# REPORT OF THE SAMPLING PROGRAM IN THE AREAS OF PIJIGUAOS (CEDEÑO MUNICIPALITY, STATE OF BOLIVAR, VENEZUELA) AND PUERTO CARREÑO (COLOMBIA) IN THE ORINOCO RIVER REGION

Selection of the material by batting in the area of interest of Venezuela. Coltan fragments circled in red

Performed by:
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**AUXICO RESOURCES**

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## 1. STATEMENT ABOUT THE REPORT (GEOLOGIST MIGUEL JARAMILLO)

This is a report of the sampling works of two zones with potential for coltan in the Orinoco river region in Venezuela and Colombia. The sampling program was carried out between December 21, 2020, and January 7, 2021. In Puerto Carreño (Colombia) this sampling program was carried out to comply with the sampling plan proposed by Japosat based on the interpretation of satellite images for AUXICO RESOURCES. Japosat's interpretation was based on geochemical data from samples taken under the direction of Mr. Juan Guillermo García in the Puerto Carreño area in Colombia in 2019 and more recent occasions in the area of the Guacamayas - Maipore indigenous reservation. For the area of Venezuela, the location of the exploratory target is based on the previous work published on the area by the geologist Simón Rodríguez and the knowledge of the person who accompanied the visit, Mr. Jimmy Ropero. This work was carried out by the geologist Miguel Jaramillo who works as a consultant for AUXICO RESOURCES.
This work is presented following the sequence of the evaluation criteria of the Colombian Code of Mining Resources and Reserves, and constitutes a basic phase of the exploratory process of the areas of interest.

## 2. PROJECT DESCRIPTION

This report deals with the visit and the sampling process of two areas of interest for Coltan (Columbite - Tantalite), tin and rare earth REE, in the Orinoco region of Venezuela and Colombia. In this region, there is a set of granite-type Precambrian igneous bodies locally cut by pegmatites called Granito de Parguaza. Almost the entire area is covered by a succession of recent sediments that discordantly overlie the igneous basement. The mineralization of coltan, tin and REEs has been found mainly in the recent sediments in deposits of the alluvial and eluvial placer type around igneous bodies, so it is inferred that these could be the origin of the mineralization.

The area of interest in Venezuela is one of those recognized by the geological community as containing coltan deposits in the State of Bolívar in Venezuela. In this area you can see alluvial and eluvial placer-type deposits related to igneous rocks of the so-called Parguaza Granite, which consists of granite with a Rapakivi texture cut locally by granite pegmatites and quartz veins. The work in Venezuela, on the properties of Mr. Jimmy Ropero and Arturo Obregón in the Pijiguaos area of the municipality of Cedeño in the State of Bolívar, consisted of visiting and sampling some points around the area where artisanal coltan has been historically found and exploited. The objectives of the visit to the area of Venezuela were to recognize and geographically position the placer-type deposits and the possible source rock of coltan in the area.

Regarding the area of interest in Colombia, Auxico Resources collaborated with Juan Guillermo García from the company Minampro Asociados to search, mine and commercialize coltan in an indigenous barequeo area of the Guacamayas - Maipore community and in the Legalization of Mining of the

property LFH-14431X. Taking advantage of the knowledge that Juan G. García has about the terrain, the communities and the materials in the area. In May 2019, a general survey of the area had been made and some samples and material had been taken from the sites already determined by Juan Guillermo. In the samples taken in these areas, interesting values of coltan, tin and REE were determined by the X-ray fluorescence method (XRF). In December 2020, at the request of Auxico Resources, the company Japosat performed the interpretation of satellite images in the areas of interest of the municipality of Puerto Carreño, determining two areas of interest (AIO-1 and AIO-2) in which it located points to sample outcropping rocks that according to the interpretation would correspond to granites, pegmatites, ultrabasic rocks and sediments around the hills. The initial objective in the Puerto Carreño area was to take samples at the points determined by Japosat in those two areas: The East area (Area AIO-1) within and around the request for the legalization of mining in the property LFH- 14431X in which Auxico has an interest for its acquisition. That of the West area (AIO-2) corresponding to the Guacamayas - Maipore Indigenous Reservation, in which it was not possible to visit but only one day to take 7 samples that represent 10% of the samples proposed by Japosat to be collected there. The reason for not being able to complete the sampling process in the West zone (AIO-2) was due to the fact that the indigenous leader of the zone informed Juan Guillermo García that he would not give permission to continue with the activity in those lands.

In the East area within and around the LFH-14431X legalization application, the decision was made to perform apiques to know the thickness, lithologies of the sediments in sections close to the structural alignments interpreted by Japosat to have better data and observe possible relationships between anomalies. geochemical and geological structures. In January 2021, based on the information obtained in the fieldwork of this work, analysis and interpretation of satellite images of the area of Venezuela were carried out, naming it AIO-3. At the time of writing this report, we are awaiting the laboratory analysis of the samples taken in the areas of interest in Venezuela and Colombia.

## 2.1 Background

At the T.I.C. (Tantalum - Niobium International Study Center) carried out in June 1987, the Venezuelan geologist Simón Rodríguez, presented an article in which he made known about the secondary mineralizations of Niobium and Tantalum associated with granitic rocks of the Parguaza Group of which in addition, bauxite has been produced in the region of the State of Bolívar in Venezuela.

In different geological congresses, the possibility was hinted that the area with potential for coltan could extend to the West of Venezuela in the region of the state of Vichada in Colombia due to its proximity to the deposits discovered in Venezuela since the geology of this area in Colombia is similar to that of Venezuela.

In 2018, Mr. Arturo Obregón gave Auxico two samples of material obtained in the area of Jimmy Ropero's properties and the same in Venezuela. Next, the geochemical data obtained by X-ray fluorescence (XRF):

| Sample | % Ta | % Nb | % Sn | % ti | g/t Sc |
|---|---|---|---|---|---|
| **V-M-8355_1** | 7,97 | 2,36 | 72,08 | 4,54 | 3200 |
| **V-M-8355_234** | 26,66 | 7,7 | 5,35 | 23,32 | 4200 |

**Table 1.** Data from XRF geochemical analyses were conducted in 2018 on 2 samples of material from the properties of Mr. Obregón and Mr. Ropero in Venezuela.

In May 2019 a visit was made to the region of Puerto Carreño guided by Juan Guillermo García so that the consultant Miguel Jaramillo would take samples in the areas where he knew of the presence of coltan. The areas of the Guacamayas – Maipore indigenous shelter and the area of mining legalization LFH-14431 were visited. The visit of the latter area also witnessed the mining operators known to Juan Guillermo García. In some apiques located and worked in the two areas, samples were taken and their form of collection, analysis and results are given below:

| MINING APPLICATION | ID Sample | SAMPLE TYPE | WGS84 COORDINATES | | GEOCHEMICAL ANALYSIS (XRF) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | East | North | Ta2O5 | Nb2O5 | SnO2 | WO3 | Sc2O3 |
| APPLICATION LFH- 14431 | Sample MV1 | Chanel in trench | 67°28'37.642156"W | 6°03'17.524906" | 30 ppm% | 97 ppm | _ | _ | _ |
| | Sample MV2 | Chanel in trench | 67°28'37.642156"W | 6°03'17.524906" | _ | 60 ppm | _ | _ | _ |
| | Sample MV3 | Chanel in trench | 67°28'37.479821"W | 6°03'17.296864" | _ | 56 ppm | _ | _ | _ |
| | Sample MV4 | Selected grains by miming operator and Juan Guillermo García | 67°28'37.479821"W | 6°03'17.296864" | 5,45% | 1,45% | 20,42% | 0,17% | 0,11% |
| Guacamayas - Maipore indigenous comunity - Juan Guillermo García | Sample MV5 | Chanel in trench | 67°33'49.314335"W | 6°00'37.299925" | _ | 59 ppm | _ | 0,03% | _ |
| | Sample MV6 | Pan Concentrate | 67°33'35.689854"W | 6°02'20.151670" | | 0,01% | | 0,28% | |
| | Sample MV7 | Chanel in trench | 67°33'36.746423"W | 6°02'37.405294" | | 47 ppm | | 80 ppm | |
| | Sample MV8 | Selected grains by Juan Guillermo Garcia and indigenous leader | 67°33'25.363934"W | 6°02'38.891748" | 0,11% | 0,13% | 15,42% | 0,07% | _ |
| | Sample MV9 | Chanel in trench | 67°33'25.363934"W | 6°02'38.891748" | _ | 41 ppm | _ | 0,02% | _ |
| | Sample MV10 | Chanel in trench | 67°33'22.649726"W | 6°02'20.985486" | _ | _ | _ | 0,06% | _ |
| | Sample MV11 | Selected grains by Juan Guillermo Garcia and indigenous leader | 67°33'22.649726"W | 6°02'20.985486" | 7,71% | 4,63% | 70,1 | 0,67% | 0,12% |
| | Sample MV12 | Sample of selected grains extracted years ago by Juan Guillermo García | 67°33'22.649726"W | 6°02'20.985486" | 30,01% | 18,62% | 0,57% | 2,24% | 0,38% |
| | Sample MV13 | Sample of selected grains extracted years ago by Juan Guillermo García | 67°33'22.649726"W | 6°02'20.985486" | 36,73% | 20,68% | 0,91% | 2,65% | 0,50% |

**Table 2.** Results of XRF analyses by CMTP (Canada) to samples taken in the Puerto Carreño in 2019.

## 2.1 LOCATIONS OF AREAS THAT ARE BEING EXPLORED

The areas that were scanned for this project (Fig. 1) are:

### 2.1.1 In Venezuela

The properties owned by Mr. Ropero and Mr. Obregón are in the territory of Pijiguaos, municipality of Cedeño, Bolivar State (Area AIO-3)

2.1.2 In Colombia

According to Japosat's scheme for the proposed sampling sites, two zones were located: Area AOI-1, in which the application for Mining Legalization is found in the deed LFH-14431X. And Area AOI-2, located in the Guacamayas – Maipore, an indigenous reserve where less than 10% of the sampling could be done.

