

Mercedes Project Reconnaissance and Target Selection

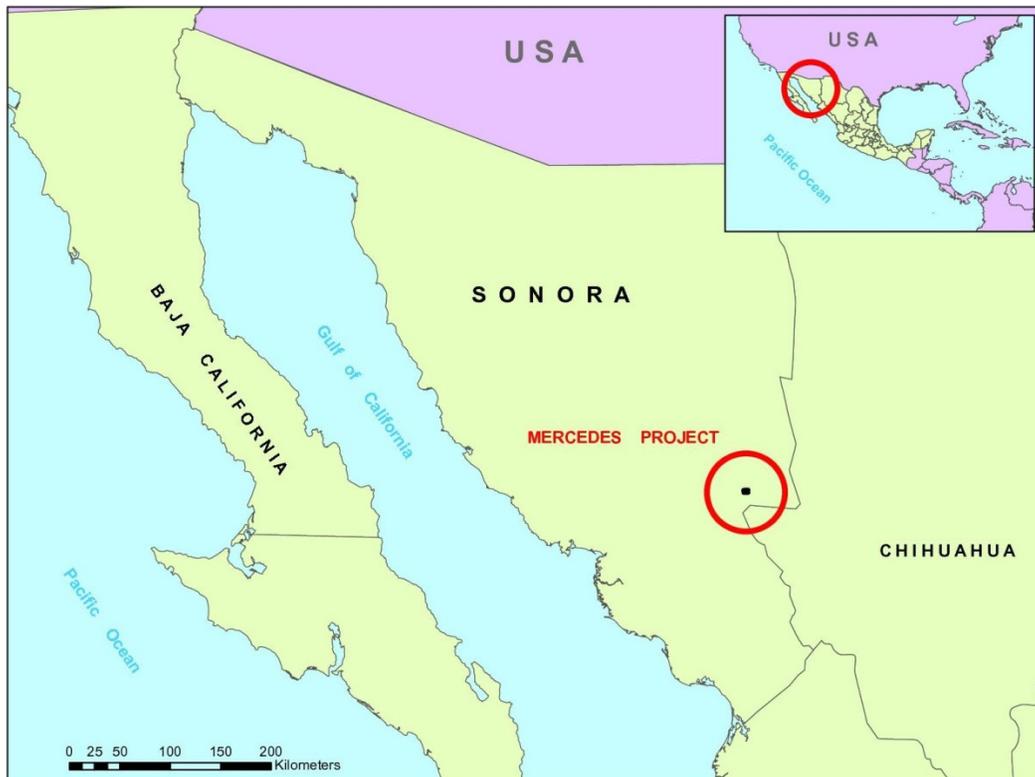
Sonora, Mexico. September 2019

Overview

This report covers the work realised by Gambusino Prospector de Mexico, S.A. de C.V. on the Mercedes property in Sonora, under contract by Minera Magna S.A. de C.V.. From August 28th to September 12th, 2019, geologist Jorge Cirett, assistant Hector Grijalva and local guide Abelardo Garcia, with the aid of Magna Gold's personnel on the field, visited several areas of the project. The objective was to gain insight on the geology and mineralisation present at the site, with a focus on the selection of targets for further testing by prospecting, stream sediment and rock chip sampling.

Location

The property is located on the eastern part of Sonora, close to the Chihuahua border, just off the road Hermosillo-Yecora, 260 km southeast from Hermosillo, and only 20 km from Yecora, within the same-name municipality.

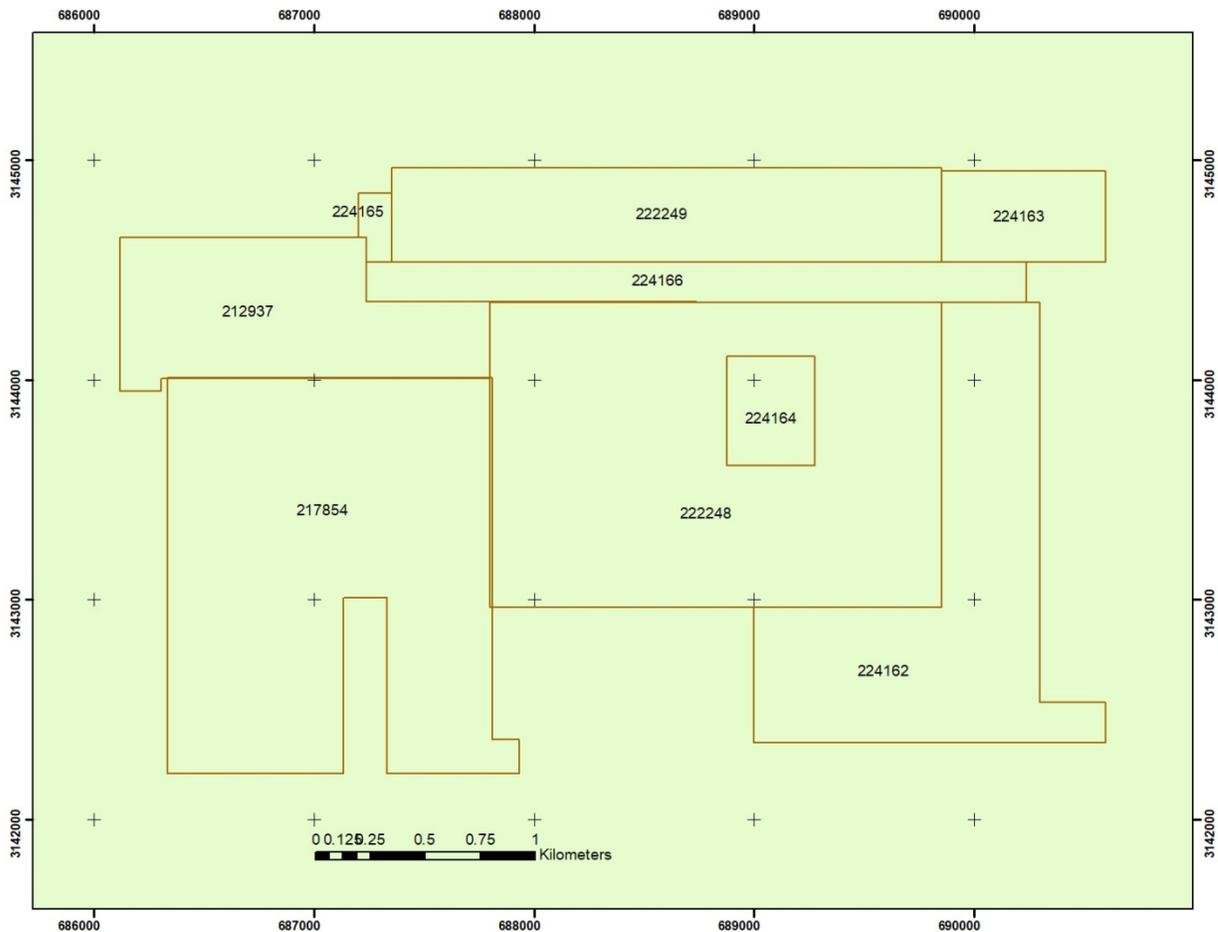


Mercedes project location

Mining Concessions

Magna Gold Corp has optioned nine mineral concessions from different vendors, covering a total of 974.57 hectares. According to the SIAM website, the following are the details of the concessions involved:

Title	Name	Hectares
212937	C.R.	93.05
217854	Ampliacion Mina de Oro	251.70
222248	Maria Fracc I	265.47
222249	Maria Fracc II	107.34
224162	Maria 2, Fracc. 1	147.49
224163	Maria 2, Fracc. 2	30.93
224164	Maria Fracc. 3	20.00
224165	Maria 2, Fracc. 4	4.40
224166	Maria 3	54.19
	Total	974.57



