

Update on the ongoing Field Reconnaissance and Stream Prospecting Programs in La Plata VMS Project, Ecuador

Program Highlights

- The field reconnaissance and rock chip sampling program over the North and Central Exploration Zones commenced in February 2018 and is currently in progress. The stream sediment sampling was initiated in early June 2018 and is ongoing.
- The investigated area up to date corresponds to the entirely covered Central Exploration Zone and partially covered North Exploration Zone of the La Plata concession and occupies approximately 4.5 square miles (~1200ha), which is about 51% of the concession area.
- The total of 1107 mapping observations were made, and 254 rock chip samples have been collected up to date and the complete assay results received.
- Stream sediment sampling program executed up to date is totaling 204 samples including 9 field duplicates. The complete assay results for the multi-element ICP-AES/MS analysis on a <0.18mm sampled fraction have been received. The BLEG assay results are pending.
- 3 priority targets and several prospective exploration targets have been identified as the result of the recently executed mapping and stream prospecting programs.
- The priority targets Guatuza, San Ramon and San Pablo South prospects are coinciding with the geochemical soil and/or IP chargeability and gravity geophysical anomalies and are currently being followed up by trenching and channel sampling. Complementary IP geophysical survey grids will be proposed to cover the untested prospective targets including the Aguas Calientes prospect located northwest of the estimated inferred resource blocks.

Exploration Program Background and Vectoring Summary

Exploration work and resource drilling results completed to date suggest that the La Mina VMS Deposit belongs to a subset of VMS deposits where sulfides have replaced favorable horizon(s) of unconsolidated volcanic and volcano-sedimentary material through a specific mechanism of hydrothermal activity at the paleo sub-seafloor level (after Piercey, S. J., 2015).

High-grade massive sulfide mineralization at La Mina is overlain by a thick sequence of mafic volcanic and volcanoclastic rocks with incipient chlorite-epidote-hematite alteration. However, the immediate hanging wall contact to the VMS ore zone has been subsequently affected by the final waning phases of hydrothermal activity, and consequently exhibits a distinct geochemical signature. This thin contact horizon shows silica ± hematite metasomatic replacement with

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anomalous geochemistry in combinations of many or all of these elements (Au, Ag, As, Ba, Sb, Hg, Cu, Pb, Zn).

The above observations were used as a vectoring tool along with our understanding of the La Mina deposit lithostratigraphy and unique alteration styles in defining the immediate hangingwall and the footwall to the known VMS ore horizon.

The complex geo-tectonic history of the Macuchi Belt, hosting the La Mina Deposit and at least two more known similar VMS deposits, is reflected onto the micro scale and the Toachi exploration team is convinced that deciphering the local structural regime is the key component in defining the present-day morphology of the inferred yet to be discovered high-grade VMS horizons in La Plata.

The La Plata Project is hosting at least three known mineralized tectonic blocks separated by a complexly arranged zones of sheared rocks. The two blocks, La Mina North and La Mina South are hosting an inferred resource estimate of 1.9Mt of high-grade polymetallic ore. The third block immediately to the north is in a Guatuzza prospect and it was not included into the resource estimate calculations up to date. All three blocks are affected by a prominent syn-volcanic dextral fault cutting through the district. This structure is parallel to the regional Chimbo-Toachi Fault, the crustal scale suture, bounding the Macuchi belt to the east which is inferred to be situated close to the eastern margin of the La Plata concession.

Prior to and during the field reconnaissance and stream prospecting programs north of the La Mina deposit, the Toachi team considered the evidence that the extensive shear zones mapped across this area may have been re-activated several times throughout their geological history. These shear zone structures might have acted as conduits allowing hydrothermal fluids to recurrently circulate leading to alteration of the adjacent mafic volcano-sedimentary hanging wall sequence and possibly remobilizing the primary sulphide mineralization giving the appearance of a phyllic altered footwall or a VMS stringer zone. These weakened zones of intense faulting and shearing exhibit numerous deformation styles and varying geometries and are inferred to be formed along the susceptible mafic-felsic contact zones due to their different rheologic properties.

The Toachi team has identified these deformed contact zones as an additional robust vectoring tool, that when properly interpreted, will help in the understanding of the relationship between present-day geomorphology and mineralization within the area, and ultimately may lead to the discovery of new VMS horizons. These latest results, together with the interpreted geological, geochemical and geophysical survey results, have defined several priority drill target areas along the new north extension of the VMS corridor.

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Recent mapping has revealed several outcropping shear and fault zones across the corridor, some of which are hosting high-grade remobilized VMS ore.