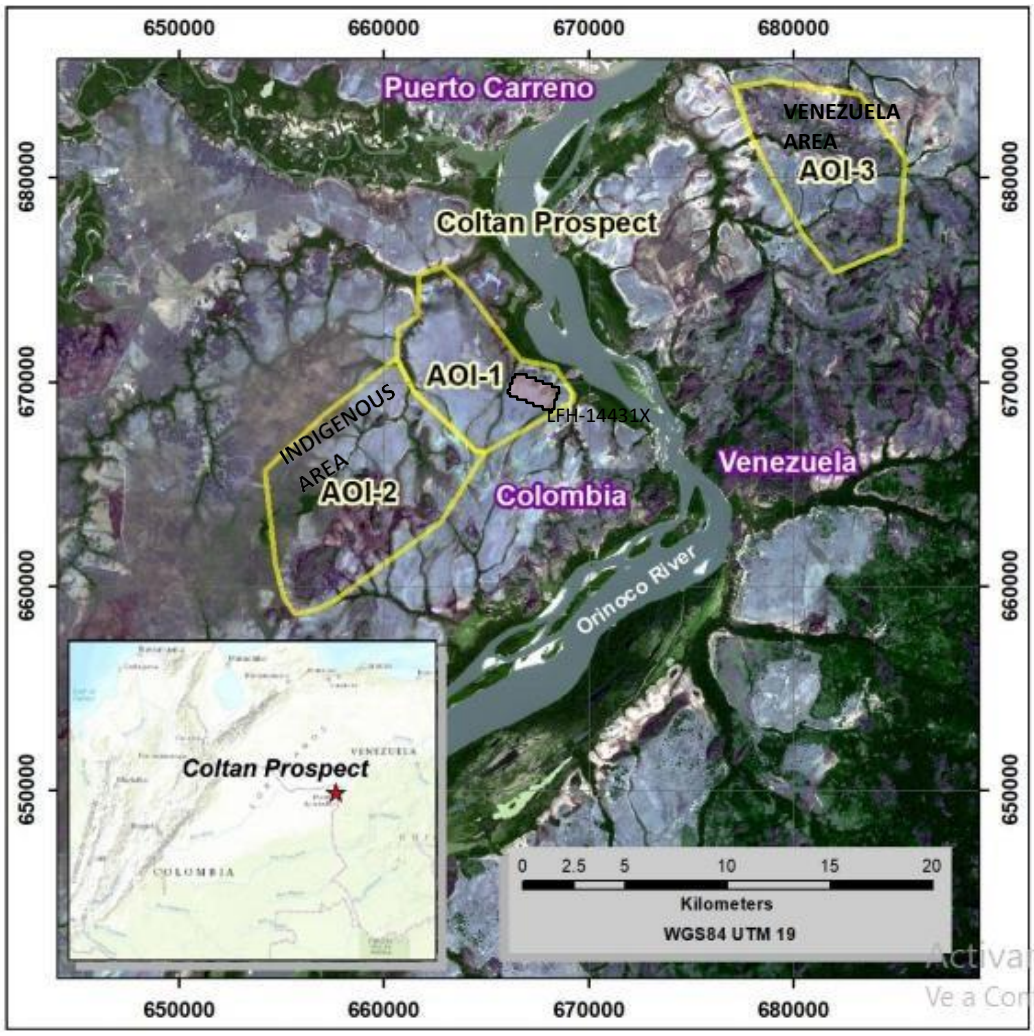



**Figure 1.** Location of areas of interest in Colombia and Venezuela. Taken and modified from Japosat, 2021.

## 2.2 CLIMATE

The region where the targets of this work are located has a tropical Savannah climate with two well-defined climatic seasons: a summer season between December to March, in which the flow of the rivers of the Orinoco basin decreases considerably and allows mobility on roads; and the winter season that goes from April to November in which it is only possible to move in the area by the river due to the floods that occur throughout the region. The average maximum temperature in the region is 35 degrees.

## 2.3 PHYSIOGRAPHY

The relief is formed by extensive plains formed by a set of peneplain with different degrees of dissection in Quaternary sediments, which extend from the foothills of the Colombian Eastern Cordillera to the Bolivarian Republic of Venezuela, on the Orinoco river basin. On both banks of the Orinoco River, there are outcrops of Precambrian igneous rocks (Parguaza granite) in the form of small hills or Inselberg that protrude from the peneplain.

## 2.4 HYDROGRAPHIC

The hydrographic network of the areas of interest consists of large rivers, ravines, and pipes that flow into the Orinoco River through the Meta river and the Bita rivers on the Western side of Colombia, and some small currents on the eastern side of Venezuela.

## 2.5 VEGETATION

Within the area, you can see typical savannah vegetation by 90%, and forests by 10%, located in the main drains of the region such as the Bita river and the different pipes and water streams.

# 3. GEOLOGY

## 3.1 REGIONAL GEOLOGY

According to regional geological maps, the following geological units emerge in the areas of interest:

Parguaza Granite
Recent deposits
Ferruginous crusts

### 3.1.1 Paraguazza Granite

The Parguaza granite is an igneous rock with a Rapakivi texture that outcrops on both banks of the Orinoco River in the areas of interest of this work and is part of the rocks that make up the Guyanese Shield.

Textually, the term Rapakivi is used to describe rounded phenocrysts, composed of potassium feldspar, with smaller crystals of quartz, plagioclase, mafic (biotites and amphiboles) and accessory minerals. The Potassium feldspar phenocrysts are surrounded by sodium feldspars, round to rectangular in shape.

The outcropping rocks corresponding to the Granito de Parguaza unit appear as isolated domes with steep slopes and heights ranging between approximately 5-70m. Bangerter (1981), establishes two classes of Rapakivi Granite from Parguaza, classified according to the size of the feldspar crystals, Viborgite type, massive rock with very coarse grain, porphyry texture, with 7-8 cm phenocrysts, the pink

microcline-pertite nucleus with sodium-rich plagioclase border; and Peterlite type which is a porphyritic granite, but with smaller phenocrysts, composed of microcline-pertite. In both types, the most abundant mafic mineral is biotite, which is included in phenocrysts. The Parguaza Granite is crossed by medium to coarse-grained granite dikes, composed mainly of quartz and feldspar; and apolytic granites. Two types of pegmatite are also found, one with quartz crystals and potassium feldspar and biotite as the major mafic component and another quartz pegmatite in an advanced state of alteration.

The Parguaza granite has a large extension in the Venezuelan territory, where it has been assigned a Proterozoic age, it is also considered to be the rock that is related to the presence of coltan and REE in the region.

### 3.1.2 Recent Deposits

Recent deposits cover a large part of the areas of interest. They correspond to an unconsolidated unit composed of sandy mud sediments of undetermined thickness and age, with colors that vary between a light gray to yellowish-brown (Figure 33) of continental fluvial environments of various facies forming extensive savannas with little to no dissection that cover rocks Precambrian (Parguaza Granite). These sediments are mostly covered by grasses and sparse shrub vegetation.

### 3.1.3 Ferruginous crusts

This unit corresponds to rocky masses with high concentrations of iron, welded, very hard, with a granular porous texture with reddish colors.

They correspond to sediments related to drainage and the lower parts of granite bodies. They had probably been formed by weathering (dissolution of minerals with iron) of the Parguaza granite and subsequent leaching.

## 3.2 STRUCTURAL GEOLOGY

Japosat's work carried out in December 2020 - 2021 with satellite images identified guidelines in the East zone in the Puerto Carreño region (Sector AIO-1) in the vicinity of the request for Legalization of Mining in the deed LFH-14431X. The structural patterns found by the Japosat interpretation were defined by the changes in the direction of the drains, the lineaments of the igneous bodies, and the contrast in the radiance image (Fig. 2). Four patterns were established and verified in the field with vein and fracture data: N20E, N15W, N65E, N50W. Apparently, the most important guidelines are the direction N65E, one of which is easily observable in the northern part of the area, a guideline that controls the change of direction of the Bita river. In the area of the request for mining legalization LFH-14431X, Japosat also recognizes guidelines with address N45E - N65E, so deep sampling apiques were carried out in that area to find any geochemical anomaly related to these structures.