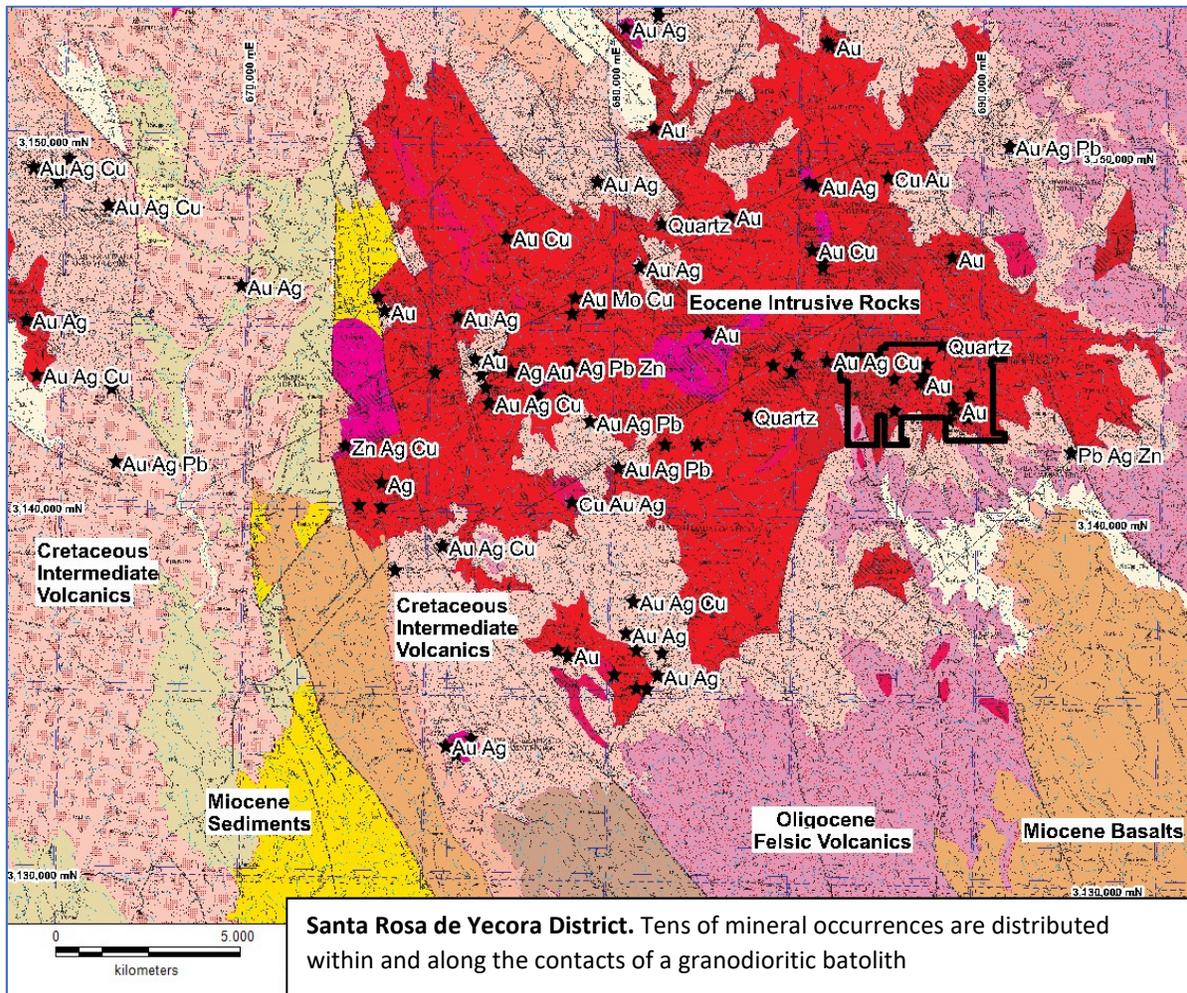
Magna Gold's mineral concessions showing title number

Previous Work

The property has seen work by exploration companies since the 1990's, with two of them performing RC and diamond drilling campaigns. Not being within this report scope, the details can be seen on Dale Brittlife's technical report "Mercedes Property" available at SEDAR's website under technical reports filed by Magna Gold Corp..

Regional Geology

The project is within the Santa Rosa de Yecora District, which is known for its gold, silver, copper, lead, zinc, molybdenum and tungsten endowment. A Cretaceous-Eocene granodioritic batholith intrudes a Cretaceous volcanic package, mainly of andesitic composition, but with dacitic and rhyolitic phases. The granodioritic rocks in the batholith have been dated between 49.3 and 56.7 million years by three researchers, whereas the intermediate volcanic rocks close to the property were dated by two researchers as 60.0 – 61.2 M years old (Informe carta H12-D76, SGM). Other intrusive phases within the batholith include quartz monzonite porphyries, same that are linked to some of the mineralisation evidences in the district, according to SGM geologists. Those rocks are partially covered by the western fringes of the Oligocene ignimbrite package of the Sierra Madre Occidental, dated at 31 to 33 million years of age.

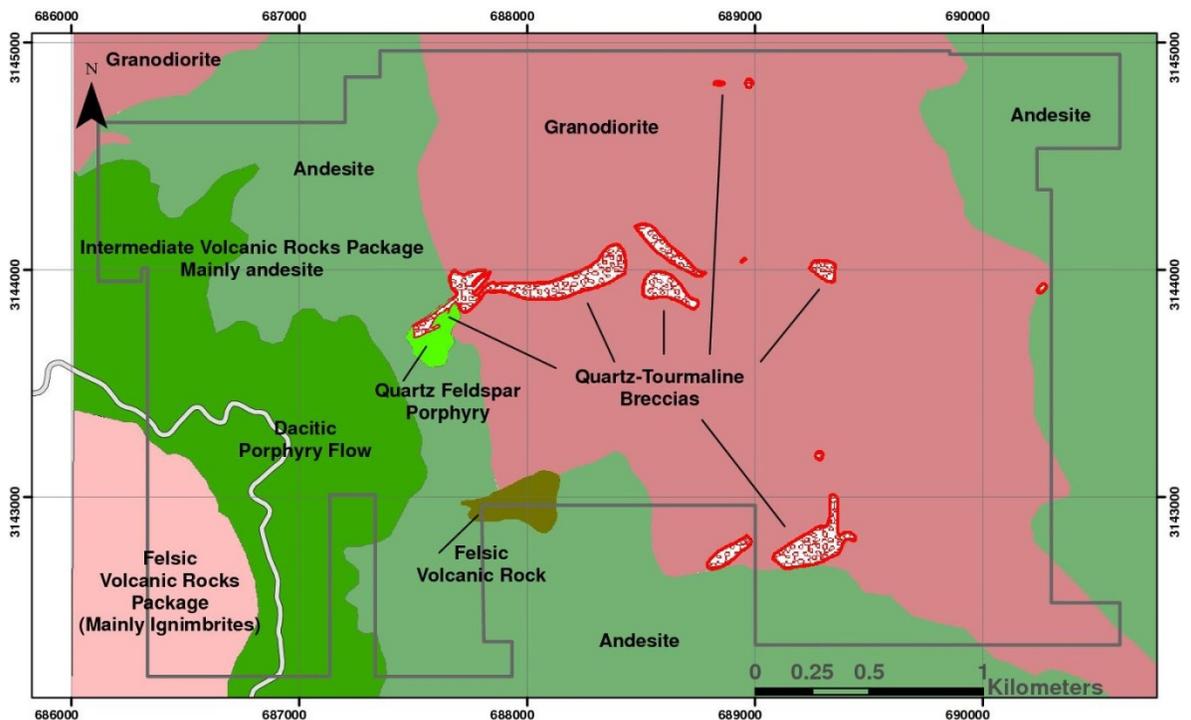


The batholith contacts are ragged, but with a roughly circular shape 20 km across when all its outcrops are accounted for. It is here suggested that this ragged pattern indicates the roof of the magmatic camera was very close to actual surface, and the contact close to flat lying, as suggested by the long embayments into the host rocks. This morphology multiplies the favorable contact area between the host rock and the intrusive magma, and might explain why this batholith is particularly productive in mineralisation terms. Significant mineral occurrences in the area include Los Verdes (porphyry Cu-Mo), Santana (Au bearing breccias and intrusive rocks), Guadalupe (Au-Ag breccias), La Trinidad-Dios Padre (Ag vein and disseminations related to an intrusion), Tia Cantuna (Au-Ag breccia), La Mantequilla (Au-Ag breccia), La Cruz (Au vein) and many more smaller and underexplored occurrences.

Sizeable mineralisation is largely related to the presence or in the vicinity of quartz-tourmaline breccias, often along the intrusive contacts with the volcanic host rocks or within the intrusive rocks themselves. Vein occurrences are mostly small in size, often sub-meter in thickness, although these can run for a few hundred of meters. Most of these mineral occurrences have been mined in the past for its content of gold, silver, copper, molybdenum, lead, zinc or tungsten.

Local Geology

Mirroring the Santa Rosa de Yecora district, the lithologic units present in the Mercedes project can be divided as: Intermediate Volcanic Rocks Package; Batholith Rocks and Felsic Volcanic Rocks Package. Rock outcrop exposure is poor, calculated here at 5-10%, due to both vegetation cover and steep relief, with a majority of outcrops being observed either on ridge lines or along streams. As such, the contacts between the units were mostly not observed in the field, and the elaboration of the geologic map includes a fair deal of interpretative work.



Schematic Geology Map of the Mercedes project area.

Intermediate Volcanic Rocks Package. This Cretaceous age unit is comprised mainly by andesitic tuffs with diverse textures and alteration degrees. A distinct porphyritic lava flow has been separated while mapping because of the ease of field identification but nonetheless is part of the larger unit. This porphyritic dacite displays euhedral plagioclase, feldspar and hornblende crystals, and only locally, minor quartz eyes. Vertical, undulating and horizontal flow lines can be observed at road level in this rock. Chloritisation of hornblende is the most common alteration observed in this unit, but local weak silicification is present and strong argillitisation is locally important. Restricted amounts of more felsic rocks ascribed to this unit include the quartz feldspar porphyry hosting most mineralisation at the La Lamosa ridge and a silicified felsic rock, flow banded at the stream level, within the Mina de Oro target. Alternatively, the felsic rock at La Lamosa ridge could represent an uncommon intrusive phase in the batholith unit, and related to the chlorite altered quartz monzonite outcrop observed at Los Fierros stream.



