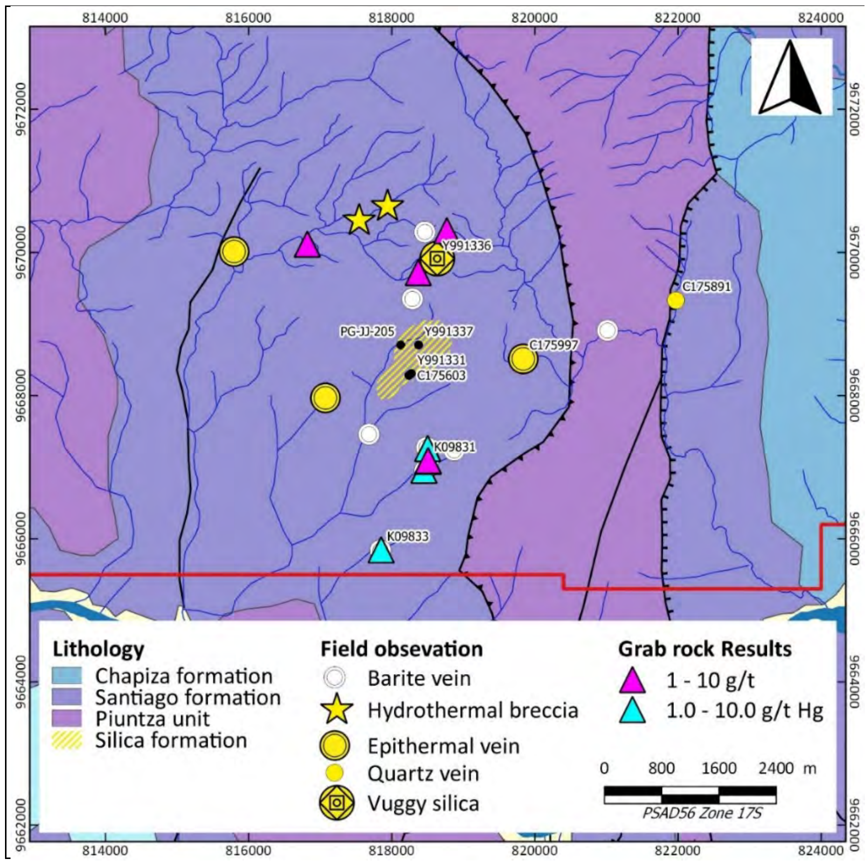


Figure 30. Preliminary geological map of the Apai target

Figure 31a, b. a) sinter block showing stromatolite texture; b) steam heated alteration of granite

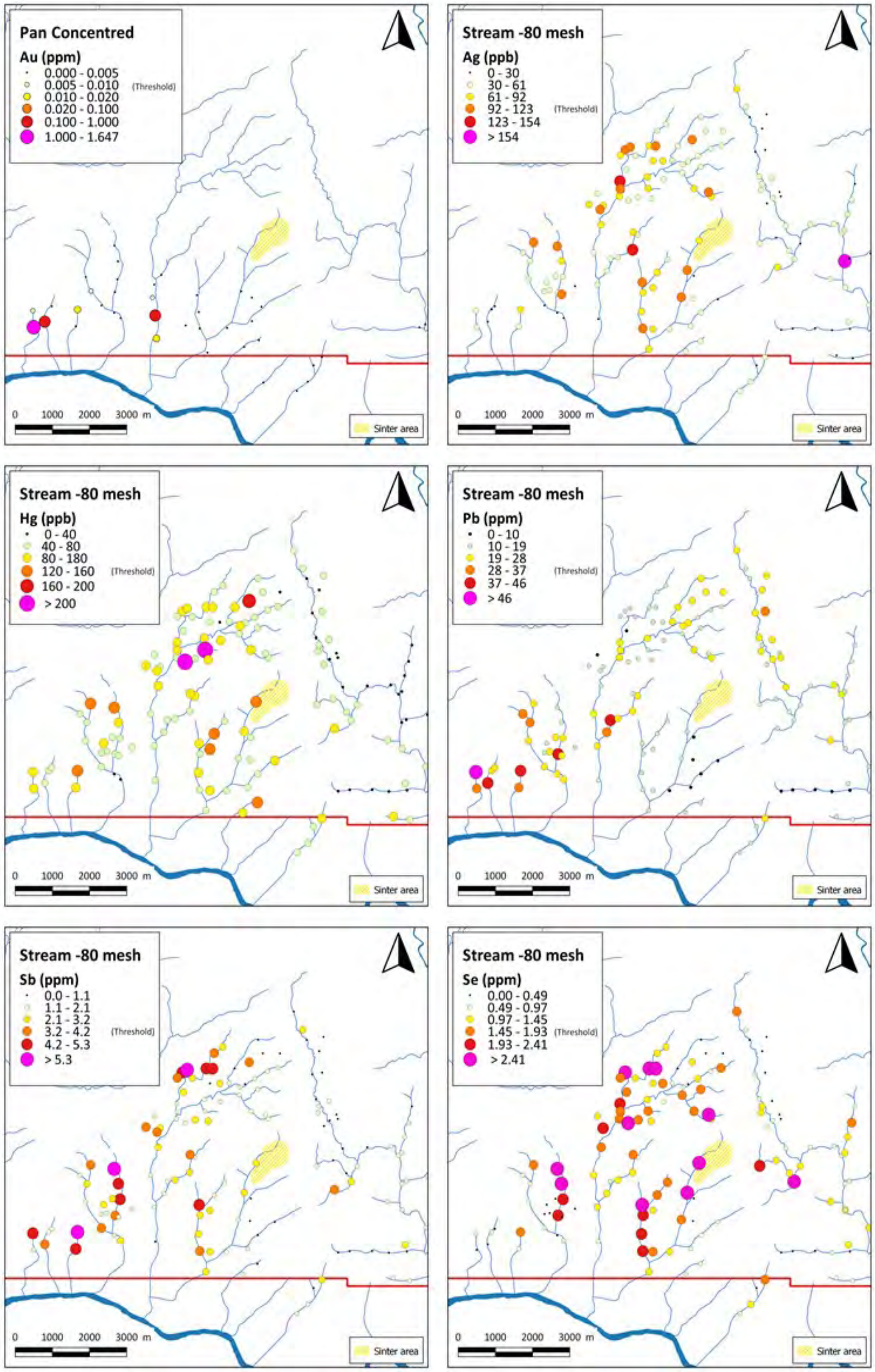


Figure 32. Gold pan concentrate results and silver, mercury, lead, antimony and selenium anomalies in stream sediment (-80 mesh) samples in the Apai target area

Stream Sediment Sample Results

The Apai target is defined by an extensive area of selenium enrichment associated with silver, mercury, arsenic and boron in the area around the sinter (Figure 32 and 33) and anomalies of antimony, silver, lead and selenium to the west. Pan concentrate samples from the southwestern area of the sinter returned gold anomalies up to 1.67 g/t.

Rock-Chip Results

Barite veins with sphalerite, galena and yellow secondary cadmium minerals lie to the south of the sinter area. Rock chip samples from barite veins contain up to 1.7 g/t silver, 24 ppm mercury, 231 ppm arsenic and 0.36% zinc. Further to the southeast, outside the Property, a fault exposure in a roadcut returned 1% zinc and 1.1 g/t silver.

Rock chip samples taken near fault zones in the southeast and east show anomalous molybdenum (up to 67 ppm) and zinc (up to 1.3%). Along the eastern-most fault, a quartz vein with chalcopyrite returned 0.3% copper. The fault system extends southward onto the adjacent Coangos concession, held by a third party, from which copper and silver mineralization has been reported (Figure 35).

9.5.1.5 Tiria

Four target areas for epithermal gold-silver, Tiria North, Tiria East, and Tiria West, and Tiria South, have been identified through stream sediment sampling peripheral to the Shimpia silver-zinc-lead target described in Section 9.5.2.

Stream Sediment Sample Results

A total of 692 stream sediment samples were taken in the Shimpia-Tiria target area. Results of stream sediment sampling in the area are summarized in Figures 34 and 35.

The target areas are:

- Tiria North is defined by two small rivers draining high ground with anomalous arsenic, antimony, mercury, selenium, thallium (Figure 34) and silver and zinc (Figure 35);
- Tiria East covers an area approximately 4 km long with stream sediments anomalous in arsenic, thallium (Figure 34), zinc, antimony, mercury, and molybdenum (Figure 35);
- Tiria West is a 2 km long area with three streams showing antimony, selenium and cadmium anomalies. Of these, the two northern streams are also anomalous in silver, arsenic, molybdenum, thallium and zinc (Figures 34 and 35); and
- Tiria South the stream sediment results show a core area of thallium partially enclosed by antimony and mercury (Figure 34).

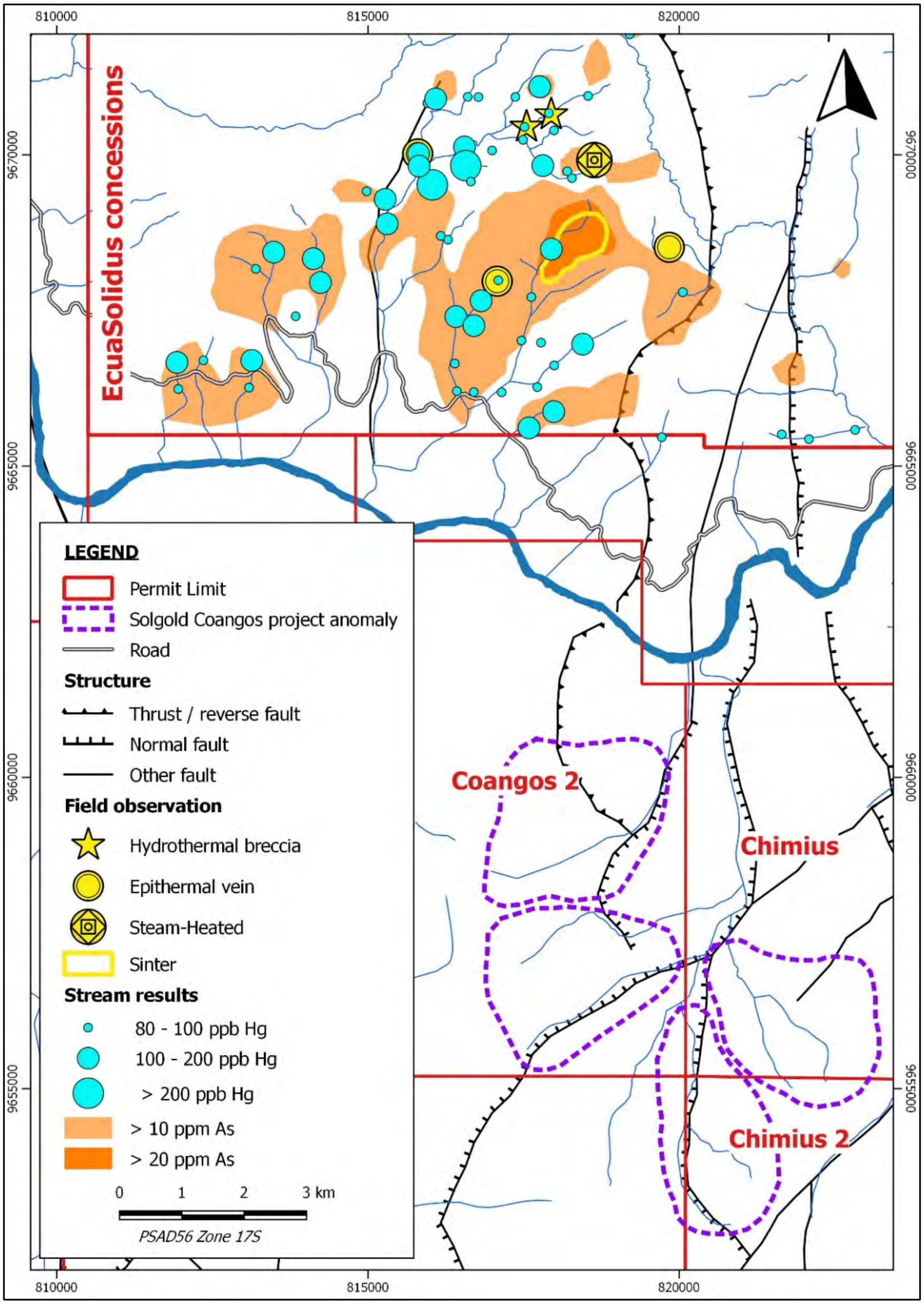


Figure 33. Location of the arsenic-mercury anomaly in stream sediment samples relative to the sinter zone in the Apai target area and adjacent properties

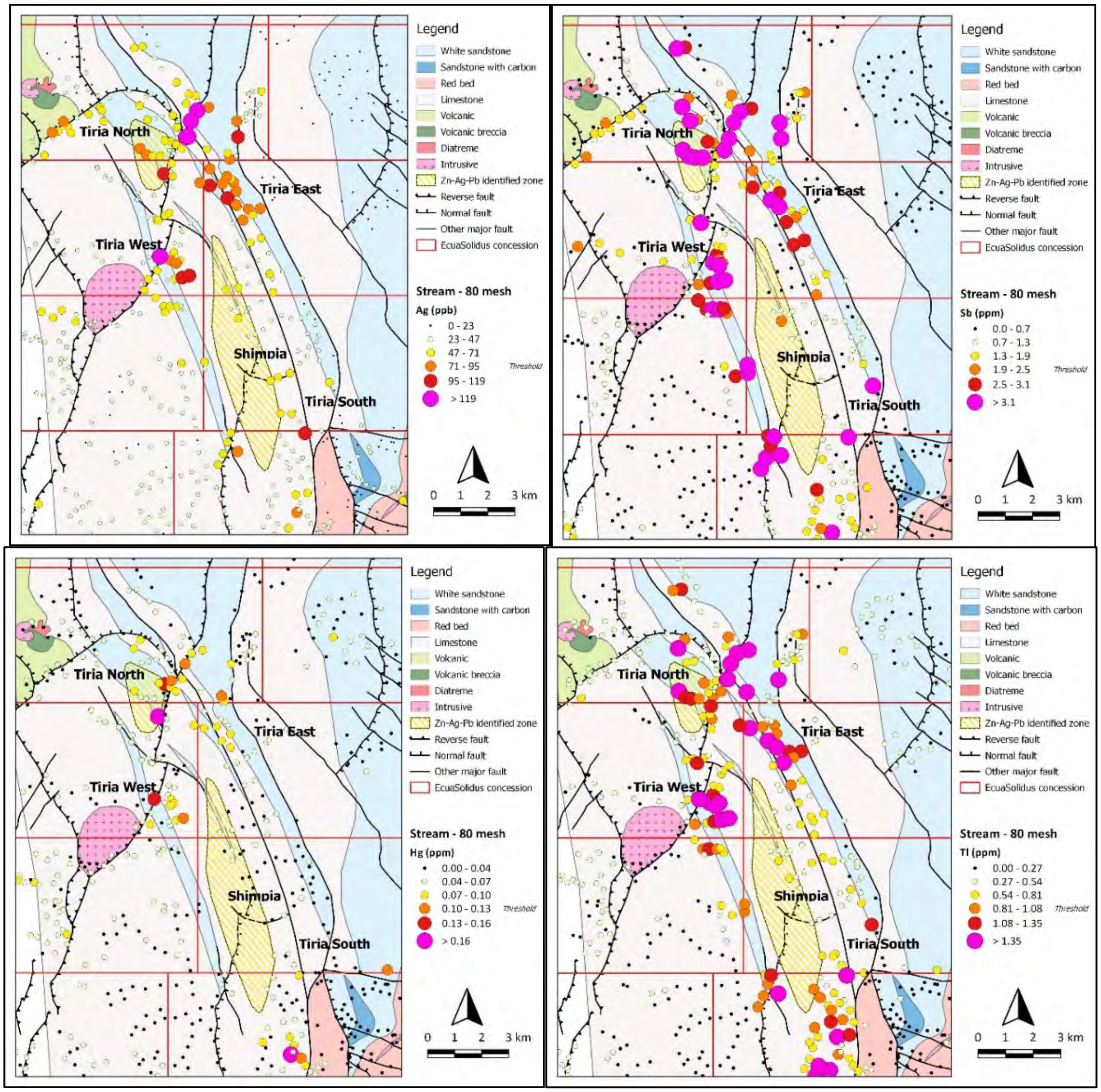


Figure 34. Arsenic, mercury, selenium and thallium geochemical results from stream sediment (-80 mesh) samples taken from the Tiria target area

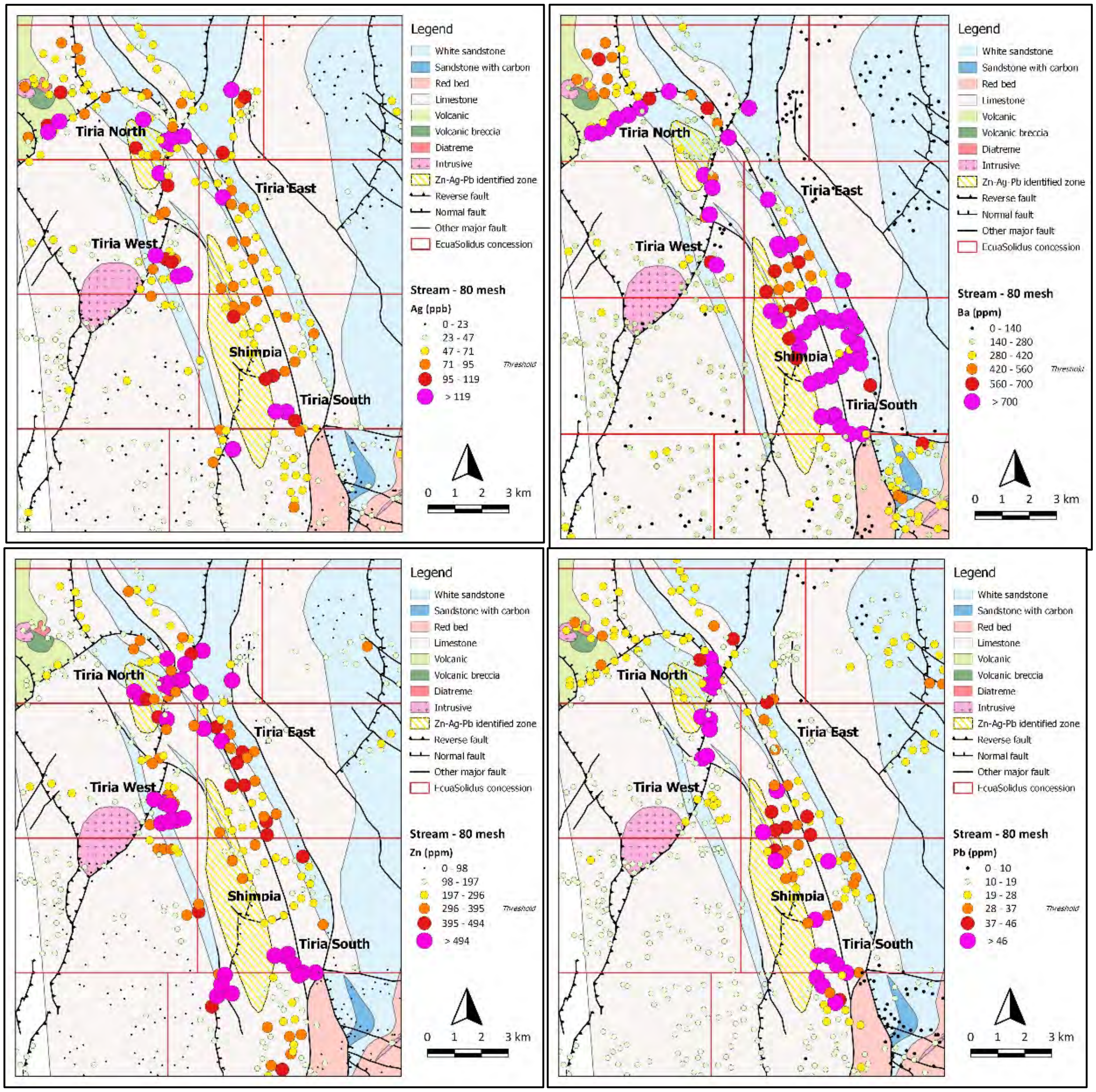


Figure 35. Silver, barium, lead and zinc geochemical results from stream sediment (-80 mesh) samples from the Tiria - Shimpia target area

Soil Sampling Results

Ridge and spur soil sampling has been completed over the Tiria North, West and South target areas and initiated over Tiria East (Figure 36) the results of which are discussed below.

- At Tiria East, as of the Effective Date, only 10% of the area been covered with ridge and spur soil sampling. The limited sampling shows a continuous, 1.5 km long anomaly in arsenic, copper, molybdenum, antimony, selenium and thallium with patchy gold anomalies extending over three ridges;

- Tiria North soil results show a mercury anomaly at the crest of a hill and barium, copper, molybdenum, antimony, selenium, thallium and zinc anomalies at lower elevations;
- Tiria West sampling shows a tight cluster of elevated gold values with mercury and selenium; and
- The Tiria South epithermal target is evident in ridge and spur soil sampling conducted over the Shimpia area while it was being investigated for silver-lead-zinc replacement deposits. The anomaly corresponds with a suspected north-south- oriented structure. Two parallel anomalies are evident (Figure 36): the first in molybdenum (not shown), antimony, selenium, thallium and mercury located east side of Tiria South and a second area to the west anomalous in arsenic, antimony, mercury, and thallium (and not shown - bismuth, cobalt, iron, manganese and tellurium).

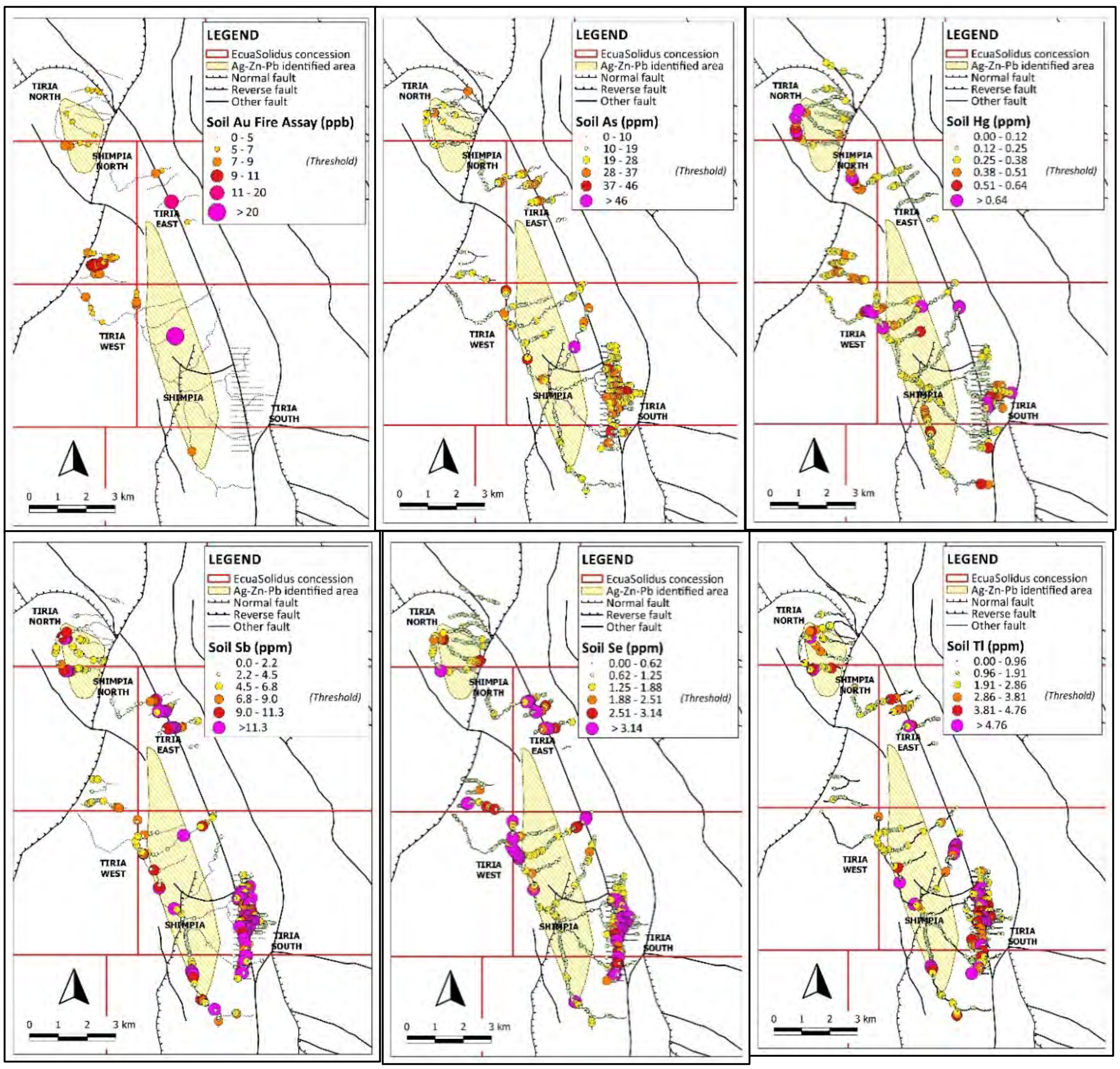


Figure 36. Soil sampling geochemical anomalies in the Tiria target area

Geology

The Tiria targets lie along the contact between limestone and a sequence of interlayered shale and sandstone. Satellite imagery shows that a major fault cuts through the Tiria target area coincident with a linear, potassium radiometric anomaly that passes through the Tiria East and South target areas. The epithermal model for the targets is supported, not only by the trace element suite, but also by the occurrence of banded chalcedony and silicified breccias found in float (Tiria East and North targets) and by gossans with up to 1,160 ppm arsenic, 1,610 ppm antimony and 67 ppm mercury.

9.5.2 SILVER-ZINC-LEAD TARGETS

9.5.2.1 Shimpia

Stream Sediment Sample Results

Stream sediment sampling identified extensive barium and silver enrichment over a 12 km by 3 km area defining the current limits of the Shimpia target. Significantly, within the southeastern and northwestern parts of this large barium-silver anomaly Aurania's sampling returned anomalous lead and zinc (Figure 35).

Volatile elements including arsenic, mercury, selenium, thallium and antimony, are enriched near the Shimpia target and have been discussed in the previous section. The Tiria South target, however, is further described here since it has silver-zinc-lead-barium anomalism in addition to the typical epithermal pathfinder elements (Figure 35).

Rock Sample Results

Grab samples collected by the reconnaissance exploration teams included samples of semi-massive sphalerite, galena, and barite replacing limestone (Figure 37). Analyses show up to 710 g/t silver, 39% lead and 48% zinc (Tables 3 and 4). These samples also contain up to 4,140 ppm arsenic, 67 ppm mercury and 1,610 ppm antimony.

Aurania has reported two different mineralization styles:

- Barite veins with semi-massive sphalerite, pyrite and some galena have been found in limestone boulders in rivers draining the area. Additionally, a vein outcrop in the southern part of the target has been mapped for approximately 50 m along its 335° strike (dipping 70° northeast); and

- Crackle breccia with sphalerite, pyrite, galena and silica infilling silicified limestone fragments. This mineralization type was found in the northwestern parts of the Shimpia target area. The body extends over a strike of at least 300 m, oriented northwest-southeast, with an estimated width of several tens of metres.

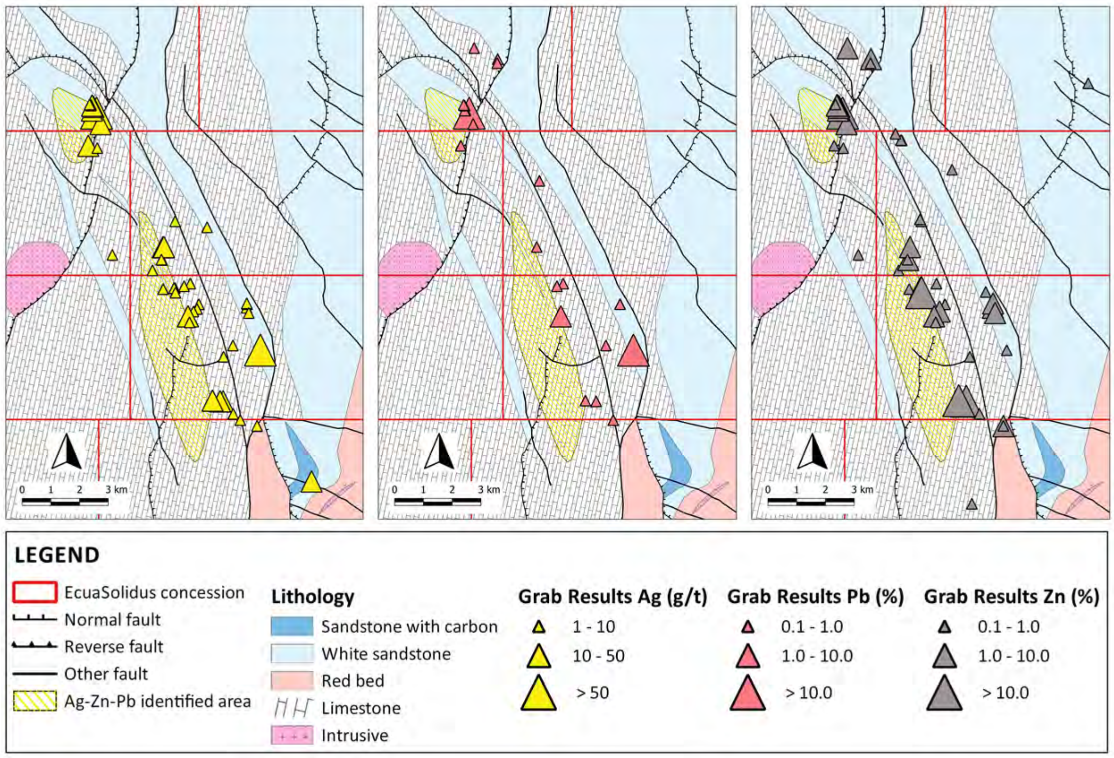


Figure 37. Silver, lead and zinc geochemical results from grab samples in the Shimpia target

TABLE 3.
OUTCROP GRAB SAMPLES RESULTS FROM THE SHIMPIA TARGET

Sample_id	Ag (ppm)	Pb (%)	Zn (%)
Y003607	**356.00**	**10.95**	**12.70**
Y991413	**17.19**	< 0.10	**5.01**
Y991404	**20.62**	0.76	**3.34**
Y991415	**12.51**	0.32	**1.66**
Y991403	**9.38**	0.27	**1.56**
Y991418	**7.64**	< 0.10	**1.26**
Y991417	**5.14**	0.13	**1.02**
Y003452	2.98	< 0.10	**2.66**
Y003701	2.99	< 0.10	**2.18**
Y991414	3.72	< 0.10	**1.52**
Y991419	4.11	< 0.10	0.63
Y991402	1.82	< 0.10	0.59
Y991416	1.44	< 0.10	0.27
Y991438	1.56	< 0.10	0.11

TABLE 4.
BOULDER GRAB SAMPLES RESULTS FROM THE SHIMPIA TARGET

Sample_id	Ag (ppm)	Pb (%)	Zn (%)
Y003604	**710.00**	**9.18**	**42.05**
E797985	**325.00**	**38.95**	0.35
E797989	**16.70**	0.10	**47.87**
E797988	**21.10**	0.10	**29.30**
E797971	**6.33**	< 0.10	**25.90**
Y003603	**43.10**	**4.08**	**6.40**
Y003610	**34.70**	0.65	**7.86**
E797979	**28.70**	**3.63**	**1.97**
Y003454	**11.90**	0.35	**1.32**
Y003815	**25.80**	< 0.10	< 0.10
Y003609	**22.90**	0.15	0.10
Y003814	**20.08**	< 0.10	< 0.10
Y003453	**15.65**	< 0.10	0.58
E797987	**10.65**	0.18	< 0.10
E797983	**9.55**	< 0.10	0.37
Y003813	**9.35**	< 0.10	< 0.10
Y003455	**8.98**	0.15	< 0.10
E797967	**8.82**	0.84	< 0.10
Y003471	**7.72**	< 0.10	0.36
E797975	4.98	< 0.10	0.57
E797972	4.47	< 0.10	**2.02**
Y003456	3.99	< 0.10	**1.23**
E797973	3.99	0.22	0.28
Y003451	3.24	< 0.10	0.14
E797968	3.23	< 0.10	**1.16**
E797966	3.18	0.11	0.73
E797974	2.71	< 0.10	**1.07**
E797969	2.6	< 0.10	0.75
Y003457	2.46	< 0.10	0.72
E797978	2.44	< 0.10	**1.07**
E797970	1.74	< 0.10	**1.14**
E797994	1.67	< 0.10	**1.16**
C175844	1.54	< 0.10	0.99
C175775	<1.00	0.20	**2.05**
C175694	<1.00	0.73	**1.89**

Soil Sampling Results

Ridge and spur soil sampling is currently in progress in the Shimpia-Tiria target area. Initial results (Figure 38) show extensive overlap of areas of enrichment of silver, barium, lead and zinc. Anomalous epithermal pathfinder element anomalies lie peripheral to silver-zinc-lead mineralized outcrops and to the east along an inferred northwest-southeast orientated fault.

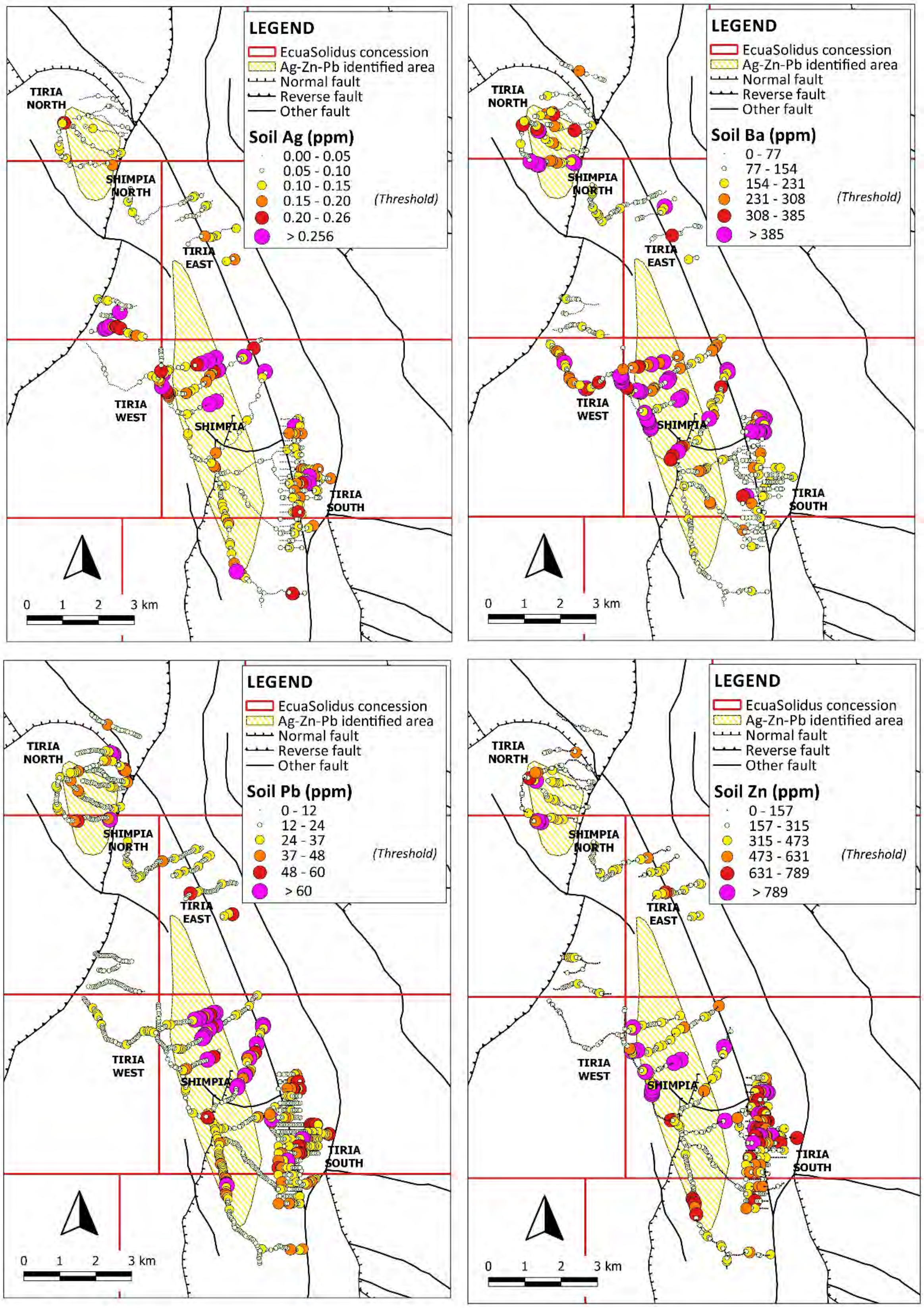


Figure 38. Silver, barium, lead and zinc in ridge and spur soil samples at Shimpia

Lithology

The eastern part of the target area is dominated by a clastic sequence of sandstone, siltstone and shale, becoming interbedded with limestone up-section in the west. Bedding strikes 150°-160° dipping 5°-30° southwest (Figure 39). Folding is locally developed adjacent to faults. Brecciation with calcite infill between the fragments, and calcite stockworks are commonly developed along anticlinal hinges.