Priority Targets

❖ *The Guatuza prospect*

The Guatuza prospect is located immediately to the north of the La Mina Deposit North Block and it was a subject of a sporadic exploration by several previous operators of the La Plata Project. The prospect was widely-spaced drilled with several significant economic grade intercepts.

The existing exploration underground adit with a ~300m long tunnel connecting Guatuza and the upper levels of the historic underground exploitation in La Mina North Block conducted in 80's is inaccessible and with ambiguous and unreliable information currently at Toachi's disposal.

Toachi drilled six (6) shallow scout holes totaling 802m in 2016 and 2017 to test the continuity and grade of the previously identified mineralized zones. The intersected VMS mineralization tested by scout drilling appeared to be discontinuous, faulted, and exhibiting intense ductile and brittle deformations.

The reinterpretation by Toachi of the historic and current drill holes at Guatuza, along with additional field reconnaissance, has inferred a continuous NNE trending mineralized shear corridor cutting through the prospect.

Recent surface mapping in the most northern parts of the Guatuza prospect resulted in a discovery of a dozen meters thick, steeply west dipping, phyllic altered mineralised shear zone incorporating the deformed and truncated westerly shallow dipping **VMS horizon** comprising irregularly alternating layers of massive sphalerite, galena and chalcopyrite. The shear is in an unconformable faulted contact with weakly altered "hangingwall" basalt to the east.

The exposed shear system in Guatuza has consequently dismembered the sulphide horizon in three thin layers that are over-thrusted one over another and have been dragged into a reverse fault laying unconformably on top of the *hangingwall unit to the east. To the west the hangingwall unit is overlaying the VMS horizon in a natural stratigraphic superposition.

The Toachi team has recently followed up this discovery with a sampling of a series of perpendicular channels and the assay results have been received confirming the similar polymetallic high-grade mineralization to VMS mineralization in the La Mina south and north block

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Approximately **150m** to the north from the newly discovered VMS horizon, another scarcely exposed zone of the phyllic altered mineralized sheared rocks with patchy remobilized sphalerite and malachite has been discovered, inferring a continuation of the mineralized horizon(s) to the north. The composite rock sample **A13479** taken at the surface exposure in the west-east trending stream *San Jose* has yielded: **0.36ppm Au, 21.3ppm Ag, 0.57%Cu, 0.1% Pb, 0.58% Zn, 6.65ppm Hg** and 339ppm As.

Recently, this outcrop was subjected to trenching and as a result the continuation of the inferred "Guatuza Shear" was confirmed. The faulted rocks were observed incorporating the thin discontinuous massive sulphide horizon and truncations of sphalerite rich VMS ore. The assay results are pending.

❖ *The San Ramon prospect*

San Ramon prospect is leaning on to Guatuza prospect's northern boundary and is located east of the N-S trending *San Ramon* creek. Prospect is incorporating the prominent NNE trending ridge drained by the several east-west orientated streams to both sides.

Approximately **180m** to the NE of the stream *San Jose* outcrop, discovered in Guatuza prospect, the high-grade VMS clast 25cm in diameter was found in situ as a xenolith in an inferred "hangingwall" basalt outcrop. The rock sample **A13532** has yielded **4.5ppm Au, 51.3ppm Ag, 16.55% Cu, 0.02% Pb, 5.83% Zn, 19.06ppm Hg** and 259ppm As.

The inferred continuation of a possible buried and recently exposed high-grade VMS horizon in Guatuza prospect into a San Ramon prospect to the north is supported by the results of the stream sediment prospecting. The samples taken in a prominent NE trending stream and its western confluences draining the Guatuza and San Ramon (Guatuza North) prospects have yielded highly anomalous values for gold, silver, copper, lead, zinc, barium, arsenic, mercury and antimony. The inferred **550m long** N-S mineralized corridor, starting at southern part of the Guatuza prospect, is supported by the coincident geophysical (IP chargeability) and geochemical (soil and rock) anomalies.

Additionally, assay results received for the stream sediment samples collected along the San Ramon drainage to the west stretching some 650m further to the north from the Guatuza North sub-prospect have shown continuous and persistent geochemical anomalies along the western side of the prominent NNE trending ridge separating the Guatuza's and the La Flaca Prospects (previously inferred by a subtle elongated gravity high and soil geochemical anomalies), inferring the continuation of the mineralized corridor, totaling 1200m in length.

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Toachi will follow up on these discoveries with a series of trenching and channel sampling, prior to defining the drilling program proposal over San Ramon target.