Left. Flow banded dacitic porphyry.
Right. Andesitic tuff



Batholith Rocks. By far the most extensively distributed intrusive rock in the property is a fine to medium grained granodiorite, with its ferromagnesian minerals weakly to strongly chloritised. This rock usually erodes more easily than the other rocks present in the area, and where not silicified by the introduction of quartz-tourmaline veinlets or breccias, tends to present a subdued topography and mostly crumbly weathered subcrops. Only at one location in the newly built road from La Lamosa ridge to Los Fierros stream, a granodiorite dikelet six centimeters wide was observed cutting through the andesite for tens of meters. Not very common, but observed intruding the granodiorite, and associated to some of the quartz-tourmaline breccias like Noche Buena and La Cueva, an aplite intrudes the granodiorite, possibly as part of a last phases of the batholith, and is likely to be involved also in the generation of mineralisation. A small quartz monzonite porphyry outcrop was observed at Los Fierros stream, bearing feldspar phenocrystals up to 1.5 cm, quartz eyes and chloritized biotite in a fine grained chloritized matrix constituting the only clear example of a porphyry in the property. This outcrop is located at 688,400 E, 3,143,830 N, and needs to be followed up.



From Left to Right. Fine to medium grained granodiorite, aplite dike, quartz monzonite porphyry. All these outcrop on the Los Fierros stream.

Felsic Volcanic Rocks Package. This Oligocene unit is comprised mainly by rhyolitic ignimbrite pulses and, according to the SGM, subvolcanic intrusions in the vicinity of the property, at Cerro La La Laguna. Rhyolitic tuffs and ignimbrites were observed at the lower elevations exposed of the unit, a few tens of meters above the road, but no attempt was made to reach the upper part with the subvolcanic intrusions.



Poorly welded ignimbrite at Cerro La Laguna.

Alteration and Mineralisation

Mineralisation and alteration in the property can be related to the same processes that created the known mineral occurrences in the district, meaning a direct causative link between the emplacement of magma in the host rocks, cooling and the formation of hydrothermal systems capable of depositing metals. The intrusion of aplites in the last stages of the batholith and degasification probably favored the formation of hydrothermal breccias within the upper parts of the batholith cupola and the contact with the host volcanic rocks, breccias that were sealed by quartz, tourmaline and minor sulphides. Isolated quartz-tourmaline veinlets in the granodiorite commonly present an alteration halo that is either whitish, indicating a possible calcosodic alteration, or pinkish, pointing to feld-K deposition, or potassic alteration. In most quartz-tourmaline breccias this halo is thought to have been overprinted by coarse grained sericite and silicification, with the exception of the Noche Buena prospect, where potassic alteration is still visible in the breccia fragments. Alternatively, each of those alteration assemblages could have been the results of different process, but the first possibility is here favored.



Left. Calcosodic alteration halo to tourmaline veinlet in chloritised granodiorite. **Center.** Quartz veinlet with tourmaline halo displaying an exterior potassic feldspar halo in chloritised granodiorite. **Right.** Quartz tourmaline as matrix to potassic feldspar altered granodiorite fragments in a breccia

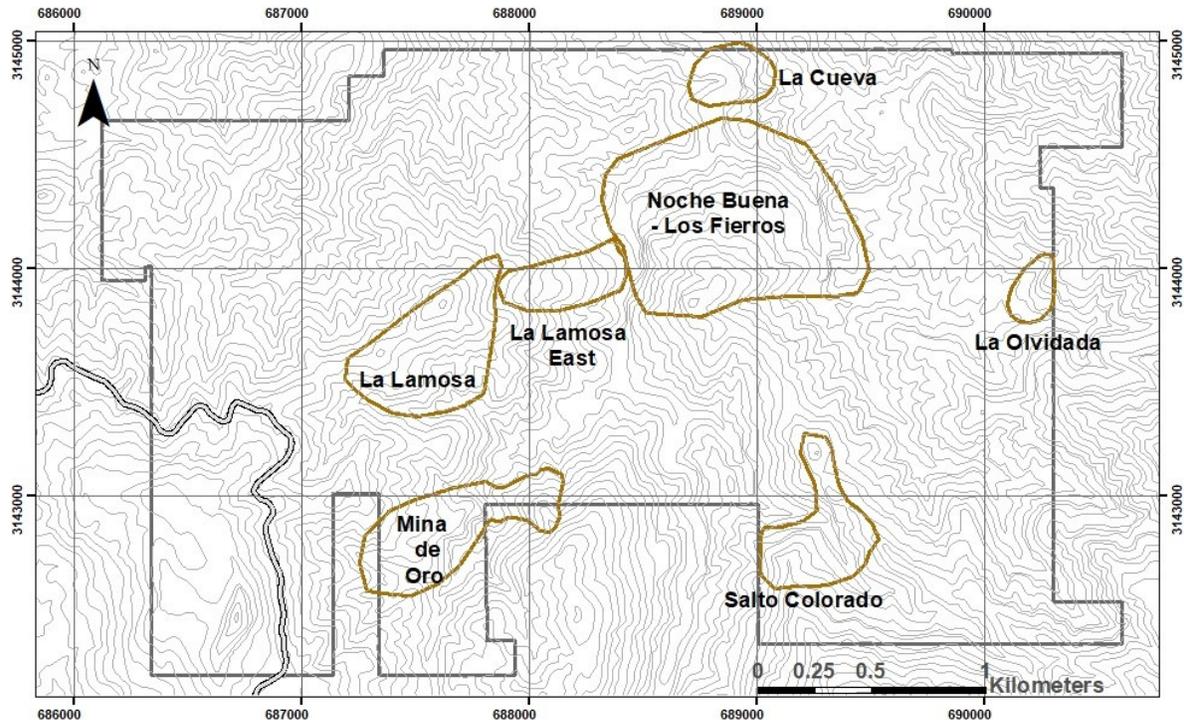
From strongest to weakest, alteration reached the vuggy quartz stage along structures in the La Lamosa ridge and the Lamosa East targets. Strong and often coarse grained sericite surrounds the vuggy quartz, and is accompanied by varying degrees of silicification and tourmaline introduction. Quartz-tourmaline matrix filling and quartz-tourmaline veinlets are often lined by coarse quartz-sericite halos. Argillic alteration can be tens of meters wide in the andesitic rocks, although it is probably formed by leaching of sulphides by weathering. Argillitisation of intermediate volcanic rocks is especially strong on the San Antonio alteration zone, about one kilometer west-northwest of La Lamosa ridge.



Left. Vuggy quartz float from the Lamosa East target. **Center.** Quartz-tourmaline breccia in Los Fierros target area with strongly quartz-sericite altered granodiorite fragments. **Right.** Strong argillic alteration in andesitic tuff at the San Antonio alteration zone.

Targets

Seven target areas have been defined: La Lamosa, La Lamosa East, Noche Buena – Los Fierros, La Cueva, Mina de Oro, Salto Colorado and La Olvidada.



Mercedes project area showing the target areas so far established. Contour lines are 20 m apart.

Targets Description

La Lamosa Ridge

Most of the work so far by Magna Gold and previous companies has been concentrated on La Lamosa ridge, where the third drilling campaign has just finished and results are about to be released. The ridge is distinctly reddish and a conspicuous feature easily spotted from the nearby paved road Hermosillo – Yecora. Not being the objective of this work, only a brief time was spent on the outskirts of La Lamosa ridge in an effort to relate the work accomplished by Magna Gold with the other targets present on the project.



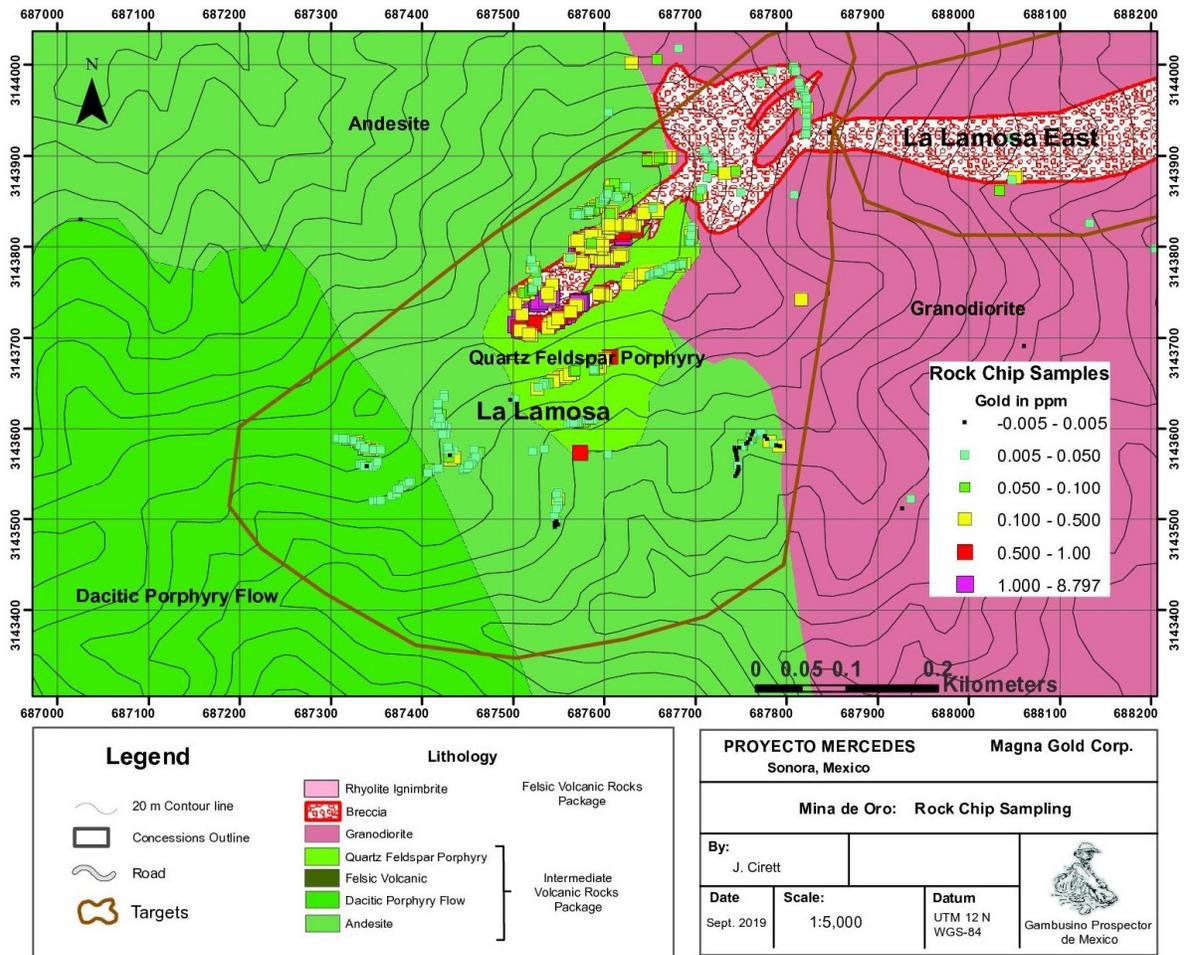
La Lamosa Ridge. As seen from the road.