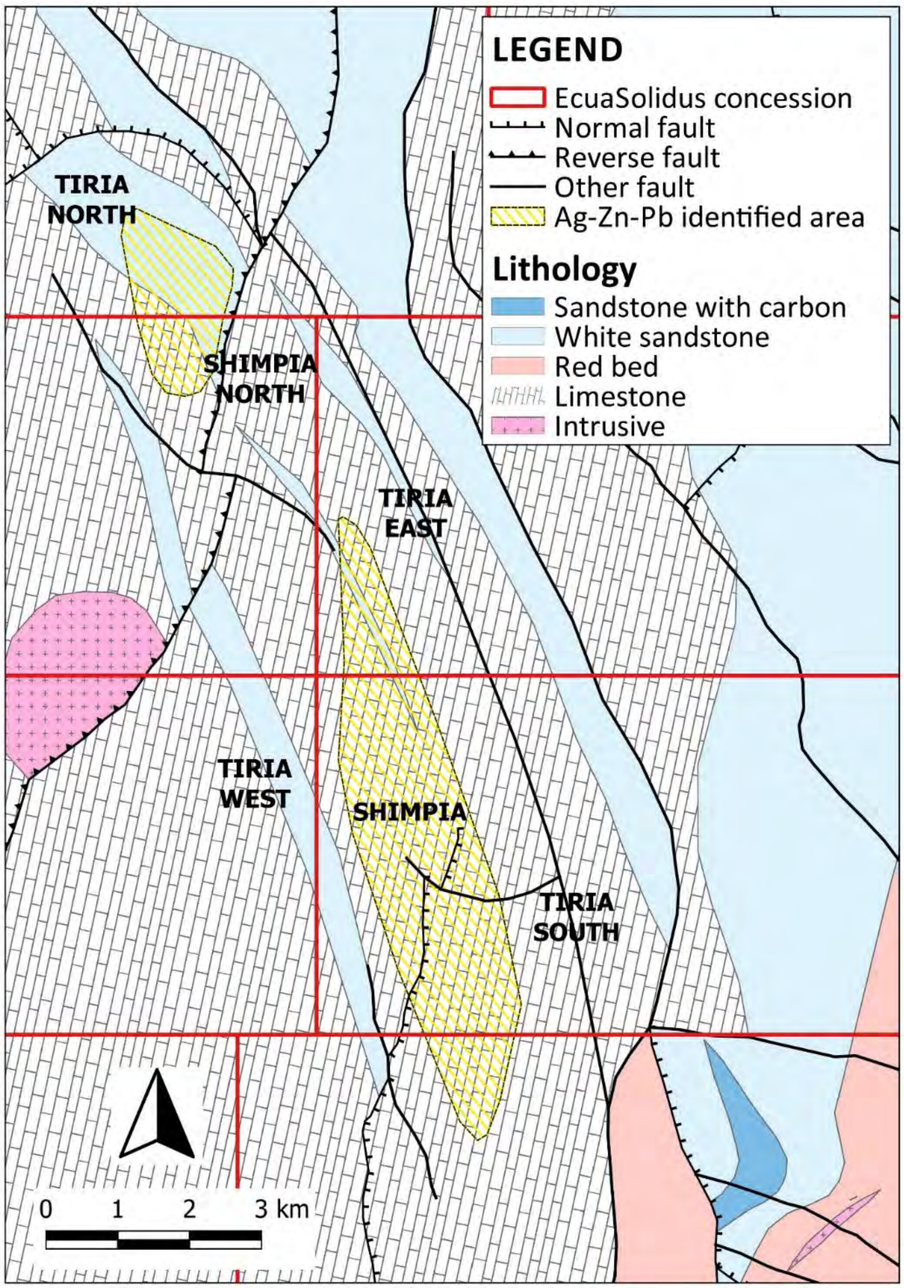


Figure 39. Geological map of Shimpia-Tiria area

9.5.3 SEDIMENTARY-HOSTED COPPER-SILVER TARGETS

9.5.3.1 Kirus – Jempe Basin

Geology

The Kirus, Tsenken and Jempe sedimentary-hosted copper-silver targets cover an area 23 km long by 7 km wide within a Mid- to Late- Jurassic sedimentary basin. The sedimentary basin has been filled by a thickness of at least 2,400 m of red-beds, comprising a coarsening-upwards sequence of mudstone, siltstone, sandstone and conglomerate of the Chapiza Formation (Figure 40). The red-bed sequence is underlain to the west by a thick limestone and black mudstone unit and is overlain to the east and in the centre of the basin by a mature sandstone unit. The sandstone unit locally contains carbonaceous fossil plant fragments.

The red-beds were deposited in a series of grabens and half grabens in which volcanoclastic beds in the upper part of the sequence attest to contemporaneous igneous activity. Additionally, porphyritic gabbro and diorite stocks intrude the red-bed sequence. Two main sub-basins are recognised in the Project area; the northern one is more complex and is subdivided by an intra-basin high. Basin margin faults trend north-northwest and were inverted prior to an onlap in the Cretaceous. The red-beds are gently folded, with fold amplitudes increasing in proximity to the inverted faults (Figure 41).

White to grey feldspathic sandstone layers 0.1 to 2.5 m thick occur locally within the red-bed sequence. These reduced sedimentary layers, with carbonized plant fragments, are the main host of copper - silver mineralization.

Gypsum is commonly found in veins associated with north-striking faults and a salt dome is located in the northern part of the area in which sedimentary-hosted copper-silver has been found.

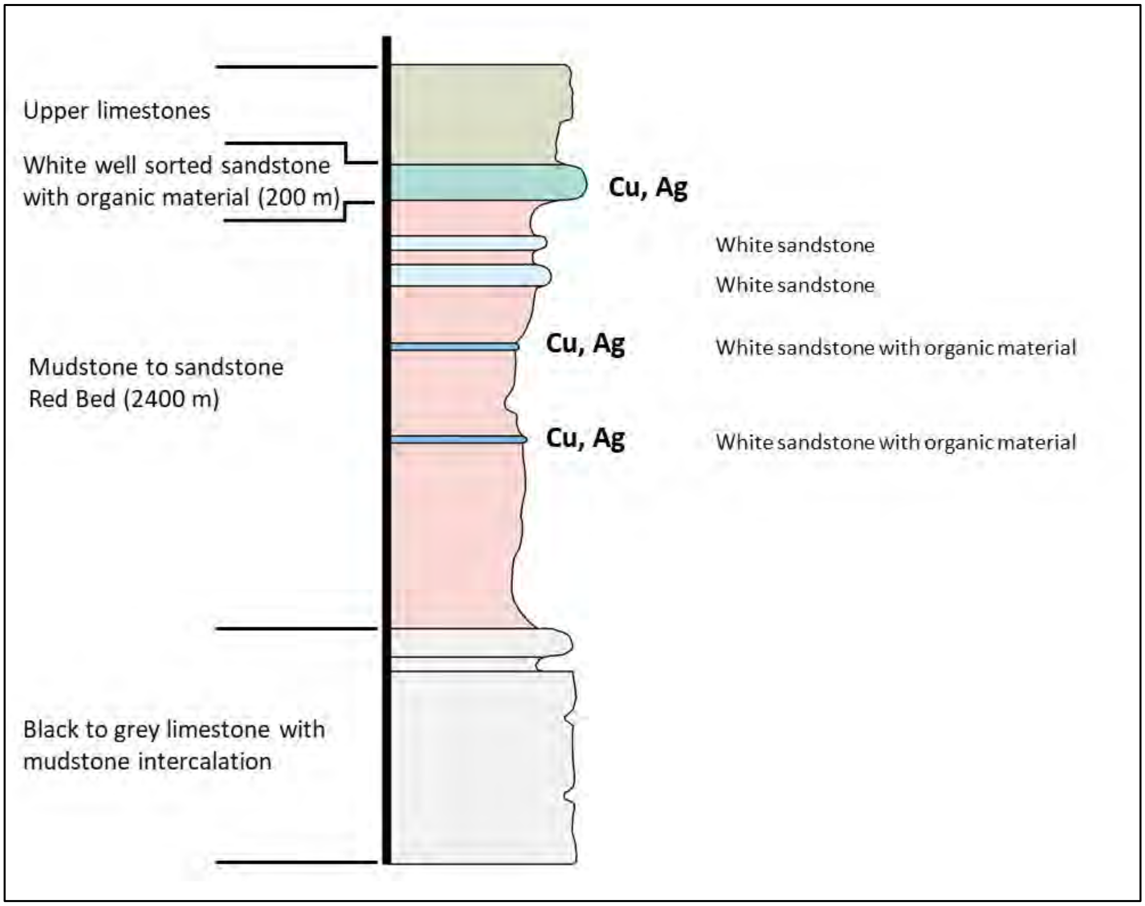


Figure 40. Simplified stratigraphic column of the Kirus – Tsenken Basin

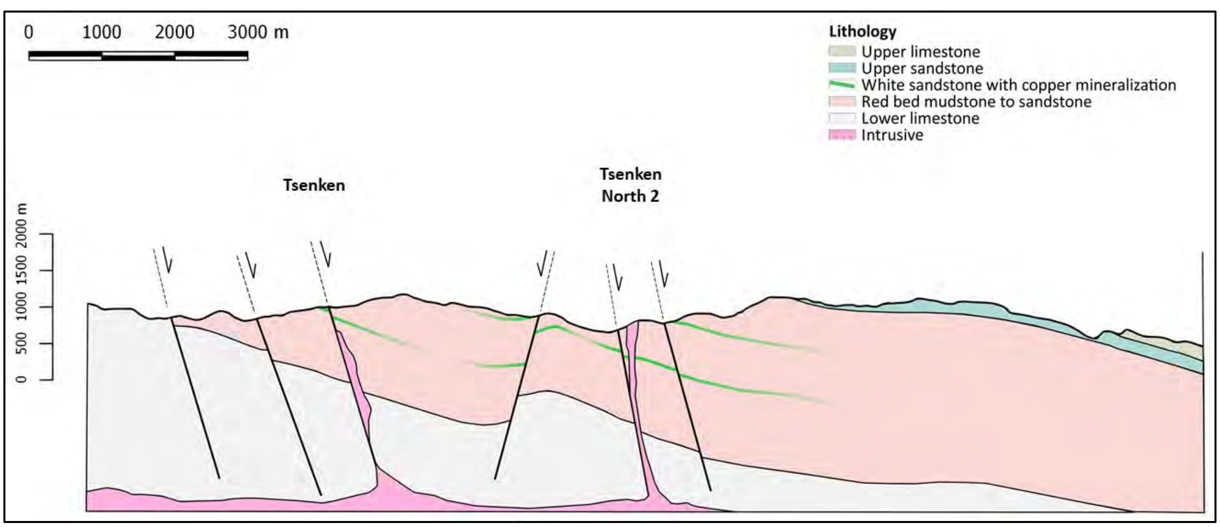


Figure 41. Geological section of the Kirus – Tsenken Basin

The sedimentary-hosted copper-silver mineralization found to date is confined to specific horizons of carbon-bearing sedimentary units found in scattered outcrops over 23 km of strike (Figure 42). The copper-silver mineralization is present as malachite, chrysocolla, tenorite, chalcocite, cuprite and native copper, and is hosted by bleached, reduced sandstone and carbonaceous shale. The strongest mineralization is found in strata with fossilized plant fragments (Figure 43).

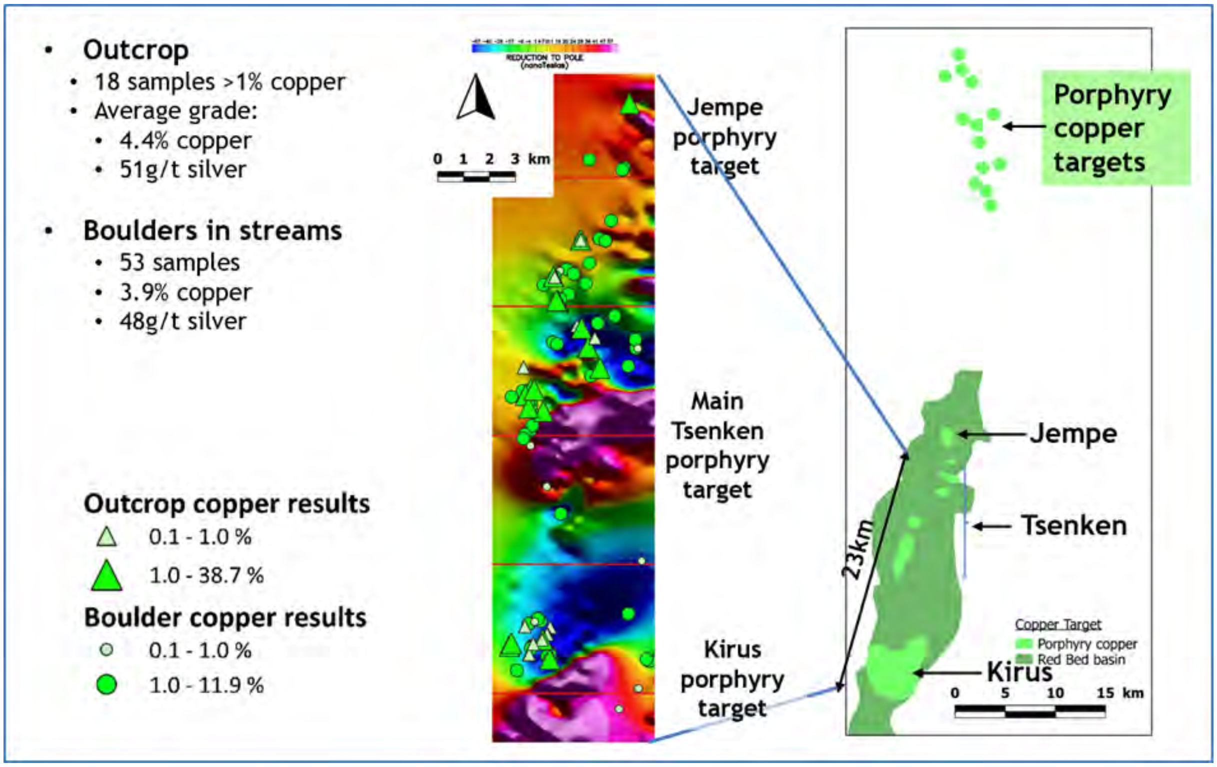


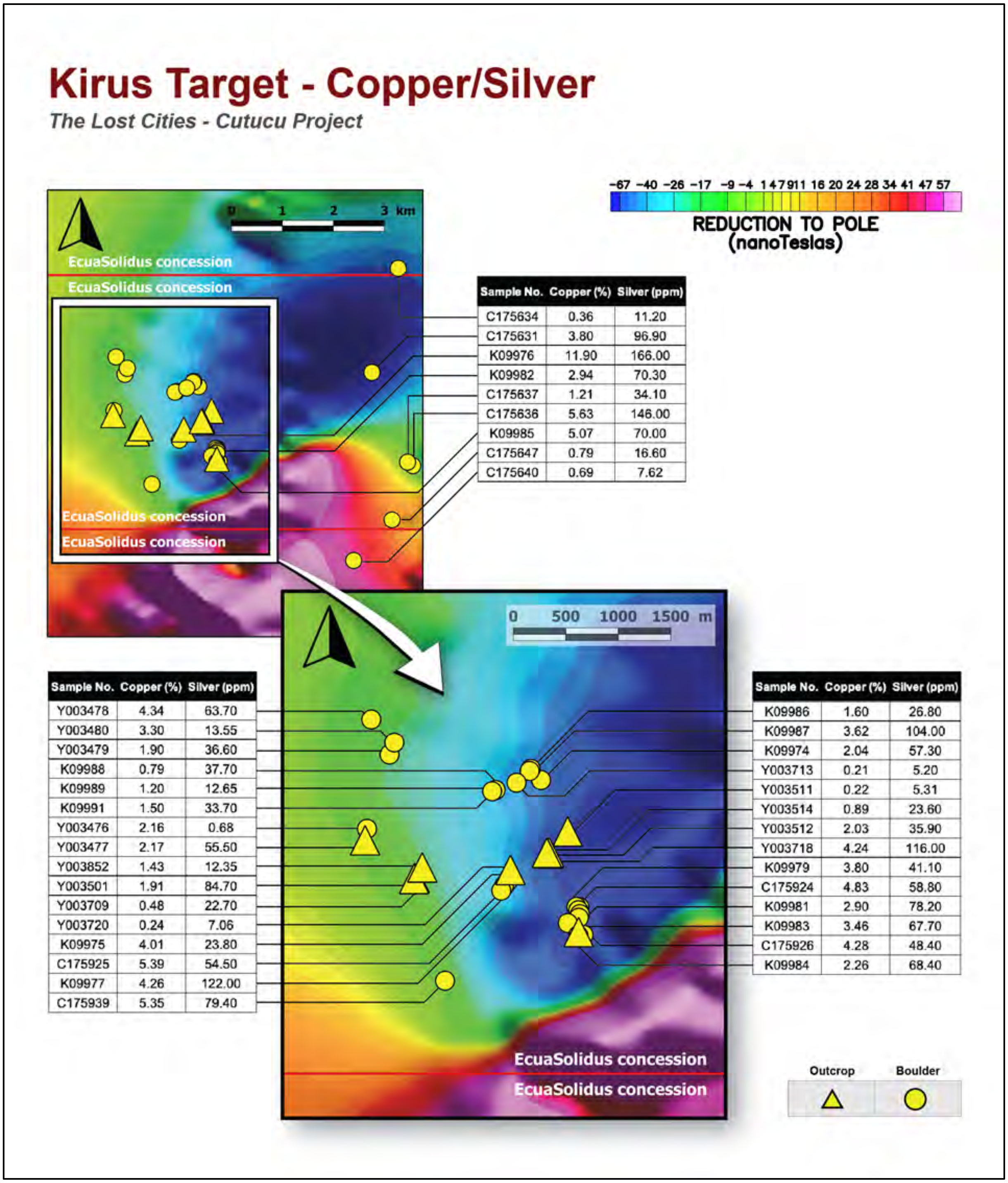
Figure 42. Location of rock-chip samples of sedimentary-hosted copper-silver mineralization shown on RTP magnetic data

Figure 43. Mineralized shale with carbonized plant stems, leaf fragments and rip-up clasts of organic rich shale. Sample assayed 5.63% copper and 146 g/t silver

9.5.3.2 Kirus Sedimentary-Hosted Target

Reconnaissance Exploration

Reconnaissance exploration identified malachite- and tenorite- bearing boulders in streams that contain up to 11.9% copper with 166 g/t silver. Follow-up exploration led to the discovery of mineralization with up to 5.1% copper and 70 g/t silver in sporadic outcrops over a 2 km trend immediately northwest of the Kirus magnetic feature (Figure 44).



Sample No.	Copper (%)	Silver (ppm)
C175634	0.36	11.20
C175631	3.80	96.90
K09976	11.90	166.00
K09982	2.94	70.30
C175637	1.21	34.10
C175636	5.63	146.00
K09985	5.07	70.00
C175647	0.79	16.60
C175640	0.69	7.62

Sample No.	Copper (%)	Silver (ppm)
Y003478	4.34	63.70
Y003480	3.30	13.55
Y003479	1.90	36.60
K09988	0.79	37.70
K09989	1.20	12.65
K09991	1.50	33.70
Y003476	2.16	0.68
Y003477	2.17	55.50
Y003852	1.43	12.35
Y003501	1.91	84.70
Y003709	0.48	22.70
Y003720	0.24	7.06
K09975	4.01	23.80
C175925	5.39	54.50
K09977	4.26	122.00
C175939	5.35	79.40

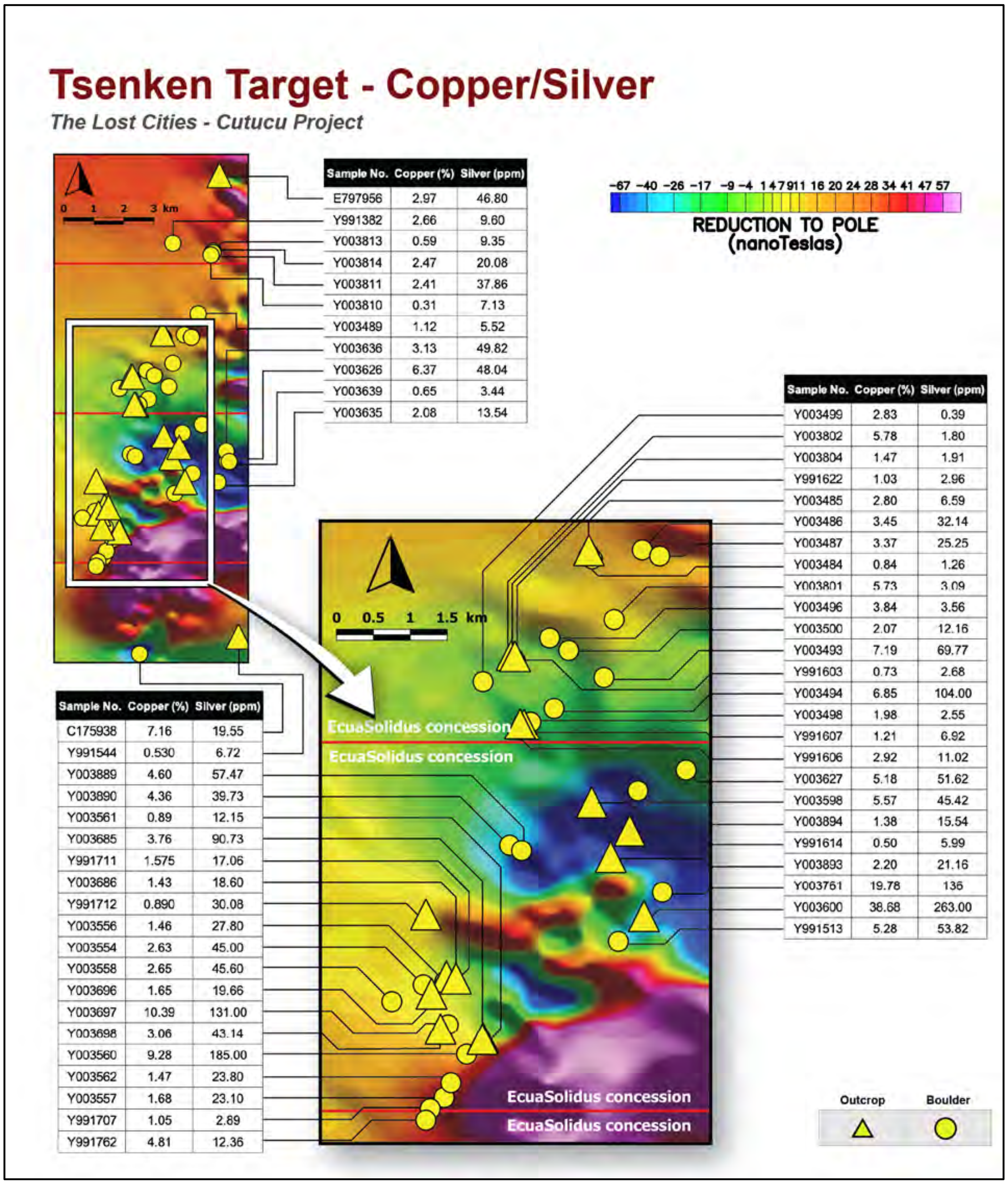
Sample No.	Copper (%)	Silver (ppm)
K09986	1.60	26.80
K09987	3.62	104.00
K09974	2.04	57.30
Y003713	0.21	5.20
Y003511	0.22	5.31
Y003514	0.89	23.60
Y003512	2.03	35.90
Y003718	4.24	116.00
K09979	3.80	41.10
C175924	4.83	58.80
K09981	2.90	78.20
K09983	3.46	67.70
C175926	4.28	48.40
K09984	2.26	68.40

Figure 44. Rock-chip sample locations in the Kirus target area shown on an image of RTP magnetic data. The entire area shown lies within the EcuaSolidus concession area

9.5.3.3 Tsenken Sediment-Hosted Target

Reconnaissance Exploration

Conspicuous malachite- and chrysocolla- bearing boulders have been encountered in streams immediately north of the Tsenken magnetic anomaly. Initial grab samples from boulders returned up to 7.2% copper with 70 g/t silver, with subsequent outcrop sampling returning up to 39% copper with 263 g/t silver in a black shale unit (Figure 45).



Sample No.	Copper (%)	Silver (ppm)
E797956	2.97	46.80
Y991382	2.66	9.60
Y003813	0.59	9.35
Y003814	2.47	20.08
Y003811	2.41	37.86
Y003810	0.31	7.13
Y003489	1.12	5.52
Y003636	3.13	49.82
Y003626	6.37	48.04
Y003639	0.65	3.44
Y003635	2.08	13.54

Sample No.	Copper (%)	Silver (ppm)
Y003499	2.83	0.39
Y003802	5.78	1.80
Y003804	1.47	1.91
Y991622	1.03	2.96
Y003485	2.80	6.59
Y003486	3.45	32.14
Y003487	3.37	25.25
Y003484	0.84	1.26
Y003801	5.73	3.09
Y003496	3.84	3.56
Y003500	2.07	12.16
Y003493	7.19	69.77
Y991603	0.73	2.68
Y003494	6.85	104.00
Y003498	1.98	2.55
Y991607	1.21	6.92
Y991606	2.92	11.02
Y003627	5.18	51.62
Y003598	5.57	45.42
Y003894	1.38	15.54
Y991614	0.50	5.99
Y003893	2.20	21.16
Y003761	19.78	136
Y003600	38.68	263.00
Y991513	5.28	53.82

Sample No.	Copper (%)	Silver (ppm)
C175938	7.16	19.55
Y991544	0.530	6.72
Y003889	4.60	57.47
Y003890	4.36	39.73
Y003561	0.89	12.15
Y003685	3.76	90.73
Y991711	1.575	17.06
Y003686	1.43	18.60
Y991712	0.890	30.08
Y003556	1.46	27.80
Y003554	2.63	45.00
Y003558	2.65	45.60
Y003696	1.65	19.66
Y003697	10.39	131.00
Y003698	3.06	43.14
Y003560	9.28	185.00
Y003562	1.47	23.80
Y003557	1.68	23.10
Y991707	1.05	2.89
Y991762	4.81	12.36

Figure 45. Rock-chip sample in the Tsenken target area shown on an image of RTP magnetic data

Follow-up Exploration

Follow-up exploration of the Tsenken target has tracked the favorable horizon for 2.5 km along strike in a sequence of reduced, sedimentary beds. Aurania, using mineralized outcrop locations in the steeply incised topography, generated a provisional elevation contour map of the favourable horizon. The map can be used as a base on which to define trends in copper-silver mineralization within the sedimentary layer, and initial drill planning (Figure 46).

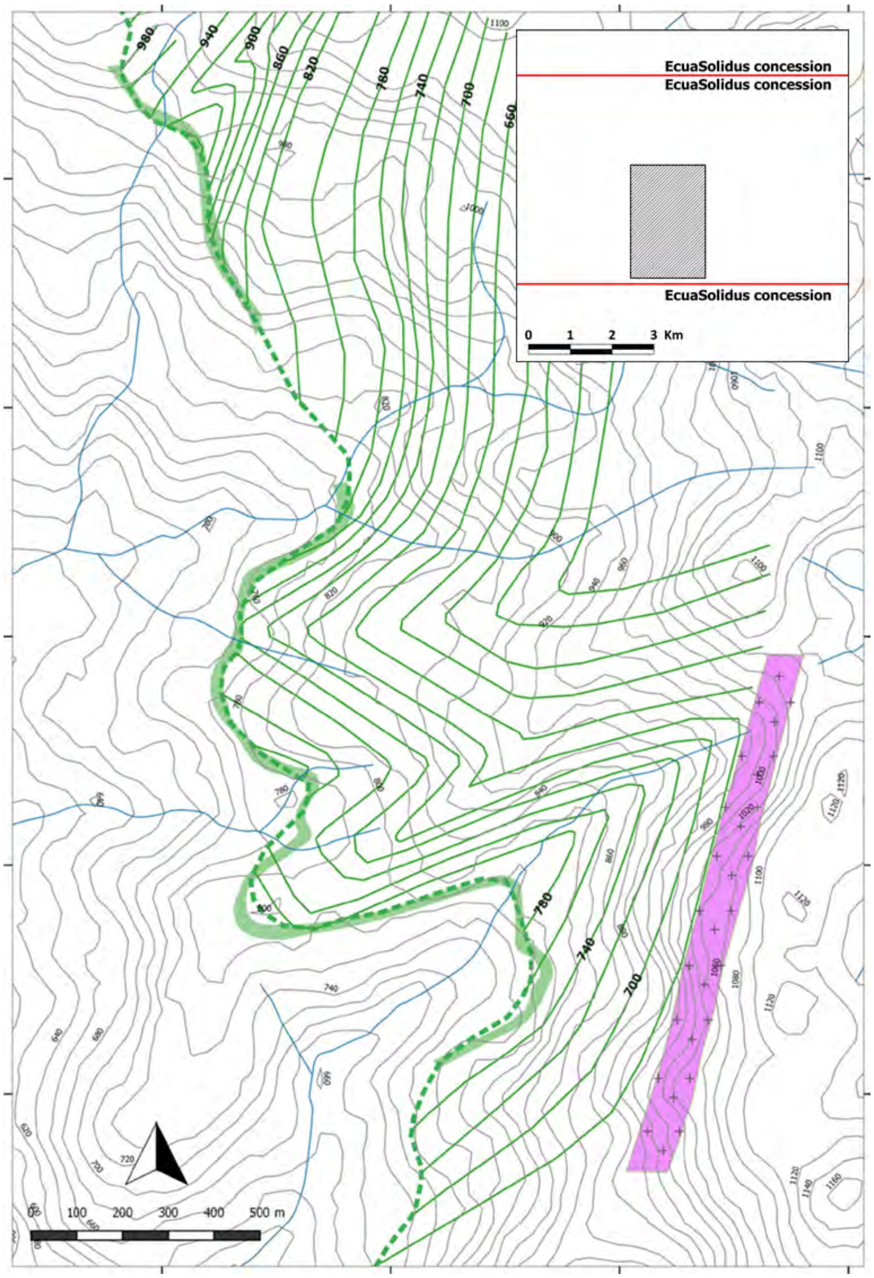
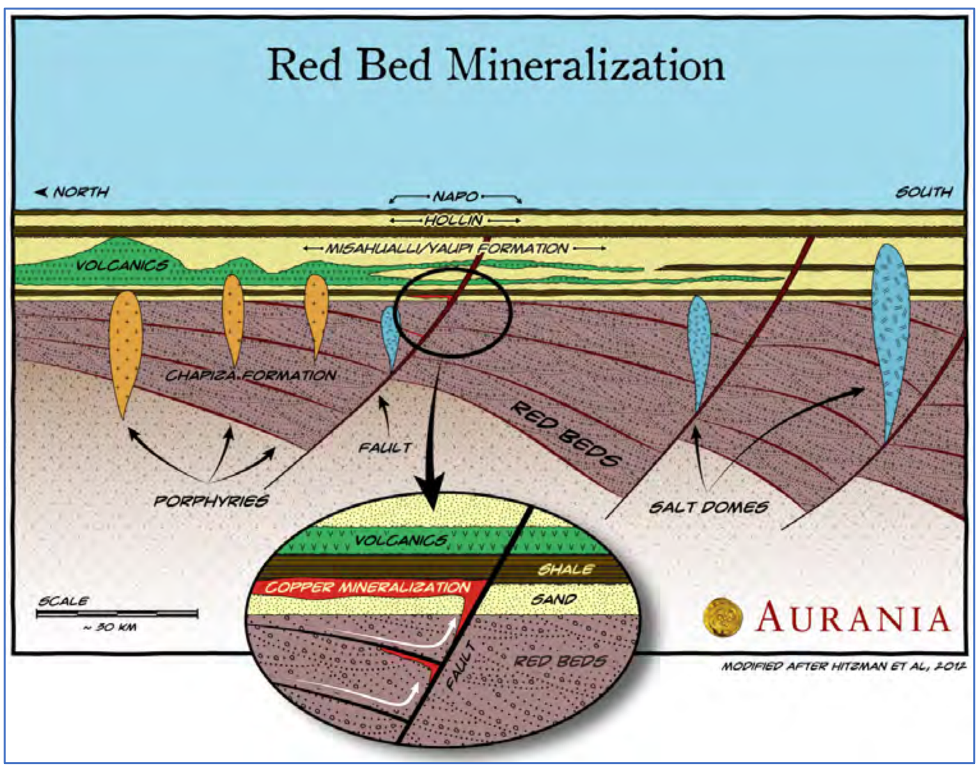


Figure 46. Provisional contour map of the favorable sedimentary layer at Tsenken shown relative to topographic contours

9.5.3.4 Interpretation and Exploration Model

As of the Effective Date, the strongest copper-silver mineralization discovered in the Project is stratabound in reduced layers above a thick and extensive red-bed basin. This is the classic location of red-bed copper of the Central African Copperbelt and the European Kupferschiefer. Sediment hosted mineralization on the Property has not been demonstrated to have the enormous lateral continuity of either the Copperbelt or the Kupferschiefer, but the genetic and exploration models developed for those regions provide an exploration guide for the Project.

Aurania's current exploration model for this sedimentary-hosted mineralization has copper-silver mineralization localized along a north-trending anticlinal fold axis located along the core of the Cordillera de Cutucú. Red-bed copper is thought to derive from leaching of copper from the sedimentary rocks by chlorine-rich, oxidized fluids, and hence the occurrence of evaporite sequences and salt domes within the red-beds, is thought to be fundamentally important to the development of these deposits. In addition to that potential source of copper, mapping has shown the red-beds of the Chapiza Formation to have been intruded by subvolcanic and plutonic rocks which is shown schematically in (Figure 47).



(modified after Hitzman et al., 2012)

Figure 47. Exploration model for red-bed style mineralization for the Project

Aurania believes the numerous magnetic features identified in the airborne survey may be related to mineralized porphyry or IOCG systems that have intruded the red-beds, providing an additional potential source of copper. The porphyries would be related to a late Jurassic island arc superimposed on the mid-Jurassic rift basin in which the red-beds accumulated. Since IOCG systems tend to develop in extensional tectonic settings, they may have developed contemporaneously with red-bed accumulation.

The genetic model has copper, whether leached from sediments or from mineralized porphyry or IOCG systems, transported through the basin as chloride complexes. The copper- and silver- rich brine would have been driven laterally along more permeable units within the red-bed sequence. Fault zones would have provided the cross-stratal permeability allowing the warm metal-rich fluid to ascend until it came in contact with reduced strata that induced precipitation of copper and silver (see Figure 47).

9.5.4 INTRUSIVE-RELATED TARGETS

9.5.4.1 Nature of Igneous Rocks

Whole rock analysis of magnetic, intensely plagioclase-rich volcanic and subvolcanic rocks classifies these rocks in a subalkaline series consisting of basaltic-andesite, andesite and rhyolite. The subvolcanic porphyritic rocks are closely associated with complex positive magnetic features in the geophysical data. Limited outcrop suggests that most of the subvolcanic rocks encountered to date are dykes, some of which are at least 100 m wide.

9.5.4.2 Porphyry Targets

Awacha

Stream sediment results show that drainages from the Awacha A and Awacha B magnetic anomalies (Figure 48) are anomalous in copper, molybdenum and arsenic. Lead shows slight enrichment east of the molybdenum and copper anomalies, while zinc shows no anomalism. These data are consistent with a porphyry target in which copper-molybdenum generally occurs near the centre of the mineralized zone, partially enclosed by an area of lead enrichment. In addition to the Awacha A and B anomalies there are 13 discrete magnetic centres in the Awacha area requiring additional investigation. This will include further stream sediment sampling and ridge and spur soil sampling.

A rock chip sample taken from the QSP zone during initial reconnaissance exploration of the Awacha target contained 0.3% copper and 0.2 g/t gold. Although this result is only from one sample, and neither Mr. Page nor Mr. Phillips were able to visit the sample site, it is significant both for relative strength of the copper and gold values and the ratio of copper to gold which falls within the range typical of copper-gold porphyries.