❖ *The San Pablo South prospect*

San Pablo South target is located immediately to the north of the inferred 1200m long mineralized corridor described above in Guatuza and San Ramon prospects, and it incorporates the prospects San Pablo South (northern part of the San Ramon drainage) and prospect Quebrada Romero.

Prospect Quebrada Romero was the focus of exploration efforts since the Duncan Derry operation in mid-sixties. Duncan Derry has drilled 946 meters in the area and reported an interval of 22m with 1.8% copper in a vertical 100m deep drill hole "LP-24".

Previous operators of La Plata, Cambior and Cornerstone, have drilled 535.5 meters in the narrow N-S corridor to test the coinciding geochemical and IP geophysical anomalies.

Recent field reconnaissance conducted by Toachi over the wider area of San Pablo South target has identified the NE trending 1100m long contact corridor that could potentially host the high-grade VHMS horizon/s and/or buried epithermal mineralization.

The NE-SW trending "footwall - hangingwall" contact zone geometry is indicated by the interpreted geology, ubiquitous alteration seen, results of the recently assayed rock chip and stream sediment samples, coinciding geochemical soil anomalies and a 1000m scout drilling conducted by Toachi in 2017.

The NW side of the corridor is comprising the typical "La Mina" footwall sequence characterized by the quartz-sericite-pyrite altered intermediate volcanic and sedimentary rocks hosting the disseminated pyrite and sub-economic Cu±Zn mineralization.

The SE side of the inferred corridor is comprising intermediate to basic volcanoclastic rocks of the "La Mina" hangingwall affinity with incipient chlorite-epidote-hematite alteration.

These rocks are, however, exhibiting inferred exhalite signature along the suggested NE-SW contact zone indicated by the observed specific silica-hematite alteration of the rocks and further supported by the recently received assay results of the rock chip and stream sediment samples characterized by the coincident moderate to highly anomalous values of gold, arsenic, barium, mercury, antimony, lead, copper and zinc. Toachi has taken into a consideration that this geochemistry could similarly indicate the presence of a superimposed epithermal mineralising event, supported by the vuggy silica textures observed in a number of collected samples in the

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outcrops. Consequently, these rocks have been submitted to a Spectral International Inc. laboratory in United States for a spectral reflectance analysis and the results are pending.

The area is also comprising the damage and deformation zones seen in faulted and sheared outcrops along the San Ramon drainage as well as in drilling intersections.

Toachi is considering the possibility that the San Pablo South target could be another displaced and/or rotated mineralized tectonic block along the 2.5km long N-S mineralized trend starting in the south part of the La Plata concession. The La Mina South estimated resource Block is the deepest one discovered so far, and it seems that San Pablo South has been exhumed and exposed at the surface as it is seen in the rapidly northward dropping topography.

Toachi has initiated the follow up of the suggested contact corridor in San Pablo South target with the series of trenching and channel sampling to closer define the scout diamond drilling program proposal.

**The term "hangingwall" in this Report is referring to syn- and/or post-genetic volcano-clastic rock sequence deposited onto a massive sulphide ore horizon.*

Prospective Exploration Target

❖ *The Aguas Calientes Prospect*

The Aguas Calientes prospect is located some 650m west-northwest from the La Mina Resource North Block.

The area was not included in geochemical and geophysical surveys by the previous operators and was therefore neglected as a possible target.

The reprocessing of the gravity survey results received in early 2018 have indicated three distinctive gravity highs in the prospect area which was immediately followed up on the ground by the Toachi field reconnaissance teams. The favorable lithostratigraphy was observed and the whole area was subjected to mapping, rock chip sampling and stream prospecting. Positive geochemical results have been obtained for 4 rock samples and 3 stream sediment samples.

The highlights of the Aguas Calientes target are as follows:

- Three distinctive parallel gravity highs coinciding with favorable stratigraphy with NNW-SSE trending vertical geometry of the contacts
- Three contact zones between mafic (aphyric to vesicular basalt) and felsic volcanic rocks (plagioclase-phyric andesite) and cherty mudstones at each contact were mapped

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- Jaspillitic replacement was seen in the outcropping mafic volcanic rocks
- Discrete parallel quartz comb veins up to 7cm thick, cutting both volcanic units returned anomalous gold values (0.2ppm – 1.14ppm)
- Cherty sediments on contacts could represent the extent of a favorable VHMS horizon/s, although no VHMS mineralization was observed in surface rock exposures.

Toachi will follow up on the Aguas Calientes target with series of IP geophysical survey lines prior to defining the scout diamond drilling program.

Figure 1