The trace of a quartz – tourmaline breccia extends by nearly 500 m along a 45 degrees azimuth and up to 75 m of width, showing vertical structures within it, although by drilling a clear not to steep dip to the SE has been defined. Strong brecciation is restricted to approximately 235 m of length of this trend, and that is where work by small miners was concentrated. Locally, along the vertical structures the more intense alteration and mineralisation, produced coarse grained sericite and vuggy silica, probably bearing the higher grade gold grades.

The breccia is hosted in the andesitic volcanic package, at the contact with a fine to medium grained granodiorite with chloritized ferromagnesians, same rock that is silicified and tourmalinised near the breccias. A puzzle is the presence of an igneous rock with clear and abundant quartz eyes and feldspars, under the name on the above map of “quartz feldspar porphyry”. This rock bears a good deal of the gold mineralisation at La Lamosa and has not been observed anywhere else in the property. Texturally looks more like a volcanic rock, but the setting and shape point to an intrusive origin. In this work it has been assigned as a quartz feldspar porphyry with volcanic or sub-volcanic origin within the intermediate rocks volcanic package.



Quartz feldspar porphyry at the core of the mineralised zone at La Lamosa ridge.

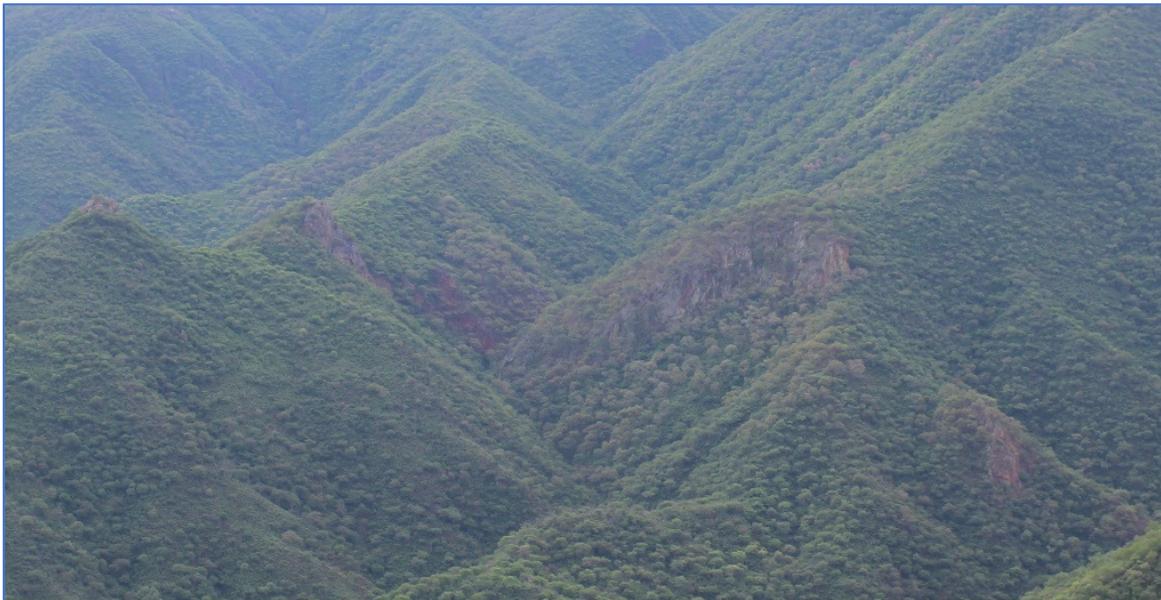


La Lamosa Geology and gold sample results. Gold values are strongly correlated to the quartz tourmaline breccia and the quartz feldspar porphyry.

Geochemically, surface rock sampling results in this target show a strong and spatially restricted response for gold with up to a few ppm, and silver in the 10 to 50 ppm range. Copper values vary, but most values are below 100 ppm in the zone with higher gold values, augmenting to 100 – 500 ppm a few tens of meters away and locally in the 0.1% to 0.5% range up to 200 m away, in the same trend. Molybdenum is 5 to 10 ppm, restricted to the strongest alteration. Lead strongest numbers (in the percent range) are in the main zone, but several thousand ppm are not uncommon locally a few hundred meters away. Zinc values are mostly low, with erratic peaks of thousands of ppm. Arsenic, antimony, bismuth, barium and tungsten numbers are higher within the breccias, diminish a little bit within the quartz feldspar porphyry outcrop, and fall beyond its perimeter.

Salto Colorado

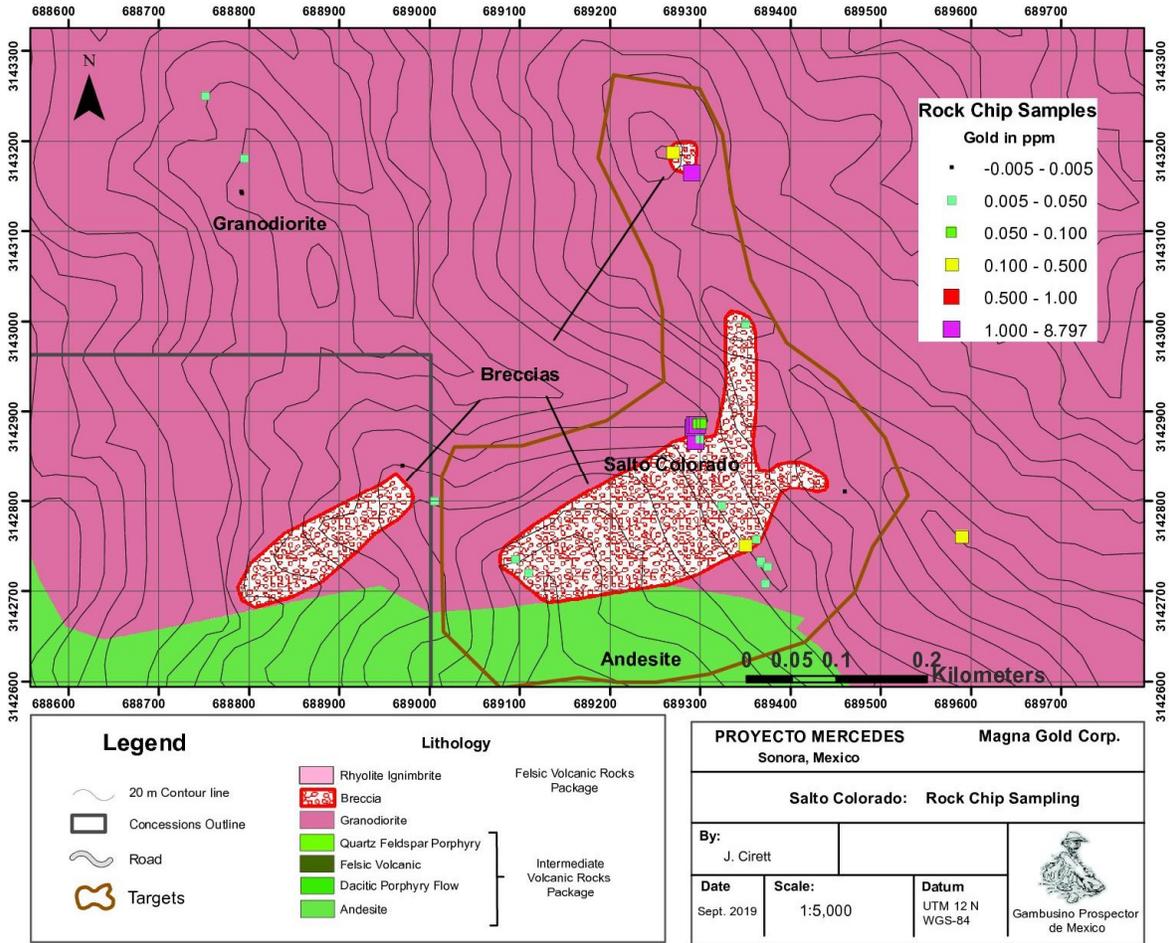
The Salto Colorado target is a breccia body oriented on a 60 to 70 degrees azimuth, 300 m long by 60 to 150 m in width, with two lobes that increase its length on the eastern end. The major lobe is oriented to the north, with a 20-30 meters width and a longitude of approximately 150 m. The other lobe is oriented to the east, 70 m in longitude and 25 meters in width. The silicified rib has a minimum elevation of 1,140 m and a maximum elevation of 1,260 m.