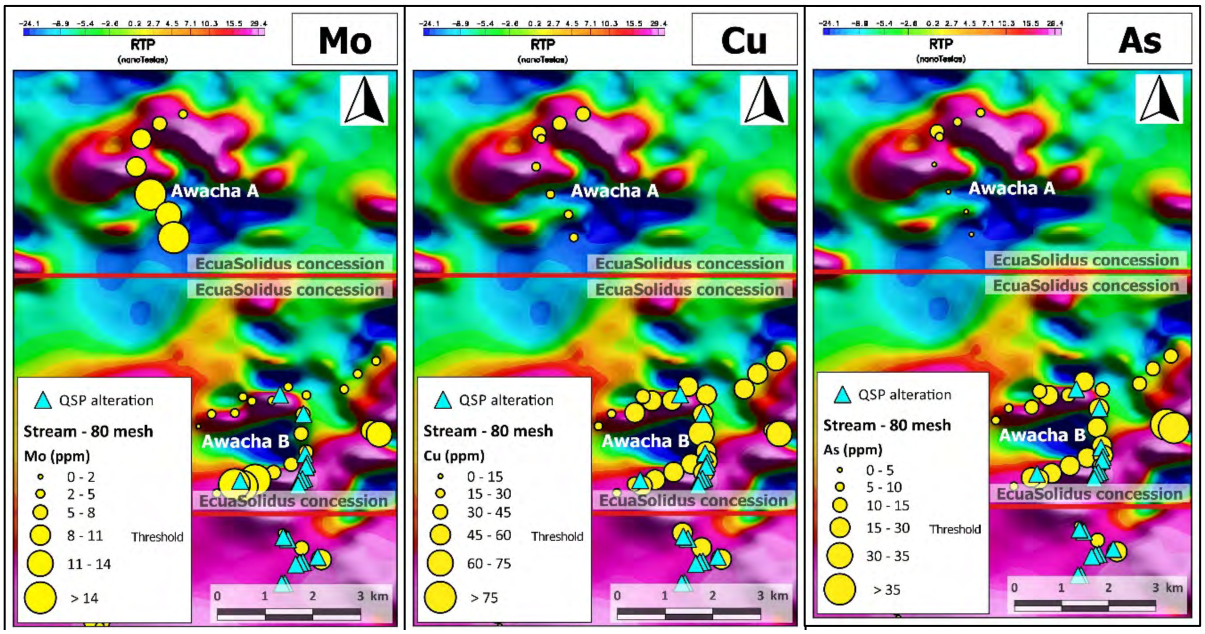


Figure 48. Stream sediment sample results from the Awacha targets shown on an RTP magnetic image

The Awacha area lies in an area with Silurian-Devonian Pumbuiza Formation slate, quartzite and minor conglomerate cut by diorite dykes. QSP alteration, confirmed by PIMA spectral analysis, is found in clastic sedimentary rock outcrops encountered in the area with Aurania reporting the pyrite content of some sedimentary layers reaches 50%. Exposures of dioritic dykes show them to be unaffected by QSP alteration but showing potassic alteration in the form of secondary biotite, although with minimal accompanying mineralization.

The QSP alteration, along with stream sediment enrichment in copper and molybdenum and the coincidence of these anomalous areas over magnetic features evident in the geophysical data, are characteristics of porphyry targets. The moderate enrichment of arsenic and lead on the periphery of the core area is also consistent with the porphyry model.

Tsenken N2

Stream sediment results show an anomalous zone of copper, cobalt and vanadium over a northeast elongate trend of alternating magnetic highs and lows (Figure 49). The highest copper values come from the Tsenken North 2 and North 3 target areas. Molybdenum is not anomalous in stream sediments from these target areas.

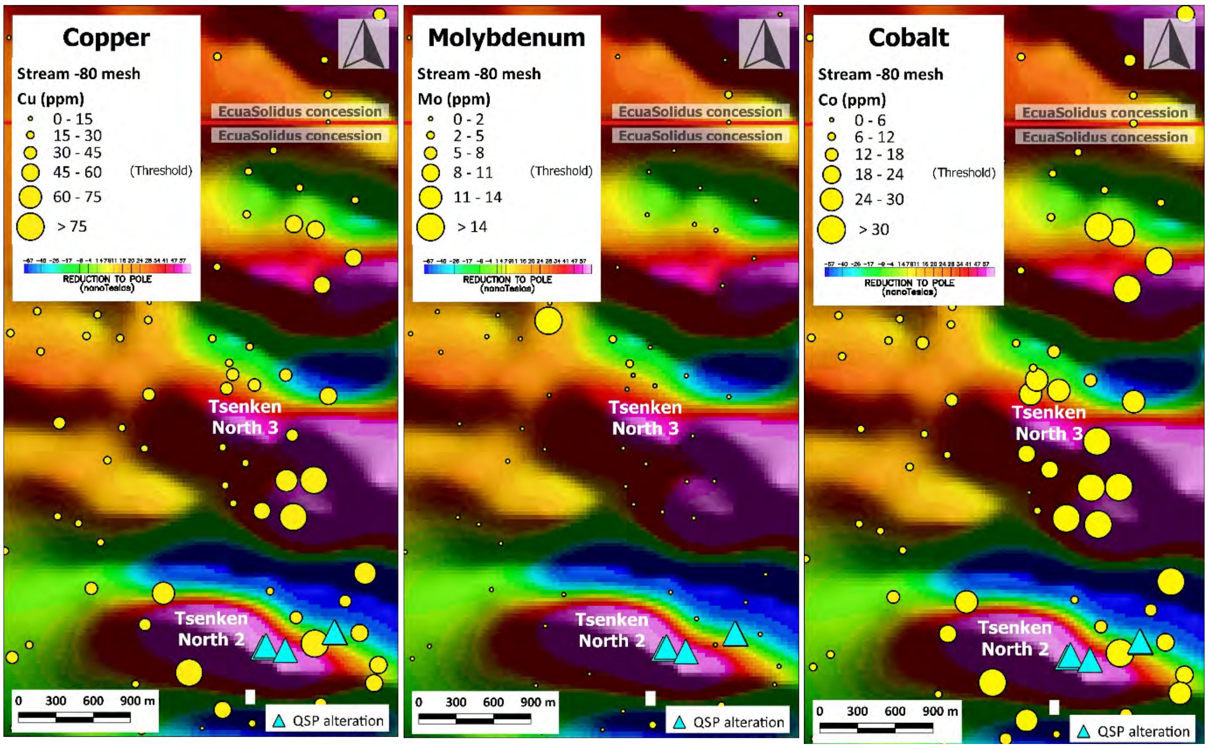


Figure 49. Stream sediment sample results from the Tsenken N2 target shown on an RTP magnetic image. Also shown is the location of an outcrop of QSP alteration

A 100 m by 50 m soil grid was sampled over the Tsenken N2 target and results show a strong and coherent copper anomaly superimposed by a patchy cobalt anomaly (Figure 50). Bismuth, molybdenum and lead anomalies are largely peripheral to the copper-cobalt anomaly. The copper anomaly in soil measures 2,000 m by 300 m over the Tsenken N2 magnetic feature (Figure 50).

The magnetic anomaly at Tsenken N2 coincides with a subvolcanic intrusive of trachy-andesitic (dioritic) composition and porphyritic texture intruding Chapiza Formation red-beds. Limited mapping of the next magnetic feature to the north, the Tsenken N3 target, has identified sub-volcanic, sub-alkaline intrusive rocks ranging in composition from gabbro, through diorite to syeno-diorite with conspicuous porphyritic textures. The igneous rocks have a significant magnetite content.

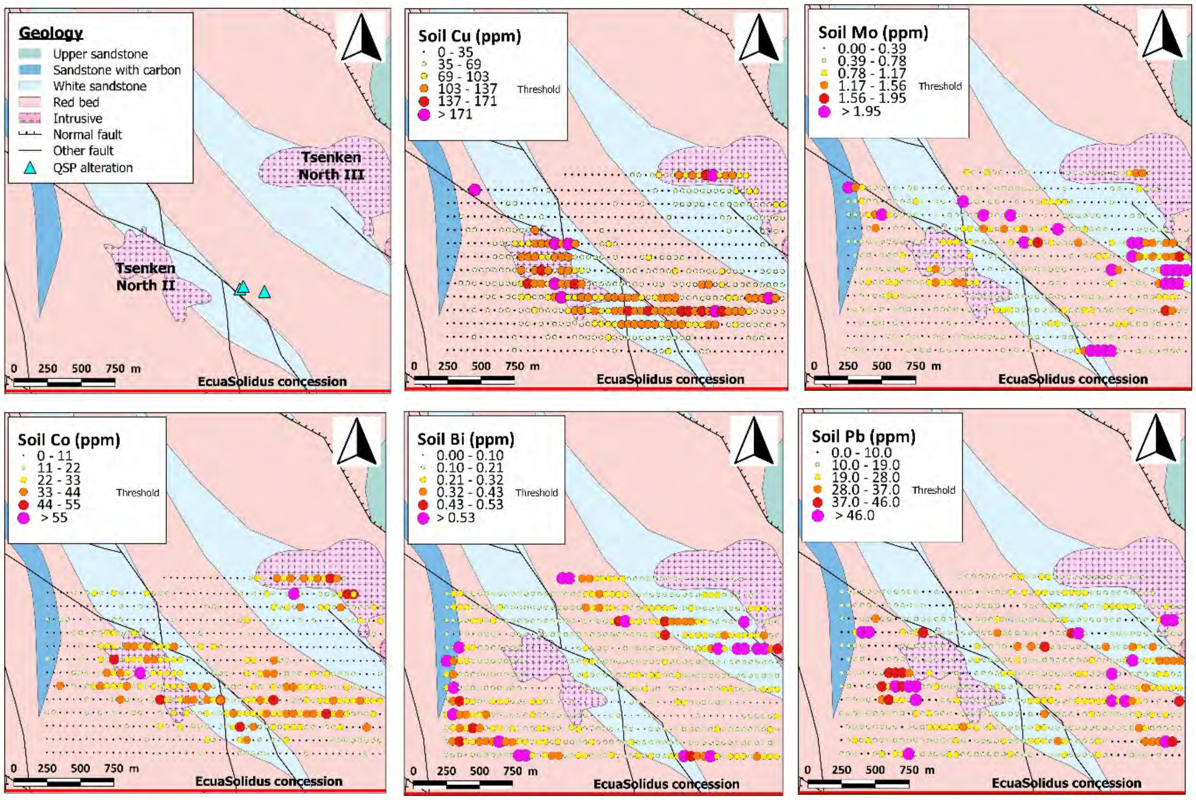


Figure 50. Soil grid sample results from the Tsenken N2 target shown on an RTP magnetic image and geology (pale pink is Chapiza Formation & darker pink with dots are intrusive rocks)

Exploration Model & Approach

The primary goal is to find one or more sub-cropping copper-gold or copper porphyry systems through follow-up of the stream sediment anomalies with prospecting, mapping, detailed soil sampling and potentially collecting more detailed airborne geophysical data. Once the characteristics of the porphyry bodies in the Cordillera de Cutucú are better understood, exploration may shift from exploring for systems located immediately beneath the soil layer to more deeply buried targets.

The porphyries closest to the Cordillera de Cutucú are the copper-gold system at the Mirador, and the San Carlos and Panantza copper-molybdenum deposits in the Cordillera del Cóndor, approximately 25 km south of the Project. These Jurassic porphyries have classic alteration zoning typified by QSP alteration above and outboard of a mineralized, magnetic core of potassic alteration that hosts most of the economic mineralization. In the Cordillera del Cóndor, only vestiges of secondary copper blankets are preserved above these deposits owing to the relatively deep current erosion profile. In contrast, the Cordillera de Cutucú is suspected to have been less deeply eroded and therefore if secondary copper blankets were formed, they could be more completely preserved.

9.5.4.3 IOCG Targets

Kirus

The Kirus target is a complex magnetic feature approximately 5 km in diameter (Figure 51a). Aurania's mapping identified blocks of fine-grained igneous rocks in the deep soil profile, suggesting that intrusive rocks lie beneath. The intrusive bodies are elongate, having a northeast-southwest trend; it is not clear if this is a preferred orientation of intrusion, or whether it results from later displacement on northeast-striking faults (Figure 51b). The northwest margin of the magnetic high is marked by a conspicuous northeast-striking lineament, northwest of which is a deep magnetic low. The linear feature is interpreted by Aurania to be a northwest-dipping normal fault, potentially with several kilometres displacement, that was active when the red-beds of the Chapiza Formation accumulated. The northeast margin of the intrusive complex is controlled by a north to northwest-trending fault.

Subvolcanic intrusive rocks cut red-beds of the Mid-Jurassic Chapiza Formation on the east limb of a regional synclinal fold. No clear relationship, if any, has been established between the intrusive complex and copper-silver mineralization in the red-beds 2-3 km to the northwest (Figure 51b).

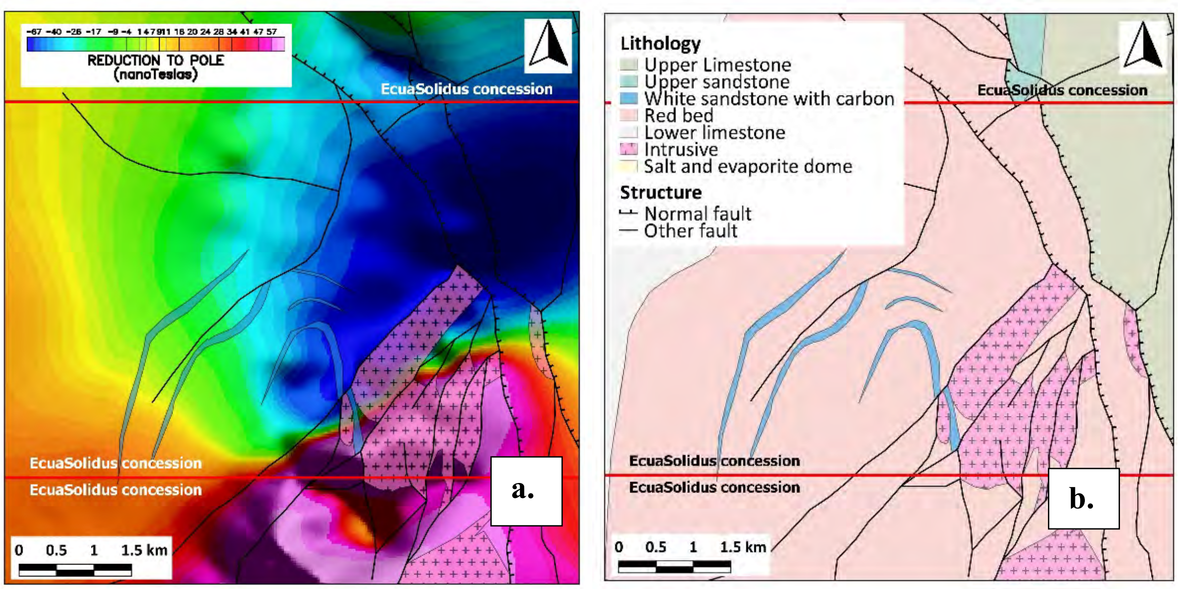


Figure 51a, b. a) Provisional geological map of the Kirus target overlain on RTP magnetic image, b) Provisional geological map of the Kirus target area

Stream sediment sample results show elevated copper values up to 312 ppm on the western flank of the Kirus intrusive complex. The intrusive complex is associated with scattered copper, lead and zinc anomalies (Figure 52) and is more consistently anomalous in cobalt, iron, vanadium, and manganese (Figure 53). Not shown in the figures are gallium, rare earth (e.g. cerium and scandium), germanium, and phosphate anomalies within the intrusive complex. The area to the west of the intrusive complex contains sedimentary-hosted copper-silver mineralization as described in Section 9.5.3.

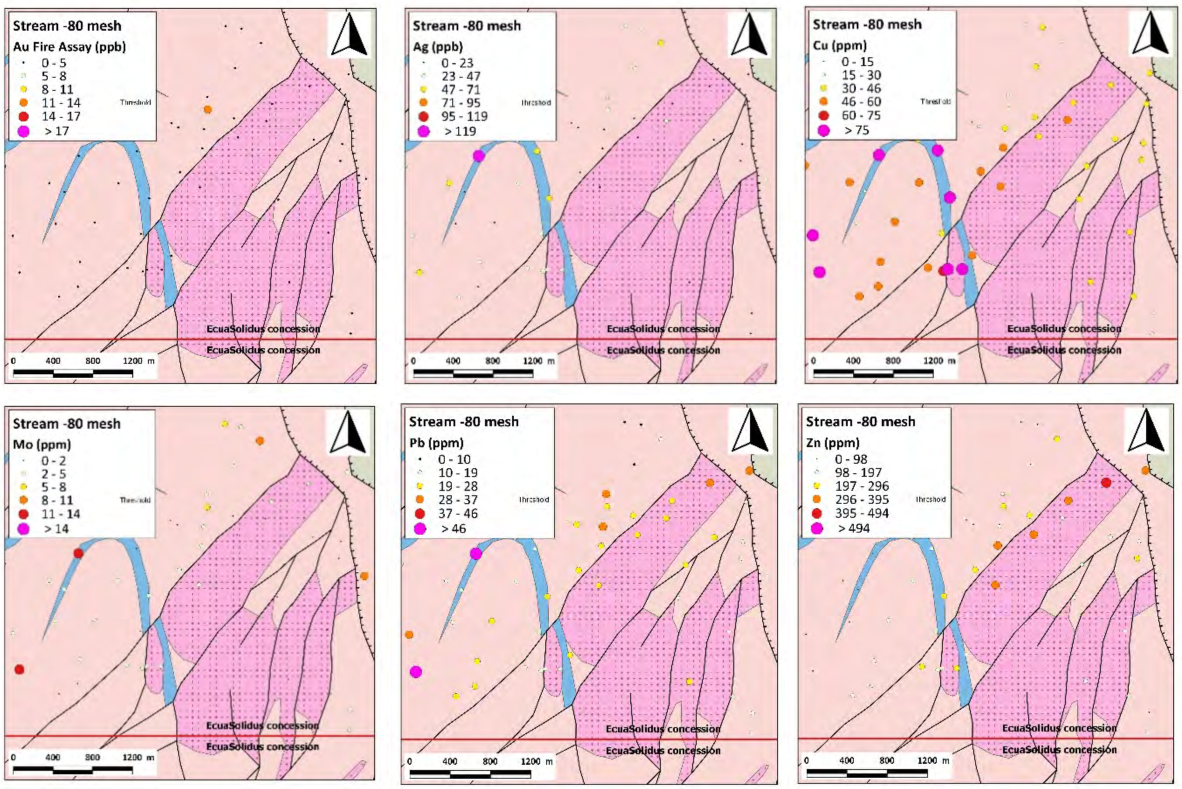


Figure 52. Gold, silver, copper, molybdenum, lead and zinc results from stream sediment (-80#) samples in the Kirus target area. (The geology legend is the same as in Figure 51)

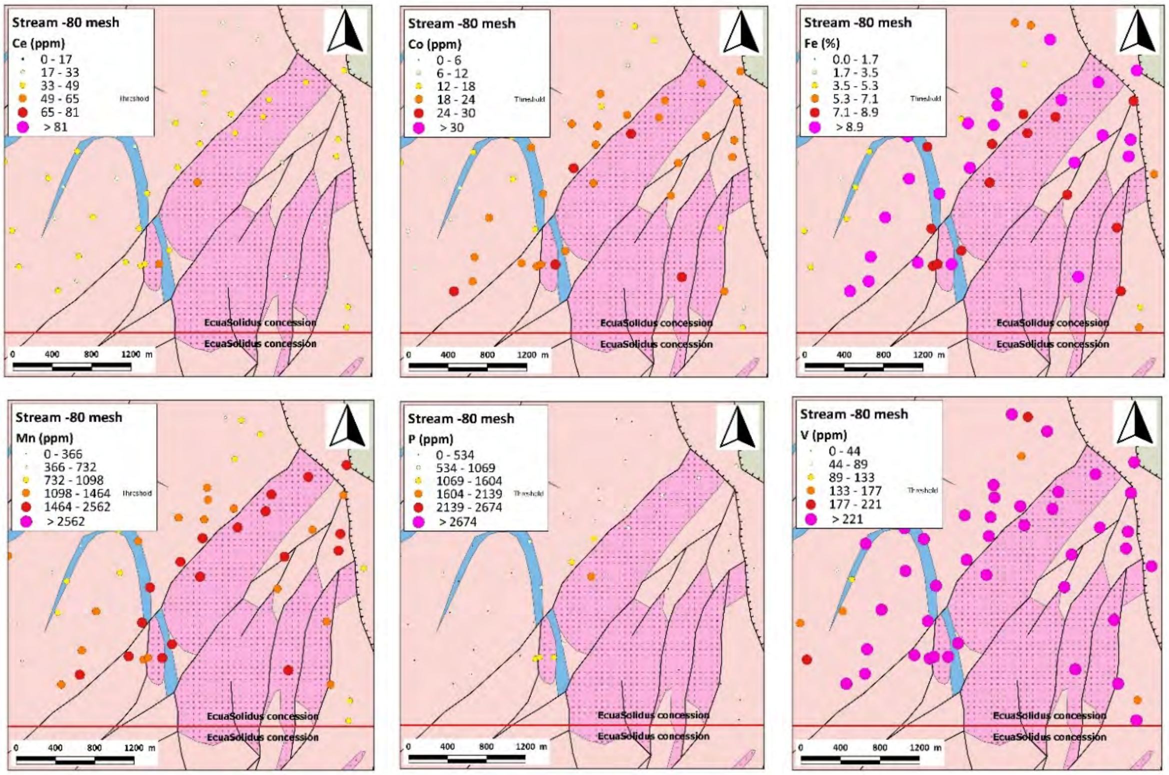


Figure 53. Cerium, cobalt, iron, phosphate, manganese and vanadium results from stream sediment (-80#) samples in the Kirus target area. (The geology legend is the same as in Figure 51)

Tsenken Dyke

A 100 m wide dyke on the southwest margin of the Tsenken magnetic feature trends north-northeast and is mapped by Aurania as a plagioclase-phyric, magnetite-bearing diorite. The dyke exhibits intense albitic and chloritic alteration with olivine replaced by iddingsite. Copper occurs disseminated and in 1 cm wide albite veinlets. Native copper occurs with chalcocite, covellite and trace pyrite. A sample from the dyke returned 4.8% copper and 12.4 g/t Ag. Aurania plans to follow-up the IOCG style alteration system with grid soil sampling.

Exploration Model & Approach

Aurania's original analysis of the airborne geophysical survey interpreted numerous magnetic features as potential porphyry targets modelled on Mirador, San Carlos and Panantza in the adjacent Cordillera del Cóndor. However, the dominant sodic alteration (albite growth and overgrowth of pre-existing feldspar phenocrysts) with chlorite and magnetite, with only minor sericite and pyrite development, is typical of IOCG systems. Furthermore, the chemical signature of these targets: copper with coincident cobalt, vanadium and rare earth elements, is consistent with IOCG mineralization.

The primary exploration tool will be soil geochemistry. Interpretation will need to take into account that the relative stability of metals will be influenced by the pH of the soils which will be near-neutral in the case of an IOCG system due to the typically low sulphide content, in contrast to acidic in the case of a porphyry system where their sulphide-rich mineral assemblage has been oxidized. For example, Aurania reports that porphyry copper deposits in the adjacent Cordillera del Cóndor were characterized by central molybdenum anomalies in soils enclosed by copper at lower elevations due to copper being more mobile than molybdenum in the acidic soil conditions generated by the oxidation of pyrite. In more neutral conditions developed over IOCGs that typically have less pyrite than porphyries, molybdenum is likely to be more soluble than copper, leading to an inverse relationship to that seen over porphyries – that is, a central copper anomaly with peripheral molybdenum in soils (Levinson, 1979).

10. DRILLING

10.1 CRUNCHY HILL

10.1.1 DRILL DATA

Scout drilling at Crunchy Hill was done with a man portable Hydrocore Gopher diamond drill "KD 1000-08" model that started on March 3, 2019 and finished on May 8. All holes were collared with "H-thin wall" ("**HTW**") bits yielding 71 mm diameter core, and all, except hole CH-2019-009, were reduced at a depth below 220 m to "N-thin wall" ("**NTW**") producing 56 mm diameter core.

Nine diamond drill holes were completed at Crunchy Hill testing a low to intermediate sulphidation epithermal precious metal target model. The program totalled 3,204 m from which Aurania cut 624 samples for a cumulative length of 1,087.74 m. Figure 54 shows hole locations and drill traces with header data provided in Table 5.

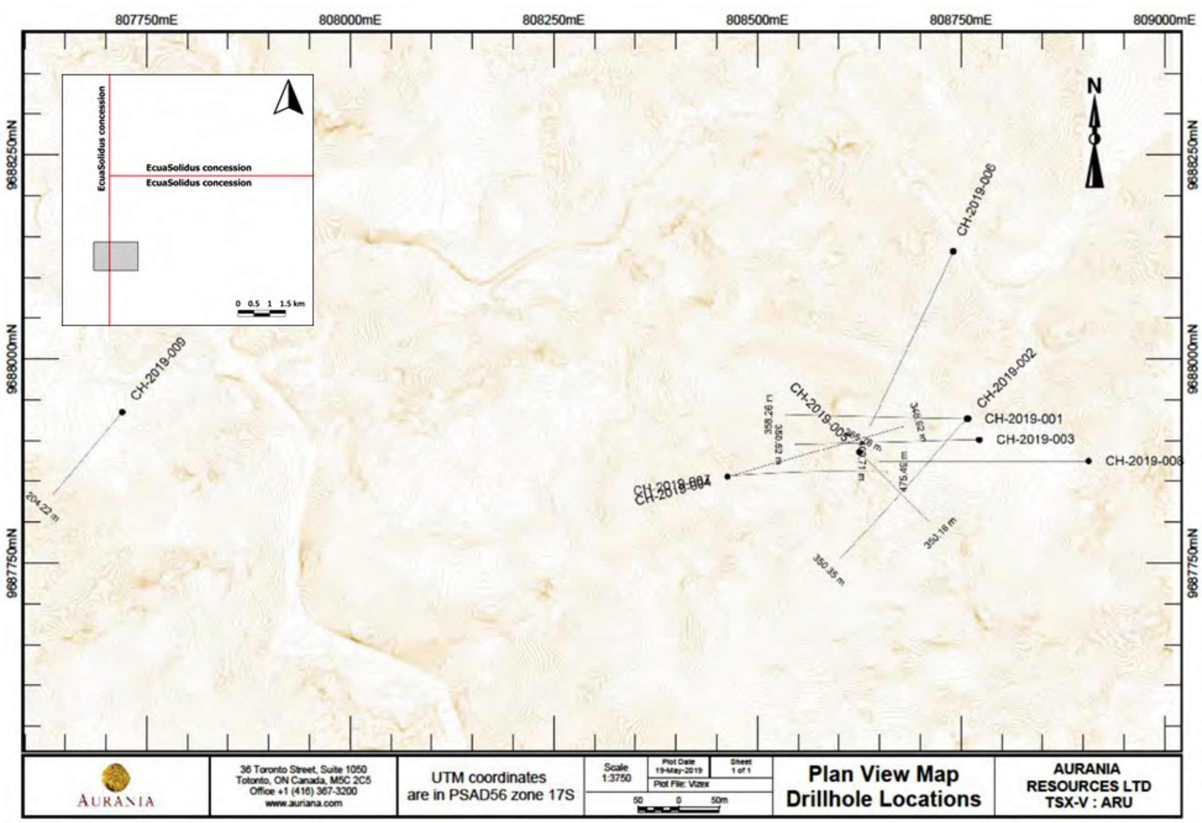


Figure 54. Topographic map of the Crunchy Hill target area showing collar locations and drill traces for the 9 holes

TABLE 5.
DRILL COLLAR COORDINATES, HOLE DIRECTION AND ANGLE OF INCLINATION AND DOWN-HOLE LENGTH OF THE BOREHOLES AT CRUNCHY HILL

HOLE_ID	COORDINATES		RL (m)	Az (°)	Dip (°)	PLANNED DEPTH (m)	FINAL DEPTH (m)	TOTAL DAYS
	PSAD56 Zone 17S_E (m)	PSAD56 Zone 17S_E						
CH-2019-001	808758	9687927	1091	270	-50	350.00	358.26	6
CH-2019-002	808758	9687927	1091	225	-50	350.00	350.35	7
CH-2019-003	808772	9687901	1078	270	-50	350.00	350.53	6
CH-2019-004	808463	9687856	1008	75	-50	350.00	348.82	7
CH-2019-005	808625	9687886	1078	135	-70	350.00	350.16	6
CH-2019-006	808790	9688132	1102	204	-50	350.00	365.76	6
CH-2019-007	808463	9687856	1008	89	-65	350.00	475.49	8
CH-2019-008	808906	9687875	1085	270	-50	350.00	400.71	8
CH-2019-009	807720	9687935	874	220	-50	150.00	204.22	5

10.1.2 DRILL RESULTS

10.1.2.1 Veins and Alteration

SWIR spectral analysis of core revealed pervasive chlorite-calcite alteration giving way to prehnite-calcite alteration at depth on the scale of the target area. More intense alteration is confined to vein selvages. Two principal veins and vein-breccias were intersected (Figure 55):

- Bore holes CH-005 and CH-007 cut what is termed the "5-7 Structure"; and
- Bore hole CH-009 cut the "9 Structure".

The 5-7 structure consists mainly of a gypsum- and calcite-cemented breccia, where intersected at an altitude of approximately 800 m amsl in hole CH-005, and by calcite with minor chalcedony in hole CH-007 at 700 m amsl. The selvage on the vein margins changes from kaolinite to illite with depth between holes CH-005 and CH-007. Fine pyrite banding (Figure 55) accompanies much of the calcite veining and minor buddingtonite (ammonia-bearing adularia) is also present based on SWIR spectral analysis.

The 9 Structure zone consists of two fault zones hosting narrow zones of opaline chalcedony in laminated sedimentary and volcano-sedimentary strata and in mafic volcanic rocks that underlie the laminated strata. Alteration in the easternmost structure is dominated by illite with minor kaolinite. Alteration assemblages extend outward from the structures along the layering of the laminated sediments.

Figure 55. Left: Pyrite (dark) band at the contact of a calcite veinlet (white) in bore hole CH-001 at 166.4 m depth, Right: Pyrite (dark) rimming host-rock fragments infilled with calcite (white) in a breccia in hole CH-005 at a depth of 301.2 m

10.1.2.2 Assay Results

All the bore holes drilled at Crunchy Hill returned intersections of anomalous silver along with pathfinder anomalies in arsenic, antimony, selenium, and thallium consistent with the low to intermediate sulphidation epithermal model. Gold was mostly below the 5 ppb detection limit with only a few samples returning 10 ppb and a single sample returning 20 ppb gold. The principal anomalous intervals are shown in Table 6.

TABLE 6.
PRINCIPAL INTERCEPTS FROM SCOUT DRILLING AT CRUNCHY HILL

Bore Hole Number	FROM (m)	TO (m)	CORE LENGTH (m)	ESTIMATED TRUE WIDTH (m)		Silver (ppm)	Arsenic (ppm)	Antimony (ppm)
CH-2019-001	7.00	13.00	6.0	4.6	@	1.16	16.26	10.77
	41.00	57.81	16.8	12.9	@	1.64	20.02	8.89
CH-2019-002	7.00	17.90	10.9	8.4	@	1.46	20.17	18.79
	26.00	36.25	10.3	7.9	@	1.46	22.83	10.93
	66.00	70.00	4.0	3.0	@	1.39	13.01	4.20
CH-2019-003	1.00	5.90	4.9	3.8	@	4.27	29.77	34.93
	10.80	16.00	5.2	4.0	@	1.52	20.72	12.08
CH-2019-004	6.87	11.00	4.1	3.2	@	1.30	12.15	4.08
	318.00	319.00	1.0	0.8	@	1.00	17.17	4.37
CH-2019-005	10.00	21.50	11.5	10.8	@	2.78	23.51	3.90
	296.00	308.00	12.0	11.3	@	2.39	13.76	4.67
	314.00	320.00	6.0	5.6	@	1.85	11.57	3.89
CH-2019-006	100.00	105.00	5.0	3.8	@	2.55	27.38	13.59
	329.00	331.00	2.0	1.5	@	3.77	0.52	0.50
CH-2019-007	14.00	16.00	2.0	1.8	@	2.72	7.30	1.93
	321.00	322.00	1.0	0.9	@	1.21	14.40	3.48
CH-2019-008	25.00	29.70	4.7	3.6	@	1.40	55.21	26.37
CH-2019-009	196.00	200.00	4.0	3.1	@	6.86	3.41	0.80

10.1.2.3 Interpretation

While failing to encounter potentially economic values of either gold or silver, geochemical results and alteration assemblages observed in the drilling support the low or intermediate sulphidation epithermal model for the Crunchy Hill target area. The gypsum and calcite content of the 5-7 Structure, with increasing chalcedonic silica content at depth, is interpreted by Aurania to represent the upper part of an epithermal vein in which relatively low fluid temperatures were in equilibrium with the enclosing prehnite-calcite alteration. Illite is present as a thin vein selvage in the deeper intersection in bore hole CH-007 indicating slightly higher hydrothermal temperatures (Figure 56) and a vector towards potential precious metal mineralization.

Aurania's target model for gold mineralization at Crunchy Hill is predicated in part on the presence of sinter-textured silicified blocks found at the top of the hill (at 1,000 m to 1,100 m elevation) and interpreted to mark the paleo-surface at the time of alteration and mineralization. If correct, the well-developed low sulphidation epithermal model then places the productive zone at 500 m – 600 m amsl – approximately 500 m below the crest of Crunchy Hill.

Along the 5-7 Structure the target lies where the potentially favourable laminated sedimentary and volcano-sedimentary unit, seen in CH-009, is cut down-dip by the 5-7 structure at approximately 500 m amsl (Figure 56). The model targets both the vein-breccia in the structure and the favourable laminated unit extending away from the structure. Additionally, it is known from outcrop and from the intercept on hole CH-009 that the laminated unit contains carbon, a strong reducing agent for the precipitation of gold from solution.

In the area of the 9 Structure, cut by hole CH-009, the low sulphidation epithermal model target for vein-hosted mineralization lies where the fault zone cut mafic lavas at an elevation of 500 to 600 m amsl (Figure 56).

The detailed stratigraphy derived from a compilation of the drill data is described in Section 9.

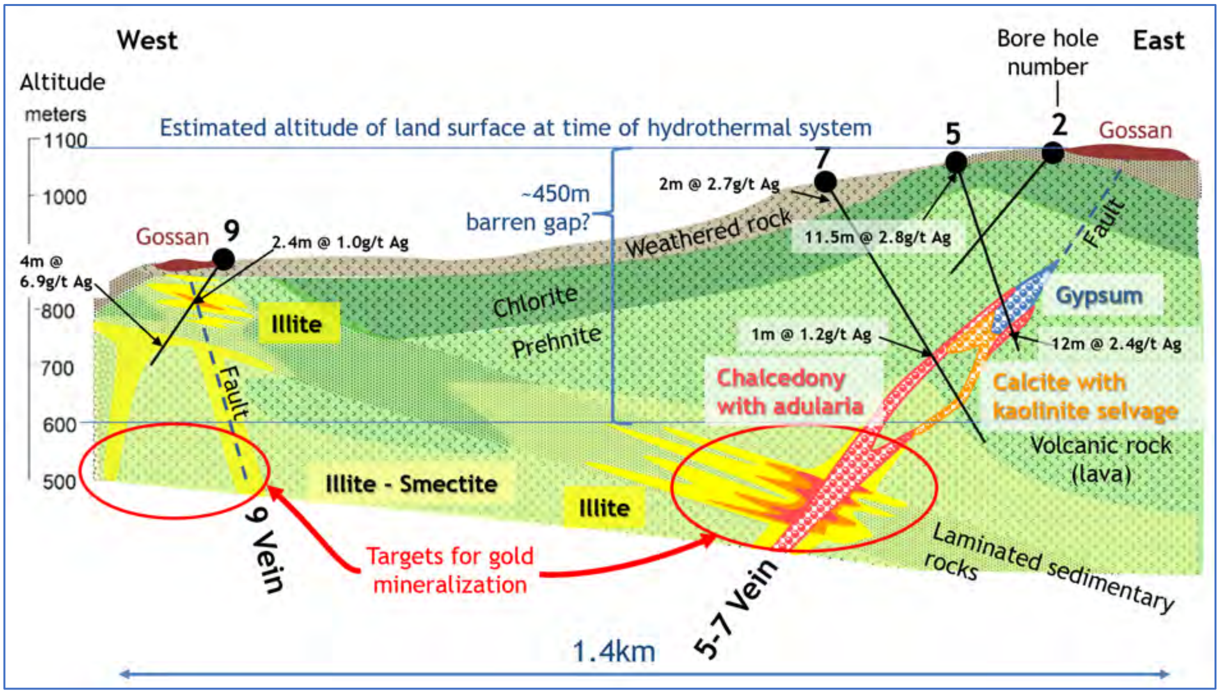


Figure 56. Vertical cross section through Crunchy Hill showing bore hole intercepts (silver grades ("Ag" = silver), host rock and alteration mineral zoning

10.2 YAWI

10.2.1 DRILL DATA

Scout drilling started on the Yawi A target on October 25, 2019. To the Effective Date, four bore holes had been completed for a total of 1,870 m in the on-going drill program (Figure 57) for a total of 1,870 metres (Table 7). 931.02 m has been drilled with HTW and 938.92 m with NTW core.

