NI43-101 Technical Report
San Francisco Copper Gold Project, San Juan Province, Argentina.

Prepared for

Turmalina Copper Corporation
Vancouver, British Columbia, Canada

Figure 1 San Francisco mine quartz tourmaline breccia and sulphide matrix

by:

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Effective Date: August 1, 2019

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Disclaimer

This Technical Report (Report) has been prepared for Turmalina Copper Corp. by Neil Motton, FSEG, MAusIMM, CP Geology, a qualified person as defined under National Instrument NI 43-101, based on assumptions as identified throughout the text and upon information and data supplied by others.

The report is to be read in the context of the methodology, procedures and techniques used, the author's assumptions, and the circumstances and constraints under which the report was written. The report is to be read as a whole and sections or parts thereof should therefore not be read or relied upon out of context.

The author has, in preparing the Report, followed methodology and procedures, and exercised due care consistent with the intended level of accuracy, using his professional judgment and reasonable care.

CERTIFICATE OF QUALIFIED PERSON

CERTIFICATE Neil Motton

I, Neil Trevor Motton, MAusIMM, CP Geo., FSEG, do hereby certify that:

1. I am the Principal Geologist and Director of Flitegold P/L registered at:

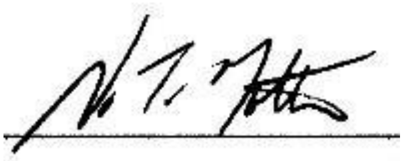
Flitegold Pty Ltd
60 Breen Street,
Bendigo
Victoria, Australia, 3350.

This Certificate is made in relation to a technical report entitled "NI43-101 Report for Turmalina Copper Corporation on the San Francisco Copper Gold Project, San Juan Province, Argentina" and dated 1st August 2019.

1. I graduated with a Bachelor of Applied Science majoring in Geology from Ballarat University College, Ballarat, Victoria, Australia in 1985 and later gained an Honours Degree in 1989 from the same institution.
2. I am a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM) and I am an accredited Chartered Professional in the field of Geology. I am also a Fellow of the Society of Economic Geologists (FSEG).
3. I have worked as a geologist for a total of 34 years since graduation in the gold, base metals, industrial minerals and environmental management industries including exploration, environmental management, project development, mine geology and engineering services, consulting and public company management. Commodity experience includes copper, gold, silver, molybdenum, lead, zinc, nickel, chromium, silica and industrial quarry products. I have operated throughout The Philippines and Australia and have experience in Peru, Ecuador, Jamaica and Argentina. Of relevance to this Project is my experience of more than 30 years taking part in and managing exploration for copper and gold projects.
4. I have read National Instrument 43-101 and Form 43-101 F1, and the Technical Report has been prepared in compliance with that instrument and form.
5. I have read the definition of Qualified Person set out in National Instrument 43-101 (NI43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a Qualified Person for the purposes of NI 43-101.
6. For the purposes of the Technical Report entitled: "NI43-101 Report for Turmalina Copper Corporation on the San Francisco Copper Gold Project, San Juan Province, Argentina", I wrote this report and made the proposals for work contained therein.
7. I visited the property and its field offices from 20th February to 25th February 2019. During the site visit I reviewed the geological maps, drill logs, drill core and all other pertinent data from the archives and I spoke to and interviewed Turmalina's geologists as well as former Petra Gold geologists who previously worked on the project. I also visited the key prospect sites including San Francisco mine, Quebrada Seca, Chorrillos and other sites.
8. At the effective date of the technical report, to the best of the author's knowledge, information, and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
10. I am independent of the issuer applying all of the tests in Section 1.5 of NI 43-101.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
12. I have no direct or indirect interest in the property that is the subject of this report and I am independent of the Vendor and the Property.
13. I do not hold shares in Turmalina Copper Corporation or its associated companies.
14. I will receive only normal consulting fees for the preparation of this report.
15. I take responsibility for the item or items presented in this technical report.
16. I have not had any prior involvement with the Property, that is the subject of this technical report.

Dated: 1st August 2019



Signature of Qualified Person

Neil Trevor Motton

1 Summary

The San Francisco property is a 3,399-hectare property located in San Juan Province, Argentina within the Frontal Cordillera mountain chain. The San Francisco project is comprised of two separate sets of tenements that have been farmed in to by Turmalina Copper Corporation (TCC). The smaller group of tenements comprised of 24 hectares and covers the old San Francisco de los Andes mine and the surrounding regional tenements of 3375 hectares owned by the Petra Gold Group.

The current owners of the regional tenements (the Petra Gold group), not including San Francisco De Los Andes and Jose Mario tenements, signed in September 2018 an exploration contract which includes the purchase option with Turmalina Copper Corp (TCC). This contract requires 7000 meters of drilling & USD$1,050,000 to be spent over four years, as well as annual option payments amounting to a total of USD$1.46M over four years to acquire 100% of the regional tenements. They also signed a document and handed on the mining authority, in which to authorize the exploration of the mining right to Aurora Mining SA (A 100% Argentine subsidiary of TCC) and the owners are voluntarily inhibited from executing any other act or contract against the mining authority.

As a separate contract, the current owners of the San Francisco De Los Andes (Cerro Negro SRL) and Jose Mario tenements (Mr. Ricardo Meritello), signed in September 2018 an exploration contract which includes the purchase option with TCC. This contract requires USD$2,050,000 to be spent over four years, as well as annual option payments amounting to a total of USD$1.445M over four years to acquire 100% of these tenements. They also signed a document and handed on the mining authority, in which to authorize the exploration of the mining right to Aurora Mining SA (A 100% Argentine subsidiary of TCC) and the owners are voluntarily inhibited from executing any other act or contract against the mining authority.

The geology at San Francisco consists of Late Permian diorite, granodiorite and quartz monzonite intrusives emplaced into Carboniferous sediments of the Agua Negra Formation. The intrusive rocks are part of a regional magmatic suite that are known to host porphyry-style copper and tourmaline breccia polymetallic base and precious metal type mineralization. Mineralization at the San Francisco project is of the tourmaline breccia style, but also includes quartz veins, which are predominantly gold, silver and copper rich that are considered to be synchronous to the mineralization of the tourmaline breccias.

The exploration concept at San Francisco is to test the multiple breccia pipes present within the project, which may create sufficient ores for a central processing facility.

To date five companies have conducted small scale mining or exploration at the San Francisco project, collecting over 2000 rock chip and soil samples. Two independent ground geophysical surveys have been completed with IP geophysics over various target areas and three limited drilling campaigns have occurred within the project, all with encouraging results for a total of 22 holes. Seven holes have been drilled at the San Francisco copper-gold mine and the remaining holes have been drilled as scout holes on various prospects.

The best drilling results are summarised as follows;

Hole ID	From	To	Interval	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Bi ppm	Prospect	Assays
DDH05	44.35	84.25	39.90	3.88	71.14	10958	2377	946	918	San Francisco	resampled
DDH_P2	25.65	66.00	40.35	4.88	43.36	8323	4630	2373	470	San Francisco	old
DDH04	42.50	74.25	31.75	3.05	56.26	9829	5872	3485	359	San Francisco	old
DDH02	35.55	92.65	57.10	2.04	118.91	4669	21931	5753	147	San Francisco	resampled
DDH-ET-0801	109.3	157.3	48.00	0.02	4.74	6279	1160	949	14	Chorrillos	

Table 1 Best Drill Intersections from the San Francisco Project.

The drilling results confirm that the San Francisco mine has excellent potential for a polymetallic medium to high grade deposit, which is limited in area extent but probably vertically continuous. Chorrillos appears to be similar in style but predominantly copper mineralised based upon the results to date.

Mineralisation within the vertical breccia pipes is largely vertical and so these intersections do not constitute true widths and in some cases the drilling is actually down dip (i.e. vertical).

In terms of the overall project, previous mapping programs have established that there are 62 breccia outcrops of elongated to circular shapes and ranging up to 6.3 hectares in areal extent mapped within the project. Most of these mapped breccias have never been sampled and this indicates that the project has considerable potential for the discovery of further polymetallic base and precious metal tourmaline breccia pipe type deposits.

Based on an analysis of the compiled data there are various recommendations for exploration & resource definition, which are;

1. Source all the previous reports of previous exploration and digitally integrate the data
2. Complete the regional geological mapping to cover the entire tenement at 1:5000 scale
3. Complete the stream silt coverage over the remainder of the property and to integrate this data with the existing coverage.
4. Carry out a rock chip and assay survey of all discovered and known tourmaline breccias to establish mineralization and priorities.
5. Carry out deeper and more comprehensive resource drilling program at the San Francisco mine and also minor confirmatory exploration drilling at the Chorrillos prospects.

A budget aimed at achieving these listed objectives has been compiled which amounts USD$2.63 million and includes a diamond drilling program of 3510 meters over approximately two years. There is 3010 meters of drilling proposed at the San Francisco mine and a further 500 meters of drilling proposed at Chorrillos.

2 Introduction

This report has been prepared for Turmalina Copper Corporation (TCC). The purpose of this report is to:

1. provide an independent evaluation of the San Francisco project,
2. provide a review of the past exploration and discovery potential in that area,
3. outline its relevance and adequacy to assess the mineralization potential of the area, and
4. provide recommendations for future work.

This report conforms to the guidelines set out by the National Instrument 43-101 Standard of Disclosure for Mineral Projects (NI 43-101).

The data presented and utilized by the author comes principally from the companies Minera Aguilar (Argentina) S.A. (Minera Aguilar) who farmed into the San Francisco mine tenements and Petra Gold, TNR Gold Corp. and their associates, who held the regional area under various mining claims for many years or through joint venture arrangements between them.

The information presented includes;

1. geological, topographical and mine maps,
2. legal and mineral tenement information
3. drilling data, including geological logs, sections and assays
4. geochemical data of soil, rock and streams sediment samples, including descriptions, locations and assays.