Salto Colorado. View looking SE from La Lamosa ridge.

The major body of the target is built by a quartz tourmaline breccia with varying degrees of brecciation and sulphide content, with the rock fragments identified being of the hosting granodiorite, but probably containing also fragments of the volcanic rocks that flank the breccia body by the southwest side. The breccia is terminated on the western end by a scarp, but a ridge more than 150 m in length lying outside Magna Gold's concessions and showing the same bearing might represent the faulted continuation to the west. A separate breccia body, some 30 m by 30 and probably a breccia pipe, is locally known as the Reyecitos breccia (after the small miner that

worked on it) is included within this target by its proximity, as it is only 160 m to the north of Salto Colorado's northernmost north lobe outcrop. Some parts of the ridges that give shape to this target are better described as strongly silicified granodiorite with intense quartz-tourmaline veining, especially the north bearing lobe, which only displays minor amounts of brecciation. Stronger alteration is represented by both silicification and coarse grained sericite, accompanied in many sites with a disseminated oxidized sulphide boxwork.



Salto Colorado Geology and gold rock chip results. The strongest gold results are from the Main Salto Colorado breccia, on the working with galena and chalcopyrite, with 2.4 and 8.5 ppm Au, and at the Reyecitos breccia with 8.1 ppm Au, 200 m to the north.



Salto Colorado Quartz tourmaline breccia at stream level, showing sulphide content and strong jarosite staining. Roughly at this location a sample returned 0.36 ppm gold.

Mineralisation at the main breccia body includes the Salto Colorado working, which has been exploited by its galena-chalcopyrite pockets within a quartz tourmaline breccia. Paragenetically, tourmaline quartz veining and breccia filling was followed by coarse crystalline quartz veining and filling of cavities as druses, and a late stage of coarse sulphide introduction. Rock sampling by the Mexican geological survey includes results of up to 2.6 gpt Au, that might correspond to mineralisation at the small working, as well as several anomalous samples on the 40 to 400 ppb Au range and up to 0.5% Cu. Minor Cu oxides were identified on the granodiorite outcrops to the south of the breccia and also on volcanic rock float fragments. The two small workings on the Reyecitos breccia are said to have been prospected for its gold content. Magna Gold's XRF readings with a Olympus Delta gun on multiple samples from the Salto Colorado target have returned local gold values of 7 gpt, common readings of 10 to 60 gpt silver and percentage readings on copper of up to 30% and lead of up to 19.9%.

Rock chip sample results by Magna Gold at the Salto Colorado working include 0.1, 1.18, 1.38, 2.38 and 8.5 ppm gold; 303, 389 and 460 ppm silver; 0.11%, 0.4%, 1.76%, 3.9%, 4.0% lead and 0.12%, 2.6% and 4.2% copper at the Salto Colorado working, Anomalous values include hundreds of ppm of arsenic and bismuth, as well as thousands of ppm of antimony at the same site. Sparse sampling at other points of this breccia include up to 0.36 ppm Au in the southern most outcrop at stream

level. Copper, silver and bismuth are anomalous in the breccias and locally on the hosting granodiorite.



Coarse galena on quartz from the Salto Colorado working.



Left.- Coarse galena and chalcopyrite from the Salto Colorado working. **Right.-** Sampling at the Reyecitos breccia. This sample returned 8.1 ppm Au

Noche Buena – Los Fierros

This target is characterized by the presence of at least three moderately sized quartz-tourmaline breccias and several zones of silicification and quartz-tourmaline-sulphide veining within the

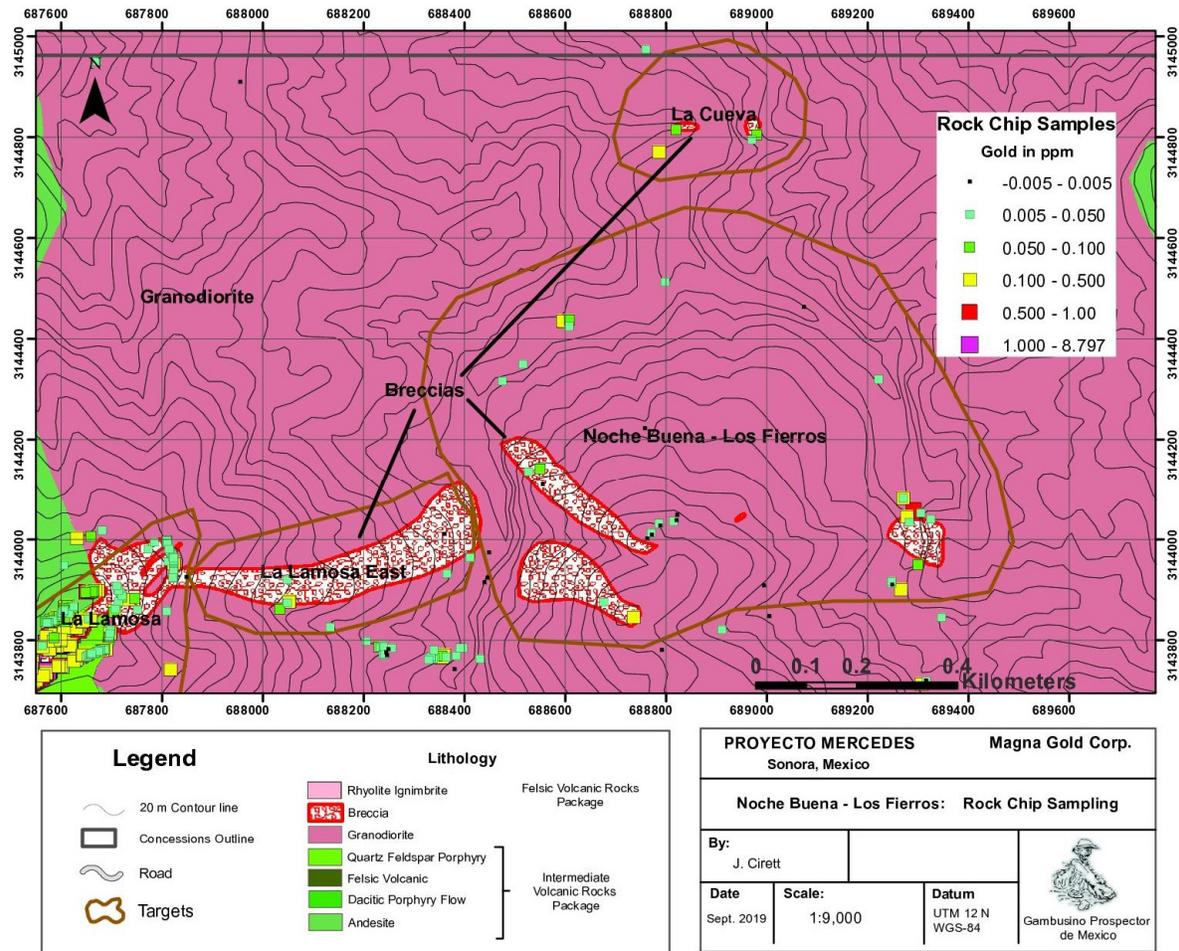
granodioritic stock and minor aplite bodies. The Noche Buena breccia is roughly an ellipsoid 80 m x 120 m in size, elongated in an East-West direction, not forming an especially distinctive ridge as other breccias in the area, beyond a copper stained 20 m high scarp on the eastern side of the stream that cuts through it. The breccia is hosted in granodiorite on its western edge and on aplite on the eastern side, bearing fragments of both rock types. This target shows potassic alteration as halos to quartz tourmaline veinlets and as rims of rock fragments within the breccias. Quartz tourmaline aggregates conform the matrix of the breccia, although the order of emplacement seems different than on the Salto Colorado target, as quartz borders the rock fragments and lines the veinlets, while tourmaline occupies the cavities centers and veinlet core. Locally quartz tourmaline veinlets show lining chalcopyrite pods several centimetres in width.



Noche Buena ridge on eastern side of stream showing minor copper staining

The Mexican Geological Survey did an evaluation of this breccia, measuring it at 150 m by 150 m, and a grade of 0.21% of tungsten oxide (WO_3) with good gold and copper credits. Recent sampling by Magna Gold reported 0.34 gpt, 0.42 gpt and 0.76 gpt gold in three of six samples from the caved-in mine working at Nochebuena; 30, 67 and 80 gpt silver; 4,310, >10,000, >10,000 ppm copper; 11 to 191 ppm molybdenum, lead, zinc, arsenic and antimony anomalies, as well as four samples with over 100 ppm tungsten. Nearby sampling on quartz tourmaline veins also returned up to 0.25 gpt gold, 16 gpt silver, 1.31% Cu, 218 ppm Mo and 1,430 ppm tungsten. Of four XRF

readings by Magna Gold geologists, one returned 14 gpt Au, and the four samples returned 1.4%, 1.4%, 2.1% and 27.1% copper.



Noche Buena – Los Fierros, Lamosa East and La Cueva Targets Geology and gold rock chip results.

The area is dominated by the presence of fine to medium grained granodiorite with chloritised ferromagnesians, cut by quartz tourmalin breccias, and local zones of quartz tourmaline veining.