TABLE 7.
DRILL COLLAR COORDINATES, HOLE DIRECTION AND ANGLE OF INCLINATION AND DOWN-HOLE LENGTH OF THE BOREHOLES AT YAWI

	COORDINATES								
HOLE_ID	UTM _E (m)	UTM _N (m)	RL (m)	Az (°)	DIP (°)	PLANNED DEPTH (m)	FINAL DEPTH (m)	HOLE PURPOSE	TOTAL DAYS
YW-001	808,440	9,677,986	1045	180	60	500	533.40	Scout drilling	17
YW-002	808,447	9,677,542	1122	360	65	500	559.31	Scout drilling	13
YW-003	808,807	9,678,630	766	180	50	250	260.60	Scout drilling	3
YW-004	807,853	9,678,195	1069	360	60	500	516.64	Scout drilling	10

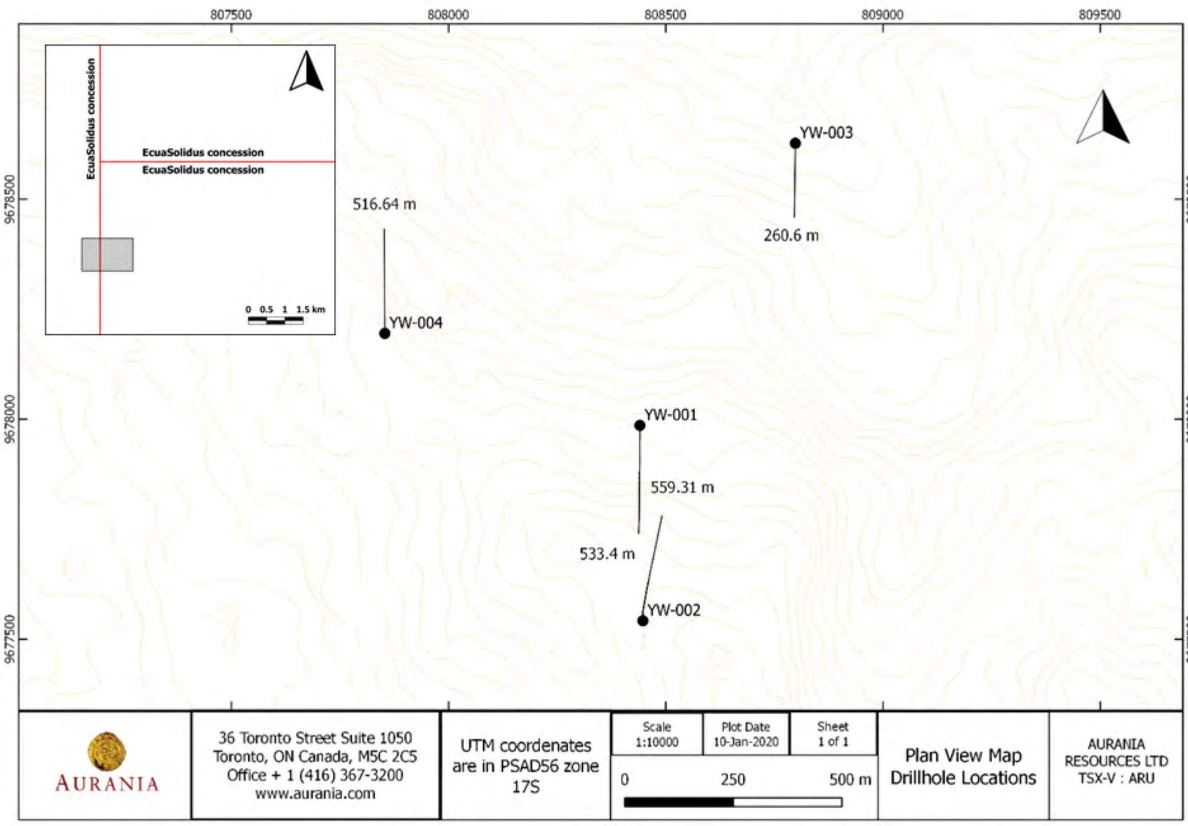


Figure 57. Yawi drill hole location map

10.2.2 DRILL TARGETS

Bore holes in the first scout drilling at Yawi were sited as follows:

- Target A:
  - Drill hole YW-001, inclined at 60° to the south with a total depth of 553.4 m, was designed to test northwest and northeast- dipping veins beneath a northeast- and northwest- striking soil anomaly. The hole cut multiple veinlets with chlorite-pyrite selvages lined by calcite and white clay (illite), terminating with finely banded chalcedony in the core of the veinlets (Figure 58). Many of the veinlets intersected in YW-001 were sub-parallel to core axis; and
  - Drill hole YW-002 was drilled on the same section line but collared to the south and inclined at 65° to the north to intersect the veinlets cut in Hole YW-001 at a perpendicular angle. The hole, terminated at a depth of 559.3 m, encountered numerous calcite and chalcedony veinlets in the lower part of the hole.

- Target B: Hole YW-003 was drilled to 260.6 m, inclined at 50° due south beneath an area of abundant sinter blocks. The bore hole intersected upward-fining sequences of volcano-sedimentary rocks. The basal coarse facies are typically matrix-supported and polylithic with juvenile mafic volcanic clasts that grade upward into finely laminated volcano-sediments. These are interpreted by Aurania to be maar sediments, intruded in places by matrix-supported diatreme breccias. Chalcedony veinlets have alteration selvages of kaolinite-illite, and illite alteration becomes more pervasive in the deeper, thicker breccias; and

- Target C: Hole YW-004 was drilled to a depth of 516.6 at 60° due north to intersect a vein target beneath the northwestern extension of the Target A soil geochemistry anomaly. This hole did not intersect a significant vein: it did, however, cut multiple chalcedony-cored veinlets developed within mafic volcanic sequences interlayered with maar-type layered, upward-fining sequences.

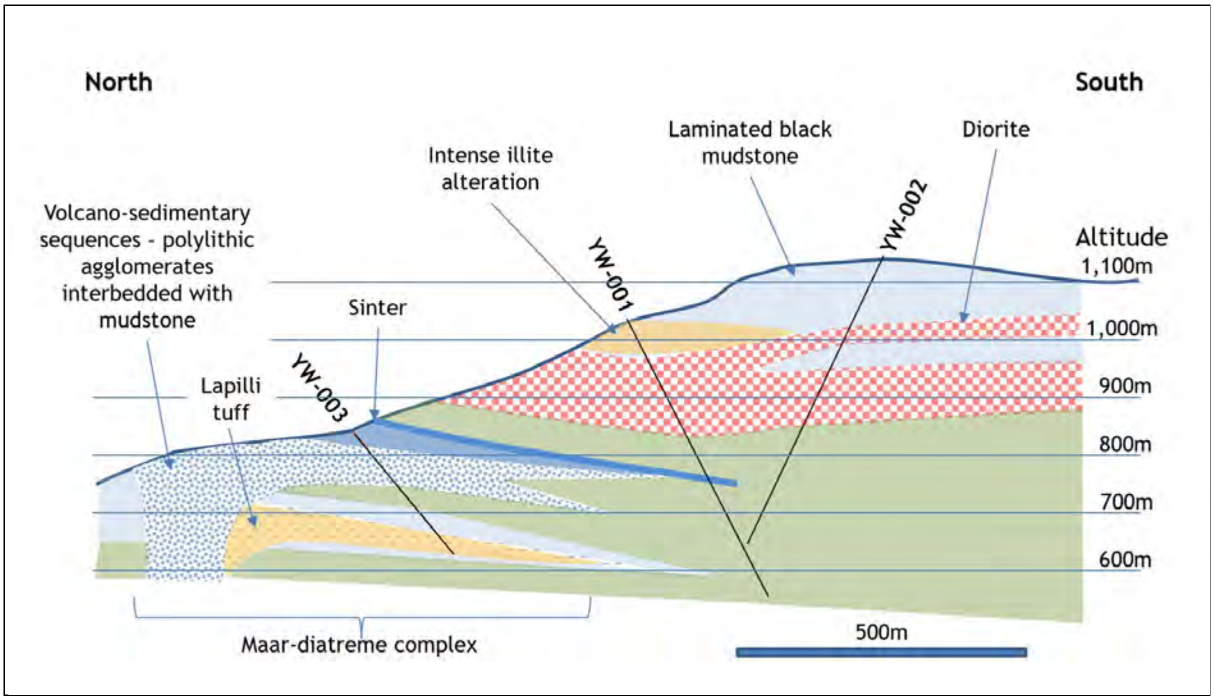


Figure 58. Vertical cross section through bore holes YW-001, YW002 and YW003 drilled on Target A at Yawi

11. SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 SAMPLE PREPARATION AND ASSAYING

Sample preparation and analytical methods used for stream sediment, soil, rock chip and core samples are covered in Section 9 above.

11.2 QA/QC

Aurania's QA/QC protocols for rock, soil, stream sediment, and drill core are more than adequate for an early stage exploration program. The company follows a practice of inserting geochemical reference material ("**standards**"), geochemically barren material ("**blanks**"), and duplicate samples at regular intervals such that most sample submissions have at least two control samples. Analytical values of six potential ore metals from 11 different standards are plotted on multiple control charts that are updated on receipt of each batch of analytical data.

11.2.1 GEOCHEMICAL STANDARDS

Aurania uses commercially available standards supplied by Ore Research & Exploration Pty Ltd. of Australia (standards labelled OREAS) and by AMIS African Mineral Standards of South Africa (standards labelled AMIS). Both companies are well known suppliers of standards to the minerals industry. Aurania based its selection of standards on the type of sample, be it stream sediment, soil, or rock chip. At least one standard would accompany each shipment to the preparation and analytical facilities.

Standards used for QA/QC of soil and stream sediment samples submissions were selected for the range of certified values in both metals and indicator elements of potential interest. All standards submitted have certified values for gold. They do not all have certified values for silver, arsenic, antimony, copper, lead and zinc. The standards used through the Effective Date, and for which results have been received, are listed in Table 8 showing certified values based on aqua regia digestion. The table also shows the number of each standard used and the number of failures by element. Failures were defined as two consecutive samples exceeding ±2 standard deviations from the certified value, or any single sample exceeding 3 standard deviations. The failures for gold and copper in OREAS 45d result from mislabelling a standard.

TABLE 8.
CERTIFIED VALUES FOR 8 ELEMENTS IN THE 9 STANDARDS INSERTED IN SOIL AND STREAM SEDIMENT SAMPLE SUBMISSIONS

Standard	Used	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Au Fail	Ag Fail	Cu Fail	Pb Fail	Zn Fail	As Fail
OREAS 45d	15	0.023	0.153	345	17	30.6	6.5	1	1	1	1	3	0
OREAS 45e	18	0.053	0.311	709	14.3	30.6	11.4	1	0	0	0	0	0
OREAS 65a	5	0.52	7.8	93				0	0	0			
OREAS 250	119	0.309	0.258	44.7	8.06	82	11.8	0	0	10		0	2
OREAS 600	5	0.2	24.3	488	157	598	85	0	0	0	0	0	0
OREAS H1	29	0.012	0.906	28	17	4.54	1.9	0	0	0	0	0	2
OREAS 252	36	0.674	0.185	49.4	11.8	91	16.2	0	0	0	0	0	0

The certified values are based on Aqua Regia Digestion

The standards Aurania selected for QA/QC of rock and drill core sample submissions had, for the most part, higher metal values and were based on the more complete four acid digestion method. These standards are listed in Table 9 which shows the certified values based on four acid digestion.

TABLE 9.
CERTIFIED VALUES FOR 5 METALS IN THE STANDARDS SUBMITTED WITH DRILL CORE AND ROCK CHIP SAMPLES

Standard	Used	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Au Fail	Ag Fail	Cu Fail	Pb Fail	Zn Fail
AMIS0178	4	1.7	0.52				0	0			
AMIS0266	6	2.36	89	208	69	126	0	1	0	1	1
OREAS 45e	7	0.53	0.311	780	18.2	46.7	2	0	0	0	0
OREAS 65a	5	0.52	7.8	93			0	0	0		
OREAS 68a	6	3.89	42.9	392			0	0	0		
OREAS 60d	21	2.47	4.57	73	10.6	36.9	0	0	0	0	0
OREAS 600	11	0.2	24.8	482	193	615	0	0	0	0	0

There have been relatively few control sample failures and most of them are failures to the high side of a certified value. Aurania has determined that in the few cases where a failure could not be attributed to a sample labelling error (Figure 59) that the failures did not justify taking further action. For the stage of the Project, where none of analyses received to date will be incorporated in a resource estimate, this approach is acceptable to a limit. Where a failure is to the high side of a certified value, the effect would be to see higher values for the metal that failed in adjacent samples. A geochemical anomaly would not be missed – it might even appear enhanced. More care should be taken with failures to the low side of a certified value. Left unresolved, such a failure could result in missing a geochemical anomaly in adjacent samples. Control charts for multiple elements for each standard used are provided in Appendix 1.

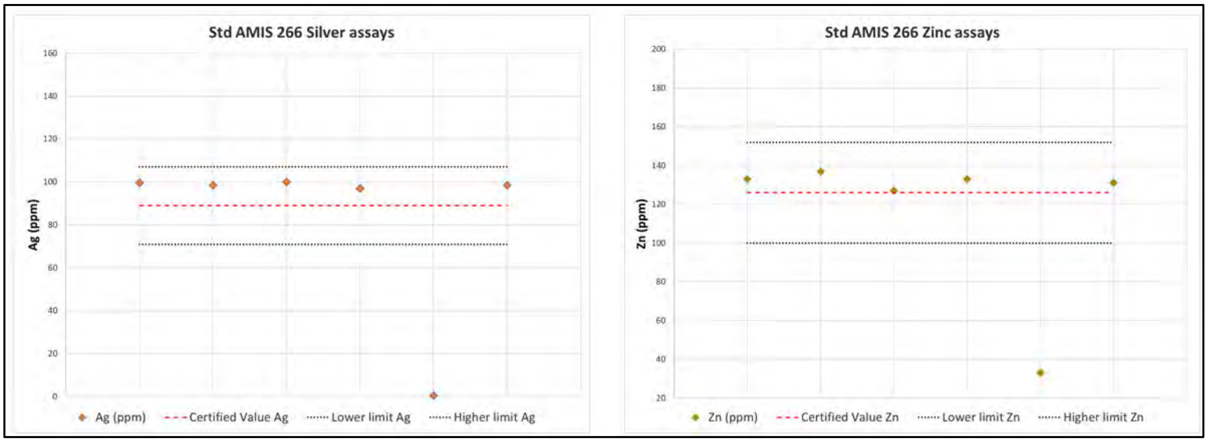


Figure 59. Control charts for silver and zinc for the standard AMIS 266 showing a single failure

The lower and higher limits on the charts are 2 standard deviations below and above the certified value. The failures are well below where the 3 standard deviation lower limit would plot. Aurania determined that the failed standard was a mislabelled sample of AMIS 178 standard.

11.2.2 BLANKS

Aurania uses an unaltered friable volcanic ash blank which is included in all rock chip, core, soil and stream sediment sample shipments. The volcanic ash has proved to consistently return insignificant values in all trace elements of interest. Over the life of the Project and through analyses reported as of the Effective Date, 320 blanks had been inserted in the combined stream sediment and soil sample submissions. Of these there were 3 clear failures (Figure 60) all of which resulted from mislabelling a standard as a blank. Another 70 blanks were inserted into core and rock chip sample submissions. There was single failure with one blank returning 20 ppb gold. Control charts for multiple elements in blanks are provided in Appendix 2.

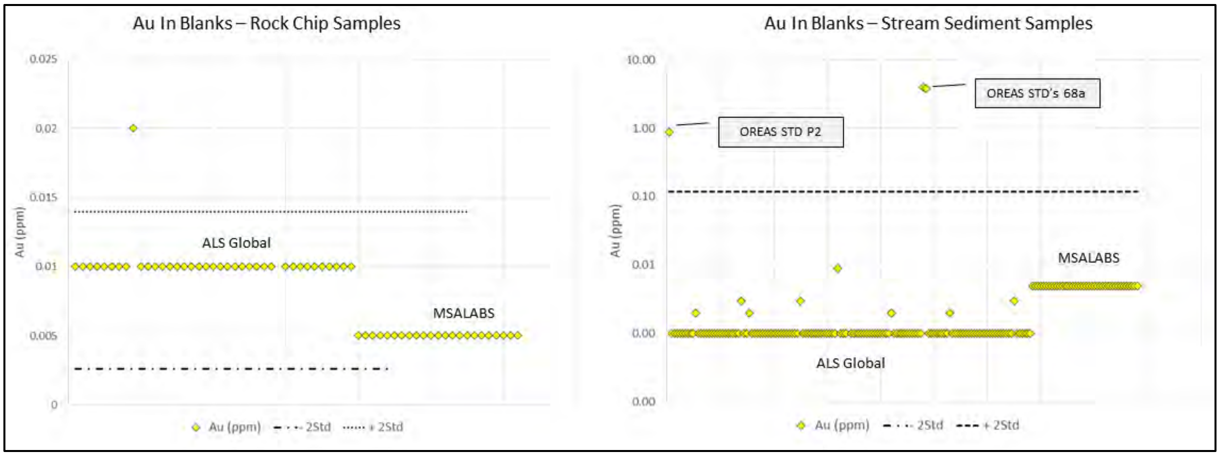


Figure 60. Results of 62 blanks returned with rock chip samples (including core) and 253 blanks returned with stream sediment and soil samples

One blank failed for gold among those submitted with rock chips. Three appeared to fail in the case of the stream sediment samples, but each of those clearly resulted from an error in having a standard inserted while it was recorded as a blank. The apparent difference in results reported by the two labs is entirely related to differing detection limits.

11.2.3 DUPLICATES

Aurania inserted duplicate samples approximately every 35th sample in both stream sediment and soil sampling programs. The duplicates were field duplicates with two samples taken from the same site. The variance between two samples collected from the same location is a combination of the variance between the samples collected, the variance between two pulps made from the same sample and the variance of two analyses from the same pulp. The variance decreases across each step. Plots of duplicates versus original samples, whether from soil or stream sediment samples, show, for the most part, excellent correlation (Figure 61). Duplicate analysis for gold in both soils and stream sediments is meaningless with most samples at the detection limit. Duplicate results for silver, arsenic, antimony, copper, molybdenum, lead, and zinc for both soils and stream sediments are presented in Appendix 3.

Results from duplicate sampling indicate that Aurania can decrease the frequency of taking field duplicates with the Author recommending 1 sample duplicated out of 80.

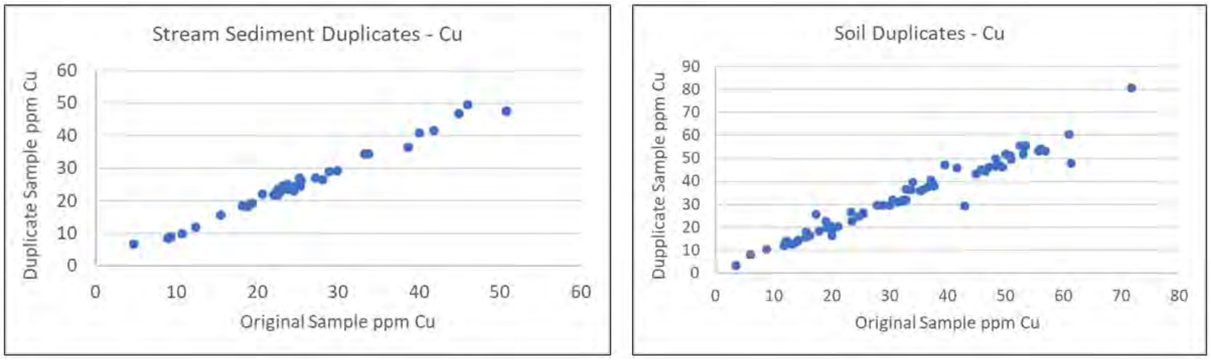


Figure 61. Results for copper in duplicate stream sediments and duplicate soil samples – the high correlation between field duplicates indicates the results of a single sample are representative of the site sampled

11.3 SECURITY

Stream sediment, soil and rock chip samples are stored at the Macas office which has 24-hour gated security. Samples are delivered to the sample preparation facility, in either Quito or Cuenca, by Aurania personnel in vehicles and drivers contracted by Aurania. Core samples are stored at the gated and guarded core logging facility near Patuca with samples for assay delivered to the MSALABS facility in Cuenca.

12. DATA VERIFICATION

12.1 DRILLING

Aurania, prior to the Effective Date, completed a scout drilling program at the Crunchy Hill Target, and drilling is underway at Yawi. Drilling is covered in Section 10. The program at Crunchy Hill totalled 3,204.29 m of diamond core in 9 holes. Of this total, 2,171 m was HTW core (71 mm diameter core size) and 1,033 m NTW core (56 mm diameter core size). Aurania sampled 1,087.74 m of core producing 624 samples. In the drill program that is underway at Yawi, 931.02 m has been drilled with HTW and 938.92 m with NTW.

Review of Aurania's drill hole database and logs for Crunchy Hill shows them to be robust and reliable. Aurania's logging practice follows what would be expected for drilling off a resource (e.g. collecting RQD and density data). In all aspects the data collection goes beyond what is necessary for an early stage drill program.

12.1.1 DRILL HOLE COLLAR VERIFICATION

The Author recorded UTM coordinates, with a Garmin *GPSmap 60CSx* handheld GPS unit, at the collars of four drill holes at Crunchy Hill. The coordinates match within the 4 m margin of error for the device (Table 10). Elevations did not match as closely but this is not unusual with handheld units GPS units.

TABLE 10.
COMPARISON OF DRILL COLLAR COORDINATES FOR HOLES ON THE CRUNCHY HILL TARGET AREA

Drill Hole	Aurania			WGM		
	Easting (m)	Northing (m)	Elev. (m)	Easting (m)	Northing (m)	Elev. (m)
CH-2019-001	808758	9687927	1091	808760	9687927	1082
CH-2019-003	808772	9687901	1078	808775	9687901	1080
CH-2019-005	808625	9687886	1061	808625	9687889	1069
CH-2019-006	808740	9688132	1102	808741	9688127	1107

Note: Both sets of coordinates use the PSAD56 datum for UTM Zone 17 South

12.1.2 DRILL CORE ASSAY VERIFICATION

The Author selected, and supervised, the collection of 5 core intervals from 5 holes to check analytical results from intervals with apparent mineralization (calcite veining or breccias). The sample intervals matched those taken by Aurania. Aurania's samples were composed of half the core while the WGM samples were from cutting the remaining core in half again and taking half of that (a "quarter core" sample). Ideally, the entire remaining half of the core would be sampled to produce a true duplicate. However, for the purpose of this Report, where the objective is to verify the assays received by Aurania, the quarter core samples are adequate. Results (Table 11) show the WGM assays match well those obtained by Aurania. For the lone exception, zinc, in the sample from Hole CH-2019-04, both values are still far below levels of economic interest.

TABLE 11.
RESULTS FROM DUPLICATE CORE SAMPLING

DDH	From	To	Sample #		Au ppb		Ag ppb		Cu ppm		Pb ppm		Zn ppm	
			Aurania	WGM	Aurania	WGM	Aurania	WGM	Aurania	WGM	Aurania	WGM	Aurania	WGM
CH-2019-04	320.50	322.00	0100188	WGM-001	<5	0.2	240	180	19	23	5	4	57	7
CH-2019-05	258.80	260.29	0100237	WGM-002	<5	<0.2	1470	1112	26	20	51	29	51	107
CH-2019-07	320.00	321.00	0100466	WGM-003	<5	<0.2	870	519	25	24	23	25	36	40
CH-2019-08	108.45	110.00	0100566	WGM-004	<5	<0.2	660	675	30	20	41	19	60	24
CH-2019-09	196.00	198.00	0100679	WGM-005	<5	<0.2	6720	4351	66	55	10	9	73	113

12.2 GEOCHEMICAL DATA VERIFICATION

Robert Page supervised collection of a single stream sediment sample taken at the same site as Aurania sample W369273. Except for gold, results for all elements from the WGM sample match the values obtained from Aurania's sample (Table 12). The excellent match between the coarse fraction of the WGM sample (-20+80 mesh) and the fine fraction (-80 mesh) of the same sample suggest it will be worth preparing and analysing more duplicate pairs where one is from the coarse fraction and one from the fine fraction. If the relationship between the coarse and fine fractions seen in WGM008 is typical, Aurania's sampling teams could speed up the stream sediment sampling program by not having to preserve the -80-mesh fraction. Aurania reports that preserving this fine fraction typically requires 30-90 minutes per sample. Collecting sample WGM008 took 90 minutes including more than 30 minutes decanting water from the -80 mesh fraction. Of potentially greater interest is the big difference in gold values between the two size fractions of the WGM sample. The result at a minimum indicates further investigation on size fractions to be collected and whether a coarser size fraction possibly provides a better indication of the presence of gold.

TABLE 12.
COMPARISON OF AURANIA STREAM SEDIMENT SAMPLE W369273 WITH WGM008 COLLECTED AT SAME LOCATION AT CRUNCHY HILL

Sample	Au PPB	Ag PPB	As PPM	Hg PPB	Sb PPM	Cu PPM	Mo PPM	Pb PPM	Zn PPM
WGM008+80	10	257	24	204	11	27	9	62	537
WGM008-80	1	166	18	209	8	23	7	51	439
WGM008-80	1	175	18	195	8	23	6	49	444
W369273-80	1	250	25	230	6	31	9	61	523

Note: Sample WGM008+80 is the -20 +80 mesh fraction of sample WGM008. The two samples WGM008-80 are two pulps made from the same -80 mesh fraction of WGM008.

Mr. Phillips in the second site visit collected 5 samples at the Tsenken target area to duplicate Aurania channel samples. The duplicates (Table 13) confirm the presence of copper and silver mineralization and match well, for this type of sample, with Aurania's results.

TABLE 13.
COMPARISON OF GEOCHEMICAL ANALYSES OF ROCK CHIP CHANNEL SAMPLES COLLECTED BY WGM WITH RESULTS FROM SAMPLES COLLECTED PREVIOUSLY BY AURANIA

Sample #			Au ppb		Ag ppb		Cu ppm		Pb ppm		Zn ppm	
Aurania	WGM	Width (m)	Aurania	WGM	Aurania	WGM	Aurania	WGM	Aurania	WGM	Aurania	WGM
Y991964	E0003682	1.2	<5	0.6	11671	6039	9168	5549	13	9	58	66
Y991966	E0003684	1.3	<5	3.8	497	205	431	447	38	42	51	53
Y991952	E0003688		<5	0.4	34725	27799	16873	17030	92	64	44	33
Y991955	E0003691	0.5	<5	3.2	1603	2259	111	151	41	49	50	35
Y991960	E0003694	1.0	<5	<0.2	2236	776	399	201	48	38	41	35

Note: The differences are within the expected range for this type of sample

As a check on the geochemical and drill hole Excel databases Robert Page compared gold, silver, arsenic, copper, molybdenum, lead, and zinc values for select samples reported on 29 certificates received from ALS Global and MSALABS. These certificates reported on 3,291 samples total (1,009 stream sediment, 1,763 soils, 286 rock-chip, and 233 drill core samples). Mr. Page found no errors.

13. MINERAL PROCESSING AND METALLURGICAL TESTING

There has been no mineral processing or metallurgical testing on material from the Property

14. MINERAL RESOURCE ESTIMATES

There is insufficient data to make a mineral resource estimate on any zone of mineralization identified to date on the Project.

15. MINERAL RESERVE ESTIMATES

There are not mineral resources on the Property on which to make a mineral reserve estimate.

16. MINING METHODS

Not applicable for a project with no mineral resources.

17. RECOVERY METHODS

Not applicable for an early stage project with no mineral resources.

18. PROJECT INFRASTRUCTURE

Not applicable for an early stage project with no mineral resources. For general discussion of infrastructure in the region refer to Section 5.

19. MARKET STUDIES AND CONTRACTS

Not applicable for an early stage project with no mineral resources.

20. ENVIRONMENTAL STUDIES, PERMIT, AND SOCIAL OR COMMUNITY IMPACT

20.1 ENVIRONMENTAL PERMITTING

The Author is unaware of any environmental liabilities on the Property. The Project lies within the Kutukú-Shaime Protected Forest, which limits the number of drill pads that may be permitted within a concession during the Initial Exploration phase to 20 pads, each no more than 6 m by 6 m in area. Additionally, within a Protected Forest, consultation with surface rights holders is mandated. In practice this is no different from permitting outside a Protected Forest since Aurania's practice is to always seek landowner permission before undertaking any exploration. The following, provided by Aurania to the Author, describes the various permits required for exploration in Ecuador.

20.1.1 ENVIRONMENTAL REGISTRATION

An Environmental Registration ("**ER**", "**Registro Ambiental**") is required for the four-year Initial Exploration period. The application for the ER requires information from two areas as follows:

- Background information relating to the Property including:
  - Nature of the corporate entity holding title to the concessions;
  - Ecosystem (inventory of flora and fauna);
  - Proposed exploration plans;
  - Resources the company plans to use (e.g. diesel, water, electricity);
  - Estimated environmental impact of the planned work;
  - Estimated quantity and nature of waste that would be generated; and
  - A reconnaissance exploration plan. (Reconnaissance exploration includes stream sediment, soil sampling, excavation of trenches and associated rock chip or channel sampling);

- An Environmental Management Plan ("**EMP**") describing:
  - Details of the plans and procedures to control, prevent or mitigate environmental impacts; and
  - A timeline and budget to carry out the plan.

The Ministry of the Environment granted an ER for Initial Exploration for the Project on June 30, 2017. An updated ER, explicitly including scout drilling as defined in an updated EMP, was granted on June 10, 2019. The EMP includes plans for a maximum of 20 drill pads per concession, the maximum allowed per concession within a Protected Forest area. The Environmental Registration file number for the Project is MAE-RA-2017-304737.

New legislation introduced in 2019 requires a bond be posted as a guarantee to cover the risk of environmental impact as identified in the EMP. ESA has posted a US$42,107.25 bond for the Project. Should environmental impacts be mitigated, the bond is released on completion of Initial Exploration.

20.1.2 ENVIRONMENTAL LICENSE

Advanced Exploration activities, such as systematic or resource delineation drilling, or the construction of semi-permanent camp infrastructure, requires an Environmental License ("**Licencia Ambiental**"). The application includes a detailed environmental study and a detailed plan that includes environmental controls as well as prevention and mitigation measures to be implemented. Processing and approval of an Environmental License should take six months, but in practice typically takes 18 months. It is likely that the 42 concessions that constitute the current Project area will be divided into smaller project areas each of which consists of a cluster of concessions that have been reduced in size to cover specific targets that would enter the next four-year Advanced Exploration phase. An Environmental License would be required for Advanced Exploration of each concession cluster.

20.1.3 MINE DEVELOPMENT

An Environmental Impact Assessment ("**EIA**") is required to permit mine development. The EIA is a detailed, multidisciplinary study identifying and evaluating potential environmental impacts and defines preventative and corrective measures to minimize those impacts. Environmental audits by the Ministry of the Environment provide a means for assessing the effectiveness of the control measures proposed in the EIA.

20.2 WATER PERMITTING AND HEALTH

20.2.1 "IMPACT ON WATER" CERTIFICATE

Article 26 of the Mining Law requires a certification of there being no impact on water resources from the National Secretariat of Water, SENAGUA, the "Certificado de no afectacion del agua", which must be obtained before commencing drilling. The application includes verification by an independent consultant that the proposed draw-points for drilling are not upstream of draw-points for water used for human consumption.

20.2.2 PERMIT TO USE WATER

On receipt of the Impact on Water Certificate, an application is submitted to SENAGUA for a permit to use water from the environment ("Permiso de Aprovechamiento Productivo de Agua"). The application includes a technical memorandum that provides data on the adequacy of the water source, including flowrate measured over several months, as well as contingencies and back-up plans to minimize the risk of contamination. The memorandum includes information as to ownership of the land from which the water is to be taken. The application also stipulates the amount of water to be used, lists any additives used in the drill water, and their characteristics. Detailed plans for water recycling, including the control measures and purification procedures to be implemented before water is discharged back into the environment, are required.

SENAGUA personnel inspect the sites and deliver an official notice to the owners of the land on which each proposed draw-point is located. The owners of the land have a period in which to oppose the use of water from their land. If there is no opposition from the landowners, SENAGUA sends an opinion to the Regulatory Agency of Water Control (ARCA - "Agencia de Regulacion y Control del Agua") in Quito, which provides a Certificate of Availability of Water ("Certificado de Disponibilidad de Caudal"). This Certificate is sent to the SENAGUA office in Macas to be forwarded to the Sub-Secretariat of Water in Cuenca for final approval.

A baseline study of water quality in streams from which water is proposed to be used for scout drilling is based on tests undertaken at 3-week intervals, ideally over a period of 6 months. Water quality is monitored during drilling, and periodically after, with results reported to SENAGUA.

The application for the Impact on Water Certificate for scout drilling at Crunchy Hill was lodged with SENAGUA on November 7, 2017 and the Permit to Use Water was granted on March 18, 2019. The permit for scout drilling at Yawi was submitted on March 14, 2019 and was granted on August 13, 2019.

20.2.3 HEALTH AND SANITATION

Contaminated water, poor sanitation, and poor hygiene are the prime health risks to people living and working in the Project area. Aurania is investing in basic sanitation education and water purification methods to improve general living standards. The company created the Technical Water Group ("**TWG**") as part of its investment in protecting water sources, improving basic sanitation, and expanding water purification. The TWG has completed preliminary assessments of water quality in ten communities within the area of influence of the Project. Potable water has been provided in one community and clean water in another. The objective is to investigate possible solutions to health-related issues identified, and to develop budgets to be presented to regional government, foundations and communities to find a means of financing, implementing and making potable water available to communities in the Project area.

20.3 COMMUNITY RELATIONS AND SOCIAL IMPACT

The Author had limited community relations discussions with Aurania's consultants, Toronto-based O-Trade, and discussions with affected communities were beyond the scope of the site visits. This section has been provided by Aurania with limited editing by the Author. It is the Author's view that the community relations program being carried out by Aurania and its consultants is professionally run. Aurania's track record for gaining approval to access multiple target areas provides confirmation of this view.

Ecuador is a signatory to the Universal Declaration of Human Rights and United Nations Declaration on the Rights of Indigenous People, among others. Approximately 69% of the Project lies within land of indigenous communities, while 5% belongs to non-Indigenous people. The remaining 26% of the Project area lies within State land administered by the Ministry of the Environment. The Company conducts its operations in compliance with these principles, which is critical to the future of the Project.

The Company's CSR team, under the guidance of O-Trade, has developed a Social Management Plan ("**SMP**") to manage and mitigate social risk. The SMP includes early stakeholder engagement, social impact analysis, and defines partnerships with the Ecuadorian government. Specifically, the Company is working with the ministries of the Environment, Health, Agriculture and Education, in addition to its normal-course interaction with the MENRNR.

Formal access agreements have been established with 70% of communities within the Project area. Improved access and infrastructure associated with the Company's exploration efforts has benefitted nine communities directly and 21 indirectly. Since inception of the Project, the exploration team has created over 1,300 part-time work opportunities, equitably distributed across 37 communities. Scout drilling at Crunchy Hill in Q1 2019 resulted in part-time work for approximately 400 men and women and approximately the same number are associated with the ongoing scout drilling at Yawi.

21. CAPITAL AND OPERATING COSTS

Not applicable for an early stage project with no mineral resources.

22. ECONOMIC ANALYSIS

Not applicable for an early stage project with no mineral resources.

23. ADJACENT PROPERTIES

Other than limited artisanal placer mining in streams and rivers around the margins of the Cordillera de Cutucú, there is no mining activity adjacent to the Property. To the south, in the Cordillera del Cóndor, there is significant exploration and development activity on numerous precious metal and base metal prospects and deposits. These, with one exception, are not immediately adjacent to the Property. However, the presence of such a well mineralized belt in the Cordillera del Cóndor is significant under the assumption that the geology of that cordillera continues along a geological trend into the Cordillera de Cutucú. Much more work is required to verify that this assumption is valid. Roa (2017) covers the deposits and geology of the Cordillera del Cóndor in more detail than will be provided below and the reader is referred to that report for detail.

Figure 62, from Roa (2017), shows the large number of prospects and deposits in the Cordillera del Cóndor. Most of these are either genetically related to the Zamora Batholith (Nambija, Santa Barbara, Mirador, San Carlos, Panantza, and Warintza) or spatially related (Fruta del Norte and multiple other epithermal gold prospects). With respect to the porphyry setting, the presence of the Zamora Batholith is probably critical. The metals in these deposits likely came from metal-rich magmatic fluids streaming off the cooling batholith. Exposures indicating the presence of a comparable intrusive body in the Cordillera de Cutucú are limited. However, the airborne magnetic survey indicates that the Cordillera de Cutucú is underlain by several batholithic sized intrusions at shallow depth.

Fruta del Norte stands out as the discovery of most import with respect to gold potential in the Project area. Fruta del Norte hosts a large, intermediate sulphidation epithermal deposit with high-grade gold. Indicated Resources are 23.8 Mt @ 9.61 g/t gold for 7.35 Moz gold, and Inferred Resources are 11.6 Mt @ 5.69 g/t gold for 2.13 Moz gold (Lundin Gold, 2019). The deposit demonstrates the potential of the region for large gold deposits and for these deposits to be blind to surface. The resource data provided on the Fruta del Norte deposit have been obtained from information provided by other companies and the Author has been unable to verify the accuracy of that information, nor is the information necessarily indicative of any mineralization that may lie in the Lost Cities - Cutucú Project area.

SolGold PLC's Coangos Project lies immediately to the south of the Cutucú Project. Coangos is an early stage project which SolGold describes as having potential for porphyry copper-gold deposits. Target generation at Coangos has produced two areas of mineralized outcrops with copper carbonate and copper oxide on fractures and chalcocite and chalcopyrite on fresh surfaces. Exposure of continuous mineralization has been documented along 120 m in one stream bed (SolGold Corporate Presentation August 2019 for Australian Diggers and Dealers, p. 42).