The geochemical data has been compiled by combining the information from the two principal sources, to create a comprehensive historical geochemical database. The integration of this data has led to a better understanding of the project coverage and standardized the information for direct comparison.

There are apparently five reports covering the larger mining claims held variously by Solitario, TNR and Petra Gold since 1995. These reports are summarized by Wyck in the 2008 report "NI43-101 report for TNR Gold Corp. on the El Tapau prospect area, San Juan Province, Argentina."

The author spent two days at the property from February 20th to February 25th, 2019, as well as three days visiting three locations where drill cores were held in San Juan. The field work included an inspection of the surface and underground workings at the San Francisco mine as well as site visits to Chorrillos, Quebrada Seca and various other locations of interest, such as other tourmaline breccia locations.

3 Reliance on other experts

In the preparation of this report, the author has relied upon public and private information provided by Turmalina Copper Corporation (TCC), which has sourced most of its information from Cerro Negro SRL (the current San Francisco mine owner, through Anitilde Irene Bertagni) and Petra Gold regarding the property.

The information on the registered mining claims described in Section 4 was derived from TCC management report, which is titled "Description and Location of the Property". This report from 2019 has a summary of the mineral tenure procedures and types of tenements applicable in Argentina, which is followed by individual tenement summaries for each property held within the project. An independent legal opinion was provided by a memo dated July 18, 2018 prepared by the Argentine law firm Bastias Yacante Abogados. The topic of the memo was the legal status of the El Tapua blocks held by Petra Gold & its associates as well as the San Francisco de los Andes claim blocks. This report has a full legal history of each individual tenement. The author believes to the best of his knowledge and experience that these data are correct. The author therefore fully relies on the legal opinion of Bastias Yacante Abogados for the purposes of the tenure of the project.

Information about historical ownership and work described in Section 6 comes from what previous reports that have been made available by TCC, and in particular the main source of the information apart from the legal report mentioned previously, are the report by Wyck, 2008 and Lencinas, 1990.

The Wyck report, 2008, Titled "43-101 report for TNR Gold Corp. on the El Tapau prospect area, San Juan Province, Argentina", is the main source of most of the regional prospect data, while the Lencinas report of 1990, titled "The report on the exploration performed at San Francisco mine by Compania Minera Aguilar SA in 1990" contains all the drilling and historical data on the San Francisco mine.

Following on from this information, more recent information has been supplied by TCC management in relation to underground and drill core resampling in the form of assays.

Other reports relied upon for this report include the Buenaventura report from 2007, titled "Preliminary report on El Tapau Project, Province of San Juan, Argentina" as well as the report by Roberto Lara, 2009, titled "El Tapau Project, Calingasta, San Juan Province, Argentina and prepared for China Mining Industry Ltd and Petra Gold Servicios Mineros S.R.L."

No information on existing environmental liabilities and work permits has been provided by TCC management, but according to the legal opinion of Bastias Yacante Abogados, the work permits have been lodged and are pending permission, which should not be unreasonably withheld.

In reference to the reliance on the Wyck report regarding the portion of the property east of the Chorrillos breccia pipe, discussed in Section 10.2.3.1 (Figure 5), the author did not visit that area and the author cannot verify the information supplied by Wyck, but has included it solely for the sake of completeness. It is not material to the overall project.

Any map that is not source referenced has been created by the author as evidenced in the title-block of those maps. All maps are north facing.

It is assumed that the information provided and relied upon for preparation of this report is accurate and that interpretations and opinions expressed in them are reasonable. The author considers that the information is consistent with a reliable exploration history and that the tenure of the granted properties is reliable. The author notes that some properties have taken a considerable time to be granted, but the causes for this are not known.

4 Property Description and Location

The San Francisco property is located in the Calingasta Department in the west-central San Juan Province of Argentina, approximately 130 km northwest from the capital of San Juan and 55 km north-northwest from the town of Calingasta at approximately 30° 50' S, 69° 36' W (Figure 2). This map was originally compiled by the Instituto Geografico Nacional of Argentina, and was sourced from the San Juan Tourism authority and is undated, but considered to be accurate.

Figure 2 San Francisco Project Location and Access Map

The project is accessed by Provincial Route N°412, 30 km in North direction driving thorough Puchuzún and Villa Nueva. From Villa Nueva and continuing on PR412 on a dirt road, there is a detour after 17 km to drive west. This is an unmaintained path that takes you to the area of work. With the current road conditions, it takes 1.5 hours from Calingasta to San Francisco de los Andes area, 2 hours to Quebrada Seca and 2 hours to El Chorrillo Breccia.

The property consists of six mining claims (tenements) for 3399 hectares (Table 2), not including the various small prior mining claims. Data provided to the author by TCC showed 4 separate areas of small claims blocks within the larger claims listed below (Figure 3).

Tenement	Current Owner	Area (ha)	Legal Status
MD "CUPRO I (File N° 545.630-P-94)	Petra Gold SM SRL & associates	1440	Application date June 1, 1994. Concession for exploitation right granted 22/3/2005. EIA submitted 21/01/2019. Canon payment due June 30, 2019 of USD$556.80 (ARS 24,000) and six monthly thereafter.
MD "CUPRO II (File N° 545.631-P-94)	Petra Gold SM SRL & associates	1247	Application date June 1, 1994. Concession for exploitation right granted 17/05/2011. EIA submitted 21/01/2019. Canon payment due June 30, 2019 of USD$482.56 (ARS 20,800) and six monthly thereafter.
MD "SOLITARIO II (File N° 0258-C-96)	Petra Gold SM SRL & associates	303.9	Application date 15/5/1996. Exploitation permit application in preliminary stage & is therefore not yet granted
CATEO 1124.191-P-2018	Petra Gold SM SRL	482.3	Application date 18/5/2018. Exploration permit application in preliminary stage & is therefore not yet granted.
Excised area (prior claims)		73.84	
		3399.36	
Including;			
MD "SAN FRANCISCO DE LOS ANDES (File N°271-M-1941)	Anatilde Irene Bertagni	18	Application date 31/10/1941. Concession granted 13/11/1941. EIA submitted 03/12/2018. Canon payment due June 30, 2019 of USD$11.14 (ARS 480) and six monthly thereafter.

ESTACA MINA "JOSE MARIO" (File N°156.884-L-73)	Anatilde Irene Bertagni	6	Application date 7/9/1973. Concession granted 11/04/1975. EIA submitted 03/12/2018. Canon payment due June 30, 2019 of USD$3.71 (ARS 160) and six monthly thereafter.
ESTACA MINA "HUGO MIGUEL" (FILE Nº 156.883-L-73)		6	Expired, now part of Cupro II

Table 2 List of Tenements comprising the San Francisco Project

A complete legal due diligence report was prepared for the project by Bastias Yacante Abogados dated July 18, 2018. This report contains a complete legal history of each of the mining tenements.

The current owners of the regional tenements (the Petra Gold group), not including San Francisco De Los Andes and Jose Mario tenements, signed in September 2018 an exploration contract which includes the purchase option with Turmalina Copper Corp (TCC). This contract requires 7000 meters of drilling & USD$1,050,000 to be spent over four years, as well as annual option payments amounting to a total of USD$1.46M over four years to acquire 100% of the regional tenements. They also signed a document and handed on the mining authority, in which to authorize the exploration of the mining right to Aurora Mining SA (A 100% Argentine subsidiary of TCC) and the owners are voluntarily inhibited from executing any other act or contract against the mining authority.

As a separate contract, the current owners of the San Francisco De Los Andes (Cerro Negro SRL) and Jose Mario tenements (Mr. Ricardo Meritello), signed in September 2018 an exploration contract which includes the purchase option with TCC. This contract requires USD$2,050,000 to be spent over four years, as well as annual option payments amounting to a total of USD$1.445M over four years to acquire 100% of these tenements. They also signed a document and handed on the mining authority, in which to authorize the exploration of the mining right to Aurora Mining SA (A 100% Argentine subsidiary of TCC) and the owners are voluntarily inhibited from executing any other act or contract against the mining authority.

There are no occupiers of the project land and therefore landowner access compensation agreements are not required.

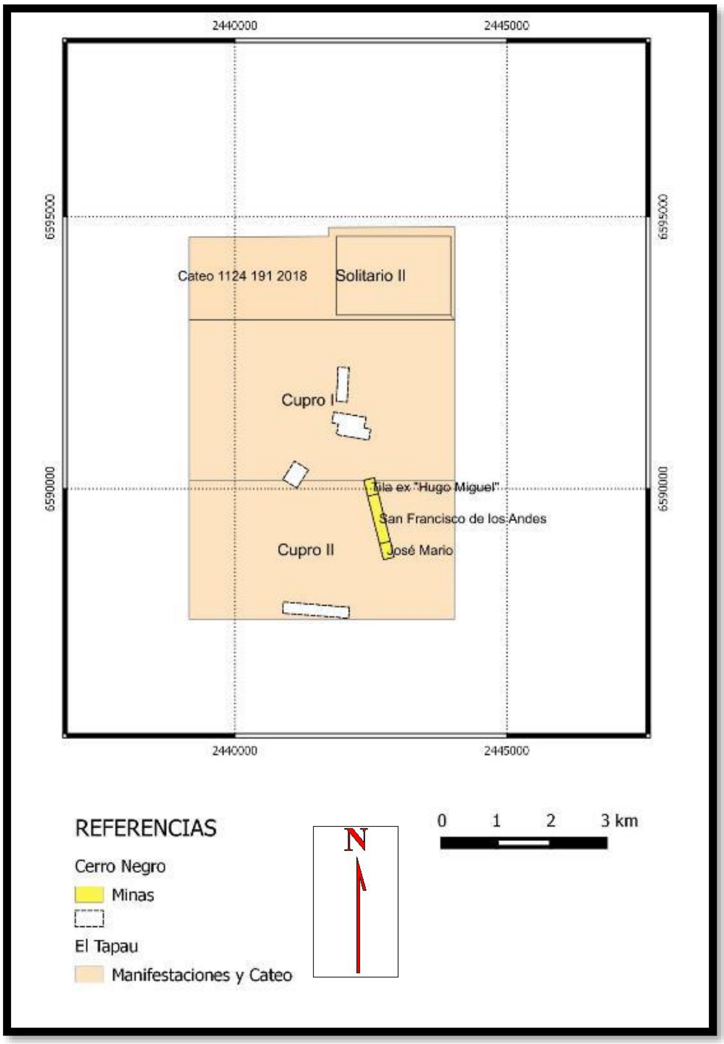


Figure 3 San Francisco Project Tenement map (TCC, 2019)

4.1 Mining Law

A mining concession allows its holder to carry out exploration and exploitation activities within the area established in the respective concession title, provided that prior to the beginning of any mining activity, such concession title is granted by the Mining Authority.