Tourmaline lined quartz veinlet displaying a chalcopyrite pod a couple of centimeters wide. Hosted in granodiorite near the Noche Buena breccia.

Los Fierros part of the target displays two breccia bodies that have seen minor small-scale mining for tungsten. The northern most breccia is about 300 m long and probably at least 30 m in width. Its position along a steep cliff may indicate a shallow dip, but that still needs to be confirmed by field observations. There are at least two adits into this body (one very likely inaccessible), but these have not been accessed and sampled. The southern breccia seems to be around 320 m long by 50 m in width, from the top of the hill to the stream base. Minor copper staining was observed on the latter ridge, near the hill summit. The actual extent of both breccias has to be field mapped.

Of four samples with results so far on the breccias at Los Fierros, two returned 21 and 62 ppb gold and two returned over 100 ppm tungsten. Interestingly, four contiguous samples of the granodiorite on the stream returned 9 m @ 0.13 gpt gold, 10 gpt silver and 1,551 ppm copper, including 3.8 m @ 0.195 gpt gold and 3 m @ 4,072 ppm copper. Those values are related to minor oxidized sulphide veining, minor green and black copper oxides and a 2 cm quartz veinlet with a black mineral interpreted as chalcocite.



Los Fierros breccias as seen from the recently built road to the stream.
Looking NE. Elevation ranges from 960 to 1,200 m above sea level.

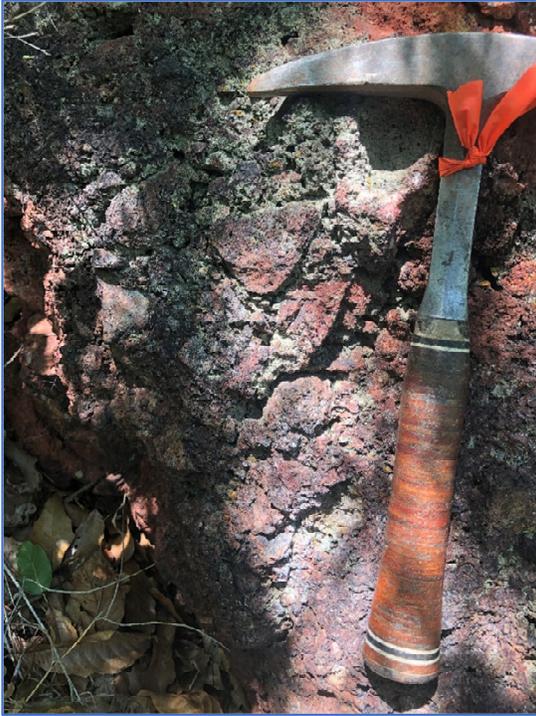


Los Fierros quartz tourmaline breccias, locally displaying copper staining.

La Lamosa East

One of the objectives of this work was to establish if there is a connection between La Lamosa ridge mineralisation and the quartz tourmaline breccias hosted in the granodiorite in the Los Fierros – Noche Buena target area. Not surprisingly, the connection is established by a corridor of mostly subcrop and float of silicified and tourmalinised granodiorite and quartz-tourmaline breccia, and local float fragments of vuggy silica. The mentioned corridor is 600 m long, 25 to over 100 m in width, encompassing a nearly 250 m of exposed elevation difference. On the Los Fierros stream, an aplite dike several meters wide mapped by Magna Gold geologists shows minor sulphide veinlets and minor disseminated pyrite and chalcopyrite, and might be related to the formation of nearby breccias.

Sampling is still very sparse at La Lamosa East. Two of eight samples collected on this target returned 0.11 and 0.14 gpt Au, two more samples 10 to 25 ppm molybdenum, lead is locally strongly anomalous, with up to 0.15%, antimony shows up to 9 ppm, bismuth and barium are locally strong, with up to 43 ppm and 308 ppm respectively. Tungsten is locally strong, with up to 230 ppm in the southern fringes of the target, and near a cluster of samples outside the target with up to 550 ppm tungsten, which are also anomalous in molybdenum, with up to 67 ppm.

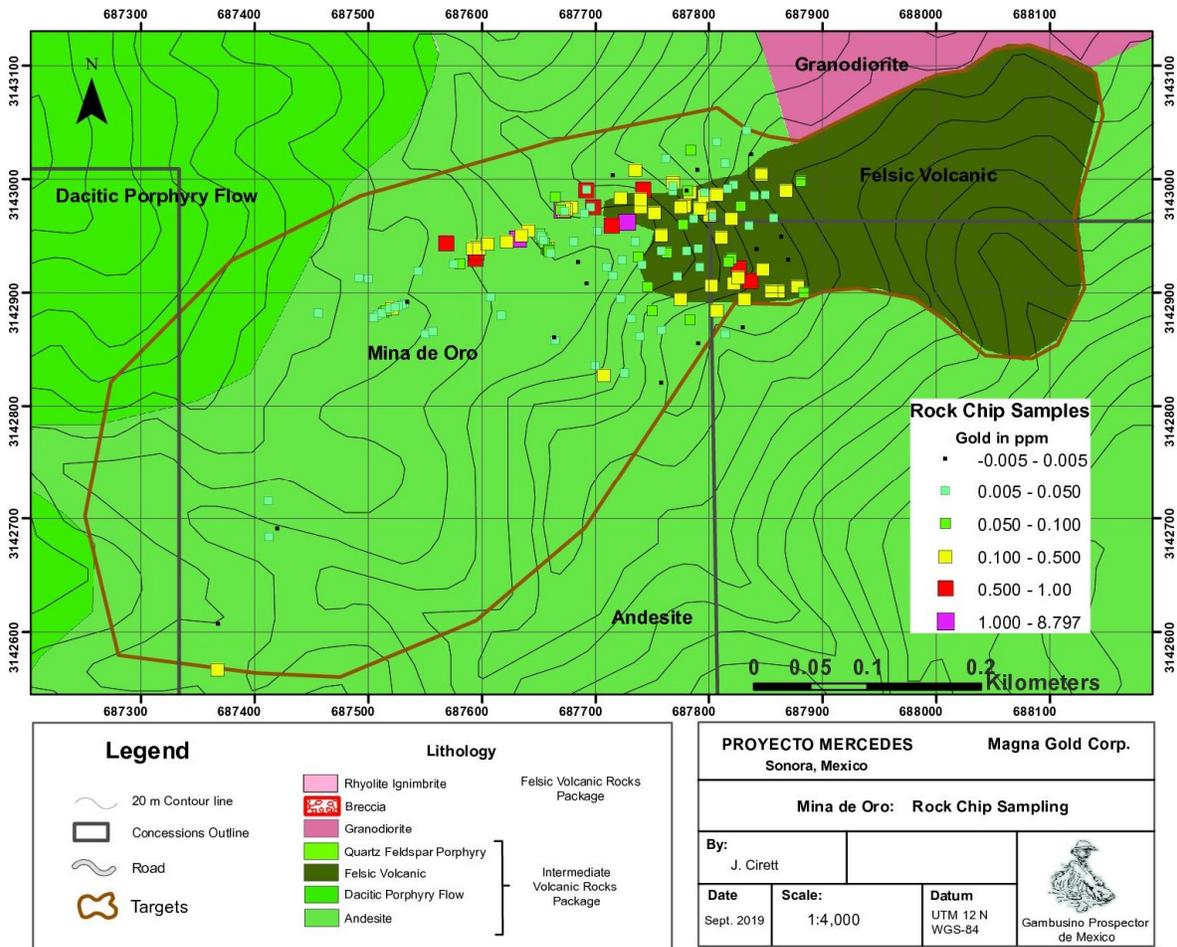


Strongly hematite stained quartz – tourmaline breccia and vuggy quartz float from the La Lamosa ridge to Los Fierros corridor

Mina de Oro

The Mina de Oro target is the only one that is not clearly related to quartz-tourmaline breccias in this project, although recent finds by Magna Gold geologists point to a probable connection. Gold and base metals mineralisation is associated to strong and complex structures in andesitic rocks, with even low angle structures showing lateral displacement. This arrangement precludes testing structures by just targeting a plane, and might be better followed as a trend hosting pods of higher grade ore. Mineralisation here has been mined at small scale by following these irregular arrays of minerals, exploiting quartz-pyrite-galena lenses, especially at the working known as Mina Vieja.

Minor copper oxides in fractures seem to follow the general east-northeast trend of mineralisation, which might be used for targeting more restricted gold mineralisation on the more than 350 m long corridor so far established. A ridge forming rock that has been mapped by Magna Gold's geologists as a rhyodacite outcrops near the east of the Mina Vieja workings. It shows variable silicification and pyrite disseminations, is affected by local development of quartz tourmaline breccias, and is covered in the top by the chlorite altered andesites. This ridge presents very strong quartz – sericite alteration in a flow banded rock at the stream level (Barranco El Pino), is pyrite bearing and anomalous in gold.



Mina de Oro sketchy geology and rock chip sampling. Gold values correlate clearly with the felsic volcanic unit (rhyodacite in the text). Quartz tourmaline breccias are not depicted, but exist within the felsic volcanic unit.