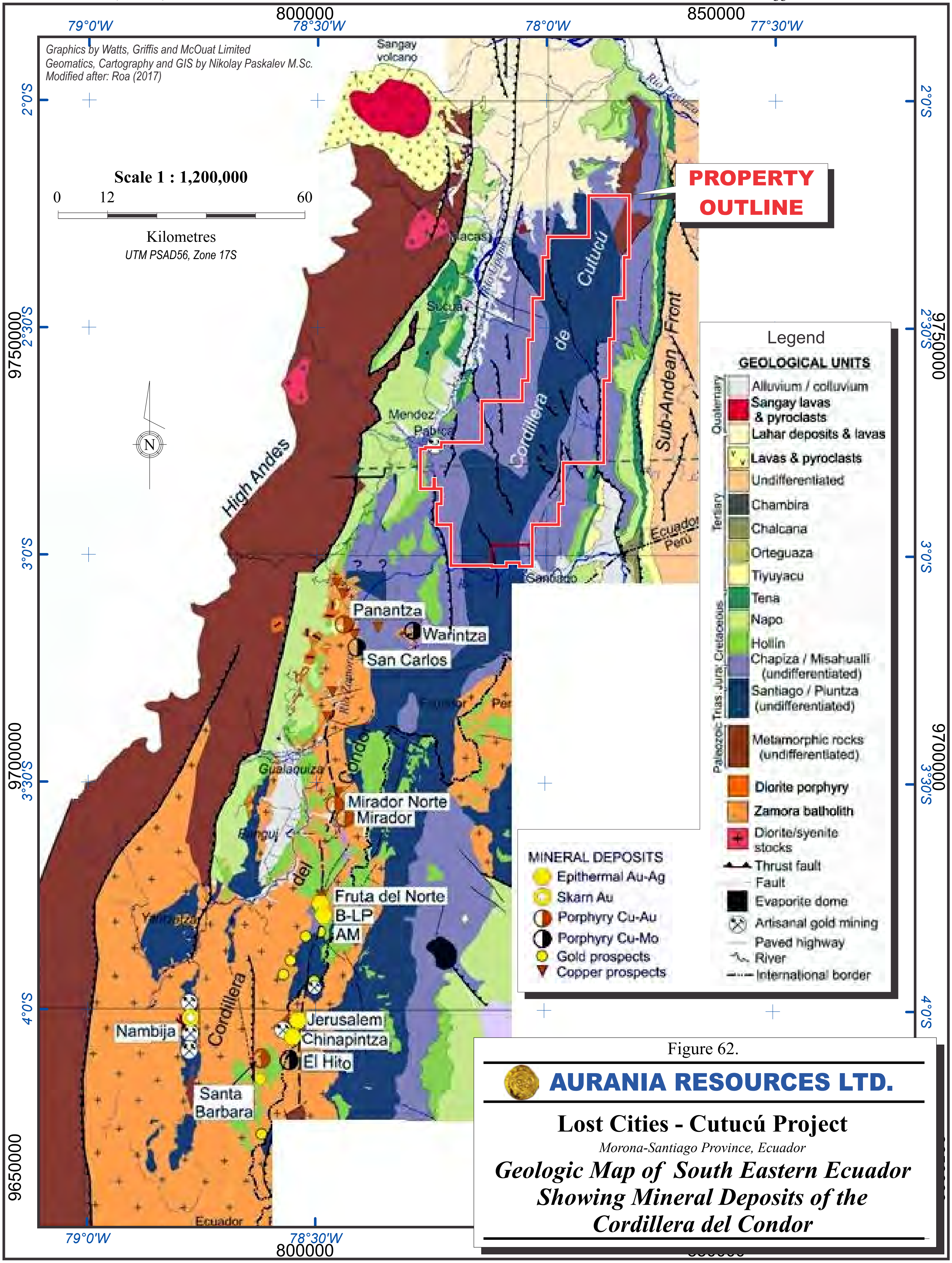


Figure 62.

AURANIA RESOURCES LTD.

Lost Cities - Cutucú Project

Morona-Santiago Province, Ecuador

Geologic Map of South Eastern Ecuador Showing Mineral Deposits of the Cordillera del Condor

24. OTHER RELEVANT DATA AND INFORMATION

No other relevant data are presented here. Section 16.2 of Roa (2017) - Other Relevant Data - includes a detailed summary on the archival research carried out by Keith Barron and Professor Octavio Latorre documenting pre-18th century gold discoveries made by the Colonial Spanish, and their location. The impetus for the research was the Nambija gold skarn which was mined by the Colonial Spanish, but was subsequently lost for centuries. The deposits were rediscovered in 1981 by a hunting party and shortly thereafter exploited by artisanal miners. The research sought to determine if other early gold mines had also been reclaimed by the jungle and remained open for rediscovery. Multiple references in archives in Quito, Lima, Spain, the Vatican and Washington D.C. indicated the Spanish produced gold from two mines in the Cordillera de Cutucú the "Lost Cities" of Logroño de los Caballeros and Sevilla de Oro. This information was highly relevant in 2017 but over the past two years results received from extensive data collected in the field are replacing archival research in significance to the future of the Project.

25. INTERPRETATION AND CONCLUSIONS

Aurania's Lost Cities – Cutucú Project consists of 42 mineral concessions granted to Aurania's wholly owned Ecuadorian subsidiary, EcuaSolidus, in December 2016. All 42 concessions are in good standing as of the Effective Date. The majority of the Property lies within the 344,002 Ha Kutukú-Shaime Protected Forest area in which, despite the designation, mineral exploration and exploitation are permitted and the designation has had minimal impact on Aurania's ability to obtain the requisite permits to carry out exploration across the Property. To date Aurania has all required permits for exploration of the Property and has reached access agreements with multiple indigenous communities within the Project area.

The Project is easily accessible from Quito on well-maintained highways. However, within the Property, access is poor requiring travel by foot on forest paths through rugged, densely vegetated terrain. Rainfall is high year-round, totaling 2-3 m annually. The combination of poor access, mountainous topography, dense vegetation, and high rainfall presents challenges to exploration, but these factors also account for the lack of modern exploration and the current opportunity.

The Project is located on-trend to the north of the well mineralized Cordillera del Cóndor - host to the Fruta del Norte gold deposit and multiple copper porphyries. Aurania's expectation is that the Cordillera de Cutucú has potential for the discovery of similar deposits.

Aurania has carried out a Property-wide airborne magnetic and radiometric survey and is in the process of completing coverage of the Property with a stream sediment sampling program. The combined work has highlighted potential for multiple deposit types including the expected epithermal precious metal and porphyry copper types. However, the strongest mineralization found to date has been sedimentary-hosted copper-silver in sandstone and shale and silver-zinc-lead replacements in limestones. The copper mineralization is found in several stacked, reduced horizons within a red-bed sequence in the Jurassic Chapiza Formation. The limestone replacements, which could be any of MVT, Irish, or CRD type, are found in the Late Triassic to Early Jurassic Santiago Formation.

25.1 GOLD-SILVER

The program has yet to rediscover one of the gold deposits, dating from the Colonial Spanish era, that archival research indicated could be present in the Project area. However, Aurania's stream sediment sampling, followed by soil sampling, have returned significant arsenic, antimony, mercury and thallium anomalies. These pathfinder element anomalies have begun to delineate multiple low and/or intermediate sulphidation epithermal alteration systems spanning three areas, each in excess of 50 km², with potential to host precious metal deposits. No significant gold anomalies have yet been identified by surface sampling in the broader Latorre target area, while at Apai, pan concentrate samples yielded gold values that are refining the target area there. At Tiria West a coherent gold in soils anomaly has been detected and Aurania has prioritized further sampling for that area.

Whether for gold or silver, the exploration model going forward on the three aerially extensive pathfinder anomalies identified to date, Latorre, Apai, and Tiria, presumes that the present level of erosion has not reached the potential bonanza grade level for gold and silver. As of the Effective Date, scout drilling has been undertaken on the Crunchy Hill target and is on-going on the Yawi target, both of which lie within the large epithermal alteration system defined by the Latorre cluster of geochemical anomalies. That drilling failed to intersect significant gold or silver values. However, results were compatible with the exploration model which has precious metal mineralization occurring below the 600 m elevation amsl.

25.2 COPPER

Aurania's work has identified potential for copper deposits in the form of the originally expected porphyry type, but also in the form of sedimentary-hosted and possible IOCG types. As of the Effective Date, the strongest copper mineralization is of the sedimentary-hosted style with multiple percent copper at surface. Each of these three styles of copper mineralization are discussed below.

25.2.1 PORPHYRY COPPER

Geophysical consultant, Jeremy Brett's interpretation of airborne magnetic data, using multiple processing techniques, identified 64 magnetic anomalies potentially related to porphyry copper deposits of which he ranked 31 as high priority for follow-up (Brett, 2019).

Stream sediment sampling returned anomalies in copper from these broad high priority magnetic anomalies (e.g. Kirus, Jempe, and Tsenken), with molybdenum and other pathfinder elements from some. The relationship between these targets and the adjacent to overlapping sedimentary-hosted copper-silver targets is being investigated through detailed field work. Aurania's current interpretation is that stratabound, sedimentary-hosted copper-silver mineralization extends over a large area, overlying, and/or intruded by, porphyry and IOCG systems.

Field work has identified or confirmed the following porphyry targets:

- Soil sampling identified enrichment in copper over the Tsenken N2 target, a magnetic anomaly interpreted to represent the core of a mineralized porphyry system. QSP alteration has also been identified at Tsenken N2. Soil sampling is underway on the Tsenken N3, a similar target located 1.5 km to the north of Tsenken N2; and
- Awacha exhibits extensive QSP alteration over two distinct clusters of magnetic features in Pumbuiza Formation slates, quartzites and conglomerates. Weak potassic alteration (secondary biotite) also occurs in diorite dykes cutting the Pumbuiza. These porphyry targets have coincident copper and molybdenum stream sediment anomalies. The values (<65 ppm copper and <45 ppm molybdenum) are not indicative of stream sediment anomalies from an outcropping deposit, although one rock-chip sample with chalcocite assayed 0.3% copper and 0.2 g/t gold. No significant stockwork veining has been identified in the limited work undertaken on the target to date.

25.2.2 SEDIMENTARY-HOSTED COPPER-SILVER

The most significant copper mineralization; and many rock samples have returned multiple percent copper values, is of sedimentary-hosted copper type. Aurania has begun to define what it terms the Kirus-Jempe Basin which covers a 23 km long by 7 km wide belt of strong copper anomalies in a Mid- to Late Jurassic, 2,400 m thick sequence of red-beds (mudstone, siltstone, sandstone and conglomerate) of the Chapiza Formation. The basin margins are defined by north-northwest trending faults which were inverted prior to an onlap in the Cretaceous. The red-beds are gently folded, with the amplitude of folds increasing in proximity to the inverted faults. Reduced beds that contain abundant, carbonized plant fragments are reported by Aurania to be 0.1 m to 2.5 m thick and occur locally within the red-bed sequence. The chemically reduced beds are the main host of copper-silver mineralization.

25.2.3 IOCG

Copper, associated with sodic alteration of gabbroic diorite that intrudes red-beds of the Chapiza Formation, has been identified in a 100 m wide dyke on the western margin of the Tsenken magnetic feature. This copper-silver mineralization is potentially of the IOCG style.

25.3 SILVER-ZINC-LEAD

Stream sediment sampling identified a north-northwest - trending barium and silver anomaly measuring 12 km by 3 km constituting the Shimpia target. Strongly anomalous levels of lead and zinc were returned in soil sampling of the southeastern and northwestern parts of this silver-barium anomaly. Rock chip samples from outcrop and boulders both returned multiple potentially economic values in silver, zinc and lead. All mineralization is in the form of limestone replacements which, in detail, either show barite veins with semi-massive galena and sphalerite, or crackle breccias with sphalerite, galena, pyrite and quartz fillings.

The style of mineralization is compatible with Irish or CRD type lead-zinc-silver deposits.

25.4 PROTOCOLS AND DATA VERIFICATION

The Author has reviewed Aurania's protocols for collecting samples of all types, through insertion of control samples, to incorporation of geochemical analyses from ALS Global and MSALABS into the Project database. The protocols are well defined and Aurania's QA/QC protocols go beyond what is necessary for an early stage exploration program. There have been few QA/QC failures despite having to track data from 9 elements (gold, silver, arsenic, copper, mercury, molybdenum, lead, antimony and zinc). Most failures were found to be mislabeling of blanks and standards. Aurania, in reviewing those failures, determined no reanalysis was required. Any error resulting from not resolving a QA/QC failure are insignificant at this early stage of exploration. None of the samples of any type will be incorporated in a resource estimate and no sample result within a batch having a QA/QC failure could potentially mislead the market in a material way.

Lastly, data verification, including comparison of results from select laboratory certificates and drill logs, with the Aurania geochemical or drill hole Excel databases, found no errors. In the Author's opinion, Aurania's databases, maps, and reports can be relied upon.

25.5 ENVIRONMENTAL AND SOCIAL

Environmental management and community relations are vital to the Project as problems with either could result in the Project being delayed or halted. The Author does not have relevant experience in either matter and depended on discussions with Aurania's personnel and Aurania's community relations consultants. Aurania is clearly giving due attention on both fronts. Receipt of permits to carry out work within the Protected Forest, combined with access agreements having been reached with over half the indigenous Shuar communities in the Project area, indicate that Aurania is successfully managing permitting and community relations.

Any mineral exploration project can be impacted either positively or negatively by significant national level political or social events that are largely out of the control of the company operating the project. A project in Ecuador is no exception. In the case of Ecuador, Aurania does have support from the bilateral trade agreement between Ecuador and Canada. Although Ecuador withdrew from the agreement in 2017, it is the opinion of Aurania's Ecuadorian legal counsel that the terms of the agreement are in effect for 15 years following the termination of the agreement.

25.6 OVERALL

Aurania's approach to exploring the Cordillera de Cutucú is sound, progressing from the airborne survey and stream sediment sampling to highlight anomalous areas, and following up on those with detailed soil sampling, prospecting, and geological mapping to select initial drill targets. Aurania's protocols are robust and the data produced from its exploration program can be depended upon. If any significant precious or base metal deposit outcrops on the Property, Aurania's program is likely to identify it. Should one or more significant deposits, blind to the surface, be present, Aurania's approach could lead to discovery with sufficient commitment in time, funding, drilling and human resources.

26. RECOMMENDATIONS

26.1 GENERAL

The highest priorities for Aurania are:

- Complete stream sediment sampling across the entire Property in order to:
    - Potentially identify waste dumps associated with the historic gold mines of Logroño and Sevilla;
    - Continue to identify and rank targets for epithermal gold-silver;
    - Identify extensions to sedimentary-hosted copper-silver;
    - Identify and rank additional targets for intrusive-related copper (porphyry and IOCG); and
    - Determine where reductions in the size of the Property can be made to lower the annual holding cost.

- Building support for the Project locally and especially with indigenous Shuar communities - the Project will be difficult to advance to mine development without that support.

- Continue to involve world-class consultants on each specific target type to critically assess the exploration programs and provide guidance for further exploration. To the Effective Date, Prof. Gregor Borg, one of the top specialists on sedimentary-hosted copper in the Central African Copperbelt and the Kupferschiefer, and Prof. Jeffrey Hedenquist, one of the top authorities on epithermal gold-silver deposits, have consulted on site in late 2019.

- Secure a partner or partners to allow Aurania to concurrently advance exploration on multiple district-scale targets. The objective is to not lose what might be key concessions for failure to meet mandated investment deadlines. Ideally, for continuity, Aurania should maintain control over all exploration programs including community relations.

26.2 PROTOCOLS

Aurania's protocols are well designed and, if anything, go beyond what is necessary for an early stage exploration project. Having these established protocols in place prepares the team for such time as advanced exploration begins on one or more targets. The Author has some recommendations as follows:

- Aurania's field protocol for collecting stream sediment samples is designed to produce a high quality -80 mesh sample but requires up to 90 minutes of field time per sampling team. There is a possibility, as indicated by the lone sample collected for WGM, that the +80 -20 mesh size fraction is equally representative and will take much less time to collect. The Author recommend that Aurania select 20-30 stream sediment sample sites, to include sampling drainages crossing epithermal, sedimentary-hosted copper, and intrusion related copper target areas, and take three samples at each location for comparison of results from each as follows:
    - -80 mesh fraction;
    - +80 – 20 mesh fraction; and
    - A pan concentrate.

  The results should assist Aurania in deciding if the stream sediment sampling protocol should be modified.

- In reviewing drill core from the Crunchy Hill program, R. Page noted that sample tags taped to the sides of core trays marking the start and end of sample intervals were peeling off. The Author recommends stapling the tags to the sides of the core trays.

- At such time as one or more target areas move to advanced exploration, the protocol for responding to standard or blank failures will need to be formalized with whichever assay laboratory Aurania is using.

- Results from Aurania's duplicate sampling in the soil and stream sediment programs show very good correlations and the frequency of taking field duplicates can be reduced.

26.3 TARGET-SPECIFIC

Aurania's approach to advancing exploration across the Property is sound. This calls for completing the initial stream sediment phase to identify large geochemically anomalous areas. These anomalies would be advanced to drill targeting through ridge and spur soil sampling followed by detailed grid soil sampling, mapping of stream beds, prospecting and detailed geophysics.

One approach to the exploration of a large region such as Aurania's 208,000 Ha concession block, is to complete detailed targeting of an entire region or target cluster such as the Latorre area, which is many tens of square kilometres in extent, before starting scout drilling of the prioritized sequence of targets. The approach selected by Aurania, in contrast, is to rapidly advance to scout drilling as each target is identified and ranked against the targets that have been studied in detail at that time. The latter approach was selected because of the lack of outcrop due to dense jungle and deep soil cover, so that the geology and alteration encountered in scout drilling on one target can be used to rapidly refine other targets in the same region, likely resulting in a shift in their priority ranking for subsequent scout drilling. Carrying out the detailed targeting work over an entire cluster of anomalies should be considered in a case like the Latorre area. Here drill testing of a small area at Crunchy Hill failed to produce a precious metal intercept of significance. Aurania should consider the merits of continued drilling at Crunchy Hill to test an exploration model with the target below an altitude of 600 m amsl versus the priority of developing new targets within the cluster.

Providing details of proposed exploration of each stream sediment or airborne geophysical anomaly identified to date is beyond the scope of this Report. Provided below are descriptions of work that the Author believes reasonable to advance exploration in each of the different types of targets.

26.3.1 EPITHERMAL PRECIOUS METAL TARGET AREAS

Aurania should continue with its current approach of stream sediment sampling to identify significant geochemical anomalies within the Property. As of the Effective Date, stream sediment sampling has not identified a large coherent gold anomaly. As has been done, anomalies identified in pathfinder and volatile elements should be soil sampled and prospected. For the epithermal precious metal anomalies generated by the stream sediment sampling program, the targeting procedure might include:

1. Ridge and spur soil sampling and prospecting across the entire anomaly.

2. Detailed grid soil sampling (200 m by 50 m grid – orientation of lines to be determined on a case by case basis).

3. Complete geological mapping of creeks concurrent with the above.

4. Scout drill as warranted on the basis of results of prospecting, mapping, and geochemical sampling.

5. If drilling encounters significant mineralization, apply to convert the concession to Advanced Exploration status and expand the drill program.

6. If the scout drilling fails to encounter mineralization of interest:
   a. Move on to the next scout drilling target area as defined by work covered in point 4 above; or
   b. Initiate detailed targeting work to improve the exploration model. The targeting work might include ground geophysics as recommended by an experienced geophysicist.

26.3.2 SEDIMENTARY-HOSTED COPPER-SILVER

Work to date has demonstrated the presence of potentially economic grade copper-silver mineralization (copper carbonate, oxides and chalcocite) over 23 km of strike in multiple, reduced beds characterized by abundant carbonized plant fragments in the Chapiza Formation. Aurania now needs to:

1. Demonstrate that this mineralization which, in hand sample can run to multiple percent copper, can be present over a thickness of several metres. Confirming this will be done by some combination of:
   - finding the mineralized zone outcropping continuously in a creek bed;
   - trenching where safe and feasible; and
   - drilling with a small man-portable rig.

2. Locate potentially important mineralizing structures that might control the location of thicker zones of mineralization:
   - from mapping;
   - from satellite image analysis; or
   - from LiDAR or DEM.

3. Show that mineralized horizons can be continuous over significant strike lengths, without being severely folded or disrupted by faulting, through:
   - mapping; and
   - detailed soil sampling on samples collected every 25 m on lines spaced 50 m apart (lines can be short if mapping has confined the possible location of the mineralized strata).

4. Drill test best zones identified by the above.

26.3.3 PORPHYRY COPPER

An outcropping mineralized porphyry should not be missed by a stream sediment survey in terrain like that of the Cordillera de Cutucú. While a potential porphyry system has been indicated at Awacha, the copper-molybdenum values in stream sediment samples from the area are lower than would be expected from an outcropping deposit. These results are consistent with the QSP alteration mapped at surface, combined with the lack of stockwork veining, that would suggest that an associated mineralized zone of a porphyry would lie at depth. The occurrence of significant gold (0.2g/t) with minor copper mineralization (0.3%) in a grab sample, highlights the potential of the Awacha target to contain copper-gold mineralization. Detailed exploration, including detailed geophysical surveys, could be considered at Awacha to develop and enhance the porphyry target concept. The Author recommends delaying that work until the stream sediment program is completed over the entire Property. A higher priority porphyry target may yet be found, up to and including an outcropping copper-gold deposit.

A coherent copper anomaly in soil over a discrete, second-order magnetic anomaly and coincident QSP alteration of a diorite, suggests that the Tsenken N2 anomaly constitutes a porphyry copper target that will be ranked against other similar targets before further detailed exploration and scout drilling is done.

26.3.4 IOCG

The occurrence of sodic alteration associated with copper-silver mineralization of subvolcanic intrusive rocks highlights the potential for IOCG deposits related to the continental extensional environment in which red-beds of the Chapiza Formation accumulated. Exploration for IOCGs is similar to that recommended for porphyries above.

26.3.5 SILVER-ZINC-LEAD

One of the better-defined geochemical anomalies on the Property is the north-northwest trending, 12 km by 3 km Shimpia silver-zinc-lead anomaly defined by the stream sediment program and enhanced by rock chip sampling. Additional mapping and prospecting are warranted to advance this target to scout drilling. Since zinc and lead are not core to Aurania, it is recommended that a partner be found to explore the target. Further exploration of the target could be undertaken with mineralization models for Irish-type and CRD lead-zinc deposits.

WGM strongly recommends that the exploration team be equipped with a Zinc-Zap indicator solution for non-sulphide zinc mineralization (Zn-carbonates, hydroxides and silicates) that forms in this strongly oxidizing surface environment. The formulation and storage instructions (they are temperature and light-sensitive) for the two solutions that are combined to make Zinc Zap are well documented. The solutions are usually prepared in a commercial laboratory. In field use, the yellow solutions react instantly in the presence of zinc mineralization, changing to orange or bright red, depending on zinc content. The Zn-Zap reaction to smithsonite mineralization in the Pucara Basin, Peru is shown in Figure 63.

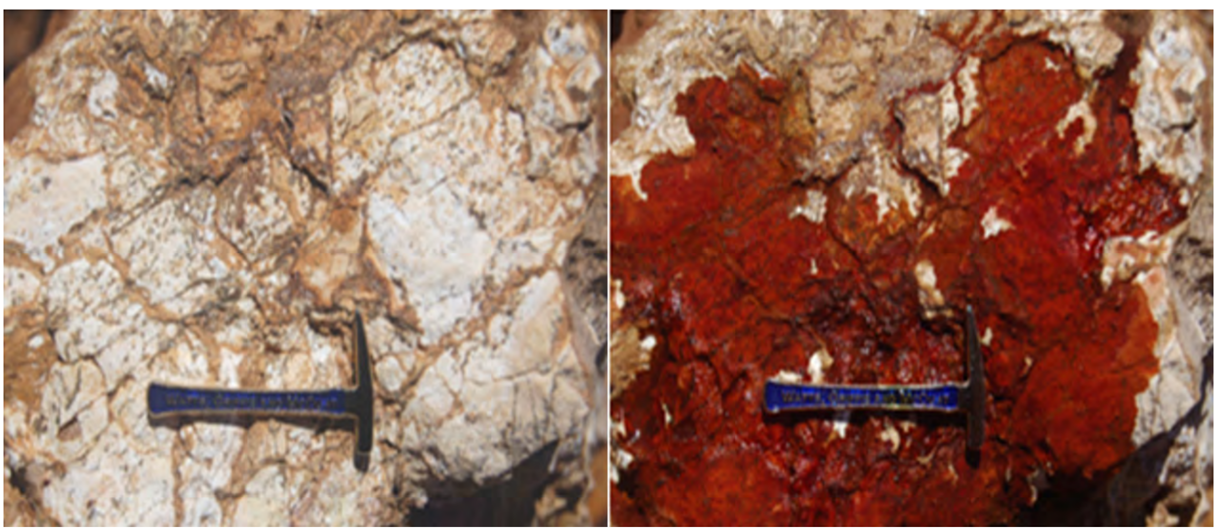


Figure 63. Zn-Zap reaction to smithsonite mineralization in the Pucara Basin, Peru

26.4 PROPERTY MAINTENANCE

Based on the number of anomalies found to date, a number which will probably grow as stream sediment sampling progresses, Aurania will be challenged to meet the timelines required by Ecuador to maintain concessions in good standing. All concessions will need to be converted to Advanced Exploration status in approximately one year if they are to remain in good standing. Advancing the single large Project on all fronts, and keeping within timelines for maintaining all concessions, will place strain on the human and financial resources of a single company. Aurania should consider sub-dividing the Property into multiple smaller concession blocks. The new properties would be based on target type with boundaries defined by underlying geology and associated geochemical anomalies. Aurania would then determine which of these new properties it wishes to advance under the Aurania banner, spin out to shareholders as one or more new companies, partner with a third party, or sell outright.

26.5 PROPOSED BUDGET

Regional exploration should continue in order to complete coverage of the remaining 50% of the Project area during 2020. A consideration in recommending a C$9,000,000 budget is the need for Aurania to advance the work required to meet timelines set by mining law to maintain concessions in good standing. This scale of budget is additionally justified by the number of targets already identified and requiring detailed targeting work and drilling.

Furthermore, new targets are expected to continue to be identified by ongoing stream sediment sampling results combined with data from the 2017 airborne geophysical survey. The principal means of advancing selected targets will be with soil sampling, detailed mapping and sampling of sporadic outcrops and potentially detailed geophysics focused on specific targets. The type of geophysics applied would depend on the nature of the mineralization expected. Due to the steep terrane, thick soil (up to 10 m) and thick vegetation cover, trenching is seldom a viable option prior to scout drilling, but may be possible locally.

The recommended C$9,000,000 budget for 2020 has not been broken out in detail in Table 14 as ongoing results are likely to dictate changes from anything presented here. Rather funding has been broken in two major categories: the first, managing and maintaining the Project; and the second, direct exploration activities. The latter has been broken down not by activity but by target type where the split at the start of the year is anticipated to give near equal weighting to gold and copper exploration. As discussed previously, the Shimpia silver-lead-zinc targets have technical merit, but Aurania should not focus significant effort on those without outside funding from a lead-zinc focussed partner.

26.5.1 STREAM SEDIMENT SAMPLING

Approximately 50% of the Property remains to be explored by stream sediment sampling. In 2020, the stream sediment program should cover the remaining unsampled parts of the Property at a sample density of at least 2.5 samples per km² with an expected average all-in cost of $60/sample. Concurrently, prospecting, regional geological mapping and rock chip sampling should be carried out along the same streams and rivers.

26.5.2 SOIL SAMPLING

Ridge and spur soil sampling, followed by grid sampling over anomalous areas identified by the ridge and spur sampling, are the primary means of follow-up of stream sediment and geophysical targets. Soil sampling will continue with an estimated 10,500 samples to be collected and analysed at an expected all-in cost of $40/sample.

26.5.3 GEOLOGICAL MAPPING AND SYSTEMATIC SAMPLING

Prioritized targets should undergo geological mapping, supported by SWIR spectral analysis, rock chip channel sampling with a diamond saw, and where possible, trenching.

26.5.4 DETAILED GEOPHYSICAL SURVEYS

A budget is allocated to allow for multiple focused geophysical surveys. These may include:

- Detailed drone-borne magnetic surveys over intrusive-related and some epithermal targets;
- Induced Polarization surveys to refine resistive areas that may be quartz veins, or areas of silicification, and to identify zones with chargeability characteristics of disseminated sulphides; and
- Audio Magnetotelluric or Deep Induced Polarization surveys to better assess deeply buried copper porphyry targets.

26.5.5 DRILLING

The program must include a significant amount of drilling to move concessions towards Advanced Exploration. The proposed budget includes 11,200 m of drilling at a forecast all-in cost of $250/m. The anticipated split of drilling between target types has 55% going to test epithermal targets, 30% to test sedimentary-hosted copper-silver and 15% to test intrusive-related copper targets. As with other types of work above, Aurania needs to be flexible on allocation of drill metres between the different target types as work proceeds and target priorities change.

TABLE 14.
BUDGET FOR 2020 IN THE CUTUCÚ - LOST CITIES PROJECT
(in Canadian Dollars)

Cost Center/Work Type	Total Cost	% of Budget
Managing and Maintaining the Project		
Concession Holding Costs	$ 2,800,000	31%
Project related legal cost	$ 50,000	1%
Macas Field Office expense	$ 80,000	1%
Senior Project Management	$ 200,000	2%
Community Relations	$ 250,000	3%
Ecuador Logistics	$ 90,000	1%
Project related travel	$ 30,000	0%
Sub-Total	$ 3,500,000	39%
Exploration by Target Type		
Regional	$ 600,000	7%
Epithermal	$ 2,530,000	28%
Sedimentary Copper	$ 1,200,000	13%
Intrusive-related Copper	$ 1,000,000	11%
Carbonate Replacement Silver-Zinc-Lead	$ 170,000	2%
Sub-Total	**$ 5,500,000**	**61%**
Grand Total	**$ 9,000,000**	**100%**

In the Author's opinion, the proposed exploration strategy and budget is appropriate for the current stage of exploration in the Lost Cities - Cutucú Project, and in consideration of timelines mandated under Ecuador's legal regime to maintain Aurania's concessions in good standing.

27. DATE AND SIGNATURE PAGE

This report titled "*A Technical Review of the Lost Cities – Cutucú Exploration Project, Morona-Santiago Province, Ecuador for Aurania Resources Ltd*." with an effective date of December 21, 2019, was prepared and signed by the following author:

Dated February 4, 2020.

"signed by Robert H. Page"

Robert H. Page, Ph.D, P.Geo.
Senior Associate Geologist

CERTIFICATE

I, Robert Page, do hereby certify that:

1. I reside at 5785 Mountain Road, Unit 9B, Stowe, VT 05672.

2. I am a Senior Associate Geologist with Watts Griffis and McOuat Limited, a firm of consulting geologists and engineers, which has been authorized to practice professional engineering by Professional Engineers Ontario since 1969, and professional geoscience by the Professional Geoscientists of Ontario.

3. This certificate accompanies the report titled *"A Technical Review of the Lost Cities – Cutucú Exploration Project, Morona-Santiago Province, Ecuador for Aurania Resources Ltd."* with an effective date of December 21, 2019.

4. I am a graduate from Dartmouth College, Hanover, New Hampshire with a B.A. Degree in Earth Sciences (1973). I subsequently received M.A. (1977) and Ph.D. (1979) degrees in Geology from the University of California, Berkeley. I have practised my profession continuously since 1979. From 1979 until 2002 I worked for Noranda Exploration in the SW US and Mexico starting as Project Geologist advancing in 1991 to Country Manager-Mexico. During this 23-year period I gained experience working on all stages of exploration projects covering porphyry copper, epithermal gold, skarns, and carbonate replacement deposits. From 2002 to 2006 I was Chief Geologist – Copper for Noranda-Falconbridge looking at porphyry projects in the Americas and Asia. Additionally, this period included oversight of zinc exploration for the company in Ireland and drilling of the Pallas Green discovery. From 2009 to 2017 I served as Director Exploration-New Opportunities for IAMGOLD which posting required oversight of company exploration programs for porphyry and epithermal gold exploration in Colombia and Peru.

5. I am a Professional Geologist licensed by the Professional Geoscientists of Ontario (Membership Number 0820).

6. I am a "Qualified Person" for the purpose of NI 43-101.

7. I visited the Lost Cities - Cutucú property from August 25 through August 29, 2019.

8. I am solely responsible for the content of this Report as qualified under Section 3 – Reliance on Other Experts.

9. I am independent of the issuer as described in Section 1.5 of NI 43-101.

10. I have had no involvement, in any capacity, on the Lost Cities – Cutucú Project or with Aurania Resources or any of its affiliates.

11. I have read NI 43-101 and Form 43-101F1 and have prepared this technical report in compliance with NI 43-101, Form 43-101F1 and generally accepted Canadian mining industry practice.