According to the National Mining Code (NMC) there are two types of mining rights, the Exploration and Exploitation concessions, both being exclusive.

The Exploration concession: the holder of the right can explore the area during the period granted. In case of discovering a mine, the holder has an exclusive right to apply for an Exploitation concession.

The period of the Exploration Permit, depends on the extension of the area applied. The maximum extension allowed is 10,000 hectares, which are divided into unit of measurements of 500 hectares each. For the first unit granted, the valid period is 150 days and for the following unit of measurements, 50 days are added for each unit. A relinquishment must be made after the first 300 days, and a second one, after 700 days being elapsed. The applicant should pay the canon fee, submit a minimum working plan to be performed, and hand in an environmental impact assessment. Exploration concessions are granted for a fix period of time, based on the extension of the area applied and there are no renewal or extensions of the term originally granted. Moreover, the licensee cannot apply again for the same area until a year has elapsed. Therefore, the next step in the process, provided a mine is discovered in the exploration area, is to apply for the Exploitation right as described hereunder.

The Exploitation Permit has no time limit provided the holder complies with the requirements of law, which are basically, the annual payment of a canon, the compliance of the working and investment plan, and the submission of an environmental impact assessment (EIA) that must be updated every two years. There are different ways of acquiring an Exploitation permit:

1. By discovering a mine as a consequence of an exploration process as described above.
2. When a mine is discovered by chance, that is, without an exploration process.
3. When an Exploitation right has been declared and posted in the register as “vacant” due to a non-compliance with the requirements settled by law.

4.2 Mining obligations

Holders of mining activities must comply with several obligations established in the Mining Law and its regulations during the two stages settled for the mining activity. Note that according to the Argentine mining legislation the principle “prior in tempore prior in jure” is the rule. Therefore, provided there are no overlapping and the legal proceedings are fulfilled, there are practically no risks for the first applicant, to get the concession in due time. The exploration and the exploitation stages are going to be described separately for clarification purposes.

4.2.1 Exploration Permit

Field delimitation work: Once the exploration permit has been issued, the titleholder has 30 days for making the delimitation of the property through the pertinent field work.

Minimum Working Plan: Together with the application permit a minimum working plan has to be submitted describing the activities, number of workers, etc., that are going to be used for carrying out the exploration activity.

Payment of the Canon (validity fee): This payment must be done with the presentation of the application permit, only once. If an overlapping exists, and the concession cannot be issued, the applicant gets the reimbursement of the money.

Environmental Impact Assessment: This EIA is for the exploration process only. Therefore, the requirements are related to the exploration works proposed and settled in the regulations.

This presentation is due only when the concession is granted and before starting with the field work.

4.2.2 Exploitation Permit

Under the Mining Law there are three main obligations that the titleholders should fulfil in order to keep its mining right. The non-compliance may result in the cancellation of the exploitation permit.

Payment of the canon:

The canon is a payment that holders of mining exploitation rights are obliged to make, in advance, twice a year -before June 30 and December 31- of each year, in two equal instalments. Failure to comply with this obligation for fourteen months results in the cancellation of the mining right.

However, the title holder can recover the mining right during 45 days after being notified by the Mining Authority, by paying the canon plus 20 % charge as a fine.

According to the NMC the amount to be paid is ARS$ 800 (USD$18.56) per unit of disseminated tenement (pertenencia).

When a new mine is discovered the owner has 3 years free of canon payment.

Legal Labour and Legal Survey:

In order to perfect the Exploitation title, the holder should fulfil the following steps settled by law:

- Within 100 days or if extension is applicable, the concession holder should perform the legal labour, consisting basically in a field work which will allow the delimitation of the mine.
- Having elapsed 30 days from the legal labour delimitation, the holder should apply for the legal survey. The Mining Director should authorize the professional that will carry out the work and fix the day that it will take place. Once the work is done, the Director will approve it and the title of the concession will be perfected after being registered in the Mining Cadaster. The failure to comply results in the cancellation of the mining right.

Working and Investment Plan:

Holders of exploitation concessions are obliged to submit a working and investment plan to achieve a minimum production equivalent to 300 times the annual canon paid, within five years following the year in which the application of the legal survey is submitted. During each of the first two years the amount of the investment shall not be less than 20 %, and the rest of the investment (60 %) freely distributed during the remaining three years.

Every year, an affidavit describing the investment done should be submitted to the Mining Director. If the affidavit is not submitted or does not correspond with real investment, the license expires and the mine is declared vacant, unless the holder amends the mistake or omission during 30 days, since the notification of the Mining Director has been received by the holder.

When the mine remains without activity during 4 years the Authority could ask the titleholder for the presentation of a “Reactivation Plan.” The obligation should be fulfilled within 6 months otherwise the mine is declared vacant. The owner should comply with each stage as described in the plan, which cannot exceed of 5 years.

Environmental Impact Assessment (EIA)

The EIA for the Exploitation permit period should be handed in once the concession has been granted and before starting with the field works, according to the requirements settled by law.

Every two years the EIA should be updated. The failure to comply will carry the imposition of penalties such as fines and warnings.

Mining properties and Surface properties:

As a principle, the Mining Code states that the mining activity is of public benefit. Therefore, the surface rights are subordinated to the mining ones. For this reason, the owner of a mine has the right to sue the land owner for the expropriation of the surface land.

5 Accessibility, Climate, Local Resources, Infrastructure & Physiography

San Francisco is located in mountainous terrain with elevations ranging from 2300 to 3200 meters above sea level. It is a desert climate with a median annual rainfall of 75 mm, although occasional flash floods do occur. Vegetation is minimal. The rainy season is generally short and occurs from October to March. The median temperature is 15°C. The summers are generally warm, ranging from 20°C to 30°C and winters are dry and cold with lows reaching -5°C.

Access to the property from San Juan is via 150 km of paved roads from the provincial capital city to Calingasta. The driving time from San Juan to Calingasta is approximately two hours and then approximately two hours from Calingasta to San Francisco Project, via Villa Nueva. Calingasta to Villa Nueva is about 33km of sealed road, then there is 30km dirt road to the project area, which is in need of repair due to seasonal flooding.

San Juan has an airport with daily flights to Argentina's capitol city, Buenos Aires, although the closest international airport is Mendoza, which is 150 km south of San Juan. San Juan is a major city with a metropolitan population of 450,000 inhabitants. The university in San Juan contains a geology department, and is therefore an excellent source of qualified mining professionals. The project occurs within the municipality of Calingasta, with a population of approximately 8000 inhabitants, and the Calingasta town itself is located approximately 55 km south of the project area and is a potential source for a non-technical workforce. The nearest town to the project is Villanueva, where Turmalina's subsidiary company, Aurora Mining SA has a field camp. Calingasta is on the national electric power grid.

The boundary between Argentina and Chile is defined by the topographic divide running along the spine of the Andes. Traversing eastward from the border one steps down and across a series of north-south trending mountain chains - San Francisco is located on the leading eastern edge of one of these chains known as the Frontal Cordillera. Across a gravel filled pediment to the east lies the Pre-cordillera range.

The drive from San Juan to the San Francisco property affords the viewer a remarkable transect across an active fold and thrust belt. Deformation and uplift are occurring at present - in 1944 an earthquake levelled the city of San Juan, and at the San Francisco property, thick foreland-basin filling gravels mapped as Plio-Pleistocene in age are actively being eroded as a response to the rapid uplift.

The San Francisco property has ample areas for water and tailings storage in the various dry valleys as well as sites suitable for mine buildings or processing facilities. Being in a desert environment, water is fairly scarce and could be problematic for a large milling operation, however at lower elevations of the property, the Castaño Viejo River flows all year. The Castaño Viejo River is a tributary to the San Juan River, which is the main water source for the city of San Juan and the majority of the population within the province. It is not known if there is significant ground water that could be used.

6 History

The San Francisco property has evidence of historic mineral development dating from the 1940's. The two largest mines are the San Francisco de Los Andes (San Francisco) and Amancay mines. San Francisco operated from 1941 to 1980 and produced 2420 tons of material grading 6-7%

copper and 1.43% bismuth (Lara, 2006). Compania Minera Aguilar evaluated the San Francisco mine, through underground development, mapping, sampling and drilling (Lencinas, 1990) (Figure 4). Compania Minera Aguilar considered that a 35m thick copper, gold, silver, lead and zinc supergene deposit was likely to occur based on the drilling and underground sampling they carried out. TCC carried out resampling of the original drill core from two of the holes, which has shown that the assay technique used by Minera Aguilar was unreliable (Section 14.2), therefore any previous resource estimate based upon this information would not have been valid.

A qualified person has not done sufficient work to create a valid resource estimate and TCC is treating the previous historic data as being significant only in terms of evidence of the presence of high-grade mineralization. In order to create a valid resource estimate all of the original historic drilling and underground sampling work would need to be either re-drilled and re-sampled or where core is available, re-sampled and assayed, plus additional drilling would need to be carried out to validate the 35m supergene interpretation.

No published information is available on the Amancay mine production, but the size and type of workings indicate a similar small tonnage-high grade operation. There are numerous other small prospect pits and exploratory adits on the property (Wyck, 2008).