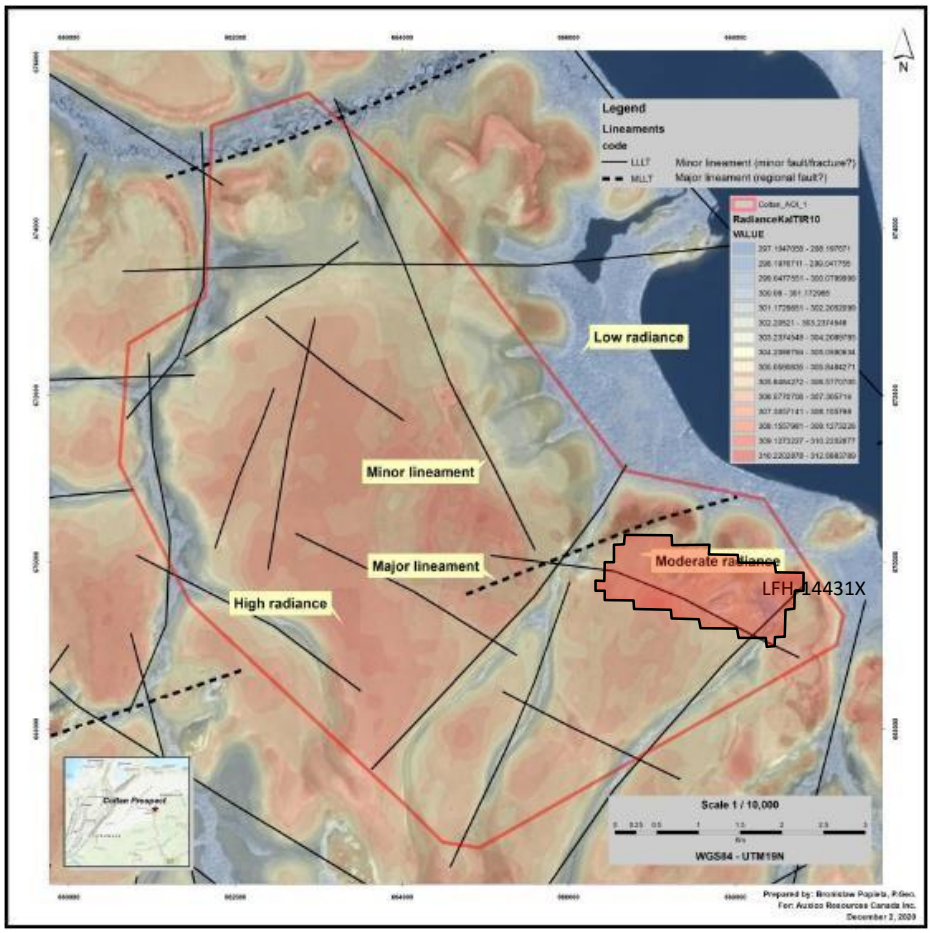



**Figure 2.** Image of radiance in the East (AOI-1) of interest with the guidelines interpreted. Taken and modified from Japosat, 2020.

## 4 LEGAL ASPECTS AND TENURE OF MINING PROPERTIES

### 4.1 In Venezuela

Land ownership in the visited area is exercised by Mr. Jimmy Ropero and Arturo Obregón in 2 “estates” or farms located in the town of Pijiguaos, municipality of Cedeño, State of Bolívar.

### 4.2 In Colombia

In the Western area (AIO-2 of the Japosat study) land ownership is held by the Guacamayas - Maipore indigenous community. According to Juan Guillermo García, members of the indigenous community have an artisanal mining exploitation permit which they carry out in partnership with him.

In the Eastern area (AIO-1 of the Japosat study) land ownership is divided as follows:

- In the southern part of the Pañuelo pipe, the land is owned by the Unda family.

- in the northern part of the Pañuelo pipe, the land is owned by the Bojonawi Reserve.

In the southern part of the AIO-1 area is the LFH-14431X mining legalization with an area of 189.79 ha (Fig. 3). The legalization of mining was requested and registered in the Mining Cadastre since June 17, 2010 and the owner is Mr. Clímaco Unda.

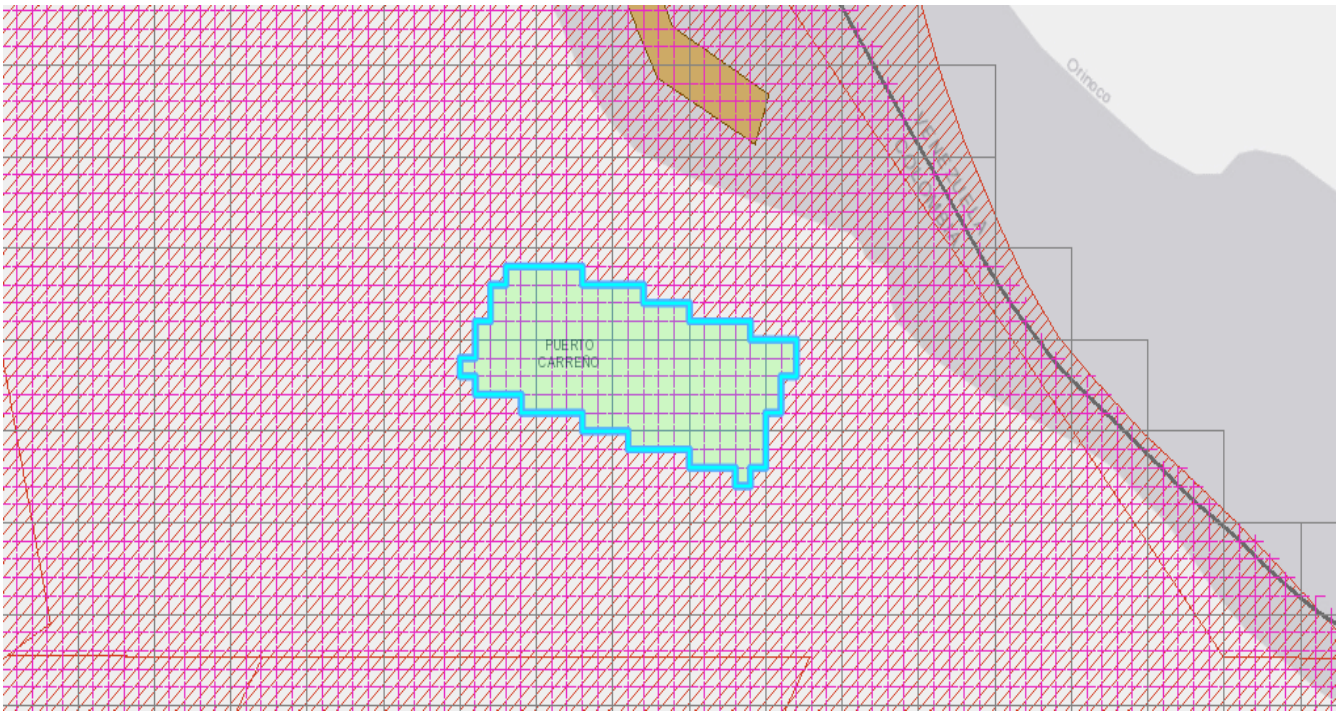



**Figure 3.** The Legalization of the deed LFH-14431X. Taken from the ANNA de ANM platform (National Mining Agency), 2021 .

## 5 SAMPLING (See sampling map attached to this report)

As mentioned above, in December 2020 Japosat proposed the sampling of rocks and sediments in the area of Colombia in each of the areas of interest with potential for coltan. The proposed sampling points are related to outcropping rocks in hills and soils.

For the AOI-1 area where the request for Mining Legalization of the deed LFH-14431X, Japosat proposed sampling in 4 outcropping hills (A, B, C, D) with 71 samples and the soils around the hills (Geobotlitho program) with a quantity of 41 samples. The total number of samples proposed by Japosat for the AOI-1 area was 112 samples. Of these 112 samples proposed by Japosat, only 78 samples were taken because the northern sector of the area past the Pañuelo River is a Natural Reserve called Bojonawi (Figure 4). Most of the points proposed in the hills of the AOI-1 area were sampled. Two samples of Bateo were also taken from the two rivers that cross the SW - NE zone at the edges of the Mining Legalization area, and another 5 additional rock samples in outcropping hills in the SE part of the AOI-1 area.