12. As of the effective date of the technical report, 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 by Robert H. Page"

Robert H. Page, Ph.D., P.Geo.
Senior Associate Geologist

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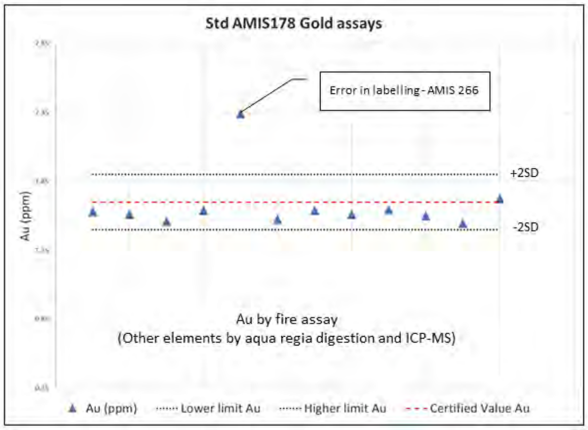
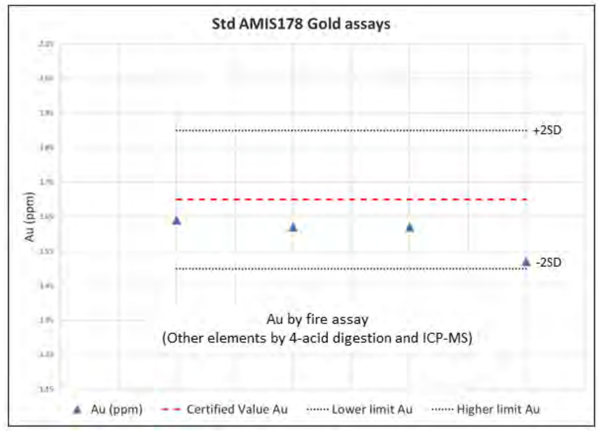
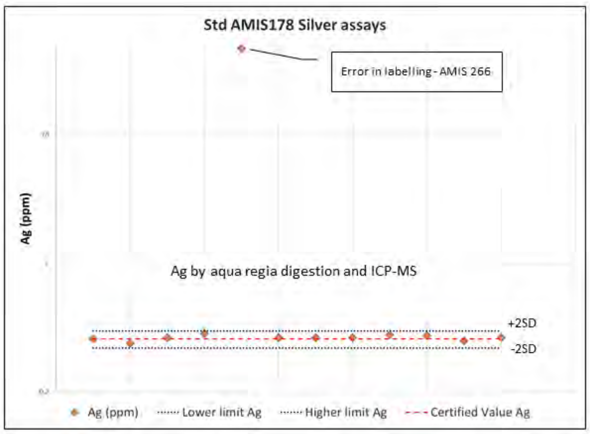
APPENDICES

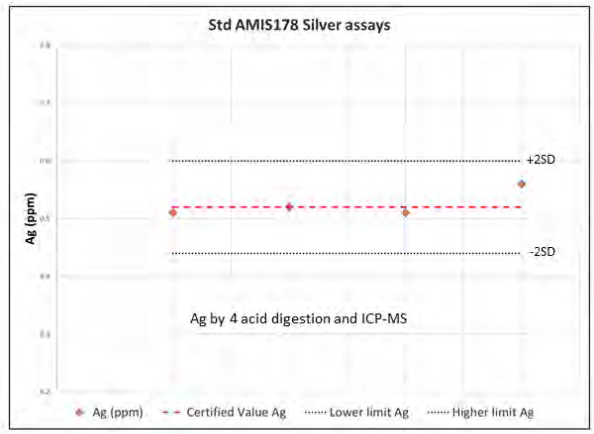
APPENDIX 1:
QA/QC CONTROL CHARTS – STANDARDS

AMIS 178

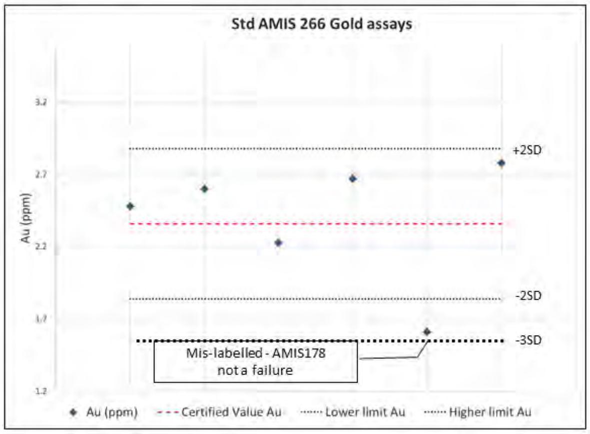

Std AMIS178 Gold assays
Error in labelling - AMIS 266
+2SD
-2SD
Au (ppm)
Au by fire assay
(Other elements by aqua regia digestion and ICP-MS)
Au (ppm)
Lower limit Au
Higher limit Au
Certified Value Au

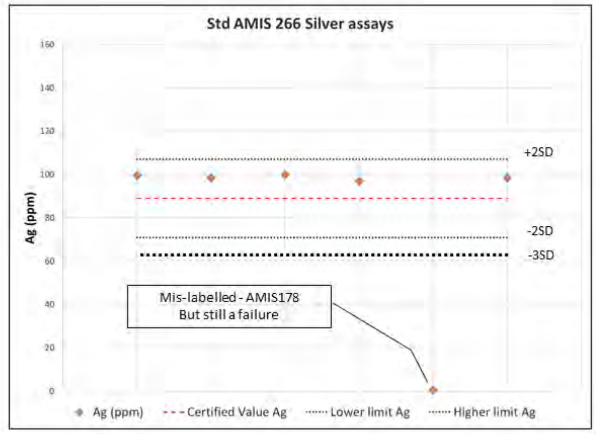

Std AMIS178 Gold assays
+2SD
-2SD
Au (ppm)
Au by fire assay
(Other elements by 4-acid digestion and ICP-MS)
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au

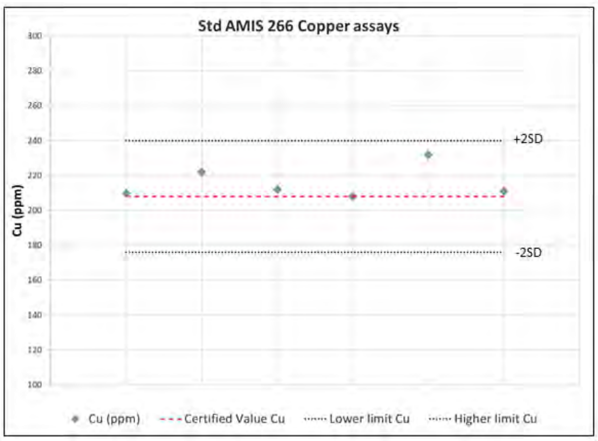

Std AMIS178 Silver assays
Error in labelling - AMIS 266
Ag (ppm)
Ag by aqua regia digestion and ICP-MS
+2SD
-2SD
Ag (ppm)
Lower limit Ag
Higher limit Ag
Certified Value Ag

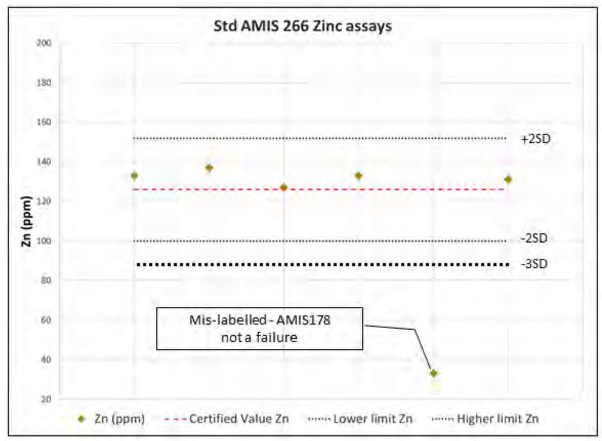

Std AMIS178 Silver assays
+2SD
-2SD
Ag (ppm)
Ag by 4 acid digestion and ICP-MS
Ag (ppm)
Certified Value Ag
Lower limit Ag
Higher limit Ag

AMIS 266

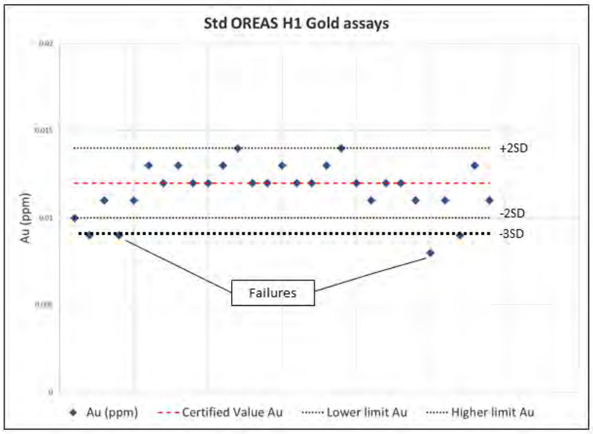

Std AMIS 266 Gold assays
Au (ppm)
+2SD
-2SD
-3SD
Mis-labelled - AMIS178
not a failure
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au

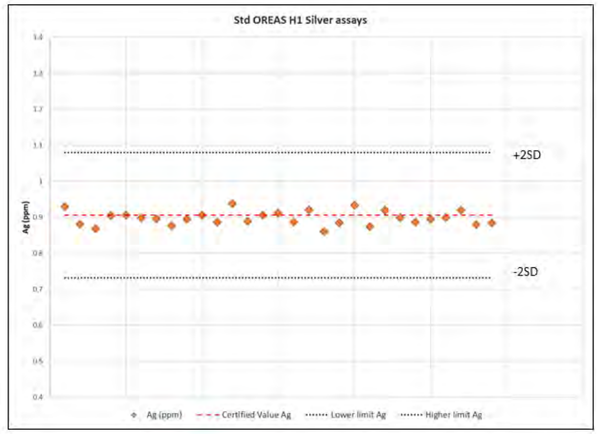

Std AMIS 266 Silver assays
Ag (ppm)
+2SD
-2SD
-3SD
Mis-labelled - AMIS178
But still a failure
Ag (ppm)
Certified Value Ag
Lower limit Ag
Higher limit Ag

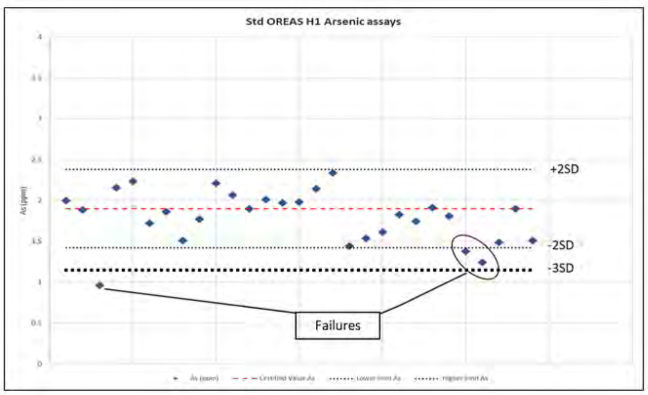

Std AMIS 266 Copper assays
Cu (ppm)
+2SD
-2SD
Cu (ppm)
Certified Value Cu
Lower limit Cu
Higher limit Cu

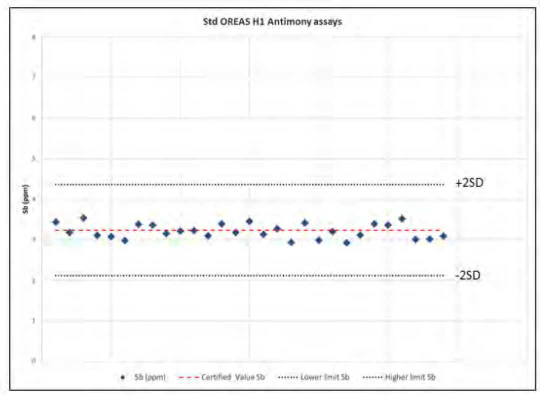

Std AMIS 266 Zinc assays
Zn (ppm)
+2SD
-2SD
-3SD
Mis-labelled - AMIS178
not a failure
Zn (ppm)
Certified Value Zn
Lower limit Zn
Higher limit Zn

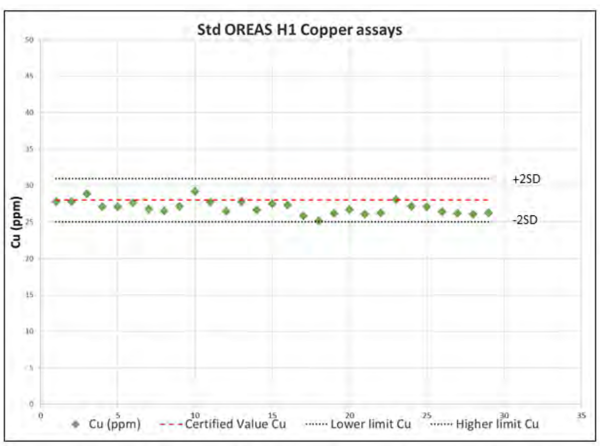
OREAS H1

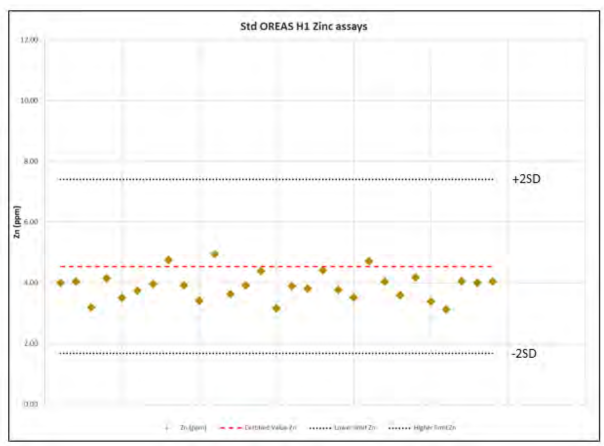

Std OREAS H1 Gold assays
Au (ppm)
+2SD
-2SD
-3SD
Failures
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au


Std OREAS H1 Silver assays
Ag (ppm)
+2SD
-2SD
Ag (ppm)
Certified Value Ag
Lower limit Ag
Higher limit Ag

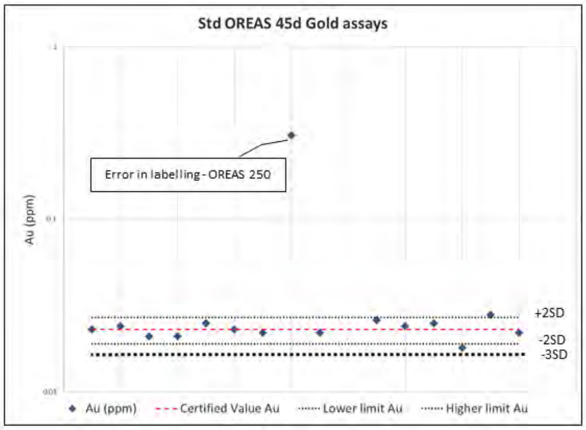

Std OREAS H1 Arsenic assays
+2SD
-2SD
-3SD
Failures

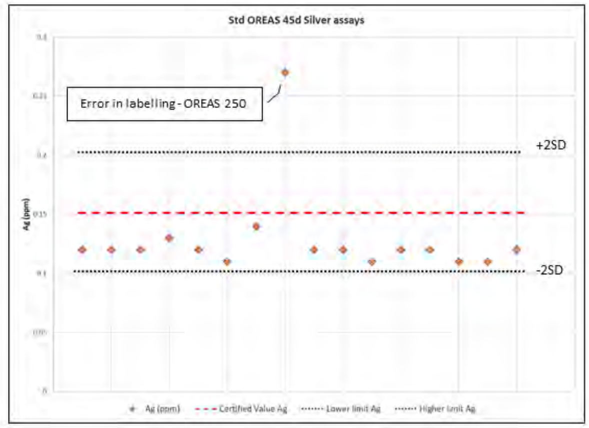

Std OREAS H1 Antimony assays
+2SD
-2SD
Sb (ppm)
Certified Value Sb
Lower limit Sb
Higher limit Sb

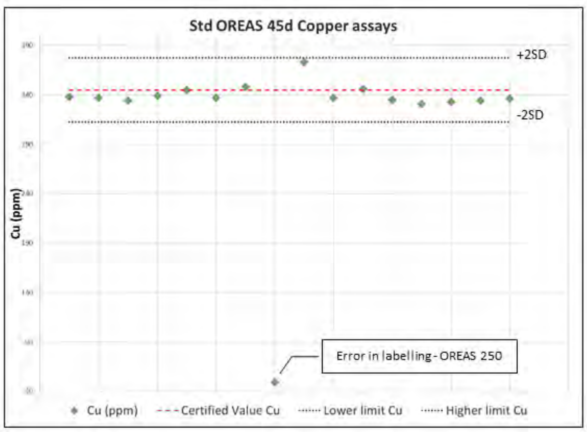

Std OREAS H1 Copper assays
Cu (ppm)
+2SD
-2SD
Cu (ppm)
Certified Value Cu
Lower limit Cu
Higher limit Cu

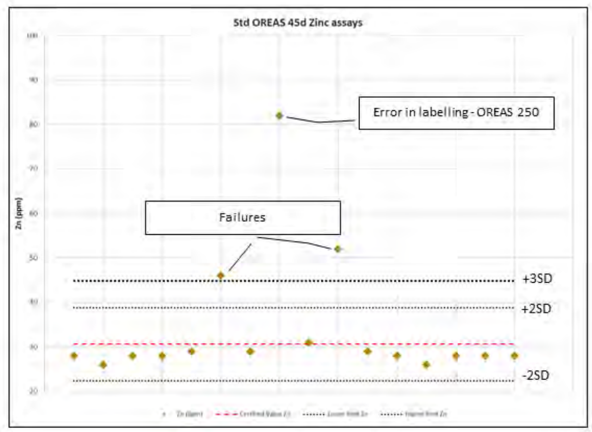

Std OREAS H1 Zinc assays
+2SD
-2SD

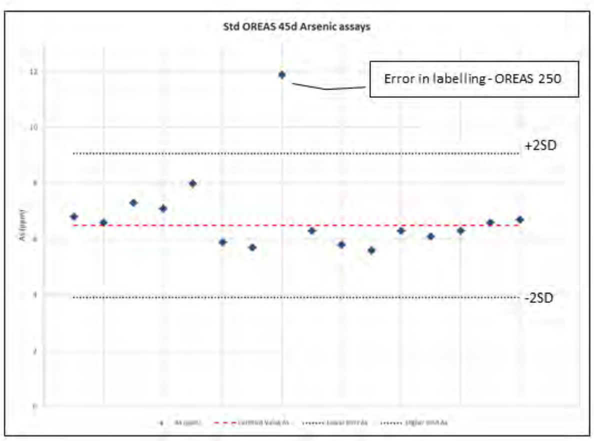
OREAS 45d


Std OREAS 45d Gold assays
Au (ppm)
Error in labelling - OREAS 250
+2SD
-2SD
-3SD
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au

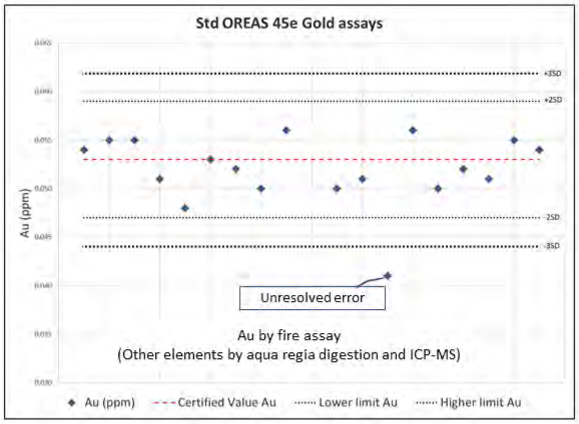

Std OREAS 45d Silver assays
Error in labelling - OREAS 250
+2SD
-2SD

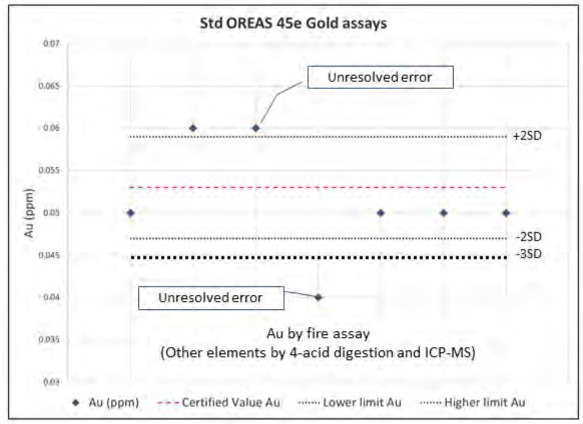

Std OREAS 45d Copper assays
Cu (ppm)
+2SD
-2SD
Error in labelling - OREAS 250
Cu (ppm)
Certified Value Cu
Lower limit Cu
Higher limit Cu

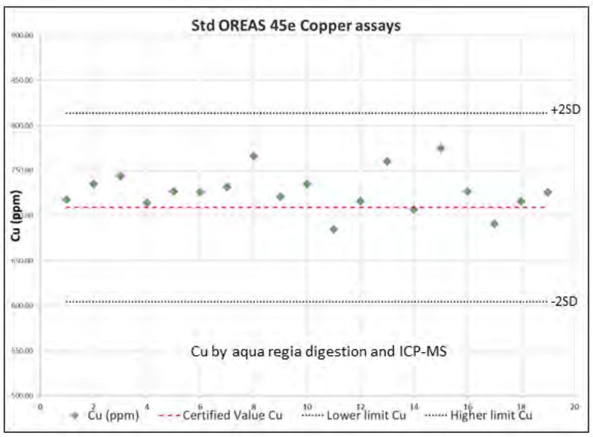

Std OREAS 45d Zinc assays
Error in labelling - OREAS 250
Failures
+3SD
+2SD
-2SD

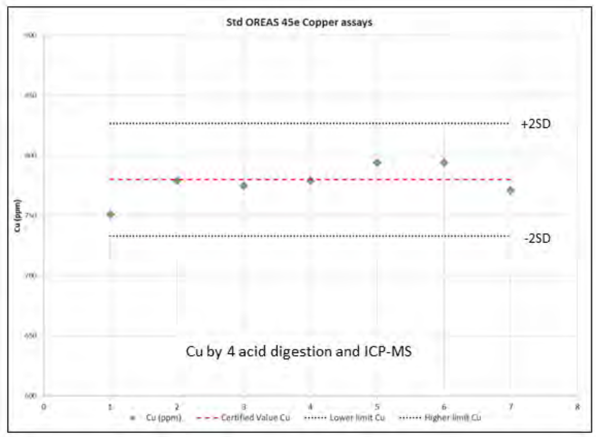

Std OREAS 45d Arsenic assays
Error in labelling - OREAS 250
+2SD
-2SD

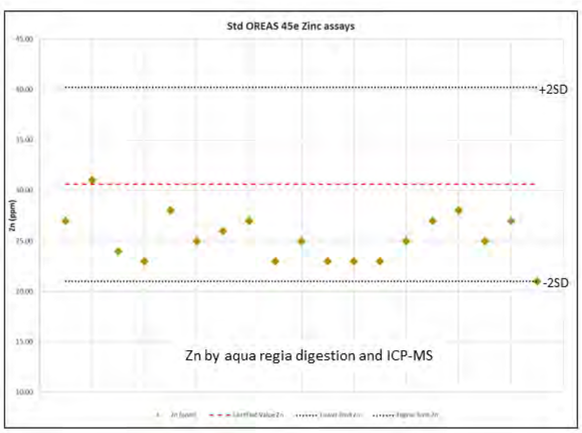
OREAS 45e

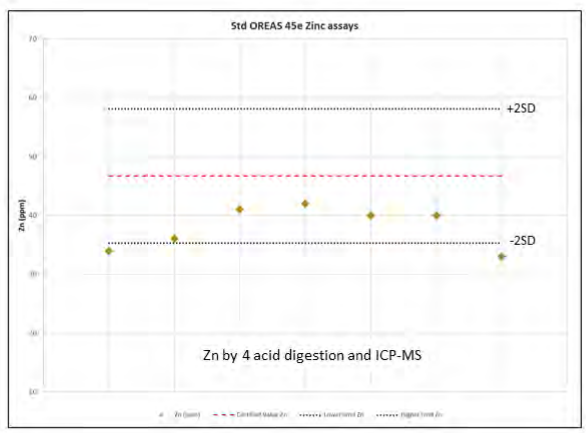

Std OREAS 45e Gold assays
Au (ppm)
Unresolved error
Au by fire assay
(Other elements by aqua regia digestion and ICP-MS)
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au


Std OREAS 45e Gold assays
Au (ppm)
Unresolved error
+2SD
-2SD
-3SD
Unresolved error
Au by fire assay
(Other elements by 4-acid digestion and ICP-MS)
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au

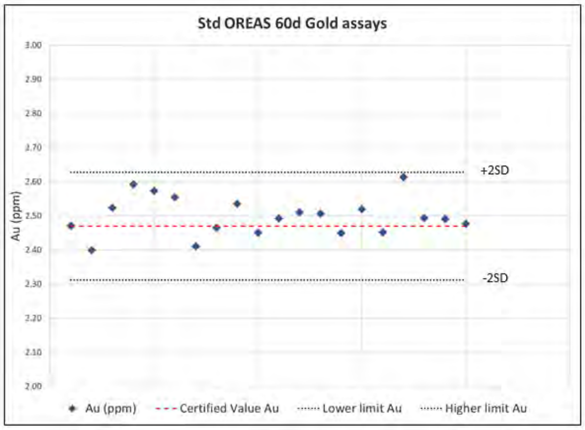

Std OREAS 45e Copper assays
Cu (ppm)
+2SD
-2SD
Cu by aqua regia digestion and ICP-MS
Cu (ppm)
Certified Value Cu
Lower limit Cu
Higher limit Cu

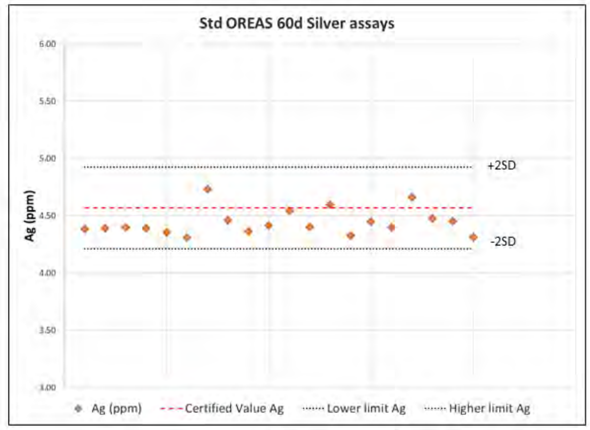

Std OREAS 45e Copper assays
+2SD
-2SD
Cu by 4 acid digestion and ICP-MS

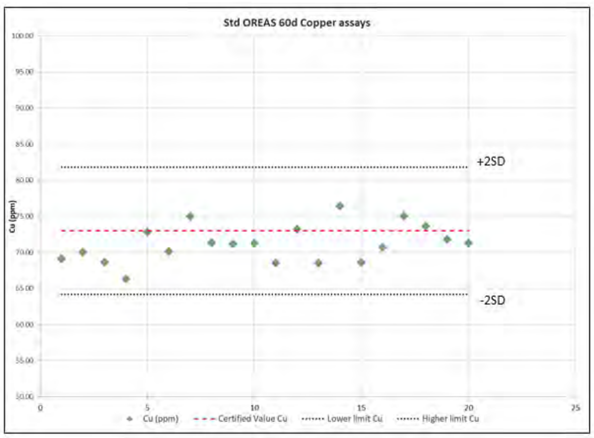

Std OREAS 45e Zinc assays
+2SD
-2SD
Zn by aqua regia digestion and ICP-MS

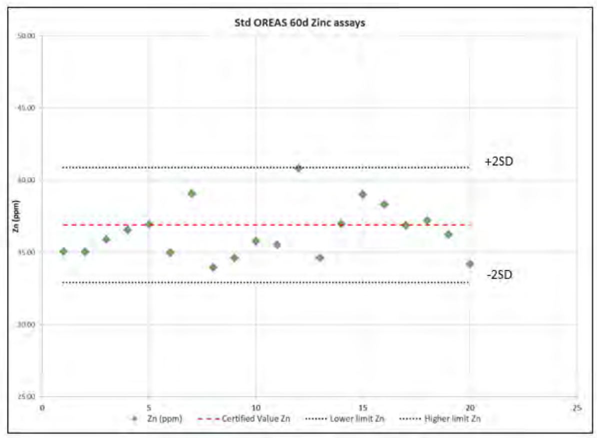

Std OREAS 45e Zinc assays
+2SD
-2SD
Zn by 4 acid digestion and ICP-MS

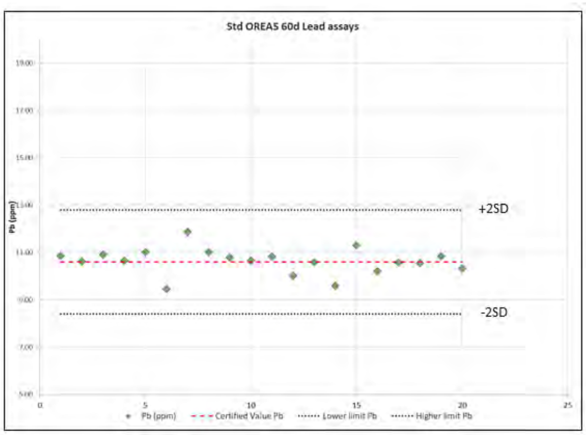
OREAS 60d


Std OREAS 60d Gold assays
Au (ppm)
+2SD
-2SD
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au

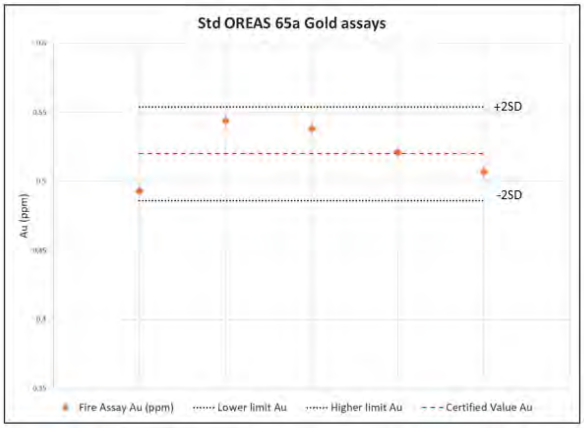

Std OREAS 60d Silver assays
Ag (ppm)
+2SD
-2SD
Ag (ppm)
Certified Value Ag
Lower limit Ag
Higher limit Ag

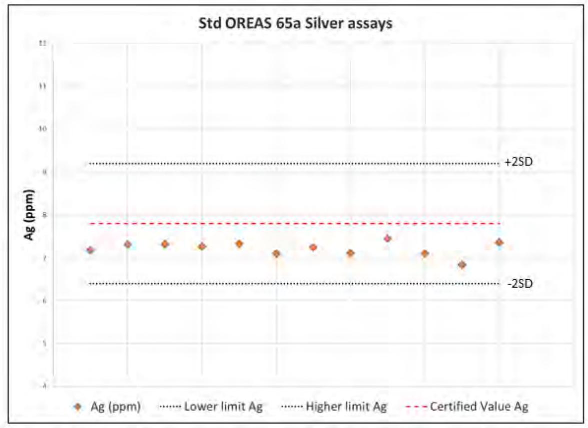

Std OREAS 60d Copper assays
+2SD
-2SD
Cu (ppm)
Certified Value Cu
Lower limit Cu
Higher limit Cu

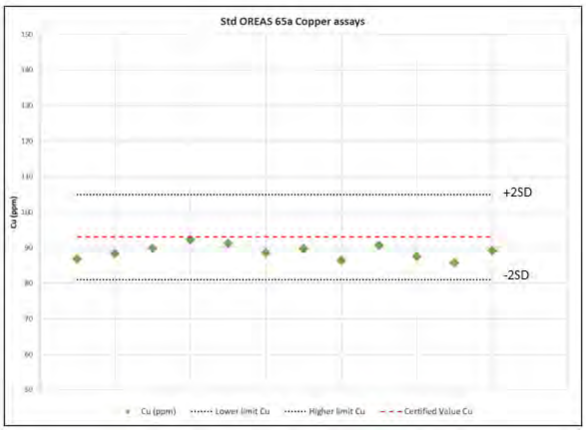

Std OREAS 60d Zinc assays
+2SD
-2SD
Zn (ppm)
Certified Value Zn
Lower limit Zn
Higher limit Zn


Std OREAS 60d Lead assays
+2SD
-2SD
Pb (ppm)
Certified Value Pb
Lower limit Pb
Higher limit Pb

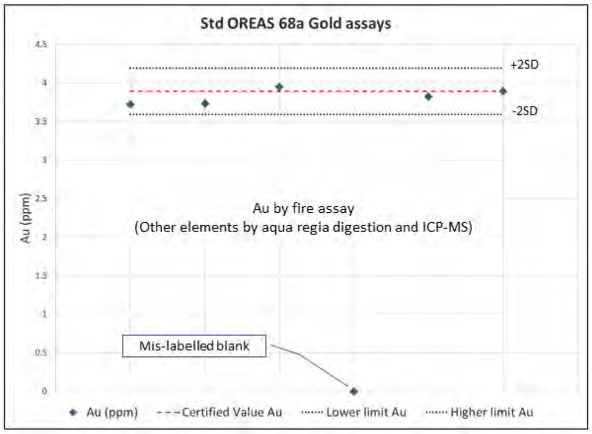
OREAS 65a

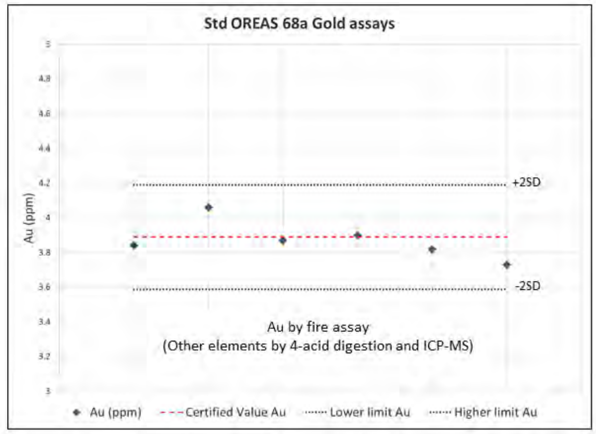

Std OREAS 65a Gold assays
Au (ppm)
+2SD
-2SD
Fire Assay Au (ppm)
Lower limit Au
Higher limit Au
Certified Value Au

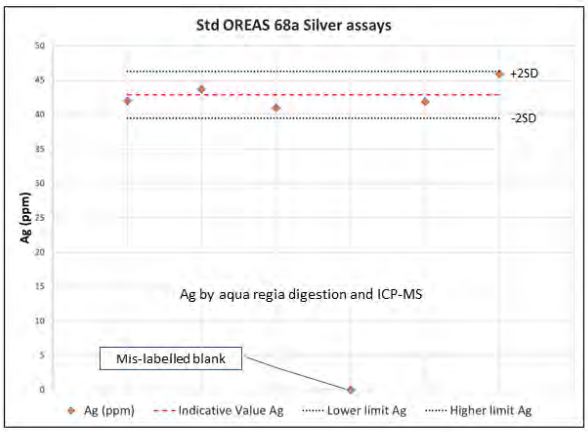

Std OREAS 65a Silver assays
Ag (ppm)
+2SD
-2SD
Ag (ppm)
Lower limit Ag
Higher limit Ag
Certified Value Ag

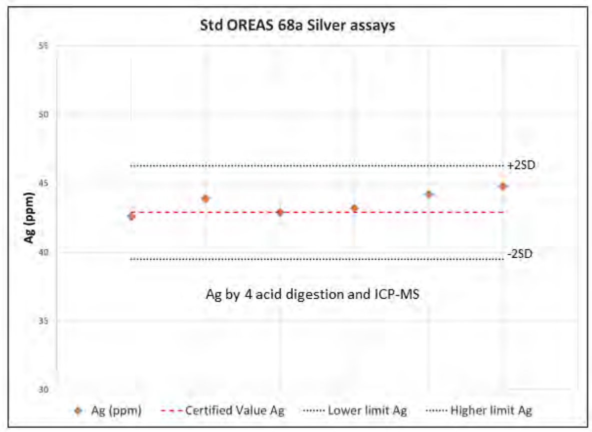

Std OREAS 65a Copper assays
Cu (ppm)
+2SD
-2SD

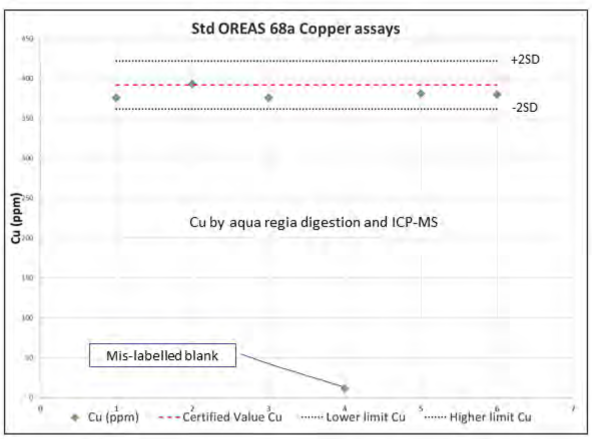
OREAS 68a

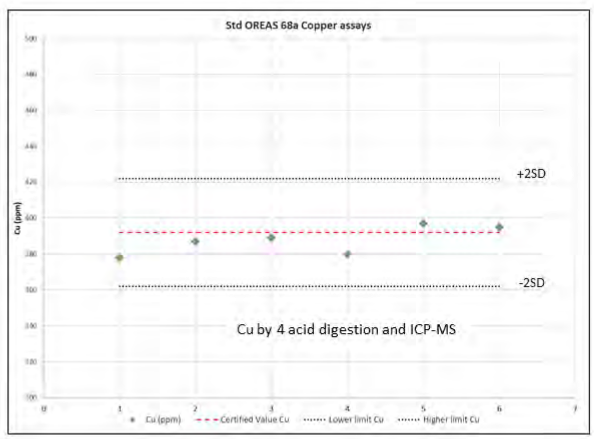

Std OREAS 68a Gold assays
+2SD
-2SD
Au by fire assay
(Other elements by aqua regia digestion and ICP-MS)
Mis-labelled blank
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au


Std OREAS 68a Gold assays
+2SD
-2SD
Au by fire assay
(Other elements by 4-acid digestion and ICP-MS)
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au

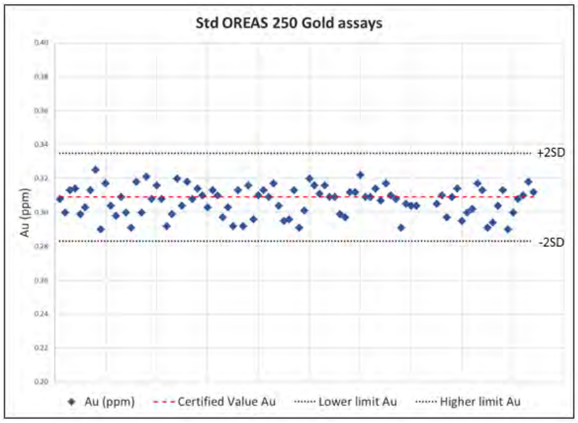

Std OREAS 68a Silver assays
+2SD
-2SD
Ag by aqua regia digestion and ICP-MS
Mis-labelled blank
Ag (ppm)
Indicative Value Ag
Lower limit Ag
Higher limit Ag

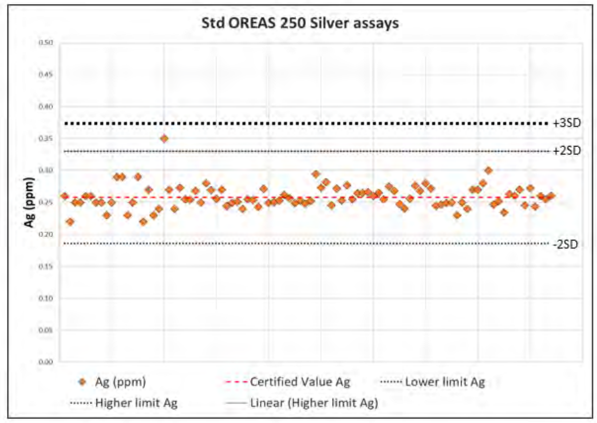

Std OREAS 68a Silver assays
+2SD
-2SD
Ag by 4 acid digestion and ICP-MS
Ag (ppm)
Certified Value Ag
Lower limit Ag
Higher limit Ag

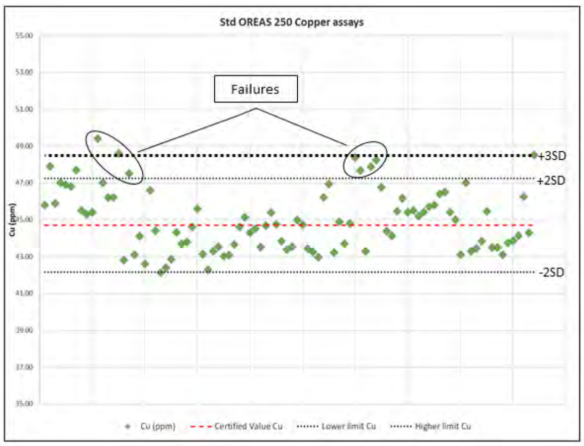

Std OREAS 68a Copper assays
+2SD
-2SD
Cu by aqua regia digestion and ICP-MS
Mis-labelled blank
Cu (ppm)
Certified Value Cu
Lower limit Cu
Higher limit Cu