During the later production phase of the San Francisco mine Mr José Mario Leonardi had a small processing plant at the nearby river where they extracted a crude copper & bismuth concentrate. A laboratory and processing plant were also operated by the company, in San Juan. This is where the drill core is currently stored.

Two vertical holes were drilled prior to 1990, by the Argentinian Mines Department, at San Francisco mine for a total of 320 meters (Figure 4). In 1990, Minera Aguilar carried out a drilling program on its San Francisco mine, with seven holes drilled for 421.6 meters.

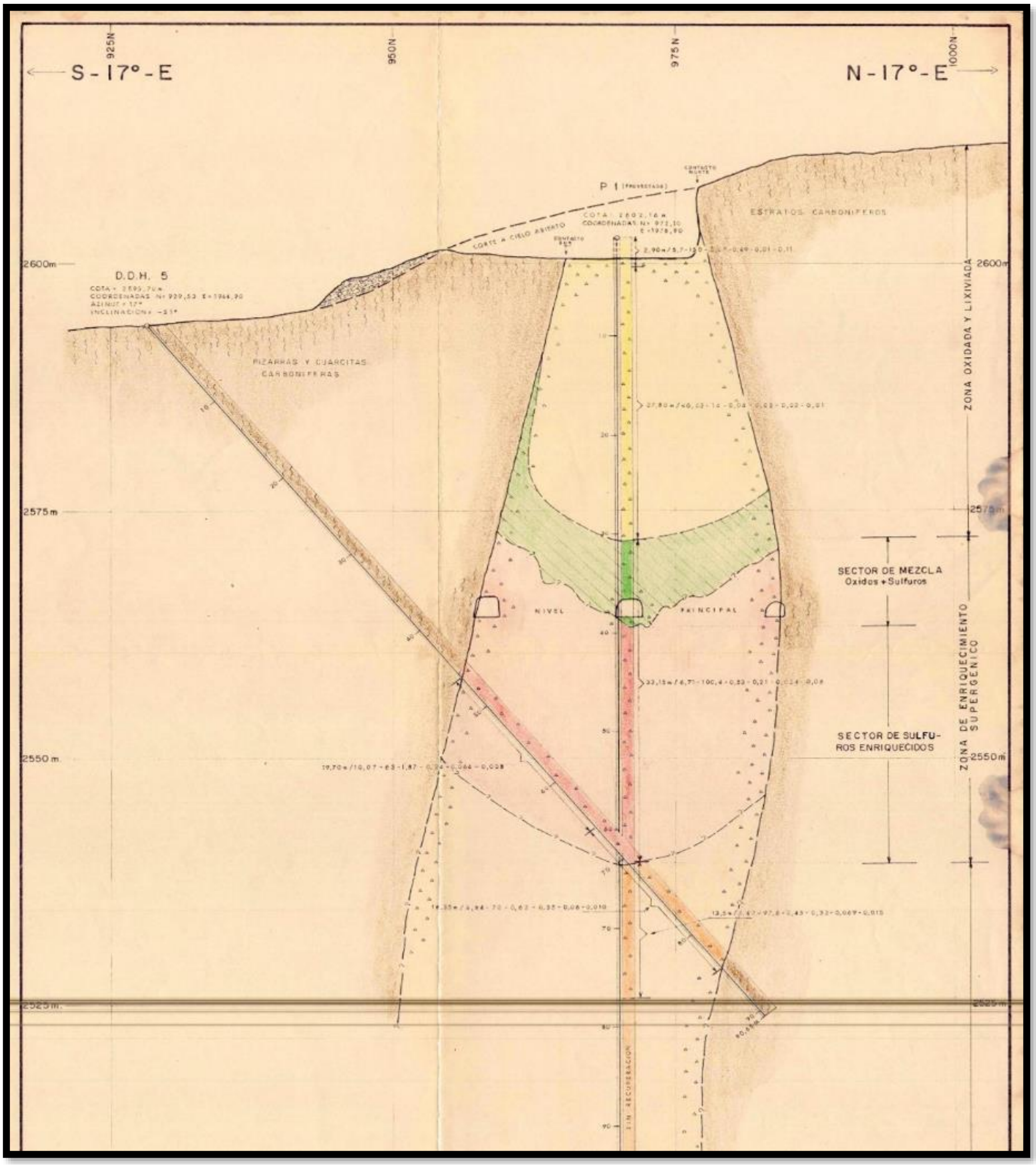


Figure 4 Historic geological interpreted drill section of the San Francisco mine (Lencinas, 1990)

6.1 Regional Exploration History

Apart from Wyck's 2008 report on the regional tenements, the other reports are as follows.

In 1995, it appears Compania Minera Solitario Argentina, farmed the project to Denver-based Crown Resources Corporation, which conducted a property-wide geochemical survey consisting of 205 widely spaced samples. An IP survey was run in the northern half of the Solitario II claim block and five reverse circulation percussion drill holes were conducted for a total meterage of 632 meters designated CN-95 series (Drinkard, 1996). The objectives of the drilling campaign were to evaluate the copper porphyry potential associated with a group of tourmaline-breccia pipes located in the northern Solitario claim and further north. At the time of the drilling campaign the company believed that the tourmaline breccias were surface expressions of deeper porphyry copper deposits. Two holes were drilled at the main Chorrillos breccia pipe, and the other three holes were drilled on three separate nearby breccia pipes (Figure 5) (Wyck, 2008).

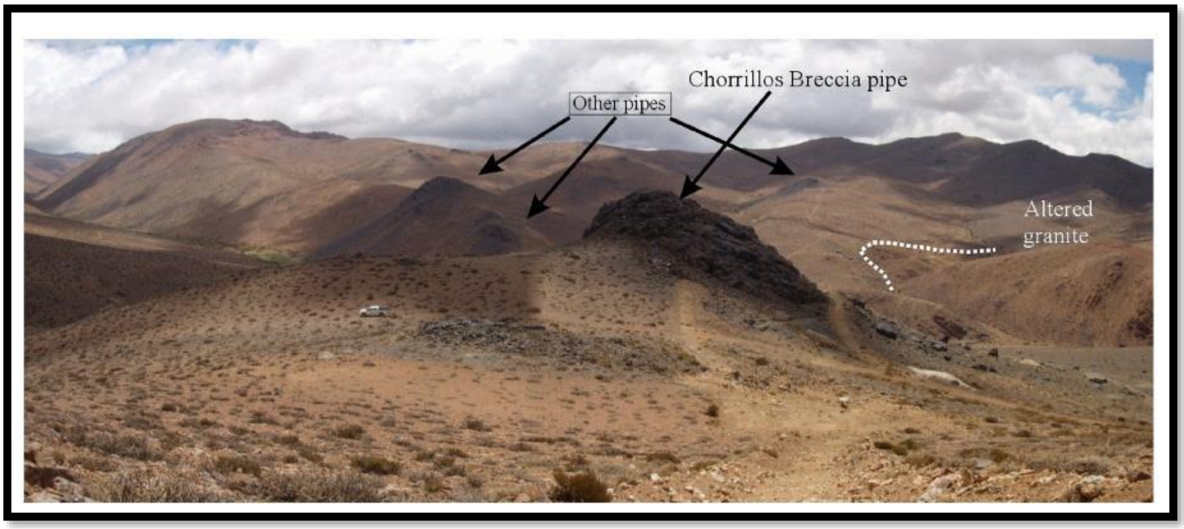


Figure 5 Photo of the Chorrillos prospect looking north (Wyck 2008)

The oldest report (Drinkard, 1996) summarized the results of exploration for Solitario Resources. This phase of exploration consisted of five drill holes, four of which are now included in the current claim block. Following this work, no further studies were performed and the property was allowed to lapse. This report is not available.

In 2005 a smaller claim block was reacquired and a new exploration model proposed Lara in his 2006 report, which isn't available.

Buenaventura, an exploration group independent of TNR Gold., spent two weeks exploring the claim block and produced a thorough report (Buenaventura, 2007), consisting of 41 pages of text, maps and figures with assay results from 416 rock and soil samples. This report and database information are available.

There have been two geophysical surveys over the project area; an earlier IP and ground magnetometer survey by Quantec Geophysics (Jones, 1996), and a second 3-DIP geophysical survey was completed by SJ Geophysics (Chen, 2008) at the request of TNR Gold. None of the geophysics reports are currently available.

In 2005, Petra and a local geologist acquired part of the original property from the Pinto family, Tersusi and Weidman group. These tenements form the majority of the current San Francisco project and the claim blocks contain a considerable number of tourmaline breccia outcrops, that are presumed to be pipes, including the areas with the best drill intercepts described by Solitario.

In 2006, Petra conducted a sampling program in the central part of the property on a series of structurally controlled, east- to northeast-striking tabular quartz veins. The sampling program delineated an area of 2500 m by 1000 m where hand selected quartz vein samples returned gold mineralization averaging 2.23 g/t.

TNR Gold Corp. appears to have purchased Compania Minera Solitario de Argentina S.A. from Solitario Resources Corporation (currently Solitario Zinc Corp.), pursuant to an agreement dated

May 28, 1998. Roberto Lara graduated from Universidad Nacional de San Juan in geology and has been involved in the mining industry in South America since 1988, mainly in the province of San Juan, Argentina. He previously was chief geologist for Crown Resources USA and consulted to numerous resource companies. Presently Mr. Lara is Vice President of Compañia Minera Solitario Argentina S.A., TNR Gold's 100% subsidiary.

In June 2007, TNR Gold Corp.'s subsidiary Solitario hired a consulting geologist to perform a reconnaissance mapping and sampling program to evaluate the economic potential of the property (Osmani, 2008). Results of this work returned highly anomalous gold and base metal values and confirmed the results reported by Petra in 2006.

On August 30th 2007, TNR Gold Corp. announced that it has signed an option agreement to acquire a 70% interest in the El Tapau property, as the San Francisco properties were known then.