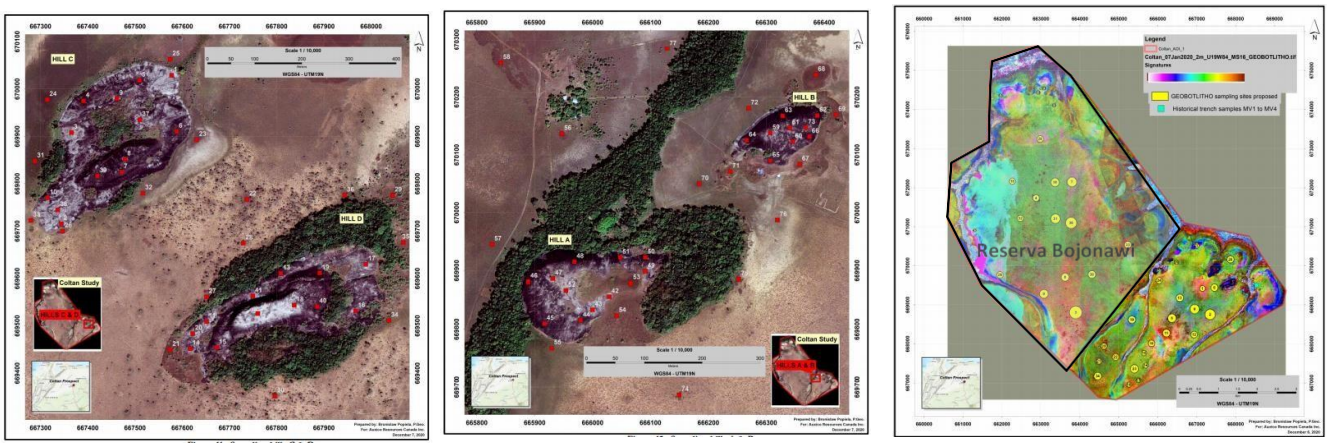



**Figure 4.** Outcropping rock sampling sites in hills A, B, C, D (red dots in the left and center images) and soils (yellow dots in the right image) proposed by Japosat for the AIO-1 area. Most of the rock points were sampled. Note that towards the north of the area with yellow dots of the Geobotlitho sampling program, it was not sampled because it is a Natural Reserve.

For the AOI-2 area in the Guacamayas Indigenous Reservation sector - Maipore Japosat proposed sampling in 10 outcropping hills (A, B, C, D, E, F, G, H, I, J) with a quantity of 40 samples, and the soils around the hills (Geobotlitho program) with a quantity of 25 samples. The total number of samples proposed by Japosat for the AOI-2 area was 65 samples. Of the 65 samples proposed by Japosat, only 7 samples were taken because the indigenous chief of the region told Juan Guillermo García that he did not want his presence in the Reserve.

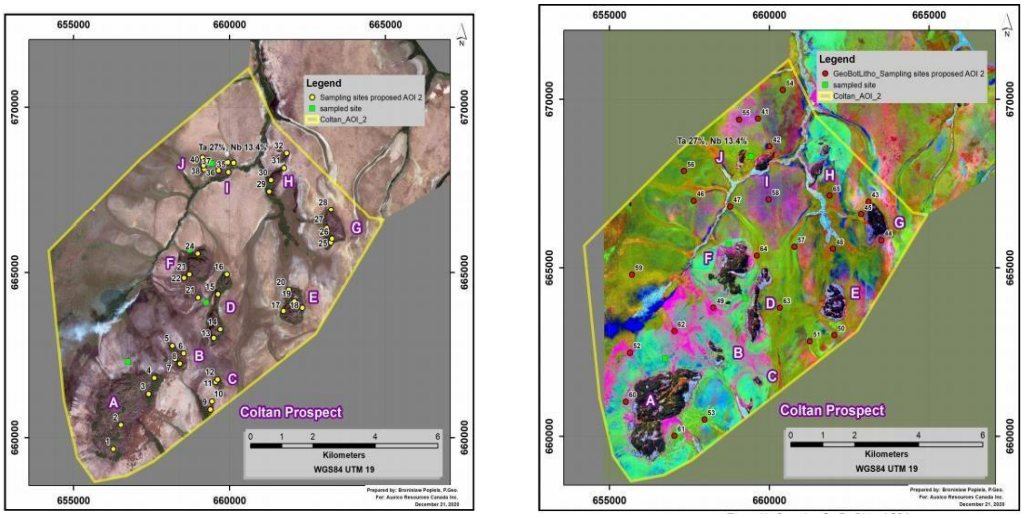



**Figure 5.** Sampling sites in outcropping rocks in hills A, B, C, D, E, F, G, H, I, J (yellow dots in the left image) and soils (red dots in the right image) ) proposed by Japosat for the AIO-2 area. Only 7 samples were taken in the AIO-2 area because the leader of the Reserve did not allow the geologist Miguel Jaramillo to stay in that place.

For the AIO-3 area in Venezuela, samples were taken freely without relation to any previously proposed program. The samples in the area were taken according to Mr. Jimmy Ropero's knowledge of the location of mineralizations in that area (Fig 6). In a recent report of January 15, 2021 after the lithology sampling and recognition program carried out by the geologist Miguel Jaramillo. Japosat has recommended sampling the area of the crest of the mountain chain in the area of interest to know other mineralization occurrences in the area. In the AIO-3 area in Venezuela, a total of 18 samples were taken: 14 samples of granite, pegmatites and lodes that cut granite, 4 samples of batea concentrate and mined material ready for processing.

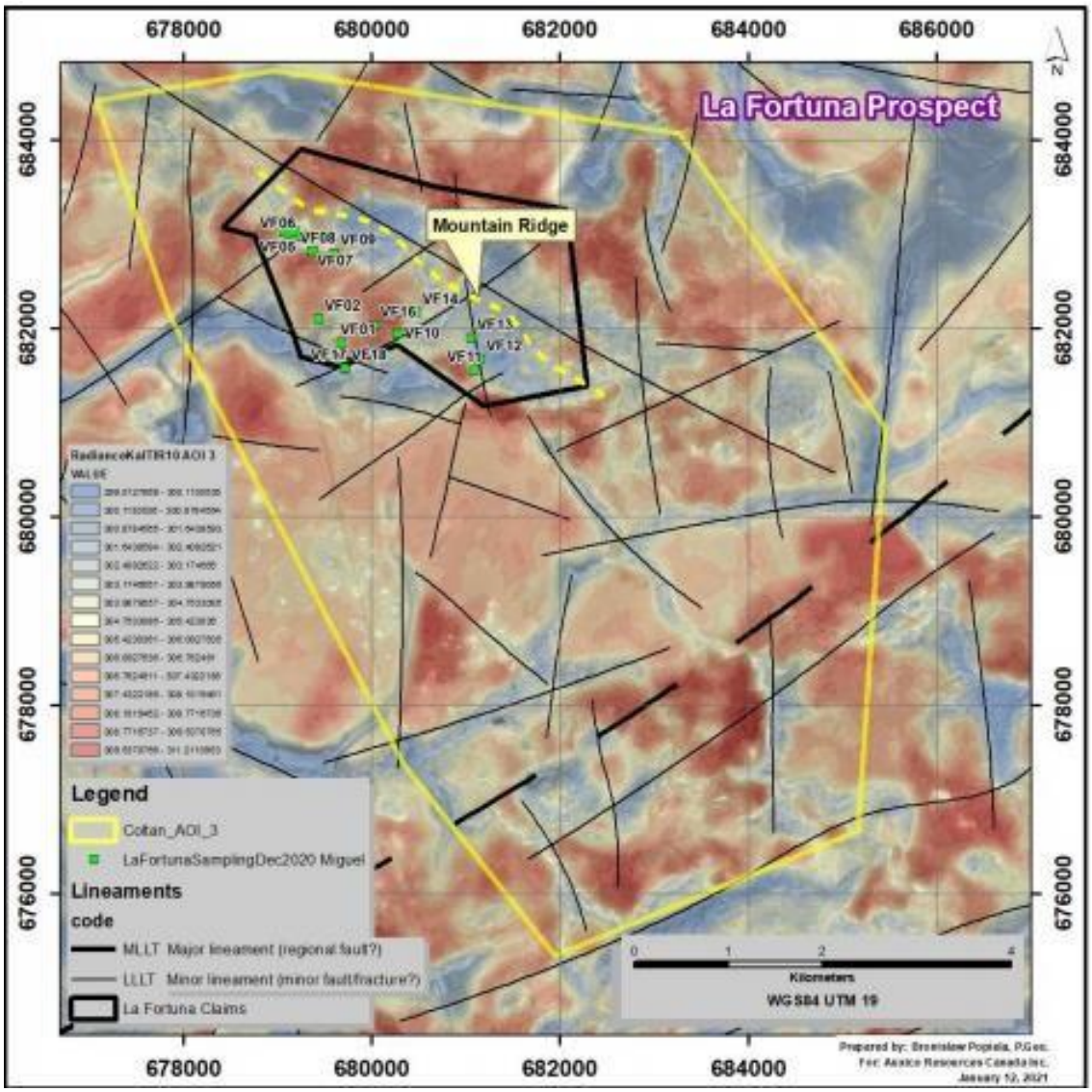



**Figure 6.** Sampling sites in outcropping rocks in areas with mineralization within the Ropero and Obregón farms (black polygon) in Venezuela. The japosat model shows that there is significant stress in the mountain range that crosses the area of interest.