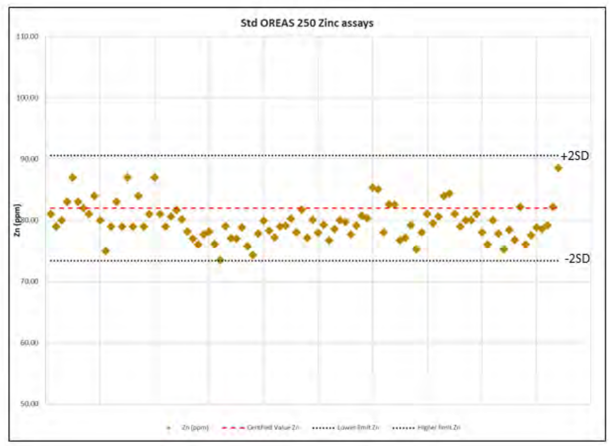

Std OREAS 68a Copper assays
+2SD
-2SD
Cu by 4 acid digestion and ICP-MS

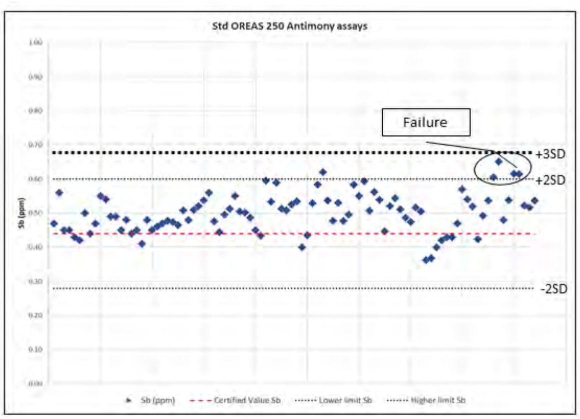
OREAS 250


Std OREAS 250 Gold assays
Au (ppm)
+2SD
-2SD
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au

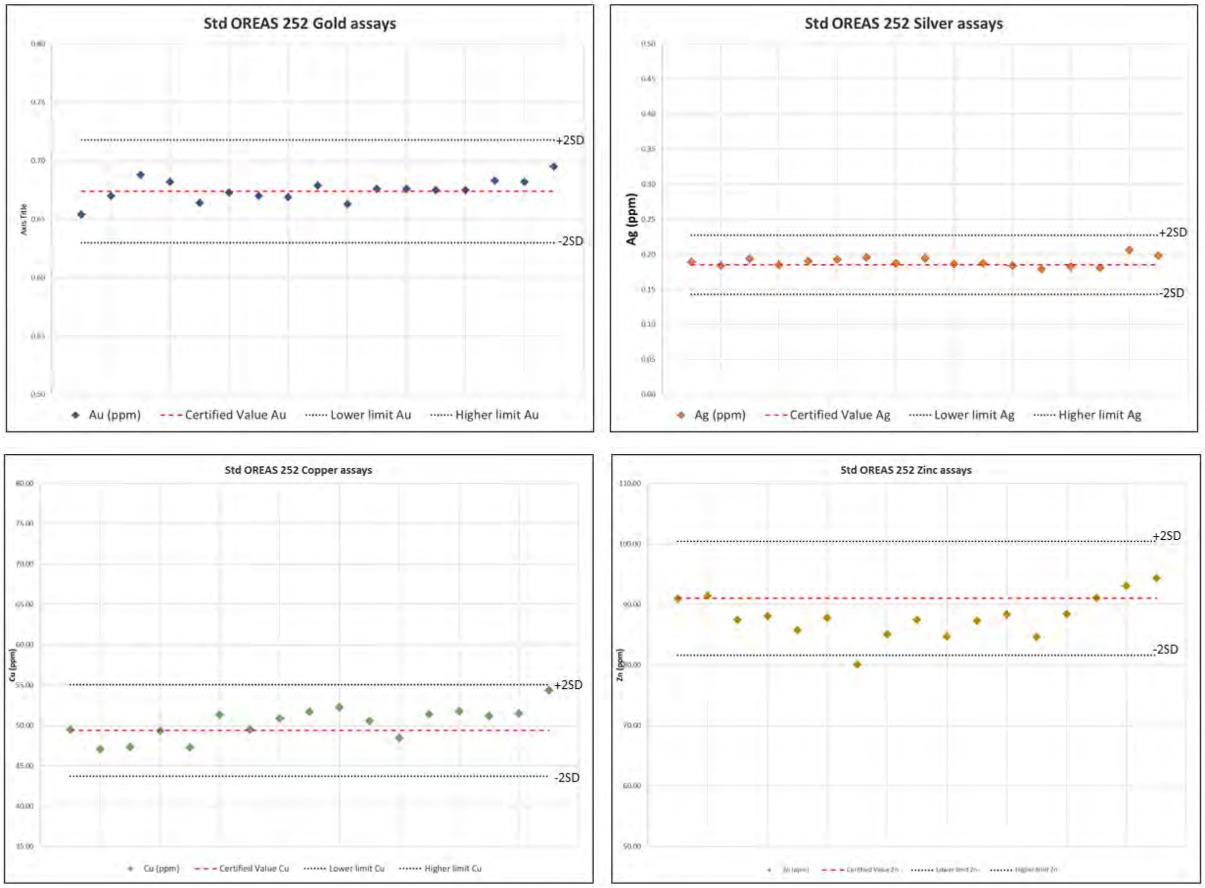

Std OREAS 250 Silver assays
Ag (ppm)
+3SD
+2SD
-2SD
Ag (ppm)
Certified Value Ag
Lower limit Ag
Higher limit Ag
Linear (Higher limit Ag)


Std OREAS 250 Copper assays
Failures
+3SD
+2SD
-2SD
Cu (ppm)
Cu (ppm)
Certified Value Cu
Lower limit Cu
Higher limit Cu

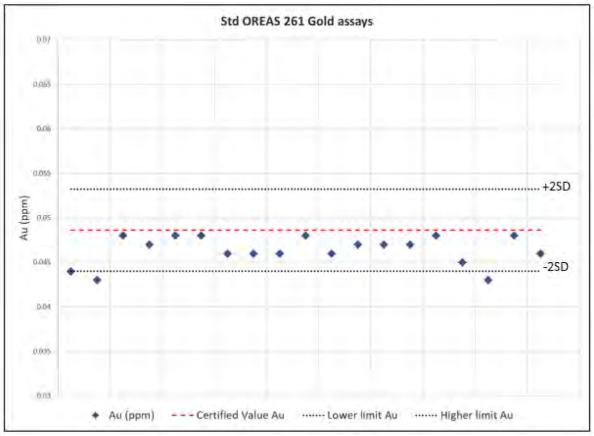

Std OREAS 250 Zinc assays
+2SD
-2SD

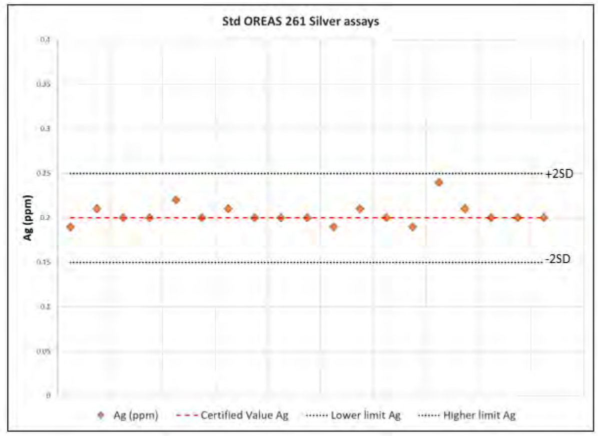

Std OREAS 250 Antimony assays
Failure
+3SD
+2SD
-2SD
Sb (ppm)
Sb (ppm)
Certified Value Sb
Lower limit Sb
Higher limit Sb

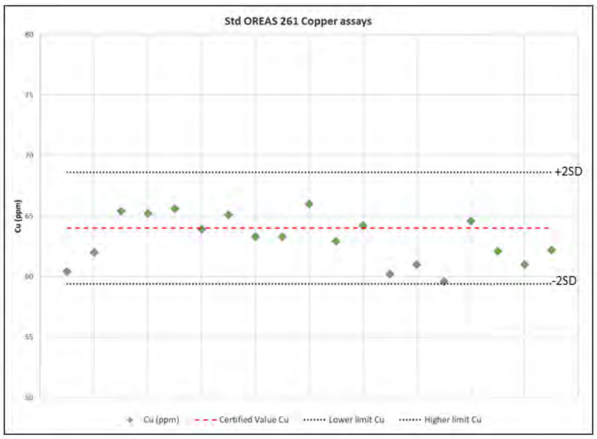
OREAS 252

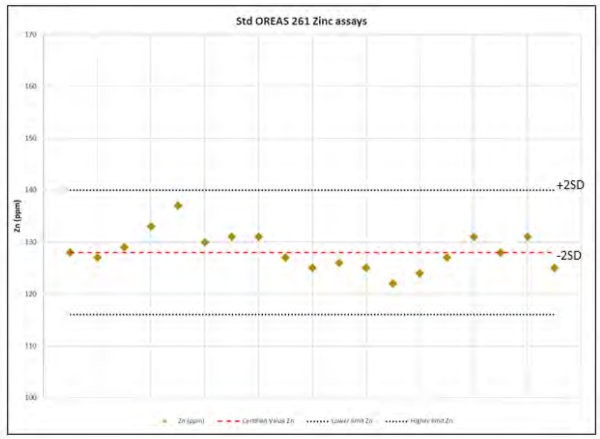

Std OREAS 252 Gold assays
+2SD
-2SD
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au
Std OREAS 252 Silver assays
Ag (ppm)
+2SD
-2SD
Ag (ppm)
Certified Value Ag
Lower limit Ag
Higher limit Ag
Std OREAS 252 Copper assays
Cu (ppm)
+2SD
-2SD
Cu (ppm)
Certified Value Cu
Lower limit Cu
Higher limit Cu
Std OREAS 252 Zinc assays
+2SD
-2SD

OREAS 261

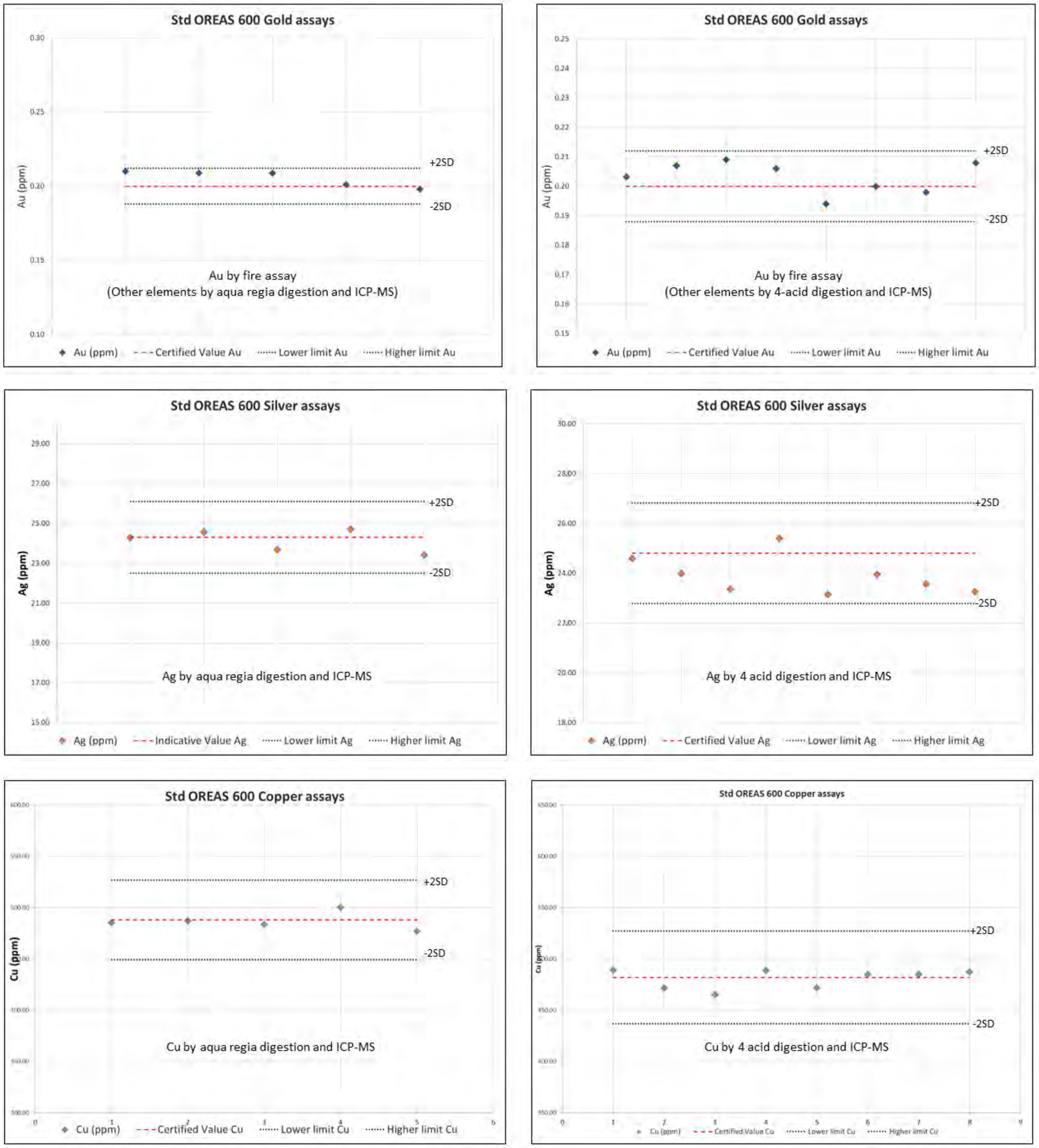

Std OREAS 261 Gold assays
Au (ppm)
+2SD
-2SD
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au

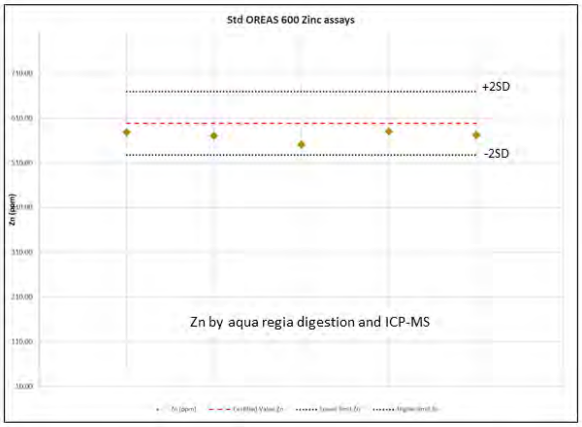

Std OREAS 261 Silver assays
Ag (ppm)
+2SD
-2SD
Ag (ppm)
Certified Value Ag
Lower limit Ag
Higher limit Ag

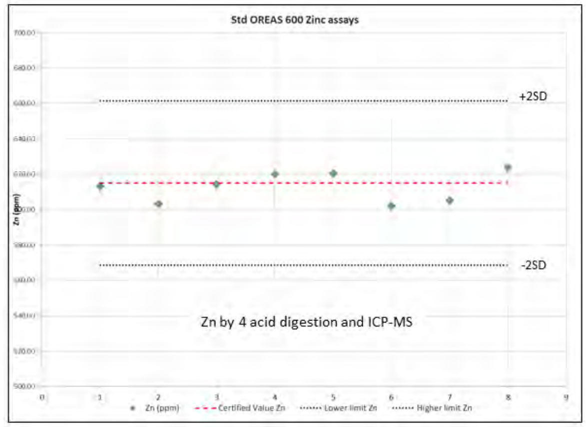

Std OREAS 261 Copper assays
Cu (ppm)
+2SD
-2SD
Cu (ppm)
Certified Value Cu
Lower limit Cu
Higher limit Cu

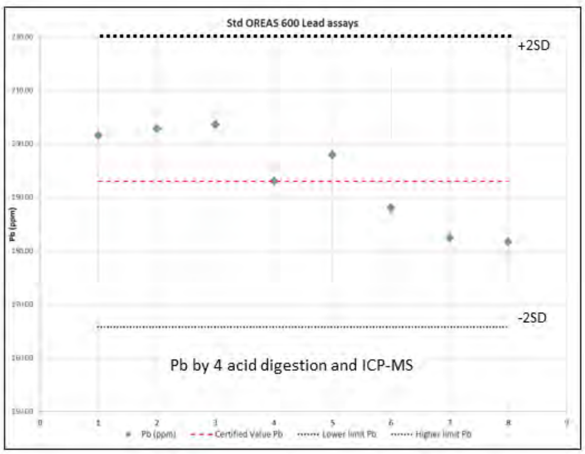

Std OREAS 261 Zinc assays
Zn (ppm)
+2SD
-2SD

OREAs 600

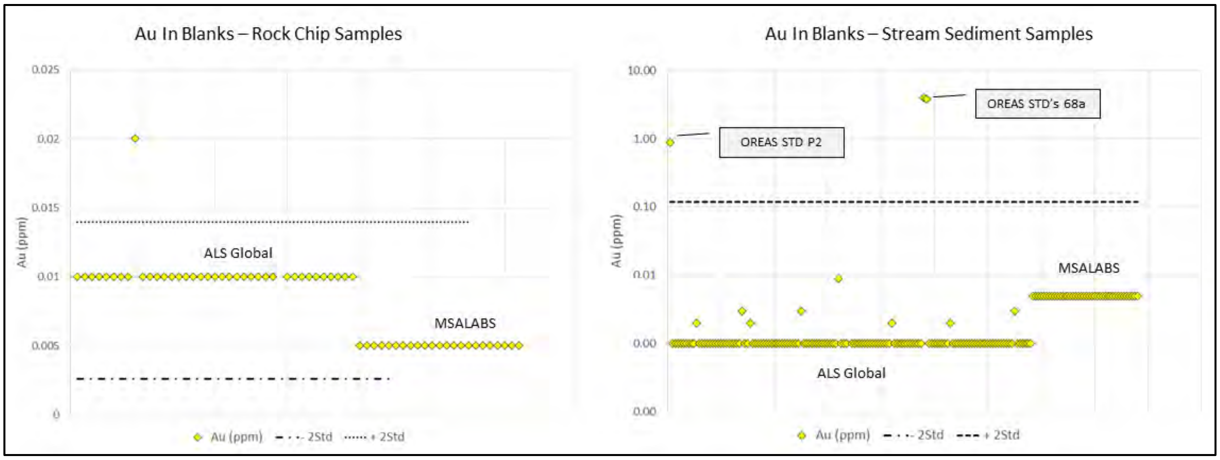

Std OREAS 600 Gold assays
Au (ppm)
+2SD
-2SD
Au by fire assay
(Other elements by aqua regia digestion and ICP-MS)
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au
Std OREAS 600 Gold assays
Au (ppm)
+2SD
-2SD
Au by fire assay
(Other elements by 4-acid digestion and ICP-MS)
Au (ppm)
Certified Value Au
Lower limit Au
Higher limit Au
Std OREAS 600 Silver assays
Ag (ppm)
+2SD
-2SD
Ag by aqua regia digestion and ICP-MS
Ag (ppm)
Indicative Value Ag
Lower limit Ag
Higher limit Ag
Std OREAS 600 Silver assays
Ag (ppm)
+2SD
-2SD
Ag by 4 acid digestion and ICP-MS
Ag (ppm)
Certified Value Ag
Lower limit Ag
Higher limit Ag
Std OREAS 600 Copper assays
Cu (ppm)
+2SD
-2SD
Cu by aqua regia digestion and ICP-MS
Cu (ppm)
Certified Value Cu
Lower limit Cu
Higher limit Cu
Std OREAS 600 Copper assays
Cu (ppm)
+2SD
-2SD
Cu by 4 acid digestion and ICP-MS
Cu (ppm)
Certified Value Cu
Lower limit Cu
Higher limit Cu

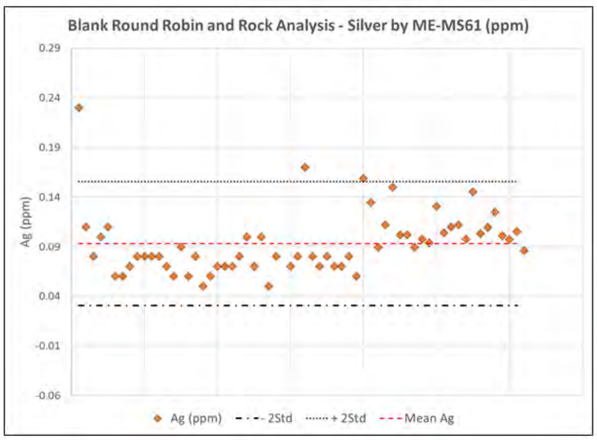

Std OREAS 600 Zinc assays
+2SD
-2SD
Zn by aqua regia digestion and ICP-MS

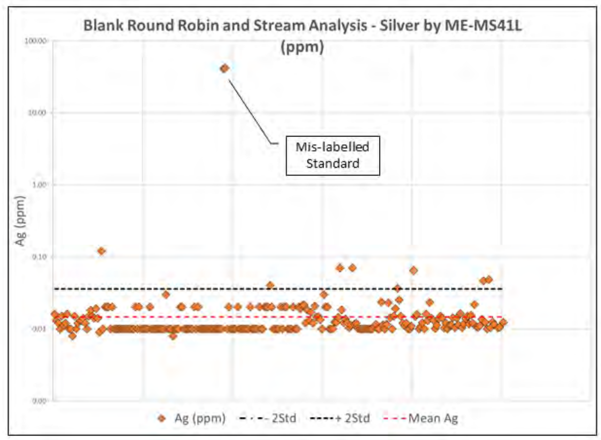

Std OREAS 600 Zinc assays
+2SD
-2SD
Zn by 4 acid digestion and ICP-MS
Zn (ppm)
Certified Value Zn
Lower limit Zn
Higher limit Zn

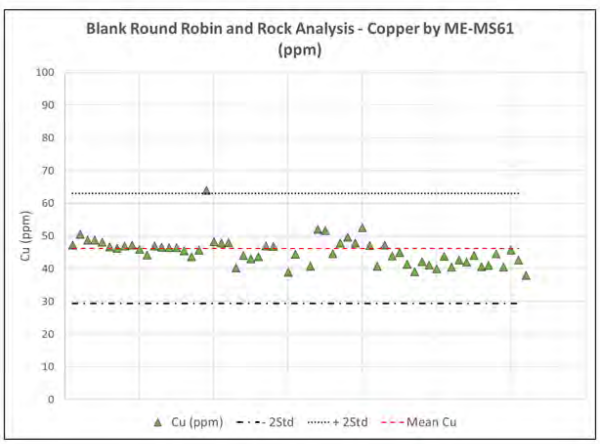

Std OREAS 600 Lead assays
+2SD
-2SD
Pb by 4 acid digestion and ICP-MS
Pb (ppm)
Certified Value Pb
Lower limit Pb
Higher limit Pb

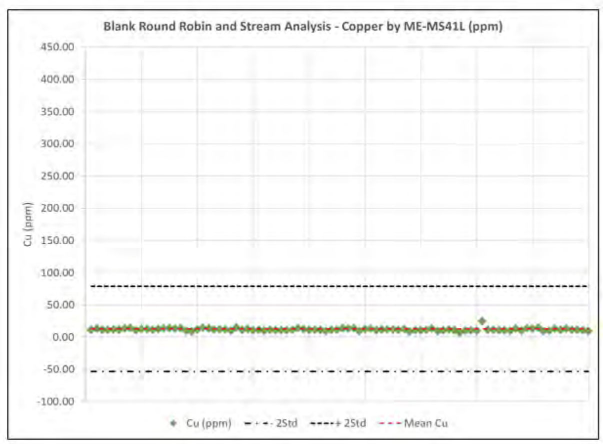
APPENDIX 2:
QA/QC CONTROL SAMPLES – BLANKS

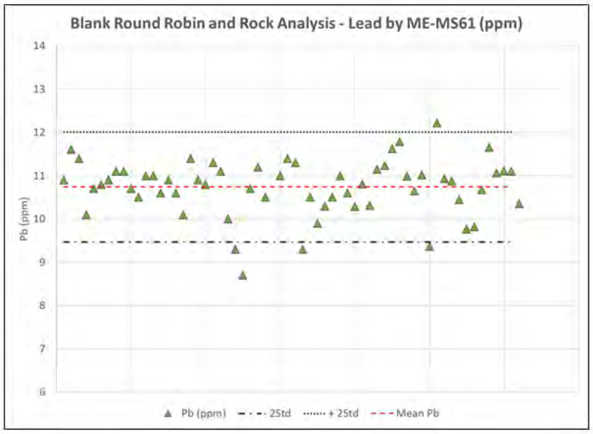

Au In Blanks – Rock Chip Samples
Au (ppm)
0.025
0.02
0.015
0.01
0.005
0
ALS Global
MSALABS
Au (ppm) - 2Std + 2Std
Au In Blanks – Stream Sediment Samples
10.00
1.00
0.10
0.01
0.00
0.00
OREAS STD's 68a
OREAS STD P2
MSALABS
ALS Global
Au (ppm) - 2Std + 2Std

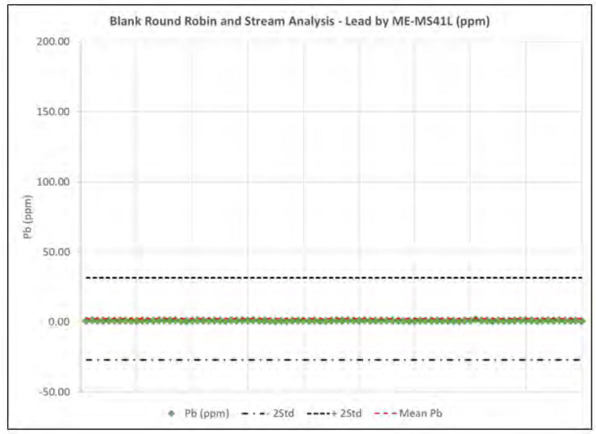

Blank Round Robin and Rock Analysis - Silver by ME-MS61 (ppm)
Ag (ppm)
0.29
0.24
0.19
0.14
0.09
0.04
-0.01
-0.06
Ag (ppm) - 2Std + 2Std Mean Ag

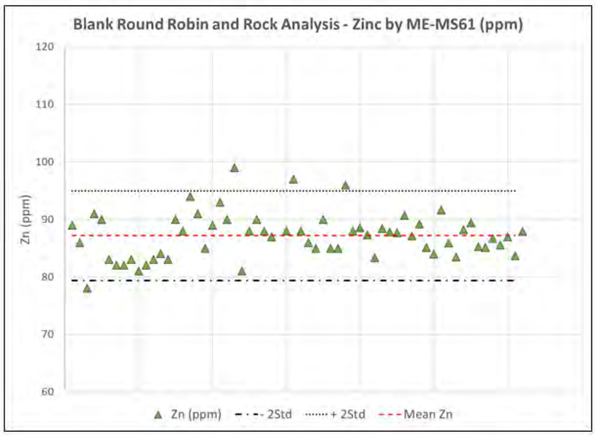

Blank Round Robin and Stream Analysis - Silver by ME-MS41L (ppm)
Ag (ppm)
Mis-labelled Standard
Ag (ppm) - 2Std + 2Std Mean Ag

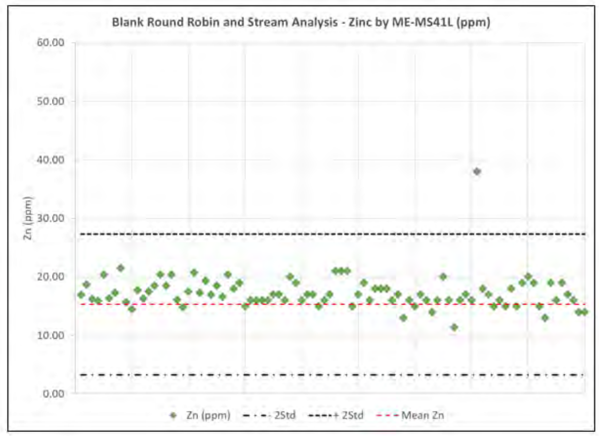

Blank Round Robin and Rock Analysis - Copper by ME-MS61 (ppm)
Cu (ppm)
100
90
80
70
60
50
40
30
20
10
0
Cu (ppm) - 2Std + 2Std Mean Cu


Blank Round Robin and Stream Analysis - Copper by ME-MS41L (ppm)
Cu (ppm)
450.00
400.00
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
-50.00
-100.00
Cu (ppm) - 2Std + 2Std Mean Cu

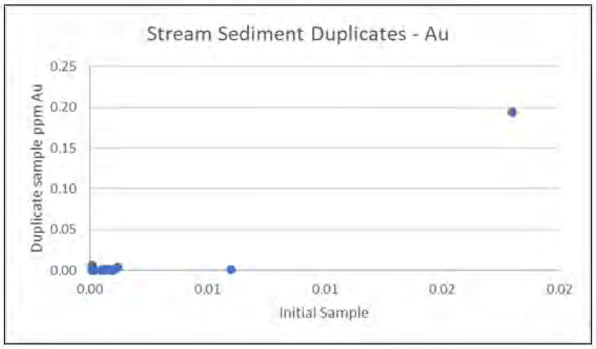

Blank Round Robin and Rock Analysis - Lead by ME-MS61 (ppm)
Pb (ppm)
Pb (ppm) - 2Std + 2Std Mean Pb

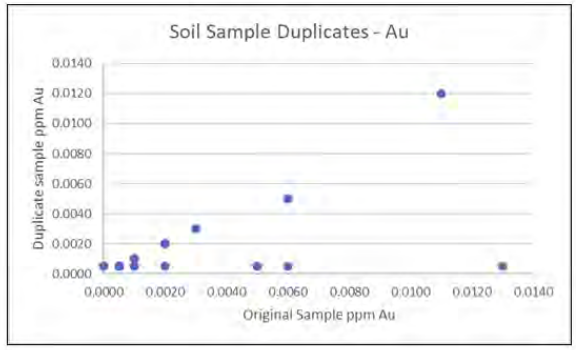

Blank Round Robin and Stream Analysis - Lead by ME-MS41L (ppm)
Pb (ppm)
Pb (ppm) - 2Std + 2Std Mean Pb

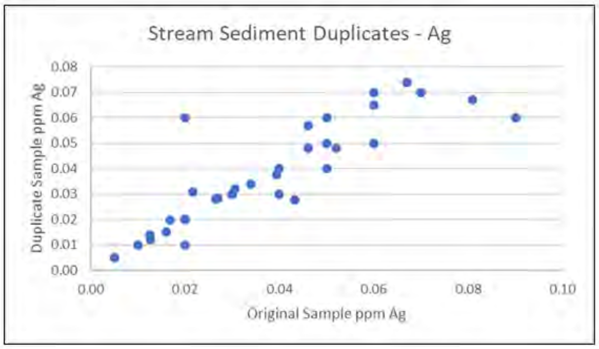

Blank Round Robin and Rock Analysis - Zinc by ME-MS61 (ppm)
Zn (ppm)
Zn (ppm) - 2Std + 2Std Mean Zn

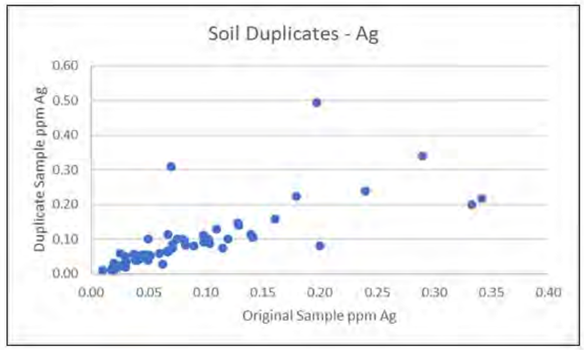

Blank Round Robin and Stream Analysis - Zinc by ME-MS41L (ppm)
Zn (ppm)
Zn (ppm) - 2Std + 2Std Mean Zn

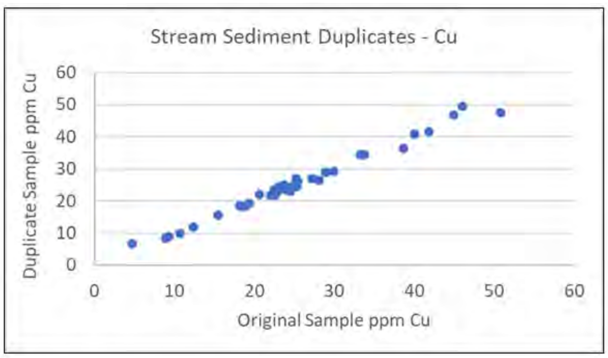
APPENDIX 3:
QA/QC CONTROL SAMPLES – DUPLICATES

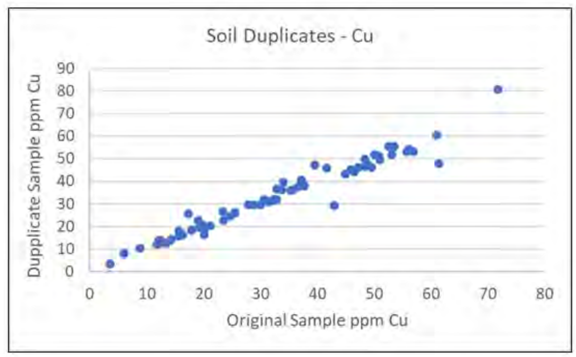

Stream Sediment Duplicates - Au
Duplicate sample ppm Au
0.25 0.20 0.15 0.10 0.05 0.00
0.00 0.01 0.01 0.02 0.02
Initial Sample

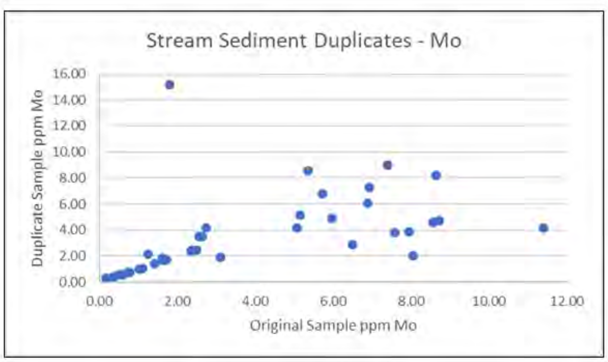

Soil Sample Duplicates - Au
Duplicate sample ppm Au
0.0140 0.0120 0.0100 0.0080 0.0060 0.0040 0.0020 0.0000
0.0000 0.0020 0.0040 0.0060 0.0080 0.0100 0.0120 0.0140
Original Sample ppm Au

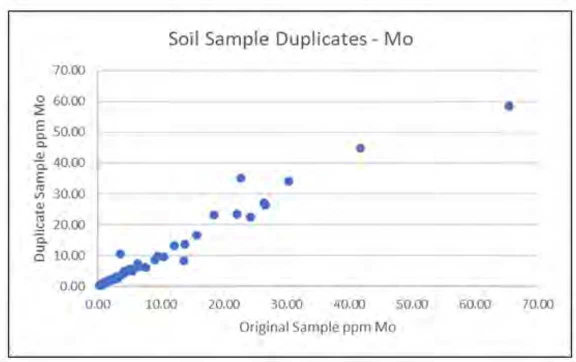

Stream Sediment Duplicates - Ag
Duplicate Sample ppm Ag
0.08 0.07 0.06 0.05 0.04 0.03 0.02 0.01 0.00
0.00 0.02 0.04 0.06 0.08 0.10
Original Sample ppm Ag

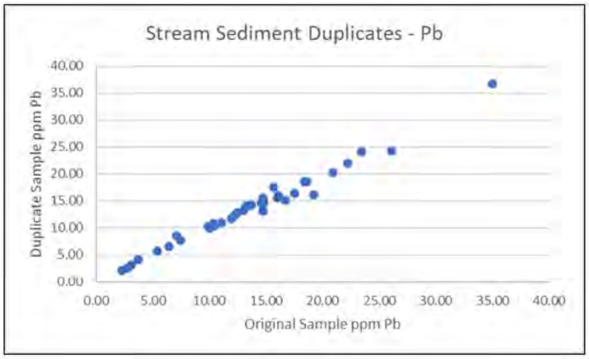

Soil Duplicates - Ag
Duplicate Sample ppm Ag
0.60 0.50 0.40 0.30 0.20 0.10 0.00
0.00 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40
Original Sample ppm Ag

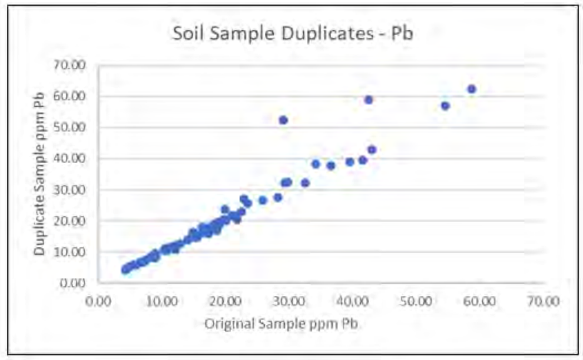

Stream Sediment Duplicates - Cu
Duplicate Sample ppm Cu
60 50 40 30 20 10 0
0 10 20 30 40 50 60
Original Sample ppm Cu

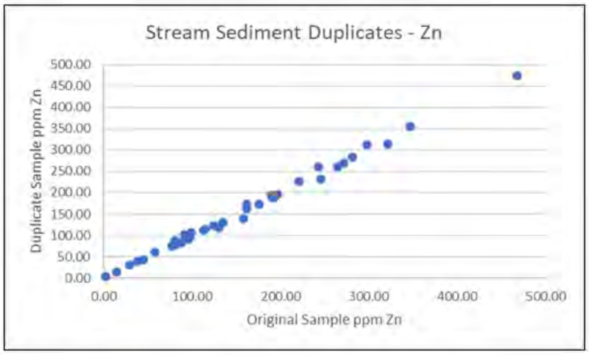

Soil Duplicates - Cu
Duplicate Sample ppm Cu
90 80 70 60 50 40 30 20 10 0
0 10 20 30 40 50 60 70 80
Original Sample ppm Cu