"TNR personnel recently completed a reconnaissance trip to the property in order to evaluate its mineral potential and design a program for further exploration. The Tapau claim contains veins and porphyry style stockwork that are mineralized with gold and copper. Initial investigations indicate a large mineralized system situated below the auriferous veins found in the northeast part of the claims. Systematic rock chip (157 samples) along this zone, over an area of 600m long by 400m wide, has yielded gold values ranging from trace to 19 g/tonne with the average value being 2.2 g/tonne. Sample analysis was done by Alex Stewart Assayers, Argentina S.A. Numerous historical underground copper mines are located on the claim, and quartz stockwork zones are common throughout the project area. Historical IP done by Quantec indicates a strong large chargeability high, approximately 1.5 km by 2.0 km (east-west) in extent, underling this area, and is open to the west."

TNR has agreed to make payments totalling $1,000,000 to Petra Gold over a five-year period and commit to work expenditures totalling $3,000,000 over a four-year period. Petra Gold maintains a 2% NSR purchasable by TNR for $2,000,000." (https://tnrgoldcorp.com/2007-news/acquisition-and-exploration-of-the-el-tapau-gold-project-argentina/)

This work was followed by a 3D IP survey on the property in November-December 2007 (Chen, 2008).

In 2008, a drilling program was conducted by Petra with seven diamond drill holes (ET08 series) being drilled at various locations. The first two holes were drilled at the Chorrillos tourmaline breccia prospect in the northern Solitario tenement. These holes were carried out as follow up to the drilling conducted by Solitario in 1995. A third hole was drilled 900m southeast of the San Francisco mine at an unknown target and the remaining four holes were drilled a the Quebrada Seca prospect where the soil and rock chip sampling of 2005 to 2007 had been encouraging. The Quebrada Seca four holes appear to target the various east west striking quartz veins prevalent in the area. The best results were recorded in the first hole at the Chorrillos tourmaline breccia with 48m intersecting 0.63% Cu from 109.3m depth (Table 3). The composite intersection presented for holes DDH-ET-801 and 802 are based upon a 1000ppm Cu cut-off grade and an internal waste maximum of 3 meter as well as a minimum 3-meter length. This intersection including six assay intervals that were above the detection limit of 1% Cu, and therefore the intersection average value is understated.

The orientation of the mineralization at Chorrillos and Chorrillos SW are assumed to be vertical as they form part of the vertical tourmaline breccias present, whereas the orientation of the mineralization at Quebrada Seca is not known and appears to be hosted by quartz veins or veinlets in various orientations that are relatively small. For the overall mineralization encountered at Chorrillos in drill hole DDH-ET-801, the estimated true width is 37.5m, and for Chorrillos SW drill hole DDH-ET-802, the estimated true width this 4.5m, but this width is also going to vary according to where the hole is drilled in relation with the circular nature of the pipes.

Hole	From	To	Length	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Bi ppm	Location
DDH-ET-0801	97.20	103.70	6.5	0.01	1.1	4455	80	8	9	Chorrillos
DDH-ET-0801	109.30	157.30	48.0	0.02	4.7	6279	1160	949	14	Chorrillos
DDH-ET-0801	162.30	172.30	10.0	0.02	4.9	2116	985	1205	26	Chorrillos
DDH-ET-0802	40.00	52.10	12.10	0.01	0.8	2172	104	39	166	Chorrillos SW
DDH-ET-0803	no significant intersections									San Francisco SE
DDH-ET-0804	100.70	101.70	1.00	0.36	5.32	153	1195	2103	2.5	Quebrada Seca
DDH-ET-0804	127.40	128.20	0.80	9.15	78.98	2260	4658	651	145.4	Quebrada Seca
DDH-ET-0804	295.40	297.30	1.90	2.03	24.45	595	5827	3590	11.37	Quebrada Seca
DDH-ET-0805	93.20	94.70	1.50	0.96	0.25	113	23	90	2.5	Quebrada Seca
DDH-ET-0806	23.00	24.60	1.60	0.51	4.22	73	2563	378	20.3	Quebrada Seca
DDH-ET-0806	36.60	38.10	1.50	0.22	0.73	117	155	524	16.9	Quebrada Seca
DDH-ET-0807	57.00	57.90	0.90	1.77	6.36	262	496	1064	13.3	Quebrada Seca
DDH-ET-0807	127.70	129.00	1.30	0.21	31.58	163	1789	1609	339.8	Quebrada Seca

Table 3 Petra drilling significant intersections

In July 2009, Solitario completed mapping of the northern package of tenements which comprise the current San Francisco Project at a scale of 1:5000 (Figure 6), with the exception of the southern tenement Cupro II. Another undated geological map at 1:5000 scale was also completed by David Sebastian Juarez, a student from the University of San Juan, which covers the Solitario II tenement. Note that in areas of overlap between the two mapping programs there is some inconsistencies in terms of the location and size of the breccia outcrops. Both these maps are in the Gauss Kruger (Argentina) Campo Inchauspe Zone 2 Projection and Grid, with north up the page accordingly.

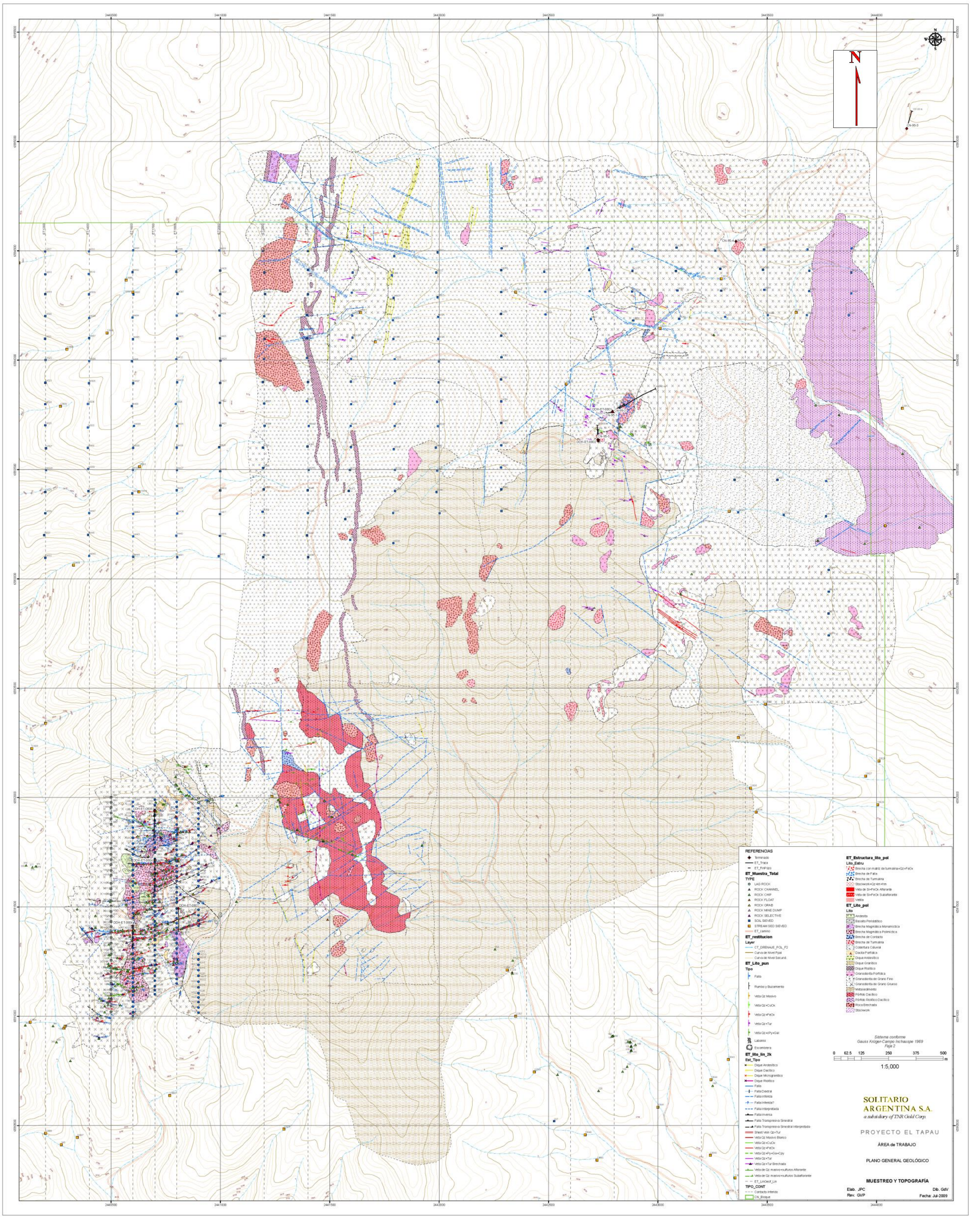


Figure 6 Solitario Geological Mapping of the northern group of tenements (Lara, 2009)

7 Geological Setting

7.1 Regional setting

San Juan Province straddles three major north–south-trending ranges, the Cordillera Principal, Cordillera Frontal, and Pre-cordillera as well as part of the Pampean range (Sierras Pampeanas range). The San Francisco Project is located on the eastern border of the Cordillera Frontal, separated from the Pre-cordillera to the east by the Rodeo-Calingasta–Uspallata Valley (Figure 7) (Altman, Cox & Moore, 2016).

The Cordillera Principal runs along the Chile-Argentine border for some 1,500 km. It is a volcanically and seismically active zone formed by subduction of the Nazca plate beneath the South American continent. This convergent plate margin has been active since the Cretaceous. The main basement is formed by Permian–Triassic intrusive and volcanic rocks, of calc-alkaline affinity and andesitic to rhyolite composition, regionally known as the Choiyoi Group. These and younger sediments of Jurassic and Cretaceous age have been thickened by compression and thrusting principally since the Late Cretaceous in a thin-skinned fold thrust belt.

The Cordillera Frontal comprises a basement of Carboniferous clastic sediments of the Agua Negra/La Puerta Formation, intruded and overlain by Permian–Triassic volcanic and intrusive complex. The Cordillera Frontal complex consists of the same rock units as those in the Cordillera Principal, and was also uplifted with the Cordillera Principal.