## 5.1 TYPES OF SAMPLING

As mentioned above, Japosat proposed to sample rock and soils - sediments in the areas of AIO-1 and AIO-2 where some spectrometric anomaly was determined, or in the sites where it is required to know the type of lithology/mineralization or geochemical change in relation with the sites where Juan Guillermo García has found the coltan.

The rock sampling was carried out taking between 400 and 600 gr of outcropping rock at the points indicated by Japosat. For the sediments, a small hole was made between 15 and 25 cm deep from which between 350 and 600 g of the extracted material was taken. The level of accuracy of the GPS used is +/- 3 meters.

Given the interest of Auxico Resources on the mining property “Request for Legalization of mining, of deed LFH-14431X” in the AOI-1 area, sampling was intensified with the realization of 18 apiques of between 1.50 and 2.30 meters deep. A representative sample of the entire column of sediments was taken in each apique.

When any of the points were close to a vein, material was taken from the vein and from the box rock.

As previously mentioned for the AOI-3 area of Venezuela, a visit was made to points where coltan has been extracted by hand and there was no prior planning of points to be sampled. A quantity of material between 350 and 600 gr was taken at the points where rocks and sediments were present. A concentrate of bateo of the material was made and it represents 140 m3 of the material that was also accumulated to carry out the coltan selection process.

The presentation of the sampling works in the different areas is presented chronologically according to their execution.

### 5.1.1 SAMPLING IN THE VENEZUELAN AREA AOI-3

In the following table (table 3) is the relationship of samples and lithologies taken in the area of Venezuela with the geographical location in the WGS84 system and UTM-19 projection.

| VENEZUELA SAMPLES AOI-3 AREA | | | |
|---|---|---|---|
| ID (LABEL) | Coordinates WGS 84 / UTM zone 19N | | Lithology |
| | X | Y | |
| VF01 | 679679 | 681840 | Pegmatite |
| VF02 | 679440 | 682090 | Lode |
| VF03 | 679066 | 683018 | Pegmatite |
| VF04 | 679123 | 682993 | Piroxenite? Was not insitu. |
| VF05 | 679180 | 683029 | Granite |
| VF06 | 679253 | 682970 | Pegmatite |
| VF07 | 679357 | 682813 | Granite |
| VF08 | 679374 | 682813 | Lodes in granite |
| VF09 | 679601 | 682794 | Pegmatite |
| VF10 | 680277 | 681941 | Dump |
| VF11 | 681098 | 681553 | Granite with ferrous crust |
| VF12 | 681149 | 681670 | Granite with the ferrous crust. Coltan grains around |
| VF13 | 681058 | 681894 | Granite with ferrous crust |
| VF14 | 680475 | 682159 | Meteorized granite |
| VF15 | 680333 | 682160 | Sediment concentrate |
| VF16 | 680023 | 682022 | Ferrous oxydes in grains |
| VF17 | 679712 | 681568 | Heavy minerals selected from stockpile concentrate for processing |
| VF18 | 679712 | 681568 | Representative sample of the material collected for processing (140 m3 approx) |

**Table 3.** List of samples taken in Venezuela area AOI-3.

### 5.1.1.1 PHOTOGRAPHS OF THE MOST IMPORTANT GEOLOGICAL FEATURES IN RELATIONSHIP WITH SAMPLING FOR THE AREA OF VENEZUELA AOI-3

Panorama of the area

Pegmatite sample with coltan-tin mineralization. Nearby are coltan grains that have been released by meteorization difference.

Rust crusts that have formed around igneous rocks in the area.

Quartz veins with micas, coltan and tin mineralization.



Intensely weathered pegmatites with mineralization of coltan, tin, topaz, tungsten


Eluvial and alluvial placer deposits. This is the type of deposit of greatest interest to the locals as the exploitation requirements are minimal. Observe the amount of quartz fragments in the ore veins.

Infrastructure in the area of exploitation. There is an infrastructure that could be used for industrial exploitation. The exploitation in the area has been artisanal and temporary.

### 5.1.2 SAMPLING IN THE COLOMBIAN AREA OF PUERTO CARREÑO AOI-1

For the AOI-1 area, the sampling plan proposed by Japosat was followed. In order to differentiate the samples from the AOI-1 and AOI-2 areas, it was labeled as follows: The AOI-1 area that is to the East was labeled CCHA and the number proposed by Japosat, for example CCEHA46 means Colombia Carreño This hill A sample 46 In the northern part of the AOI-1 area there were some points proposed by Japosat from the Geobotlitho program that could not be sampled because the area is a Natural Reserve called Bojonawi. Additionally, 18 trenches were made in the area of the main guidelines interpreted by Japosat near the mining community LFH-14431X.

The following is a list of samples and lithologies taken in the area of Colombia AOI-1 with the geographical location in the WGS84 system, projection UTM-19:

| COLOMBIA Samples (AOI-1) Hills A and B | | | | | Lithology |
|---|---|---|---|---|---|
| Japosat proposal ID | This work ID | Label sample Hills AB, AOI- | Coordinates WGS 84 / UTM zone 19N X | Y | |
| 42 | 42 | CCEHA42 | 666028 | 669856 | Rapakivi textured granite |
| 43 | 43 | CCEHA43 | 665999 | 669833 | Rapakivi textured granite. Small sinkholes |
| 44 | 44 | CCEHA44 | 665979 | 669815 | Rapakivi textured granite |
| 45 | 45 | CCEHA45 | 665916 | 669809 | Rapakivi textured granite |
| 46 | 46 | CCEHA46 | 665888 | 669881 | Rapakivi textured granite |
| 47 | 47 | CCEHA47 | 665931 | 669886 | Rapakivi textured granite. Small sinkholes with sediments |
| 49 | 49 | CCEHA49 | 666091 | 669898 | Rapakivi textured granite. Small sinkholes with sediments |
| 50 | 50 | CCEHA50 | 666091 | 669922 | Rapakivi textured granite |
| 51 | 51 | CCEHA51 | 666047 | 669922 | The iron crust in the upper 10 cm. Quartz sand down. |
| 52 | 52 | CCEHA52 | 665953 | 669866 | Rapakivi textured granite. Small sinkholes with sediments |
| 53 | 53 | CCEHA53 | 666065 | 669878 | Iron crust |
| 54 | 54 | CCEHA54 | 666041 | 669823 | Iron crust. Fragments of sandstones medium grain size. |
| 55 | 55 | CCEHA55 | 665929 | 669767 | Sandy soil |
| 74 | 74 | CCEHA74 | 665947 | 670136 | Iron crust |
| 59 | 59 | CCEHB59 | 666306 | 670137 | Rapakivi textured granite |
| 60 | 60 | CCEHB60 | 666345 | 670122 | Wheatered Rapakivi textured granite. Small sinkholes with sediments |
| 61 | 61 | CCEHB61 | 666340 | 670146 | Rapakivi textured granite |
| 62 | 62 | CCEHB62 | 666387 | 670167 | Rapakivi textured granite |
| 63 | 63 | CCEHB63 | 666328 | 670167 | Rapakivi textured granite. Biotite altering to chlorite? |
| 64 | 64 | CCEHB64 | 666265 | 670125 | Rapakivi textured granite |
| 65 | 65 | CCEHB65 | 666306 | 670090 | Rapakivi textured granite |
| 66 | 66 | CCEHB66 | 666374 | 670131 | Rapakivi textured granite |
| 67 | 67 | CCEHB67 | 666357 | 670083 | Iron crust and sandstone coarse grain size with oxyde-kaolin matrix |
| 68 | 68 | CCEHB68 | 666385 | 670238 | Iron crust |
| 69 | 69 | CCEHB69 | 666420 | 670169 | Iron crust |
| 70 | 70 | CCEHB70 | 666184 | 670049 | Sandy soil |
| 71 | 71 | CCEHB71 | 666237 | 670071 | Iron crust and sandstone medium grain size with oxyde matrix |
| 72 | 72 | CCEHB72 | 666269 | 670180 | Sandy soil |
| 73 | 73 | CCEHB73 | 666368 | 670147 | Rapakivi textured granite |
| 76 | 76 | CCEHB76 | 666319 | 669987 | Sandy soil |