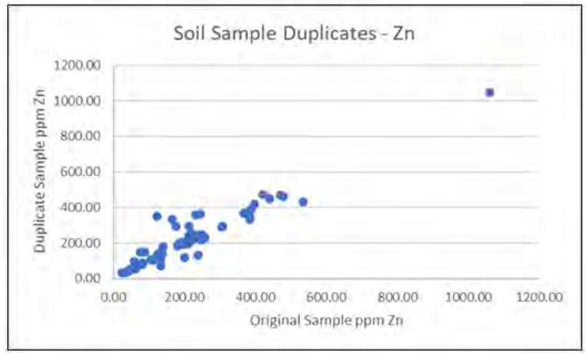

Stream Sediment Duplicates - Mo
Duplicate Sample ppm Mo
16.00 14.00 12.00 10.00 8.00 6.00 4.00 2.00 0.00
0.00 2.00 4.00 6.00 8.00 10.00 12.00
Original Sample ppm Mo

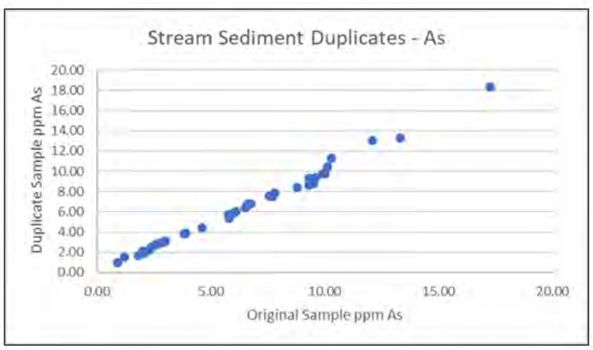

Soil Sample Duplicates - Mo
Duplicate Sample ppm Mo
70.00 60.00 50.00 40.00 30.00 20.00 10.00 0.00
0.00 10.00 20.00 30.00 40.00 50.00 60.00 70.00
Original Sample ppm Mo

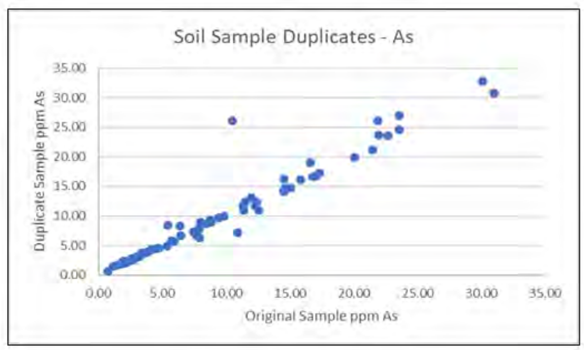

Stream Sediment Duplicates - Pb
Duplicate Sample ppm Pb
Original Sample ppm Pb

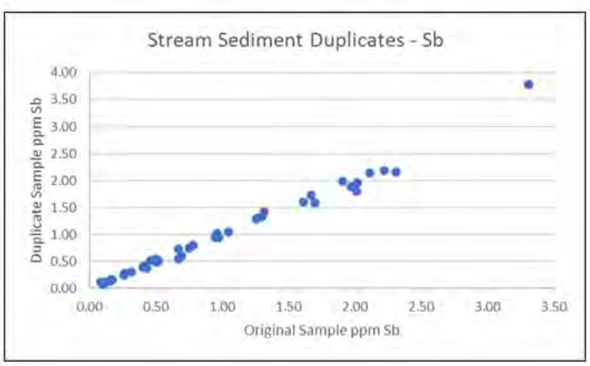

Soil Sample Duplicates - Pb
Duplicate Sample ppm Pb
Original Sample ppm Pb

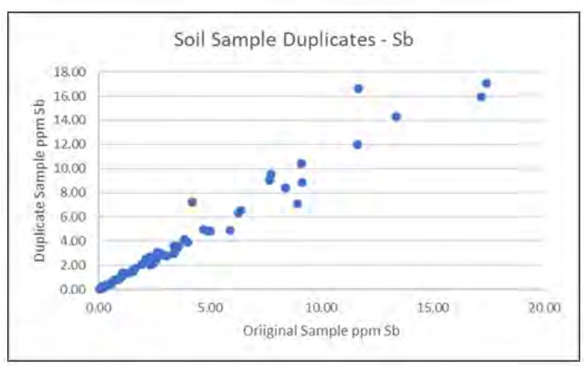

Stream Sediment Duplicates - Zn
Duplicate Sample ppm Zn
Original Sample ppm Zn

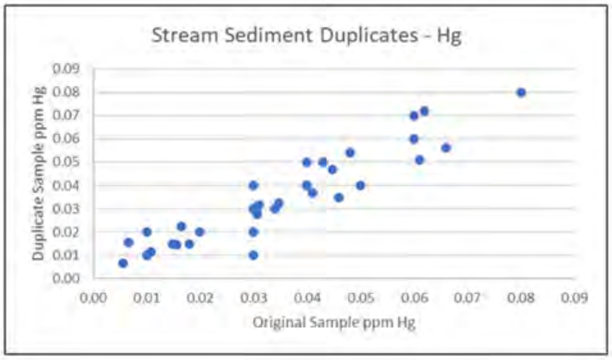

Soil Sample Duplicates - Zn
Duplicate Sample ppm Zn
Original Sample ppm Zn

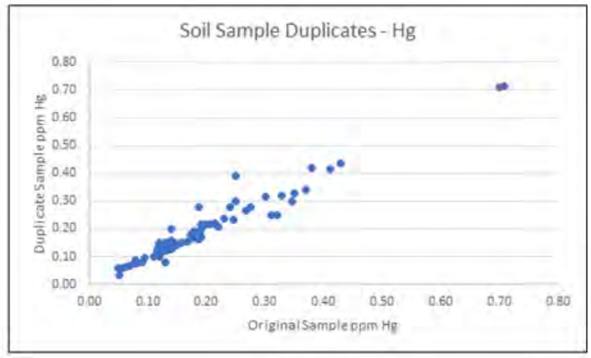

Stream Sediment Duplicates - As
Duplicate Sample ppm As
Original Sample ppm As


Soil Sample Duplicates - As
Duplicate Sample ppm As
Original Sample ppm As


Stream Sediment Duplicates - Sb
Duplicate Sample ppm Sb
Original Sample ppm Sb


Soil Sample Duplicates - Sb
Duplicate Sample ppm Sb
Oriiginal Sample ppm Sb


Stream Sediment Duplicates - Hg
Duplicate Sample ppm Hg
Original Sample ppm Hg
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09


Soil Sample Duplicates - Hg
Duplicate Sample ppm Hg
Original Sample ppm Hg
0.00
0.10
0.20
0.30
0.40
0.50
0.60
0.70
0.80

APPENDIX 4:
CERTIFICATE OF ANALYSIS

Certificate UIO19000263.1 for Duplicate Core Samples (Table 11)

MINERAL LABORATORIES
Perú

www.bureauveritas.com/um

Bureau Veritas Perú - Callao
Av. Elmer Faucett N° 444, Prov. Const. del Callao Callao Callao 01 Peru
PHONE +51(1) 6138080

Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Submitted By: Al Workman
Receiving Lab: BV - Quito, Ecuador
Received: September 03, 2019
Report Date: September 20, 2019

CERTIFICATE OF ANALYSIS UIO19000263.1

CLIENT JOB INFORMATION

Project:	WGM
Shipment ID:	
P.O. Number	WO- 416
Number of Samples:	7

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	7	Sorting, labeling and boxing samples received as pulps			UIO
AR251-EXT	7	Aqua Regia Digestion - Ultratrace ICP-MS Analysis	15	Completed	CLL
SHP01	7	Per sample shipping charges for branch shipments			UIO

ADDITIONAL COMMENTS

Invoice To: Watts, Griffis and McOuat Ltd.
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5
Canada

CC: Robert Paje
Jan Pol pallier

FLOR MELGAR
JEFE DE LABORATORIO
CIP: N°186937

BUREAU VERITAS MINERAL LABORATORIES Perú
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Bureau Veritas Perú - Callao
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PHONE +51(1) 6138080

Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Project: WGM
Report Date: September 20, 2019

CERTIFICATE OF ANALYSIS UIO19000263.1

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01	0.001
WGM-001	Pulp	0.38	22.75	3.91	7.4	180	71.1	27.5	1814	2.34	2.1	<0.1	0.2	0.5	60.6	0.02	0.45	<0.02	64	12.33	0.058
WGM-002	Pulp	0.78	20.36	29.12	107.3	1112	67.3	33.2	2526	2.50	3.7	<0.1	<0.2	0.4	44.5	2.78	0.77	<0.02	147	12.02	0.062
WGM-003	Pulp	1.49	24.14	25.20	39.7	519	66.6	23.0	2412	3.35	2.2	0.1	<0.2	0.3	63.9	0.05	0.88	<0.02	156	10.91	0.072
WGM-004	Pulp	3.83	20.30	19.20	24.3	675	59.2	19.2	2564	5.69	7.7	<0.1	<0.2	0.2	87.8	0.08	0.86	<0.02	105	16.34	0.037
WGM-005	Pulp	5.06	55.04	8.60	112.8	4351	73.1	22.9	1907	4.23	3.7	1.0	<0.2	0.7	40.9	0.21	0.45	<0.02	215	4.18	0.057
WGM-006	Pulp	0.40	8.87	0.44	12.7	28	11.4	4.1	77	1.02	0.5	0.1	13.4	0.5	65.2	0.02	0.03	0.09	61	0.49	0.020
WGM-007	Pulp	1.85	32.51	7.10	42.1	3185	13.4	8.8	618	2.29	11.4	0.2	4495.6	1.1	153.7	0.12	0.26	0.09	59	6.85	0.052

Bureau Veritas Perú - Callao
Av. Elmer Faucett N° 444, Prov. Const. del Callao Callao Callao 01 Peru
PHONE +51(1) 6138080

BUREAU VERITAS MINERAL LABORATORIES Perú

www.bureauveritas.com/um

Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Project: WGM
Report Date: September 20, 2019

CERTIFICATE OF ANALYSIS UIO19000263.1

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
WGM-001	Pulp	9.8	66.2	0.71	18.7	<0.001	<1	0.47	0.035	0.14	<0.1	13.6	0.32	0.35	29	0.5	<0.02	1.1	0.29	<0.1	0.02
WGM-002	Pulp	12.2	140.4	0.52	28.3	0.071	3	1.76	0.035	0.08	0.2	17.2	0.73	1.69	218	0.3	<0.02	6.8	0.17	<0.1	0.19
WGM-003	Pulp	13.5	150.6	1.38	54.9	0.003	<1	1.86	0.022	0.11	<0.1	17.3	1.01	1.04	38	0.5	<0.02	9.5	0.35	<0.1	0.04
WGM-004	Pulp	8.1	129.5	1.35	12.1	0.003	<1	1.77	0.021	0.05	<0.1	11.8	5.62	4.02	131	0.6	<0.02	8.6	0.17	<0.1	0.03
WGM-005	Pulp	14.3	221.5	3.15	83.2	0.107	<1	2.72	0.036	0.07	14.3	16.8	1.13	0.40	24	1.1	<0.02	13.4	0.23	0.2	0.15
WGM-006	Pulp	3.8	99.2	0.15	35.8	0.111	<1	0.88	0.217	0.05	0.1	2.1	0.15	<0.02	89	0.3	0.03	1.8	0.07	<0.1	0.10
WGM-007	Pulp	12.7	22.7	0.80	31.7	0.079	8	1.38	0.126	0.14	0.5	6.7	0.13	0.37	90	0.5	0.90	4.9	1.89	<0.1	0.28

BUREAU VERITAS MINERAL LABORATORIES Perú

Bureau Veritas Perú - Callao

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PHONE +51(1) 6138080

www.bureauveritas.com/um

Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Project: WGM
Report Date: September 20, 2019

CERTIFICATE OF ANALYSIS UIO19000263.1

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
	MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2
WGM-001	Pulp	<0.02	6.4	0.1	<0.05	0.6	11.88	21.3	0.03	2	0.3	1.4	<10	<2
WGM-002	Pulp	0.05	3.9	0.3	<0.05	6.8	15.32	22.3	0.04	8	0.3	16.4	<10	2
WGM-003	Pulp	<0.02	3.9	0.3	<0.05	1.1	15.37	26.5	0.04	2	0.4	24.2	<10	<2
WGM-004	Pulp	0.02	1.9	0.3	<0.05	1.0	9.44	15.9	0.04	10	0.6	24.7	<10	<2
WGM-005	Pulp	0.04	2.6	0.3	<0.05	3.9	9.66	27.7	0.04	5	0.4	29.2	<10	<2
WGM-006	Pulp	0.14	1.4	0.3	<0.05	4.7	1.73	7.9	<0.02	<1	<0.1	0.9	<10	14
WGM-007	Pulp	0.03	6.5	0.5	<0.05	10.9	8.36	26.5	0.02	1	0.4	10.8	<10	4

Client: Watts, Griffis and McOuat Ltd.
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PHONE +51(1) 6138080

Project: WGM
Report Date: September 20, 2019

QUALITY CONTROL REPORT UIO19000263.1

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01	0.001
Reference Materials																					
STD OREAS262	Standard	0.69	119.21	54.03	154.6	432	59.7	26.2	538	3.31	35.9	1.1	73.9	9.0	35.9	0.61	5.10	0.97	21	3.11	0.035
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	72	9.33	36	0.61	5.06	0.98	22.5	2.98	0.04
BLK	Blank	0.05	0.05	<0.01	<0.1	7	<0.1	<0.1	<1	<0.01	<0.1	<0.1	0.4	<0.1	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001

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Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Project: WGM
Report Date: September 20, 2019

QUALITY CONTROL REPORT UIO19000263.1

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Reference Materials																					
STD OREAS262	Standard	12.8	41.4	1.14	251.4	0.002	1	1.12	0.076	0.26	0.3	3.0	0.47	0.25	176	0.9	0.23	3.5	2.76	<0.1	0.28
STD OREAS262 Expected		15.9	41.7	1.17	248	0.0027	4	1.3	0.071	0.295	0.2	3.24	0.47	0.253	170	0.4	0.23	3.73	2.8		0.27
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02

BUREAU VERITAS MINERAL LABORATORIES Perú

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PHONE +51(1) 6138080

Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Project: WGM
Report Date: September 20, 2019

QUALITY CONTROL REPORT UIO19000263.1

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
	MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2
Reference Materials														
STD OREAS262	Standard	<0.02	15.0	0.5	<0.05	12.0	10.70	26.6	0.03	1	1.1	17.3	<10	<2
STD OREAS262 Expected			18.6	0.5		11.7	11.2	32	0.033		1.14	17.8		
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2

Certificate UIO19000264.2 for the Silt Sample (Two Size Fractions – Table 12)

MINERAL LABORATORIES
Perú

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PHONE +51(1) 6138080

Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Submitted By: Al Workman
Receiving Lab: BV - Quito, Ecuador
Received: September 03, 2019
Report Date: September 25, 2019

CERTIFICATE OF ANALYSIS UIO19000264.2

CLIENT JOB INFORMATION

Project: WGM
Shipment ID:
P.O. Number WO-417
Number of Samples: 2

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	2	Sorting, labeling and boxing samples received as pulps			UIO
AR251-EXT	2	Aqua Regia Digestion - Ultratrace ICP-MS Analysis	15	Completed	CLL
SHP01	2	Per sample shipping charges for branch shipments			UIO

ADDITIONAL COMMENTS

El presente certificado UIO19000264.2 reemplaza al emitido el 24/09/19. Se incluyen resultados para los analitos Cu, Mo y Pb.

Invoice To: Watts, Griffis and McOuat Ltd.
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5
Canada

CC: Robert Paje
Jan Pol pallier

FLOR MELGAR
JEFE DE LABORATORIO
CIP: N°186937

BUREAU VERITAS MINERAL LABORATORIES Perú

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Bureau Veritas Perú - Callao

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Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Project: WGM
Report Date: September 25, 2019

CERTIFICATE OF ANALYSIS UIO19000264.2

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01	0.001
WGM008+80	Pulp	8.50	27.00	62.00	537.0	257	34.0	20.4	2670	6.56	24.0	0.9	10.0	3.6	12.0	3.66	11.00	0.19	124	0.25	0.168
WGM008-80	Pulp	6.72	23.00	51.00	439.0	166	26.0	19.1	2441	4.55	18.0	0.7	1.0	3.2	11.0	3.41	8.02	0.19	85	0.26	0.138

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Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Project: WGM
Report Date: September 25, 2019

CERTIFICATE OF ANALYSIS UIO19000264.2

		Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
		Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
		Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
		MDL	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
WGM008+80	Pulp		19.0	106.0	0.09	214.0	0.006	3	2.11	0.002	0.17	<0.1	8.5	1.52	<0.02	204	1.5	0.14	7.0	0.97	<0.1	0.04
WGM008-80	Pulp		19.0	24.0	0.07	181.0	0.004	4	1.46	0.002	0.11	<0.1	6.8	1.30	<0.02	209	1.4	0.13	4.0	1.22	<0.1	0.04

Bureau Veritas Perú - Callao

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Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Project: WGM
Report Date: September 25, 2019

CERTIFICATE OF ANALYSIS UIO19000264.2

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
	MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2
WGM008+80	Pulp	0.20	15.8	0.4	0.11	4.0	15.00	57.0	0.06	2	1.3	5.0	<10	5
WGM008-80	Pulp	0.11	14.5	0.4	<0.05	3.0	13.00	51.0	0.06	1	0.7	4.0	13	<2

BUREAU VERITAS MINERAL LABORATORIES Perú

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Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Project: WGM
Report Date: September 25, 2019

QUALITY CONTROL REPORT UIO19000264.2

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01	0.001
Pulp Duplicates																					
WGM008-80	Pulp	6.72	23.00	51.00	439.0	166	26.0	19.1	2441	4.55	18.0	0.7	1.0	3.2	11.0	3.41	8.02	0.19	85	0.26	0.138
REP WGM008-80	QC	6.25	23.00	49.00	444.0	175	26.0	18.5	2459	4.60	18.0	0.7	1.0	3.4	11.5	3.39	8.00	0.18	85	0.26	0.138
Reference Materials																					
STD OREAS262	Standard	0.69	119.21	54.03	154.6	432	59.7	26.2	538	3.31	35.9	1.1	73.9	9.0	35.9	0.61	5.10	0.97	21	3.11	0.035
STD OREAS262	Standard	0.69	118.00	58.00	154.0	450	62.0	25.7	520	3.27	36.0	1.1	72.0	9.5	33.0	0.61	5.00	0.99	23	2.96	0.041
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	72	9.33	36	0.61	5.06	0.98	22.5	2.98	0.04
BLK	Blank	0.05	0.05	<0.01	<0.1	7	<0.1	<0.1	<1	<0.01	<0.1	<0.1	0.4	<0.1	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001

BUREAU VERITAS MINERAL LABORATORIES Perú

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Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Project: WGM
Report Date: September 25, 2019

QUALITY CONTROL REPORT UIO19000264.2

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
WGM008-80	Pulp	19.0	24.0	0.07	181.0	0.004	4	1.46	0.002	0.11	<0.1	6.8	1.30	<0.02	209	1.4	0.13	4.0	1.22	<0.1	0.04
REP WGM008-80	QC	20.0	24.0	0.07	184.0	0.004	4	1.52	0.002	0.11	<0.1	6.3	1.33	<0.02	195	1.3	0.14	4.0	1.23	<0.1	0.04
Reference Materials																					
STD OREAS262	Standard	12.8	41.4	1.14	251.4	0.002	1	1.12	0.076	0.26	0.3	3.0	0.47	0.25	176	0.9	0.23	3.5	2.76	<0.1	0.28
STD OREAS262	Standard	13.0	38.0	1.19	240.0	0.003	4	1.18	0.071	0.29	0.2	3.2	0.47	0.25	162	0.4	0.23	5.0	2.81	<0.1	0.28
STD OREAS262 Expected		15.9	41.7	1.17	248	0.0027	4	1.3	0.071	0.295	0.2	3.24	0.47	0.253	170	0.4	0.23	3.73	2.8		0.27
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02

Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
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Av. Elmer Faucett N° 444, Prov. Const. del Callao Callao Callao 01 Peru
PHONE +51(1) 6138080

Project: WGM
Report Date: September 25, 2019

QUALITY CONTROL REPORT UIO19000264.2

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb
	MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2
Pulp Duplicates														
WGM008-80	Pulp	0.11	14.5	0.4	<0.05	3.0	13.00	51.0	0.06	1	0.7	4.0	13	<2
REP WGM008-80	QC	0.12	13.9	0.4	<0.05	3.0	13.00	52.0	0.06	1	0.7	4.0	11	<2
Reference Materials														
STD OREAS262	Standard	<0.02	15.0	0.5	<0.05	12.0	10.70	26.6	0.03	1	1.1	17.3	<10	<2
STD OREAS262	Standard	0.02	15.3	0.5	<0.05	12.0	12.00	30.0	0.03	1	1.1	17.0	274	<2
STD OREAS262 Expected			18.6	0.5		11.7	11.2	32	0.033		1.14	17.8		
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2

Certificate UIO19000376.1 for the Samples Robert Collected (Table 13)

MINERAL LABORATORIES
Perú

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Av. Elmer Faucett N° 444, Prov. Const. del Callao Callao Callao 01 Peru
PHONE +51(1) 6138080

Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Submitted By:	Al Workman
Receiving Lab:	BV - Quito, Ecuador
Received:	December 11, 2019
Report Date:	December 20, 2019
Page:	1 of 2

CERTIFICATE OF ANALYSIS UIO19000376.1

CLIENT JOB INFORMATION

Project:	None_Given
Shipment ID:	
P.O. Number	WO-539
Number of Samples:	17

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	17	Sorting, labeling and boxing samples received as pulps			UIO
AR251-EXT	17	Aqua Regia Digestion - Ultratrace ICP-MS Analysis	15	Completed	CLL
SHP01	17	Per sample shipping charges for branch shipments			UIO
AR402	2	Aqua Regia Digestion 0.5g / 100 mL	0.5	Completed	CLL

ADDITIONAL COMMENTS

Invoice To: Watts, Griffis and McOuat Ltd.
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5
Canada

CC: Al Workman

FLOR MELGAR
JEFE DE LABORATORIO
CIP: N°186937

BUREAU VERITAS MINERAL LABORATORIES Perú

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Bureau Veritas Perú - Callao

Av. Elmer Faucett N° 444, Prov. Const. del Callao Callao Callao 01 Peru

PHONE +51(1) 6138080

Client: **Watts, Griffis and McOuat Ltd.**
Suite 301 - 8 King St. East
Toronto Ontario M5C 1B5 Canada

Project: None_Given

Report Date: December 20, 2019

CERTIFICATE OF ANALYSIS UIO19000376.1

Method		AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
Analyte		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01	0.001
E0003676	Pulp	1.60	95.85	16.70	50.3	70	33.9	23.1	510	12.02	29.1	0.1	1.5	0.7	28.1	0.04	0.38	0.07	85	2.09	0.272
E0003677	Pulp	1.86	47.90	21.21	45.3	92	40.8	27.7	304	12.89	21.3	<0.1	6.0	0.6	15.5	0.15	0.47	0.02	80	0.42	0.203
E0003678	Pulp	1.91	6.19	2.66	212.0	<2	21.3	12.8	614	6.63	<0.1	0.8	<0.2	3.5	27.6	0.13	0.03	0.08	12	0.37	0.063
E0003679	Pulp	1.57	6.71	2.31	102.0	5	19.9	11.2	665	7.00	<0.1	0.7	<0.2	4.2	25.3	0.07	0.04	0.08	17	0.40	0.067
E0003680	Pulp	1.81	458.23	164.85	583.0	24799	16.3	6.2	667	2.04	91.3	0.8	194.3	4.7	33.0	3.36	11.38	6.55	10	1.80	0.049
E0003681	Pulp	0.86	98.33	82.85	283.0	83	36.4	39.5	318	12.33	11.3	<0.1	9.8	0.6	16.9	0.38	0.96	0.11	173	0.33	0.170
E0003682	Pulp	0.52	5549.46	8.63	65.9	6039	16.7	9.4	811	1.63	2.9	2.2	0.6	2.7	43.5	0.05	0.11	0.41	64	2.33	0.069
E0003683	Pulp	24.93	7687.20	38.12	16.4	7899	12.4	23.3	302	3.35	130.6	2.5	51.0	2.5	102.0	0.55	0.58	0.07	127	1.23	0.079
E0003684	Pulp	1.49	446.64	42.32	52.8	205	13.7	12.9	1448	1.80	2.1	1.4	3.8	2.7	95.4	1.01	0.10	0.05	73	1.34	0.080
E0003685	Pulp	0.42	24.40	8.01	45.0	71	9.6	6.4	620	1.69	1.6	0.5	6.1	2.8	78.2	0.53	0.05	0.04	61	0.93	0.083
E0003686	Pulp	20.39	84.07	387.45	47.8	1319	15.2	18.3	750	2.57	92.7	1.0	0.2	3.4	71.1	19.36	0.44	0.09	79	0.58	0.095
E0003687	Pulp	0.65	399.45	161.70	51.3	137	14.9	10.8	667	1.49	3.1	1.2	2.7	2.5	32.3	0.35	0.06	0.08	59	0.50	0.084
E0003688	Pulp	2.40	>10000	63.74	32.7	27799	12.3	5.7	619	1.01	3.7	3.6	0.4	3.0	63.3	0.27	0.10	0.14	114	0.88	0.087
E0003689	Pulp	4.06	>10000	110.25	14.3	68999	7.5	2.8	222	0.66	7.5	5.2	<0.2	2.3	77.9	0.26	0.14	0.15	139	1.19	0.065
E0003690	Pulp	0.61	41.02	1.34	20.4	53	14.9	4.5	115	1.35	<0.1	0.2	0.5	0.8	124.3	0.02	0.04	0.09	85	0.84	0.032
E0003691	Pulp	23.38	151.07	49.35	34.5	2259	25.8	25.0	780	3.93	203.0	1.2	3.2	2.6	110.0	0.43	0.81	0.15	47	4.56	0.083
E0003694	Pulp	15.45	200.95	38.12	35.4	776	13.3	8.1	421	2.14	41.0	0.5	<0.2	2.2	33.9	0.18	0.46	0.13	46	0.24	0.069

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	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
E0003676	Pulp	11.4	98.2	1.39	30.0	0.007	<1	3.04	0.034	0.20	0.1	11.6	0.10	8.23	<5	1.6	<0.02	11.8	0.56	0.2	0.10
E0003677	Pulp	9.1	93.4	1.02	24.4	0.010	<1	2.64	0.040	0.27	0.5	7.7	0.10	>10	<5	1.4	<0.02	11.0	0.50	0.1	0.10
E0003678	Pulp	9.2	91.1	1.03	60.4	<0.001	<1	0.39	0.023	0.15	0.1	5.4	0.04	1.23	22	0.7	<0.02	1.4	1.34	<0.1	0.07
E0003679	Pulp	13.8	87.9	1.03	53.1	<0.001	<1	0.37	0.016	0.14	0.4	4.7	0.04	1.63	27	0.9	<0.02	1.6	1.31	<0.1	0.09
E0003680	Pulp	18.0	23.8	0.25	77.3	0.001	<1	0.70	0.044	0.16	0.7	1.6	0.51	1.61	209	5.5	8.40	2.9	1.96	<0.1	0.34
E0003681	Pulp	7.4	126.9	2.12	22.1	0.004	<1	3.80	0.052	0.05	<0.1	15.7	<0.02	6.94	<5	1.1	<0.02	14.2	0.32	0.1	0.03
E0003682	Pulp	17.5	77.9	1.16	1260.0	0.139	5	1.74	0.044	0.20	0.3	6.7	0.09	0.10	7	0.8	0.04	7.0	0.87	0.1	0.43
E0003683	Pulp	14.7	79.7	0.28	1617.0	0.166	4	2.24	0.075	0.11	0.4	5.7	0.43	0.10	6	1.7	0.06	6.3	0.43	0.2	0.47
E0003684	Pulp	21.6	141.4	0.88	1407.0	0.154	2	2.32	0.068	0.10	0.5	7.4	0.59	0.02	<5	0.5	<0.02	9.6	0.32	0.1	0.39
E0003685	Pulp	17.9	67.7	0.72	310.8	0.139	<1	2.45	0.082	0.12	0.3	5.7	0.21	<0.02	<5	0.5	<0.02	9.5	0.29	0.1	0.32
E0003686	Pulp	18.7	123.8	0.78	137.6	0.183	4	2.07	0.090	0.22	0.4	6.0	2.00	0.73	<5	1.4	0.04	7.9	0.54	0.1	0.41
E0003687	Pulp	14.2	74.0	0.96	178.5	0.123	2	1.68	0.050	0.10	0.5	4.6	0.16	<0.02	<5	0.2	0.06	7.2	0.36	0.1	0.31
E0003688	Pulp	18.5	140.4	0.57	1659.0	0.204	3	1.21	0.071	0.12	0.4	6.2	0.25	0.10	15	3.0	<0.02	5.0	0.31	0.2	0.51
E0003689	Pulp	12.0	130.0	0.21	635.3	0.164	3	0.79	0.076	0.14	0.8	4.1	0.52	0.19	23	6.0	<0.02	2.7	0.28	0.1	0.46
E0003690	Pulp	4.0	134.2	0.23	68.9	0.158	<1	1.40	0.370	0.09	0.2	1.7	0.14	<0.02	<5	<0.1	<0.02	3.6	0.10	<0.1	0.24
E0003691	Pulp	25.5	60.1	0.68	59.7	0.035	8	2.35	0.038	0.26	0.2	5.9	7.72	2.85	40	1.4	0.08	6.7	0.74	<0.1	0.24
E0003694	Pulp	19.7	78.0	0.56	116.6	0.160	1	1.34	0.040	0.13	0.3	4.3	1.31	0.50	<5	0.6	<0.02	4.5	0.46	<0.1	0.28

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Project: None_Given
Report Date: December 20, 2019

CERTIFICATE OF ANALYSIS UIO19000376.1

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR402
	Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	%
	MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2	0.001
E0003676	Pulp	0.07	8.5	0.3	0.05	2.2	17.04	26.7	0.04	<1	0.5	46.7	<10	<2	
E0003677	Pulp	0.10	9.9	0.5	<0.05	2.4	10.68	20.6	0.03	1	0.6	31.3	<10	<2	
E0003678	Pulp	0.03	7.6	0.3	<0.05	2.0	13.32	21.4	0.07	<1	0.6	15.8	<10	<2	
E0003679	Pulp	<0.02	7.0	0.4	<0.05	2.7	14.56	34.1	0.05	<1	0.6	11.6	<10	<2	
E0003680	Pulp	0.06	6.7	1.2	<0.05	8.8	6.28	37.0	0.74	<1	0.6	4.3	15	2	
E0003681	Pulp	0.04	2.4	0.5	<0.05	1.0	8.42	14.6	0.07	<1	0.8	21.7	<10	<2	
E0003682	Pulp	0.17	9.4	0.7	<0.05	8.1	12.24	38.3	0.03	6	0.7	27.1	<10	<2	
E0003683	Pulp	0.18	4.7	0.8	<0.05	8.9	10.72	33.6	0.02	9	0.4	10.0	<10	4	
E0003684	Pulp	0.11	3.9	0.7	<0.05	7.0	13.32	49.2	0.03	<1	0.5	19.5	<10	7	
E0003685	Pulp	0.15	4.3	0.6	<0.05	6.5	9.73	38.7	<0.02	<1	0.6	23.6	<10	<2	
E0003686	Pulp	0.45	8.0	0.8	<0.05	9.0	12.36	42.3	0.03	30	0.7	27.4	48	3	
E0003687	Pulp	0.31	4.2	0.8	<0.05	6.2	10.30	28.1	0.03	4	0.5	27.7	<10	<2	
E0003688	Pulp	0.96	4.9	0.7	<0.05	10.1	13.32	34.1	0.03	51	0.5	14.1	<10	2	1.703
E0003689	Pulp	0.99	4.7	0.8	<0.05	9.2	10.49	22.8	0.04	253	0.3	6.3	<10	5	3.071
E0003690	Pulp	0.13	2.2	0.3	<0.05	7.1	2.82	8.5	<0.02	<1	0.1	1.4	<10	3	
E0003691	Pulp	0.09	9.2	0.8	<0.05	4.3	13.56	53.1	0.04	33	1.1	24.3	<10	<2	
E0003694	Pulp	0.42	4.7	0.6	<0.05	5.7	9.44	35.6	0.03	16	0.5	20.3	<10	<2	

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QUALITY CONTROL REPORT UIO19000376.1

	Method	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251	AR251
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01	0.001
Pulp Duplicates																					
E0003679	Pulp	1.57	6.71	2.31	102.0	5	19.9	11.2	665	7.00	<0.1	0.7	<0.2	4.2	25.3	0.07	0.04	0.08	17	0.40	0.067
REP E0003679	QC	1.57	7.03	2.36	103.0	6	20.3	11.6	678	7.16	<0.1	0.8	<0.2	4.6	25.9	0.07	0.04	0.09	18	0.40	0.070
E0003688	Pulp	2.40	>10000	63.74	32.7	27799	12.3	5.7	619	1.01	3.7	3.6	0.4	3.0	63.3	0.27	0.10	0.14	114	0.88	0.087
REP E0003688	QC																				
Reference Materials																					
STD OREAS262	Standard	0.69	113.51	59.93	159.0	442	62.0	26.5	541	3.31	36.2	1.2	64.5	8.9	36.9	0.62	5.60	1.00	21	3.03	0.039
STD OREAS503B	Standard	306.94	4944.39	12.63	81.2	1409	35.2	14.2	397	4.70	17.7	3.9	715.1	16.2	76.2	0.29	0.45	2.68	123	1.13	0.101
STD OREAS604B	Standard																				
STD OREAS503B Expected		308	5230	12.9	81	1460	35	15.9	400	4.87	18.7	4	685	15.3	79			2.7	114	1.16	0.099
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	72	9.33	36	0.61	5.06	0.98	22.5	2.98	0.04
STD OREAS604B Expected																					
BLK	Blank	<0.01	<0.01	0.03	<0.1	5	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
BLK	Blank	0.02	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	0.4	<0.1	<0.5	<0.01	<0.02	<0.02	<2	<0.01	<0.001
BLK	Blank																				

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	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	Hf
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	0.02
Pulp Duplicates																					
E0003679	Pulp	13.8	87.9	1.03	53.1	<0.001	<1	0.37	0.016	0.14	0.4	4.7	0.04	1.63	27	0.9	<0.02	1.6	1.31	<0.1	0.09
REP E0003679	QC	14.1	96.6	1.05	55.3	<0.001	<1	0.41	0.017	0.15	0.5	4.9	0.04	1.65	15	0.9	<0.02	1.8	1.31	<0.1	0.09
E0003688	Pulp	18.5	140.4	0.57	1659.0	0.204	3	1.21	0.071	0.12	0.4	6.2	0.25	0.10	15	3.0	<0.02	5.0	0.31	0.2	0.51
REP E0003688	QC																				
Reference Materials																					
STD OREAS262	Standard	8.3	36.2	1.18	226.8	0.002	2	1.04	0.073	0.25	0.3	3.2	0.47	0.26	163	0.6	0.24	4.2	2.85	<0.1	0.40
STD OREAS503B	Standard	26.6	81.8	1.25	306.6	0.313	<1	2.07	0.152	0.99	2.1	7.3	0.57	0.64	26	5.2	0.14	9.4	8.29	0.2	0.43
STD OREAS604B	Standard																				
STD OREAS503B Expected		26.1	81	1.23	311	0.309		2	0.163	0.958	2.24	7.36		0.675		5.85	0.19				
STD OREAS262 Expected		15.9	41.7	1.17	248	0.0027	4	1.3	0.071	0.295	0.2	3.24	0.47	0.253	170	0.4	0.23	3.73	2.8		0.27
STD OREAS604B Expected																					
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1	<0.02
BLK	Blank																				

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	Analyte	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	%
	MDL	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2	0.001
Pulp Duplicates															
E0003679	Pulp	<0.02	7.0	0.4	<0.05	2.7	14.56	34.1	0.05	<1	0.6	11.6	<10	<2	
REP E0003679	QC	0.03	6.9	0.4	<0.05	2.9	14.81	35.5	0.05	1	0.6	11.9	<10	<2	
E0003688	Pulp	0.96	4.9	0.7	<0.05	10.1	13.32	34.1	0.03	51	0.5	14.1	<10	2	1.703
REP E0003688	QC														1.742
Reference Materials															
STD OREAS262	Standard	<0.02	15.9	0.5	<0.05	11.7	10.33	18.7	0.03	<1	1.1	18.0	11	8	
STD OREAS503B	Standard	0.40	107.4	6.5	<0.05	7.3	15.84	53.8	0.37	6	0.4	29.6	<10	<2	
STD OREAS604B	Standard														2.055
STD OREAS503B Expected							15.5					29.2			
STD OREAS262 Expected			18.6	0.5		11.7	11.2	32	0.033		1.14	17.8			
STD OREAS604B Expected															2.12
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	<2	
BLK	Blank	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10	3	
BLK	Blank														<0.001