The Choiyoi Group hosts coeval mineralization, mainly porphyry copper - molybdenum and copper - gold deposits such as San Jorge and El Salado and low-sulphidation gold systems such as Casposo, La Cabeza, and Castaño Nuevo. Tertiary mineralization occurs at Poposa (high-sulphidation gold) and at Paramillos (porphyry copper – molybdenum) prospects.

The Pre-cordillera comprises a series of north–south ranges, covering about 1,000 km north– south and 100 km east–west. It is the product of large-scale tectonic compression since the Jurassic and culminating in the Miocene, and is still seismically active. The ranges in San Juan Province comprise Palaeozoic limestones and clastic sediments separated by plains reminiscent of the “Basin and Range” extensional terrain of the western United States.

East of the Precordillera, the Pampean and Transpampean Ranges (Sierras Pampeanas) are composed of Precambrian and Palaeozoic granitic and metamorphic rocks. Uplift occurred along Tertiary Laramide-style high angle reverse faults. These ranges host minor Precambrian mineralization and, within the Precordillera, some Tertiary-aged deposits, associated with calc-alkaline to alkaline volcanic and sub-volcanic centers of Miocene - Pliocene age (for example Famatina and Gualcamayo).

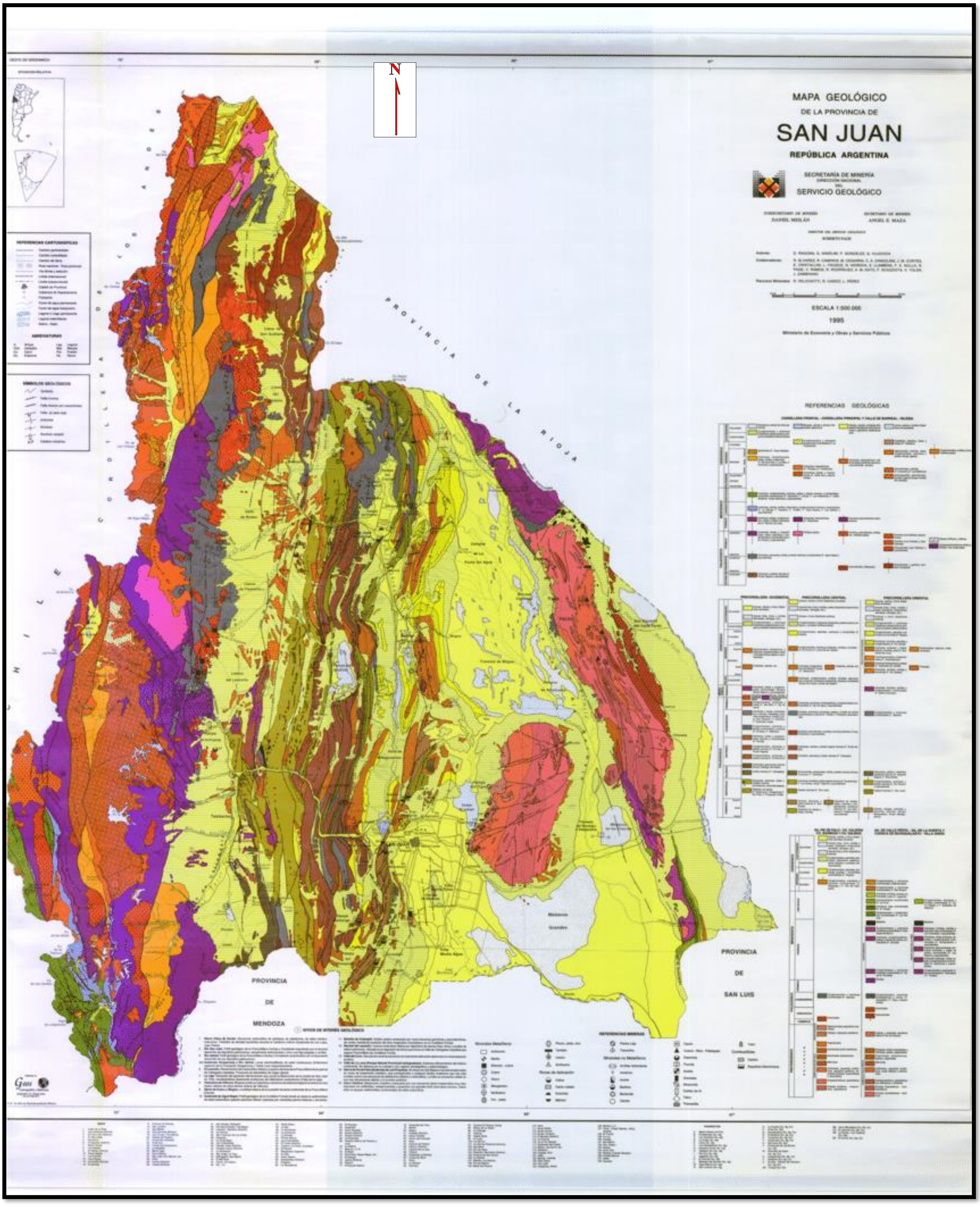


Figure 7 Geological Map of the San Juan Province (Ragona, et al, 1995)

7.2 Local Geology

Basement exposed at San Francisco consists of Carboniferous-Permian metasediments of the Agua Negra Formation, which are shallow marine sediments of interbedded quartzites and shales. These sediments have been deformed, metamorphosed and intruded by Permian plutons collectively mapped as the Colanguil Batholith. Intrusive rock mineralogy ranges from diorite through monzonite to granite. The Colanguil Batholith is shown on geologic maps with a 43 km north-south strike length, although magmatism of similar age and likely tectonic significance extends further north and south. These larger intrusive rock units are cut by later tourmaline breccia pipes as well as andesite and rhyolite dykes. The youngest magmatic event are the Permian rhyolite dykes that are typically associated with strong alteration haloes in the host sediments. The rhyolite dykes post-date the copper and gold mineralization associated with quartz veining (Wyck, 2008).

7.2.1 Lithology

7.2.1.1 Agua Negra Formation

The oldest rocks are dark grey, fine to medium grained immature arenites and siltstones of the Carboniferous Agua Negra Formation. In the study area, due to the close proximity of the younger intrusive rocks, they have been contact metamorphosed to a hackly hornfels. On account of the jointing and metamorphism it is often hard to resolve bedding but where it is discernible the general strike is N-S with the bedding dipping steeply both east and west (Figure 11) (Wyck, 2008).

7.2.1.2 Plutonic rocks

There are a few phases of plutonic rocks recognized within the project, which intrude the Agua Negra Formation. The principal unit is a feldspar-phyric biotite-quartz monzonite. This plutonic phase varies from monzonite to quartz monzonite to granite. Within this unit are small blocks/rafts or plugs of feldspar-phyric diorite to granodiorite. All of these units have been mapped as a single map unit (Wyck, 2008).

The quartz-monzonite unit is typically comprised of euhedral to subhedral feldspar phenocrysts up to 2 mm, of both plagioclase and potassic feldspars, comprising approximately 80% of the rock. The remainder is made up of quartz (3-7%) and mafic minerals, predominantly biotite, and lesser amphibole. Potassic alteration makes it difficult to identify the relative amounts of the two feldspars. This unit is the most susceptible to alteration, veining and mineralization (Wyck, 2008).

The feldspar-phyric, more mafic phase, is a fine grained, dark grey diorite with scattered, but evenly dispersed feldspar phenocrysts < 2 mm. It occurs throughout the quartz monzonite as rounded to sub-rounded xenoliths, up to 15 cm in size. At numerous locations, it has also been observed as larger, more angular rafts, ranging to 70 m in length, as observed in the area of the main zone of the auriferous quartz-tourmaline veins at Quebrada Seca. In the area around the Chorrillos breccia pipes, the diorite is slightly porphyritic. In all areas it is strongly magnetic. Tourmaline orbicular phases of the quartz monzonite are present at the Chorrillos prospect. These rosettes are up to 5 cm in diameter (Figure 8) (Wyck, 2008).

7.2.1.3 Andesite Dykes

Andesite dykes up to 2 meters width have been mapped at various locations on the property. Subhedral feldspar phenocrysts <1 mm occur in a dark grey, very fine groundmass. These dykes are present throughout the project area. They cross cut both the intrusive and hornfelsed sediments.

7.2.1.4 Quartz-tourmaline breccias

Quartz-tourmaline breccia pipes occur at numerous locations throughout the property. They are roughly circular in appearance at surface, and can exceed 100 meters in diameter. Composition of these breccias varies, where they may contain either altered igneous or sedimentary clasts and/or quartz fragments in a granular quartz-tourmaline matrix, as well as tourmaline +/- quartz fragments in a vuggy quartz matrix. These compositional differences are often defined by distinct contacts. (Wyck, 2008).

Figure 8 Orbicular tourmaline quartz monzonite from Chorrillos

Previous mapping programs have established that there are 62 breccia outcrops of elongated to circular shapes and ranging up to 6.3 hectares and held within the Cupro I, Solitario and Cateo mining claims. Most of these are considered to be tourmaline - quartz breccias. Only 6 breccia outcrops are greater than 1 hectare (10,000m2) in area, and these are all along the west side of the project on an NNE trend. In the southern mining claim of Cupro II (1247 hectares) and the San Francisco mine site, only one tourmaline breccia is known, which is the San Francisco mine itself. This paucity in breccia outcrops is likely the result of the Cupro II tenement not having been geologically mapped.

The Chorrillos and San Francisco breccia pipes have historic workings and the San Francisco de Los Andes mine has significant production from a small-scale operation. Primary mineralization includes chalcopyrite, pyrite, arsenopyrite, sphalerite, galena, and other bismuth/antimony sulpho-salts. Within the oxide zone, chrysocolla, azurite and malachite predominate. Mineralization is generally stronger toward the breccia pipe – host rock contact where stoping has been prevalent at the San Francisco mine (Figure 9).