**Table 4.** List of samples of the A and B hills of the sampling program in the AOI-1 area of Puerto Carreño

| COLOMBIA Samples (AOI-1) Hills C and D | | | | | Lithology |
|---|---|---|---|---|---|
| Japosat proposal ID | This work ID | Label sample Hills CD, AOI-1 | Coordinates WGS 84 / UTM zone 19N X | Y | |
| 1 | 1 | CCEHC01 | 667577 | 670929 | Rapakivi textured granite and quartz lode |
| 2 | 2 | CCEHC02 | 667344 | 669715 | Wheatered Rapakivi textured granite |
| 3 | 3 | CCEHC03 | 667365 | 669908 | Rapakivi textured granite |
| 4 | 4 | CCEHC04 | 667391 | 669975 | Rapakivi textured granite |
| 5 | 5 | CCEHC05 | 667509 | 670018 | Rapakivi textured granite |
| 6 | 6 | CCEHC06 | 667588 | 669910 | Rapakivi textured granite |
| 7 | 7 | CCEHC07 | 667471 | 669824 | Wheatered Rapakivi textured granite |
| 8 | 8 | CCEHC08 | 667478 | 669851 | Wheatered Rapakivi textured granite. Small sinkholes |
| 9 | 9 | CCEHC09 | 667461 | 669979 | Rapakivi textured granite. Quartz veins E-W |
| 10 | 10 | CCEHC10 | 667314 | 669770 | Rapakivi textured granite |
| 23 | 23 | CCEHC23 | 667630 | 669892 | Sand |
| 24 | 24 | CCEHC24 | 667314 | 669977 | Sandy soil |
| 25 | 25 | CCEHC25 | 667574 | 670062 | Sandy soil |
| 26 | 26 | CCEHC26 | 667346 | 669700 | Iron crust in the upper 10 cm. Quartz sand down. |
| 31 | 31 | CCEHC31 | 667287 | 669848 | Sandy soil |
| 32 | 32 | CCEHC32 | 667516 | 669780 | Sandy soil |
| 33 | 33 | CCEHC33 | 667279 | 669722 | Coarse sand |
| 37 | 37 | CCEHC37 | 667510 | 669935 | Aplite lode |
| 38 | 38 | CCEHC38 | 667336 | 669744 | Rapakivi textured granite |
| 39 | 39 | CCEHC39 | 667420 | 669816 | Rapakivi textured granite |
| 11 | 11 | CCEHD11 | 667651 | 669509 | Small sinkholes filled with sediments from granite |
| 12 | 12 | CCEHD12 | 667760 | 669526 | Rapakivi textured granite |
| 13 | 13 | CCEHD13 | 667808 | 669610 | Rapakivi textured granite |
| 14 | 14 | CCEHD14 | 667616 | 669452 | Wheatered Rapakivi textured granite |
| 15 | 15 | CCEHD15 | 667673 | 669454 | Wheatered Rapakivi textured granite |
| 16 | 16 | CCEHD16 | 667967 | 669531 | Rapakivi textured granite |
| 17 | 17 | CCEHD17 | 667988 | 669630 | Rapakivi textured granite |
| 18 | 18 | CCEHD18 | 667837 | 669543 | Wheatered Rapakivi textured granite |
| 19 | 19 | CCEHD19 | 667891 | 669611 | Wheatered Rapakivi textured granite |
| 20 | 20 | CCEHD20 | 667622 | 669483 | Wheatered Rapakivi textured granite |
| 21 | 21 | CCEHD21 | 667574 | 669449 | Iron crust in the upper 10 cm. Quartz sand down. |
| 22 | 22 | CCEHD22 | 667736 | 669767 | Sandy soil |
| 27 | 27 | CCEHD27 | 667651 | 669561 | Sandy soil |
| 28 | 28 | CCEHD28 | 667729 | 669674 | Sandy soil |
| 29 | 29 | CCEHD29 | 668045 | 669775 | Sandy soil with oxides |
| 34 | 34 | CCEHD34 | 668037 | 669511 | Rapakivi textured granite |
| 35 | 35 | CCEHD35 | 668068 | 669676 | Sandy soil with oxides |
| 36 | 36 | CCEHD36 | 667944 | 669775 | Sandy soil |
| 40 | 40 | CCEHD40 | 667885 | 669540 | Wheatered Rapakivi textured granite |
| 41 | 41 | CCEHD41 | 667749 | 669563 | Wheatered Rapakivi textured granite |

**Table 5.** List of samples of the C and D hills of the sampling program in the AOI-1 area of Puerto Carreño.

| COLOMBIA Samples (AOI-1) Geobotlitho | | | | | Lithology |
|---|---|---|---|---|---|
| Geobotlitho Japosat | This work ID | Label sample GeoBotLitho | Coordinates WGS 84 / UTM zone 19N | | |
| | | | X | Y | |
| 1 | 77 | CCEBT01 | 667148 | 669416 | Sandy soil |
| 2 | 78 | CCEBT02 | 667344 | 668754 | Sandy soil |
| 5 | 79 | CCEBT05 | 666365 | 668659 | Sandy soil |
| 6 | 80 | CCEBT06 | 666947 | 668892 | Sandy soil |
| 11 | 81 | CCEBT11 | 666222 | 668278 | Sandy soil |
| 12 | 82 | CCEBT12 | 666937 | 668241 | Sandy soil |
| 13 | 83 | CCEBT13 | 666566 | 669178 | Sandy soil |
| 24 | 84 | CCEBT24 | 666037 | 669617 | Sandy soil |
| **COLOMBIA Additional Samples (AOI-1)** | | | | | **Lithology** |
| **This work ID** | | **Label sample GeoBotLitho** | **Coordinates WGS 84 / UTM zone 19N** | | |
| | | | **X** | **Y** | |
| 85 | | Entremorichales | 668885 | 667668 | Iron crust and sandstone coarse grain size with oxyde matrix |
| 86 | | CCEHE01 | 666625 | 664589 | Rapakivi textured granite |
| 87 | | CCEHF01 | 668534 | 666035 | Rapakivi textured granite |
| 88 | | CCEO01 | 671551 | 666912 | Quartz lode. |
| 89 | | CCEO02 | 671376 | 666912 | Rapakivi Pegmetitic textured granite. |

**Table 6.** List of Samples of the Geobotlitho program and additional points in the AOI-1 area of Puerto Carreño.

### 5.1.2.1 SAMPLING IN APIQUES AND ACTIVE SEDIMENTS IN THE AREA OF PUERTO CARREÑO COLOMBIA AOI-1, IN AND AROUND THE LEGALIZATION OF MINING LHF-14431X

In the course of the sampling works, the importance of having more data in the unconsolidated deposits and the iron crusts that cover the intrusive bodies was seen due to the following reasons:

- They cover most of the area of interest in Puerto Carreño
- They would form a placer deposit in which several miners such as Juan Guillermo García - Guacamayas indigenous community - Maipore and operators of the legalization of mining in the deed LFH- 14431X have been exploiting coltan.
- The thickness of the sediments that would make up the placer deposit and the different levels with the mineral of interest are unknown.
- Relationships between the possible deposits of interest and the structural guidelines that may give rise or control mineralization are unknown.

For the above reasons, the decision was made to make 18 apiques with depths between 1.6 and 2.2 meters. The information that the realization of the apiques yielded is the following:

-The thickness of the unconsolidated sediments varies according to the paleoforms of the igneous bodies covered by them. In general, close to the places where granite bodies are exposed, a smaller thickness of sediments could be observed covering the granite whose grains of potassium feldspars weather kaolin.

In the case of apique T12, an old well over 6 meters deep was used. According to the inhabitants, the rock was not found at this site. Due to the above, it is suggested that there may be places where the thickness of the unconsolidated deposits may be greater, and a geophysical geoelectric resistivity study was required to make a model of the thickness of the unconsolidated sediments.

-The general column of sediments that cover the intrusive bodies from the apiques can be observed in a trench where the miners have carried out exploitation on the eastern side of the legalization LFH-14431X (Fig. 7)