A roughly 150 x 150 m rock chip sampling survey on this lithological unit has returned 31 out of 78 samples between 0.1 and 0.62 gpt Au. Results for the rest of elements have not been received for most samples to the date of writing this report. The extent of the lithological unit, and the accompanying alteration, has not been confirmed on the field, but topographic features suggest it could extend for 300 m more along the contact with the granodiorite and up to 150 m vertically. This unit and its possible extension beneath the Mina de Oro trend in the andesites can constitute an excellent exploration target. Rock sample results by the Mexican Geological Survey returned up 5.6 gpt gold, 1.4% copper and 2,070 ppm molybdenum at the Mina de Oro working.



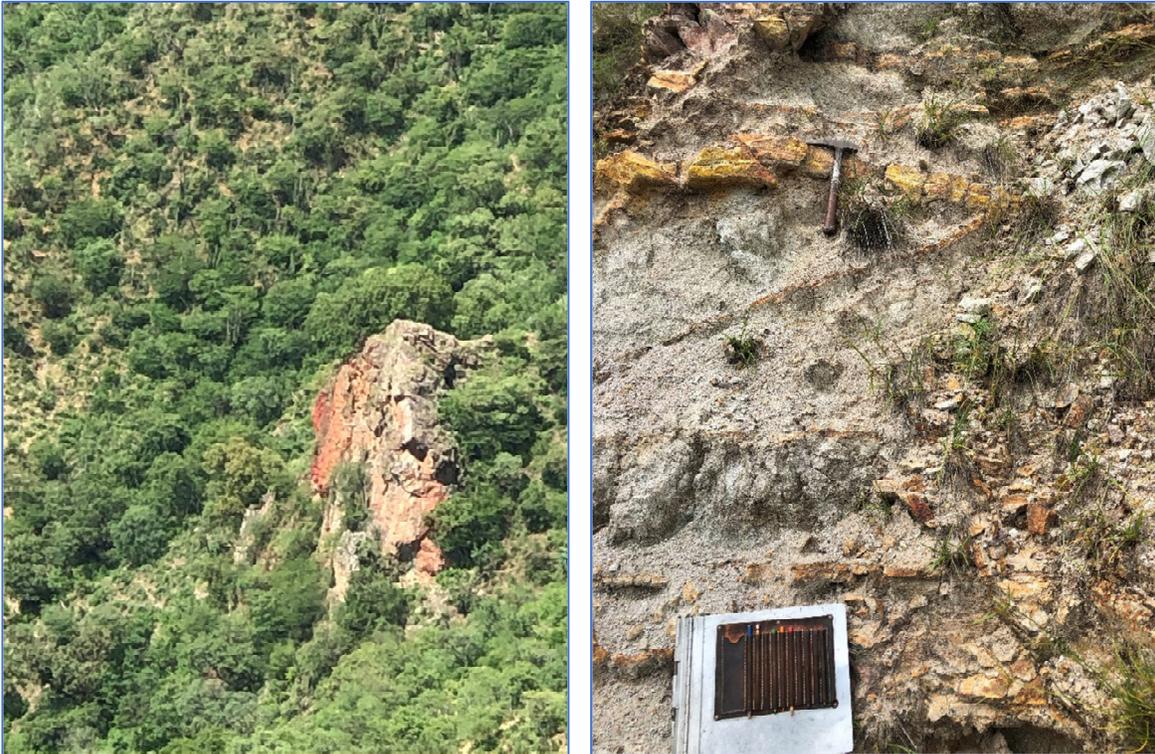
Left.- Mina Vieja working. **Right.** Overhang on silicified ridge of silicified rhyodacite at the Mina de Oro target zone (Héctor Grijalva and Abelardo García as scale)



Left.- Copper staining on andesitic rock on trend with Mina de Oro. **Right.-** Strong quartz – sericite - pyrite alteration on flow banded rock (rhyodacite?)

La Cueva

This is the northernmost target, located less than 200 m from the claim edge. The target is at least 300 m long by 10 to 50 m in width, spanning 50 m of altitude, and due East-West oriented. A quartz – tourmaline breccia 150 m long outcrops on both sides of the La Palmita stream, being concealed under stream and slope deposits for nearly 100 m of its length. The eastern limb presents a cliff tens of meters high, with a vertical wall towards the stream, is composed mostly by quartz, and only locally bears rock fragments and tourmaline. Granodiorite and aplite host the breccia, with only the aplite contact with the breccia having been observed. Jarosite staining and copper oxides are common but erratic.



Left.- Quartz ridge on eastern side of the La Cueva target. **Right.-** Quartz – sericite alteration halo of quartz-tourmaline veinlets hosted in granodiorite on the western side of the La Cueva target. A sample here returned 0.136 gpt gold, 13 gpt silver, 296 ppm copper, 577 ppm lead and 140 ppm tungsten.

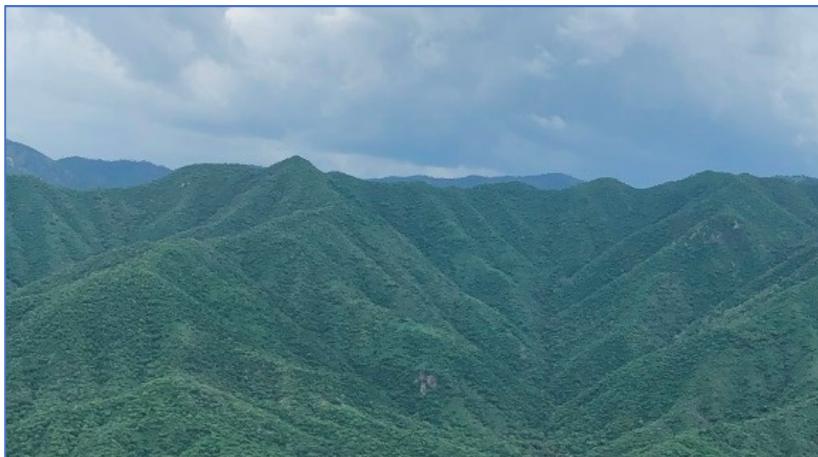
A small working on its eastern end is developed on a fault contact with the aplite, showing strong bright green copper staining. On the west, the granodiorite outcrops beyond the aplite, hosting quartz-tourmaline veinlets that display a quartz-sericite halo and local copper oxides staining. Two samples by the SGM returned 46 and 93 ppb gold, and one returned 310 ppm copper. Current sampling returned 20 to 136 ppb gold in five assays.



Left.- View to the west from the quartz ridge. A distinct quartz outcrop can be seen just across the stream. **Right.-** Strong copper staining on structure developed on quartz and aplite contact.

La Olvidada

This target was not visited, as when seen on the field from the distance was thought to be outside the eastern boundary of the property. Recent review of satellite data point to an escarpment that might be another quartz-tourmaline breccia lies on the inner side of the claim limit. The silicified ridge trends northeast for at least 50 meters, is about 15 m wide and seems to straddle the favorable contact between the granodiorite and the volcanic rocks.



La Olvidada ridge can be seen at the center of the picture, looking East from La Lamosa ridge.

Preliminary Geochemistry by XRF

Magna Gold geologists utilize an Olympus Delta gun for XRF readings on the field. These results are point measurements that nonetheless provide a first glance at the geochemical composition of the rock in question, and are useful for guiding exploration efforts.

Reading	Area	Mode	Cu_%	Zn_%	Ag_ppm	Au_ppm	Pb_%
#3-1	El Salto	Geochem	23.02	0.176	14.6	N/D	0.306
#5-1	El Salto	Geochem	0.87	<LOD	10.5	N/D	19.930
#7-1	El Salto	Geochem	26.60	0.108	14.1	N/D	0.486
#9-1	El Salto	Geochem	0.00	0.072	3	N/D	0.004
#10-1	El Salto	Geochem	8.19	0.359	18.5	N/D	9.900
#12-1	El Salto	Geochem	22.34	0.048	14.2	N/D	0.068
#13-1	El Salto	Geochem	7.36	0.068	10.4	N/D	0.220
#15-1	El Salto	Geochem	0.55	0.009	3	7	0.014
#26-1	El Salto	Geochem	0.03	<LOD	3.7	N/D	0.208
#28-1	El Salto	Geochem	30.07	0.223	58.8	N/D	2.144
#30-1	El Salto	Geochem	11.79	0.061	25.5	N/D	1.703
#31-1	El Salto	Geochem	0.03	<LOD	11.2	N/D	15.910
#33-1	Mina Vieja	Geochem	0.29	0.016	3.6	15	0.054
#48-1	Noche Buena	Geochem	1.36	0.019	2.5	N/D	N/D
#49-1	Noche Buena	Geochem	2.15	0.048	N/D	N/D	N/D
#60-1	Noche Buena	Geochem	1.39	0.007	2.7	14	0.001
#71-1	Mina Vieja	Geochem	0.01	0.002	N/D	N/D	0.002
#72-1	Noche Buena	Geochem	27.09	0.059	24.7	N/D	0.025

As can be seen on the table, the Salto Colorado, Mina Vieja and Noche Buena targets show promising readings in gold, copper and lead. Gold results are just indicative of the probable presence of the element, as other elements like arsenic and zinc can produce false positive readings. Nonetheless, the positive gold readings on the three targets that also happen to have multi-gram gold geochemical results by the SGM (Mexican Geological Survey) is very encouraging. These point specific XRF readings with high gold are expected to turn into gold bearing geochemical samples from the same targets, even if not the same grades.