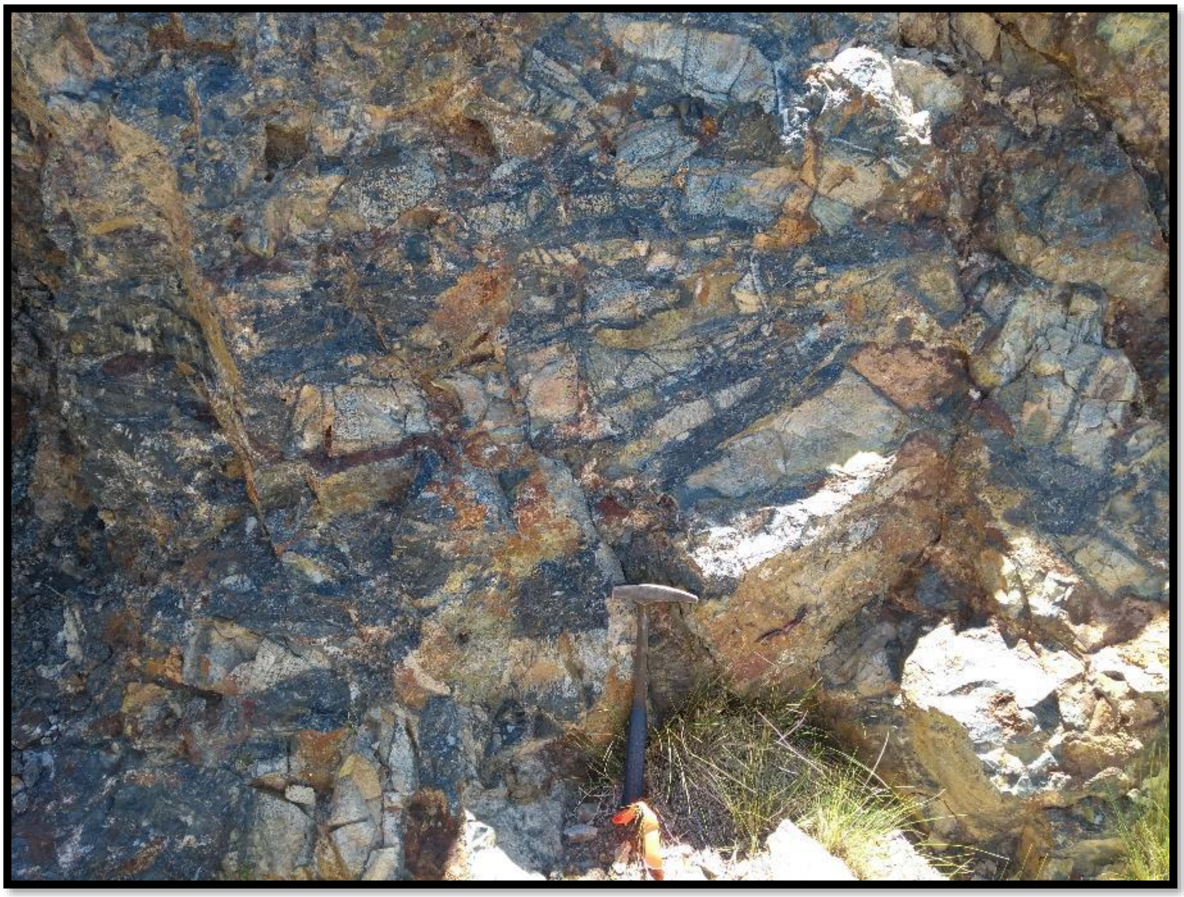


Figure 9 Copper mineralised tourmaline shingle breccia at the San Francisco mine

Areas of tourmaline mineralised joints are also present within the project and these may represent the upper reaches of buried tourmaline breccias or lateral leakage from nearby breccia zones (Figure 10).

Figure 10 Tourmaline mineralization of joints sets.

7.2.1.5 Rhyolite dykes

Distinctive, reddish weathering aphyric rhyolite dykes truncate all intrusive rocks and the gold and base metal bearing quartz veins.

7.2.2 Structure

Mapping of the Rodeo-I quadrangle identifies the area containing the San Francisco project as part of the Tranquitas-Colanguil Horst - a Palaeozoic aged structure. The north-south trending structure is cored by plutonic rocks of the Colanguil Batholith, which itself has a distinct north-south elongate outcrop pattern. Bedding plane measurements of the Agua Negra Formation in the San Francisco project area (Figure 11) show bedding is folded in a simple upright antiformal structure with a north-south fold axis.

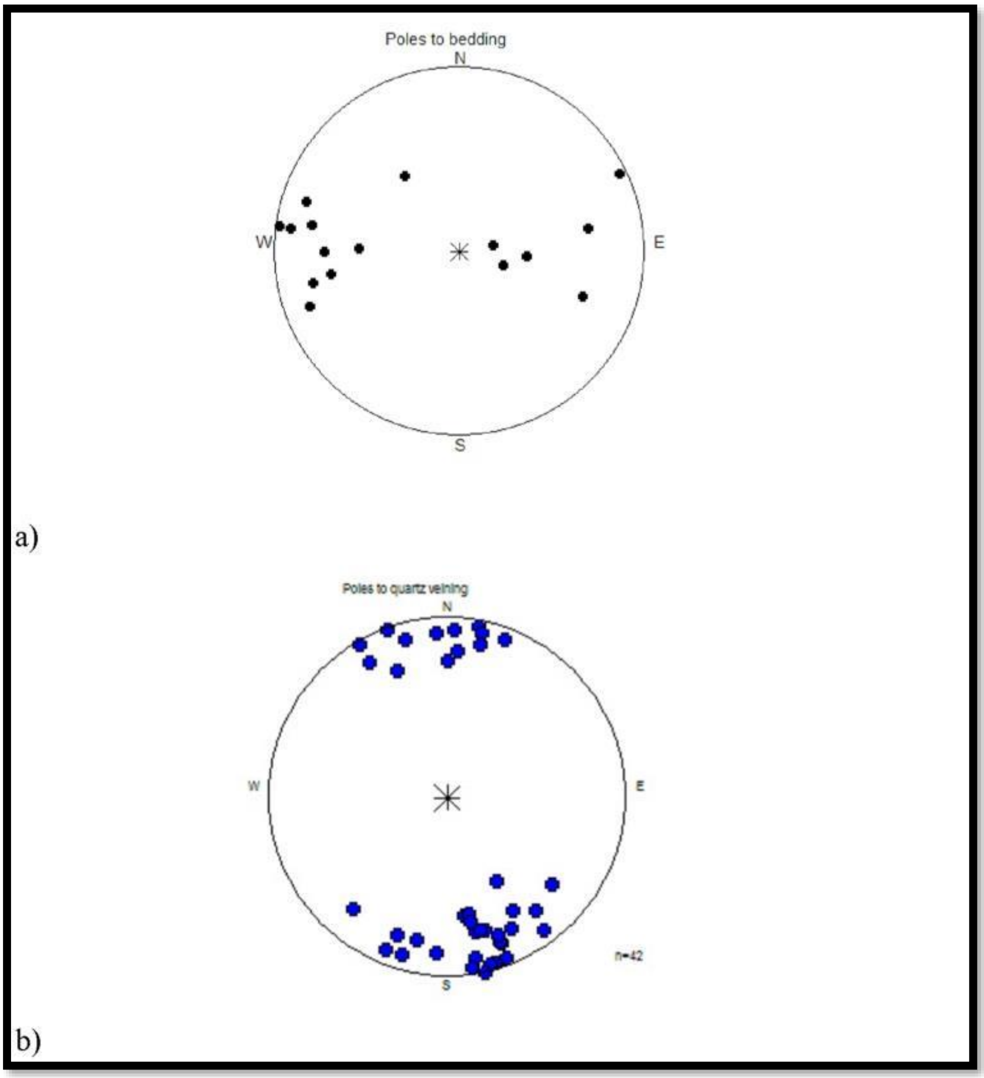


Figure 11 Stereonets of Poles to (a) Bedding and (b) Quartz vein orientations (Wyck, 2008)

The gold-base metal quartz veins possess a strong WNW to ENE orientation (Figure 11). A number of prospects with minor workings occur along a WNW striking corridor east of the Quebrada Seca prospect (Wyck, 2008) (Figure 12).

Figure 12 Large quartz vein outcrop east of Quebrada Seca prospect

Other outcrops of quartz veins and shear zones east of San Francisco mine also showed an E-W to WNW-ESE strike. These veins/shears were often limonitic and showed preferential clay-sericite alteration and weathering (Figure 13 & Figure 14). These shear zone sets are gold and base metal mineralised and may have some bearing upon the location of the breccias pipes.

Figure 13 Granite hosted quartz veined shear zone on the main access road looking west.

Figure 14 Quartz vein boulder displaced by the road works.

An independent analysis of the geophysical data (Chen, 2008) mapped inferred structures based on contrasts between zones of high and low conductivity. These geophysics-based structures show a very good correlation with structures described above, and emphasizes the strong NW oriented and lesser NNW structures (Wyck, 2008).

Various north striking faults are inferred to occur throughout the project and some of the plutonic rock contacts may be fault bounded. This is well demonstrated in the Quebrada Seca area, where the drainage and road occupy one of these structures between monzonite and sediment (Wyck, 2008). The larger tourmaline breccia outcrops occur in a corridor striking NNE from Quebrada Seca. The younger rhyolite dykes also have a north-south orientation. Lineation interpretation from satellite imagery of the project area show the strong north-south and WNW-ESE trending structures. The mapped breccia outcrops have been superimposed upon the satellite image to illustrate the widespread nature of the breccia deposits (Figure 15).