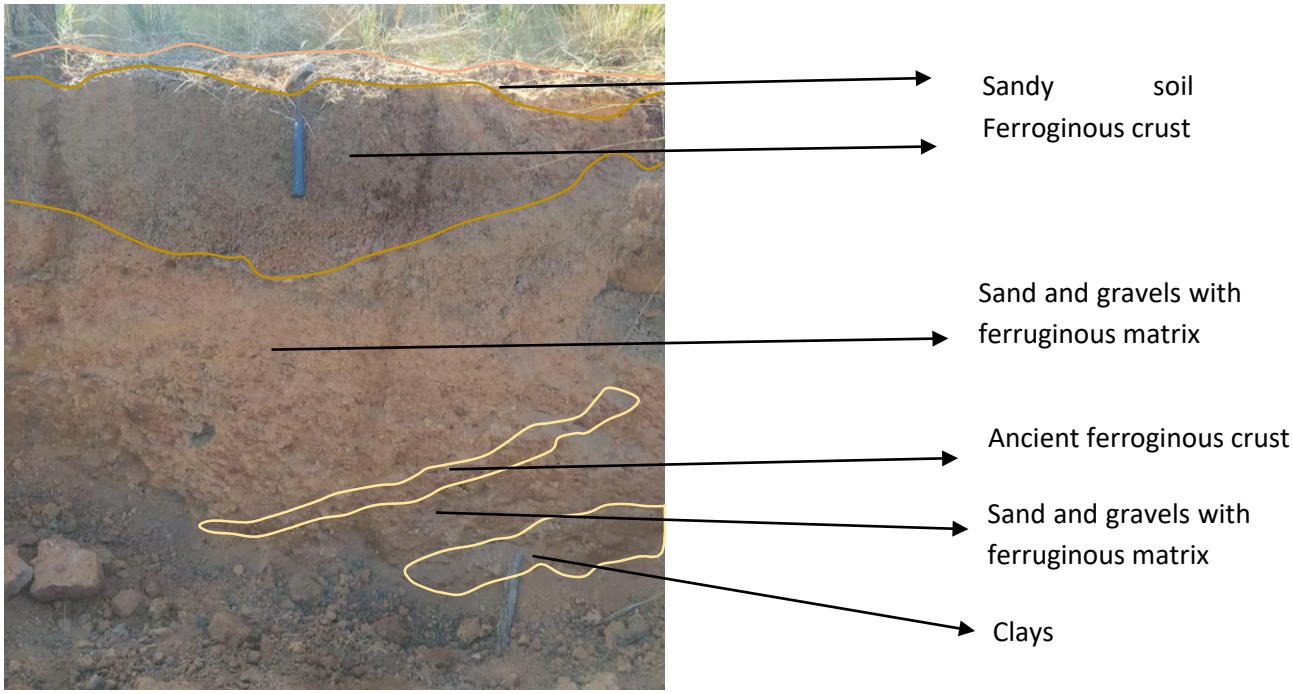



**Figure 7.** Column or general profile of the unconsolidated sediments that cover the intrusive bodies and in which mining has been carried out to obtain coltan. Trench 05 shows CCET05P, coordinates WGS84 projection UTM 19N X = 668534 Y = 669505

A representative sample of the entire thickness cut with the apique was taken. The trenches T01, T02, and T03 reached a weathered basement corresponding to weathered granite to kaolin-type clays (Fig. 8). In all 3 cases, a sample was taken from the section of unconsolidated sediments and fragments of the rock found. Additionally, two active sediment samples P1 and P2 were taken in the two most important currents that cross the area.

**Figure 8.** In trenches T01, T02, and T03 the trenches cut rock. Notice the white clay (kaolin) product of the weathering of the granite.

The trenches were made covering the area of the LFH-14431X legalization and close to the main lines interpreted by Japosat in the satellite images (Fig. 9).

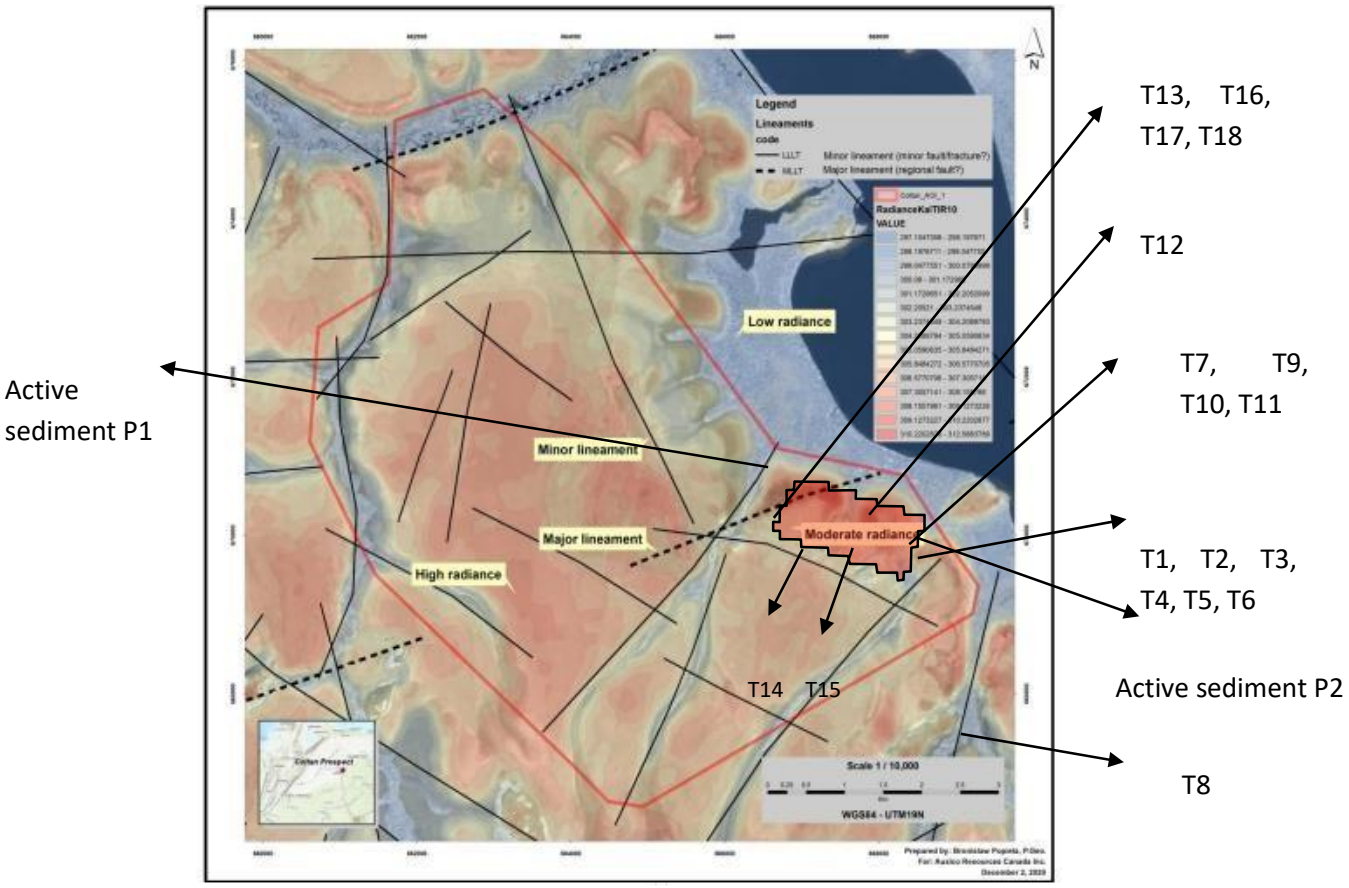



**Figure 9.** Location of the trenches made in connection with the LFH-14431X legalization and the structures.

The following is the list of trenches and lithologies in the AOI-1 area of Colombia with the geographical location in the WGS84 projection UTM-19 system (Table 7).

| Samples from trenches and pan in the LFH-14431X Application | | | | |
|---|---|---|---|---|
| This work ID | Label sample ID | Coordinates WGS 84 / UTM zone 19N | | Depth (m) |
| | | X | Y | |
| T1 | CCET01R | 668600 | 669503 | 1,6 |
| T2 | CCET02R | 668609 | 669504 | 1,7 |
| T3 | CCET03R | 668614 | 669485 | 1,8 |
| T4 | CCET04P | 688575 | 669507 | 2 |
| T5 | CCET05P | 668534 | 669505 | 2 |
| T6 | CCET06P | 668530 | 669539 | 2,1 |
| T7 | CCET07P | 668215 | 669753 | 0,3 |
| T8 | CCET08P | 671406 | 666987 | 0,25 |
| T9 | CCET09P | 668260 | 669834 | 2 |
| T10 | CCET10P | 668299 | 669903 | 2 |
| T11 | CCET11P | 668340 | 669974 | 2 |
| T12 | CCET12P | 667873 | 670160 | 6 |
| T13 | CCET13P | 666284 | 669855 | 2 |
| T14 | CCET14P | 666861 | 669698 | 2,1 |
| T15 | CCET15P | 667532 | 669543 | 2,2 |
| P1 | CCEB01 | 666527 | 671039 | Pan |
| P2 | CCEB02 | 668582 | 670103 | Pan |
| T16 | CCET16P | 666329 | 670258 | 2 |
| T17 | CCET17P | 666485 | 670363 | 2 |
| T18 | CCET18P | 666624 | 670467 | 2 |

**Tabla 7.** List of samples from trenches in the AOI-1 area near the Mining Legalization of the property LFH-14431X.

### 5.1.3 SAMPLING IN THE ÁREA OF PUERTO CARRENO AOI-2

In the AOI-2 area, only 7 samples could be taken because the indigenous leader of the Guacamayas-Maipore reservation that covers the entire area did not permit the team to continue sampling. In order to differentiate the samples from the AOI-1 and AOI-2 areas, they were labeled as follows: The AOI-2 area that is to the west was labeled CCWHF and the number proposed by Japosat, for example, CCWHF23 means Colombia Carreño Oeste hill F sample 23. The following is a list of samples and lithologies taken in the AOI-2 area of Colombia with the geographical location in the WGS84 system and UTM-19 projection:

| COLOMBIA Samples (AOI-2) | | | | | Lithology |
|---|---|---|---|---|---|
| Japosat proposal ID | This work ID | Label samples Hills A to J | Coordinates WGS 84 / UTM zone 19N X | Y | |
| 57 | 90 | CCWBT57 | 660784 | 665626 | Sandy soil |
| 22 | 91 | CCWHF22 | 658539 | 664832 | Rapakivi textured granite |
| 23 | 92 | CCWHF23 | 658713 | 664941 | Rapakivi textured granite |
| 49 | 93 | CCWBT49 | 658254 | 663817 | Sandy soil |
| 15 | 94 | CCWHD15 | 659627 | 664345 | Rapakivi textured granite |
| 21 | 95 | CCWHF21 | 658991 | 664238 | Rapakivi textured granite |
| 35 | 96 | CCWHI35 | 659965 | 668041 | Sandy soil |