Left.- Sample 3-1. Chalcopyrite-galena deposited on a quartz druse cavity of the El Salto breccia.-
Right.- Sample 15-1. Quartz-sericite-pyrite alteration on fine grained granodiorite. Pictures by Magna Gold's geologists

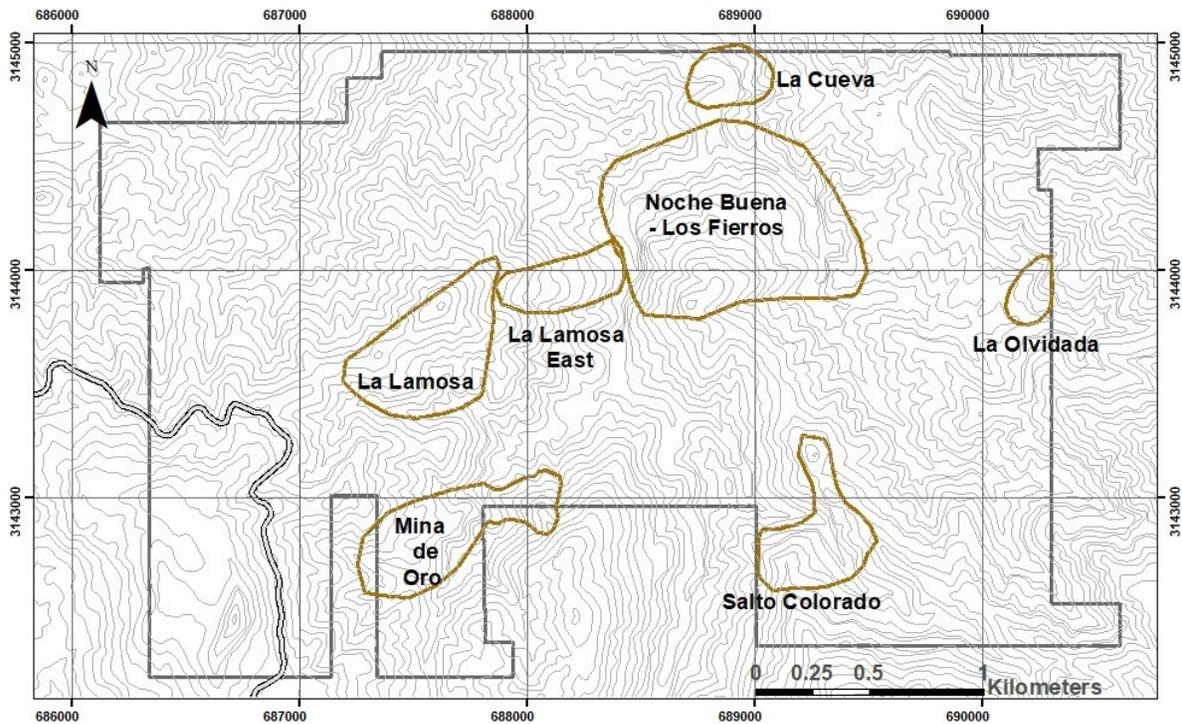
Conclusions and Recommendations

The Mercedes project is within the Santa Rosa de Yecora district in Sonora, displaying the characteristics proper of the other mineralised occurrences within it. Namely, a strong association to the Eocene age batholith intrusive phases and to the contacts with the hosting Cretaceous volcanic rocks. At Mercedes, the batholithic rocks are represented by a fine grained granodiorite with varying degrees of chloritisation, and minor bodies of aplites. Within the granodiorite and on the contacts with the hosting Cretaceous intermediate volcanic package, quartz-tourmaline breccias formed, probably related to the latest stages of magmatism and decompression of the magmatic chamber. The close spatial relationship between aplites and the breccias might point to a relationship in its origin. The formation of the breccias was accompanied by vuggy quartz alteration in the core zone of La Lamosa and La Lamosa East, surrounded by a wide halo of quartz-sericite and tourmaline alteration. In the rest of the targets the predominant alteration was quartz-sericite. The presence of isolated quartz-tourmaline veinlets with a calcosodic or potassic alteration halo in the granodiorite points to an earlier phase of alteration, same that was later overprinted by quartz-sericite alteration in the most active parts of the system. The quartz-tourmaline breccia at Noche Buena was the only one where potassic alteration was observed in the granodiorite fragments within the breccia. Most of the quartz-tourmaline breccia in the area form prominent ridges and scarps, although not all them, providing a good prospecting guide in the district in general.

Regionally most mineralisation is related to quartz tourmaline breccias, like at Los Verdes (Cu-Mo) and Santana (Au) projects. At Mercedes, La Lamosa ore body is interpreted as a quartz tourmaline breccia developed in the contact between the granodiorite and the intermediate volcanic package, where brecciation developed over a previous structural weakness in the contact between a quartz feldspar porphyry and the andesites. More than 10 breccia bodies were identified in this work within seven target zones. These breccias need to be thoroughly mapped and sampled, and probably several will develop into valid drill targets. Already the Noche Buena, Reyecitos, Salto Colorado and Mina de Oro target zones present gold values in the range of 0.1 to 8.5 gpt of gold in breccias. The most favorable condition for mineralisation is considered here the location of felsic units of the intermediate volcanic package in contact with the granodiorite, as is the case at La Lamosa and Mina de Oro, where extensive alteration accompanies the formation of quartz tourmaline breccias.

Seven targets were defined in this work, several of which had already been identified by Magna Gold geologists. The overall recommendations for exploration include:

- **Soil sampling.** Can aid to define the extent of mineralised areas
- **Induced polarization.** Probably a good way to define the quartz-tourmaline breccias behavior and sulfide content at depth.
- **Trenching.** Might be a good technique in the targets with less silicification
- **Magnetometry.** The quartz-sericite alteration in breccias and its surroundings is likely to destroy the magnetite content in both the intrusions and the volcanic rocks. Given the terrain, a land mag survey seems difficult, and the area might be too small for a cost effective aerial survey, but the technique probably would identify strongly altered zones.



Target Areas

La Lamosa has seen the most work and almost all the previous and current drilling, and as such is out of the scope of these recommendations.

La Lamosa East. Represents the continuation to the East from La Lamosa ridge of quartz tourmaline breccias for 600 metres. Outcrops are scarce, but rubble and subcrops point to a zone that can be tens of meters wide of quartz tourmaline breccias and silicified and quartz veined granodiorite. Soil sampling can be a fast and cost effective way to select areas for directly drilling. Trenching can easily be done on this target, and provide surfaces to map and sample, while an induced polarisation survey would highlight silicified resistive zones and the probability of sulfides at depth. This is a first priority target.

Mina de Oro. On this target a silicified felsic rock has returned consistent assays anomalous in gold and has seen small scale mining for gold and lead. In the other hand the anomalies lie just within the claims limits, neighboring Minera Alamos ground. The actual dimension of the felsic rock outcrop has to be defined by mapping, and a lot of rock sampling done before deciding the next exploration strategy, that might include soil sampling, trenching and/or an induced polarisation survey. Soil sampling might aid to define trends, as copper oxides were seen peripheral to one of the structures followed by old timers, and might provide a wider signature to pursue than just gold. An induced polarisation survey might aid to define the presence of a silicified felsic unit beneath the widespread andesites. This is a first priority target.

Salto Colorado. Seems an excellent target, with a size of over 400 m and more than 60 meters of width, and having returned assays of up to 8.5 gpt gold and several percent copper and lead on a small working, and up to 0.36 gpt gold in a sulfide rich quartz-tourmaline breccia. Detailed mapping and sampling is recommended. An induced polarisation survey might aid to define the breccia shape and sulfide content at depth. The Reyecitos breccia within this target should also be tested, because if even restricted in size to a few tens of meters, the only two rock samples to date returned 0.3 and 8.1 gpt gold. This is a first priority target.

Noche Buena – Los Fierros. Is the largest of targets at approximately 1,000 m long and 800 m wide. Contains at least three large quartz-tourmaline breccias, with the longest being around 300 m long, and several tens of metres in width. The real potential of this target might be outside these three breccias, in intrusive rocks with enough quartz veining and geochemical signatures to produce drilling targets. This is exemplified by the recent sampling by Magna Gold geologists of four samples averaging 9 m @ 0.13 gpt gold, 10 gpt silver and 0.15% copper on the Los Fierros stream. The northern facing slope of Los Fierros hill has a vegetation cover by oaks that points to the presence of altered rocks, as it is common through the district. Exploration at this target must include detailed mapping and sampling on Los Fierros stream, which is to provide insight on what rocks and alteration are present below the breccia pipes that cap the hill. The northern slope of the hill can be studied by soil sampling and/or trenching, and finally, an induced polarisation survey may point to the actual extent of the breccias and the presence of sulfides.

La Cueva. This target might pose an exploration challenge, as only the extremes of a breccia body outcrop on both sides of the La Palmita stream. The granodiorite and aplite hosting the breccia present varying degrees of argillic alteration, silicification and sericitisation, as well as quartz-tourmaline veining with sulfides, presenting local copper oxides. The target has to be mapped beyond the alluvial covered stream valley where it sits, looking for continuation to the East and alteration to the North, as suggested by satellite imagery. Field mapping and an induced polarisation survey might be the only applicable techniques at La Cueva.

La Olvidada. This target was selected by visual identification of a ridge on the mountain slope, and confirmed by satellite imagery. La Olvidada should be mapped and sampled to assess if it is of interest, as it may very well sit on the favorable contact between the granodiorite and the intermediate volcanic rocks package.