**Tabla 8.** List of samples from the sampling program in the AOI-2 area of Puerto Carreño.

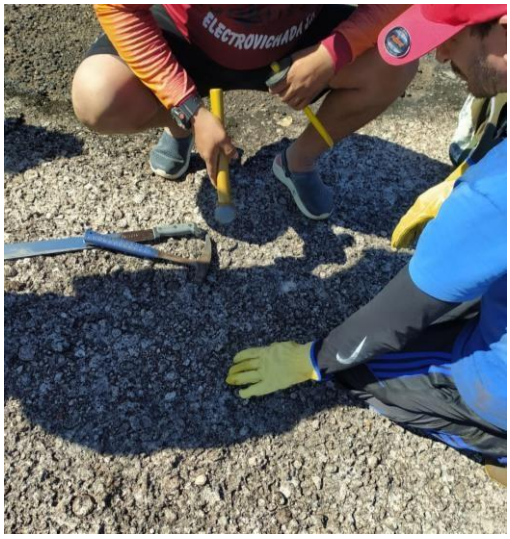
### 5.1.4 PHOTOGRAPHS OF THE MOST IMPORTANT GEOLOGICAL FEATURES CONCERNING SAMPLING FOR THE AOI-1 AND AOI-2 AREAS OF COLOMBIA

The same types of rocks that were observed in the well-known Venezuelan deposit are observed inside and around the Auxico property: Parguaza granite, quartz veins, pegmatites, iron oxide crusts.

**REVIEWING PREVIOUS WORK IN THE AREA OF THE MINING PROPERTY**

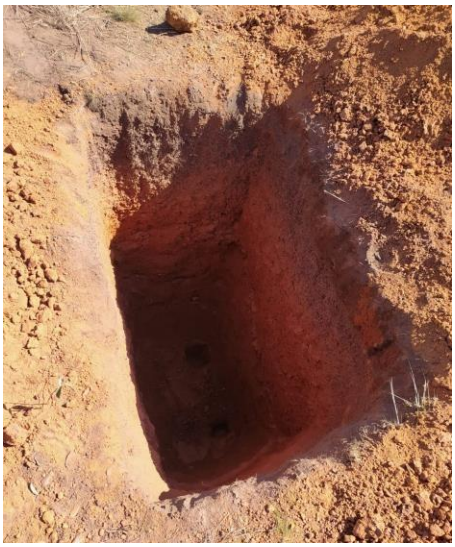
Small artisanal mining works have been carried out on the property of LFH-14431X in which material from surface oxides has been extracted.

**SAMPLING FROM THE SATELLITE MODEL**




Japosat performed a satellite interpretation and proposed sampling points. The Japosat program was carried out 85% in the AIO-1 area of interest inside and around the LFH-14431X mining property. The proposed model was successful in terms of coincidence in the presence of igneous rocks, locally pegmatites and soils with oxides.

**DEEPER SAMPLING AT SITES RELATED TO GEOLOGICAL STRUCTURES INTERPRETED BY JAPOSAT**



18 trenches were made around the mining property in order to have better information on the different levels within the alluvial deposit. The entire column of sediment has oxides. In most of the area, a higher level of higher concentration of oxides 20 to 40 cm thick was observed. Lower levels were occasionally seen with thinner oxide concentrations

**SAMPLING OF ACTIVE SEDIMENTS IN CURRENTS WITHIN THE PROPERTY**

Active sediment samples were taken from the lower reaches of the two streams that run through the property. In the images, you can see dense dark mineral particles in the stream bed and the result of batting sampling.

**TAKING DATA IN THE AREA OF INTEREST IN COLOMBIA**


Geological data was taken outside the LHF-14431X property in the SE zone to determine other sites that may contain or be the contribution zone of the sediments with oxides and coltan. Quartz vein zones, oxide zones and old dunes are suspected of contain mineralization.

## 6. POTENTIAL OF COLTAN IN THE AREAS WHERE THE SAMPLING WAS PERFORMED IN THIS WORK.

### 6.1 IN VENEZUELA

In the Venezuela AOI-3 area, a good exposure of granitic rocks with pegmatite texture was observed, which in some sectors present good mineralization of coltan and tin. As we saw in Table 1, the analyzes show various minerals with high potential such as Scandium, perhaps related to other rare earths. The sub consolidated sediments that surround the hills where granitic rocks with primary mineralization outcrop have a high potential since most of the coltan in the region has been obtained from there. The potential of the Venezuela area for industrial mining is high both in the rocks with primary mineralization and in the alluvial and eluvial deposits. The chain of mountains that present primary mineralization covers an area of more than 3 km and evidence of mineralization was obtained in the most NW part in an approximate area of 500 m X 200 m = 100,000 m2. These mineralized igneous bodies usually continue at depth. In this case, taking the depth of mineralization to only 100 meters, with which the volume of rock with the potential to be mined for coltan and scandium is 100,000 m2 X 100 m = 10,000,000 m3. The analysis of the samples can give us data to work with, but inferring that the coltan content is 0.3%, we would find that the potential of coltan resources in the primary mineralization of Venezuela is 30,000 m3 of coltan, which with an average density of 6 gr / cm3, meaning 180,000 tons of coltan with a Ta2O5 content of 25%.

The sub consolidated sediments that surround the igneous bodies and that are those that have been exploited until now are found in an area of 3,000,000 m2 in the properties visited. It was observed that the thickness of these sediments is between 30 cm and more than 6 meters, with an average thickness of 2 meters, which means a volume of 6,000,000 m3 of alluvial and eluvial material with coltan. Data provided by the miners on the content of coltan in the sediments is 0.25% coltan, which means that we would have 15,000 m3 of coltan. With an average density of 6 gr / cm3, it means that the potential of coltan resources in the placer-type mineralization in Venezuela is 90,000 tons of coltan with a Ta2O5 content of 25%.

### 6.2 In Colombia

Based on the exploitation and production data provided by Mr. Juan Guillermo García, the great potential of Colombia in the AIO-2 areas of the Guacamayas - Maipore reserve and AIO-1 of the LFH-14431X mining property is found in the placer deposits of alluvial material. The primary mineralization of coltan in the igneous rocks of the Puerto Carreño region is not clear. The data from the samples taken for this work will reveal to us whether we can consider it or not. The exploitations of Mr. Juan Guillermo García in the area have not given us precise data on the content of coltan in the sediments, but if the presence of this material is demonstrated with the samples taken, a geophysical and drilling campaign will be required to establish the different sediment levels with deep mineralization. If the coltan content in the sediments of the Colombia area is similar to that of Venezuela, that is 0.25%, the potential could be:

6.2.1 In the Guacamayas Reserve - Maipore area where Mr. Juan Guillermo García :

- Maipore Guacamayas Reserve area: 17000 ha
- Guacamayas Maipore reserve area with recent sediments that may contain coltan: 4000 ha approximately.
- The average thickness of the alluvial levels with coltan mineralization: iron crusted soil and some other lower-level of crusts as observed: 0.5 meters.
- The potential volume of material with coltan: 20,000,000 m3.
- The estimated tenor of coltan according to comparison with the area of Venezuela: 0.25%
- The potential volume of coltan in the sediments of the Guacamayas - Maipore reservation area: 50,000 m3, the average density of coltan is 6 gr / cm3.
- Coltan potential in the sediments of the Guacamayas - Maipore reservation area: 300,000 tons with a content of 27% of Ta2O5 according to quality data reported by Mr. Juan Guillermo García.

6.2.2 In the area of the mining property LFH-14431X;

As in the case of the Guacamayas-Maipore reservation area, it is required to have data from the samples to establish the content of coltan in the primary mineralization, therefore, its potential will not be estimated. With the data provided by Mr. Juan Guillermo García and by the operators of the area, the potential of coltan resources in the area of the mining property LFH-14431X will be estimated by:

- Mining property area: 189.79 ha
- Approximate area of the property that has alluvial sediments: 120 ha
- The average thickness of the alluvial levels with coltan mineralization: iron crusted soil and some other lower-level of crusts as observed: 0.5 meters
- The potential volume of material with coltan: 600,000 m3
- Coltan tenor estimated in sediments from data in Venezuela: 0.25%. The average density of coltan is 6 gr / cm3
- Coltan potential in the sediments of the area of the mining property LFH-14431X: 9,000 tons with a content of 27% of Ta2O5, according to quality data reported in the area near the Guacamayas – Maipore reservation.

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