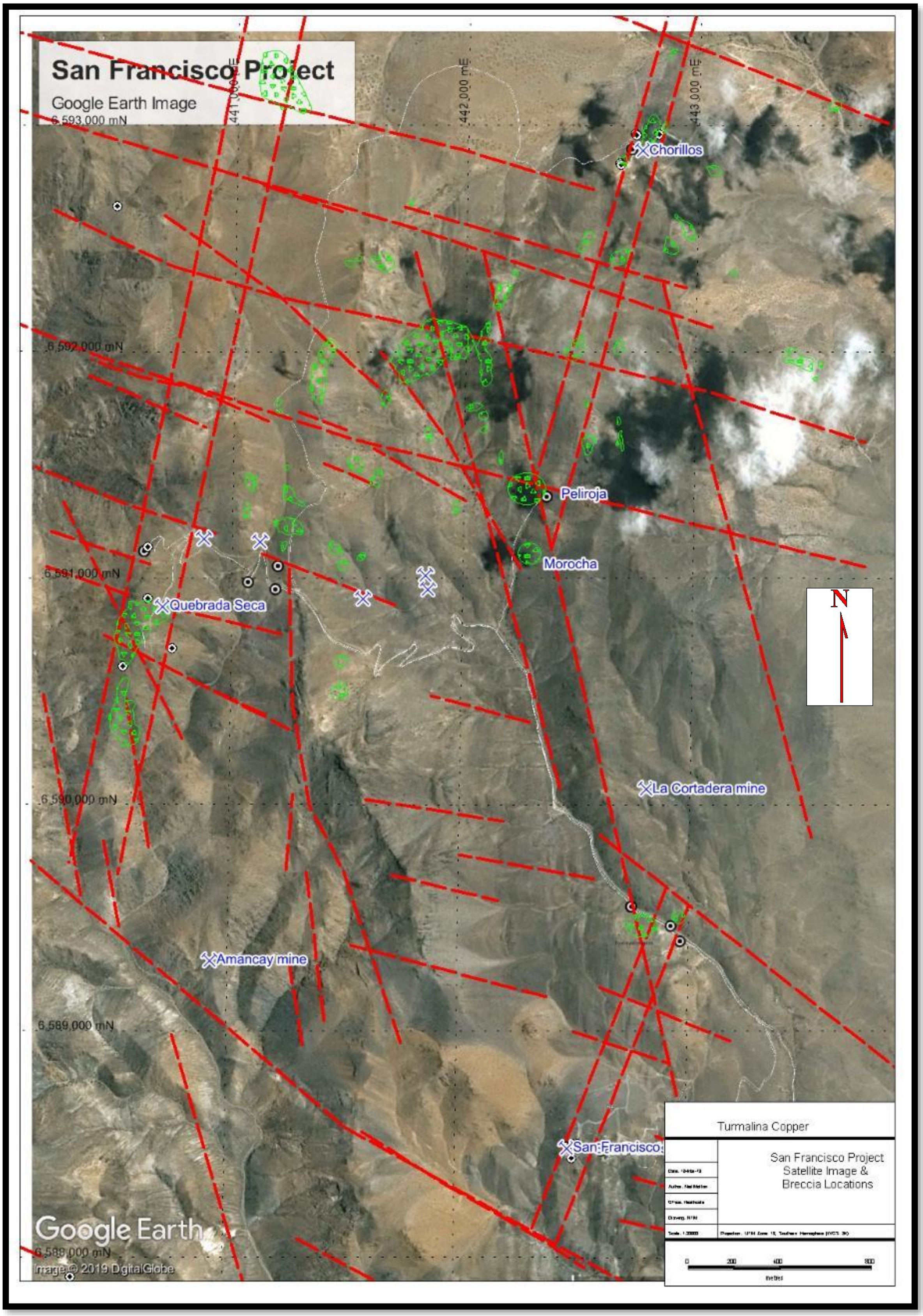


Figure 15 Satellite image with regional lineation, prospects and mapped breccia outcrops.

8 Deposit Type

There are two deposit types being investigated at San Francisco, namely the tourmaline breccia pipes and the various quartz veins.

Copper-bearing tourmaline pipes are a distinctive class of intrusion-related breccias which vary considerably in size and metal content. They are considered to be derived from granitic to granodioritic magmas initiated at deeper crustal levels than generally much larger copper-bearing pipes associated with porphyry copper deposits. As a consequence, intrusion related pipes tend to increase in size with depth, in contrast with porphyry-related examples which typically flare upwards due to much less lithostatic pressure exerted by the host wall rocks. Both deposit types can have vertical dimensions exceeding one kilometre. The common presence of decompressive shock textures and shingle breccias provide further evidence for deeper emplacement of the intrusion-related pipes. (Figure 16) (Kirwin et al, 2018)

Development of the breccia pipes is a result of over-pressuring of the accumulated boron-metal rich hydrothermal fluid in the cupola of the intrusive complex, which is followed by hydraulic fracturing of the overlying host rock creating sheeted vein sets. This in turn may cause upward stoping of the overlying host rock as pipes through hydraulic failure with pipe growth through associated collapse & internal wall rock failure.

In terms of mineralization, complex multi-element assemblages (Cu, Mo, Au, Ag, As, Bi, WO3, Pb and Zn) typically characterize the deeper smaller pipes in contract to the generally simple Cu-Mo association observed in porphyry environments. The highest metal concentration is normally found near the inside margins of the tourmaline pipes, and especially in the non-porphyry derived examples where there is intense development of shingle breccias. A very good example of what appears to be a non-porphyry-tourmaline breccia pipe field occurs at Soledad in the Ticapampa-Aija mining district in the Cordillera Negra in Central Peru. Previous exploration has identified a cluster of nine high grade copper-gold bearing breccia pipes which have surface diameters of 30 to 100 meters within a 10 square kilometre area. Drilling has demonstrated some of the pipes have an "inverted carrot" morphology and vertical extents of greater than 500 meters. The breccias are polymictic with sericite and silica-altered wall-rock andesitic clasts set in a tourmaline and sulphide-rich matrix. Breccia contacts with the andesitic wall-rocks are sharp and there is a well-defined halo away from the contact characterized by sheeted quartz-sericite-sulphide veining. Tourmaline breccia pipes can be attractive economic exploration targets (Figure 17). (Kirwin et al, 2018)

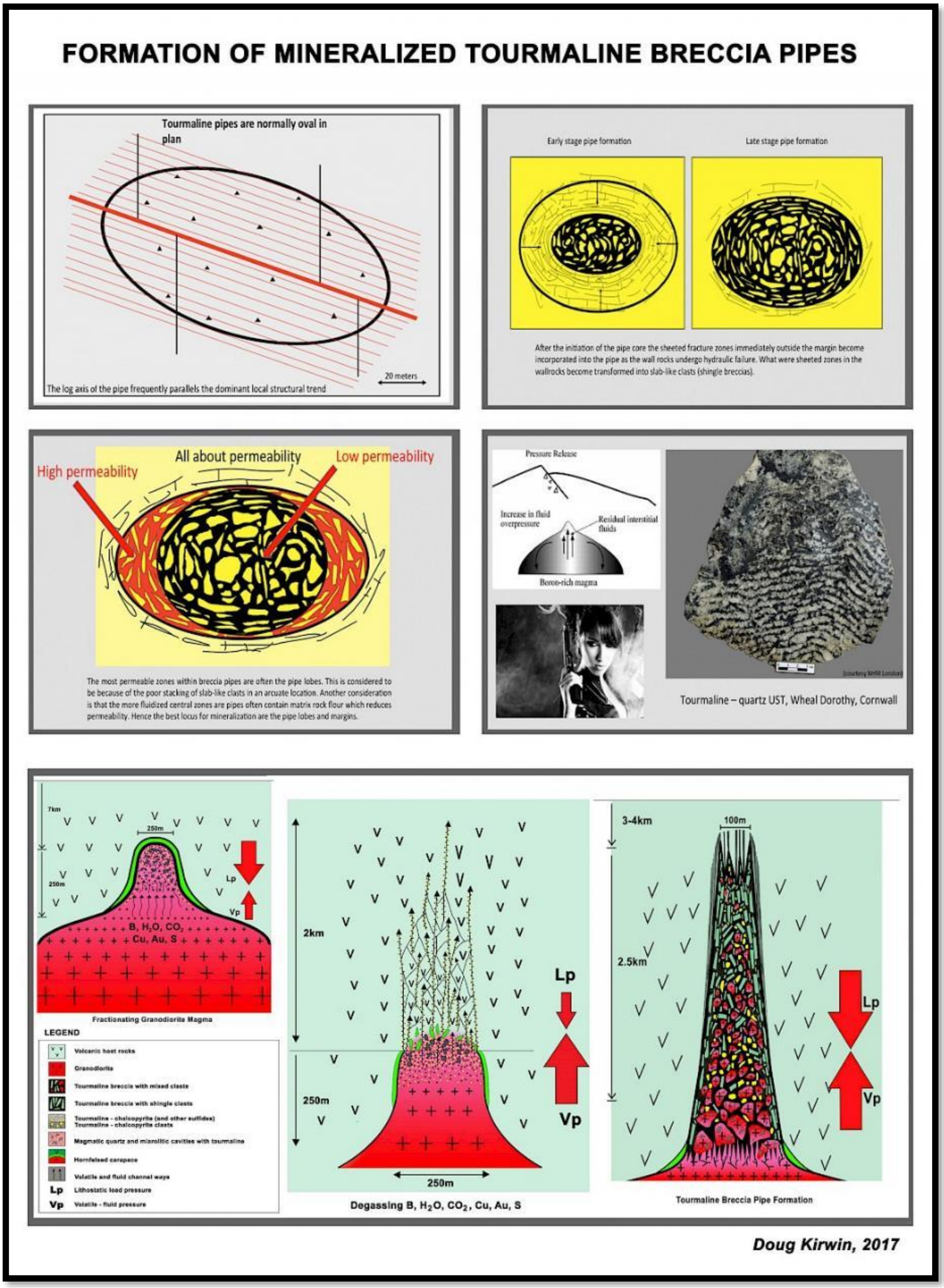


Figure 16 Formation of Tourmaline Mineralized Breccia Pipes

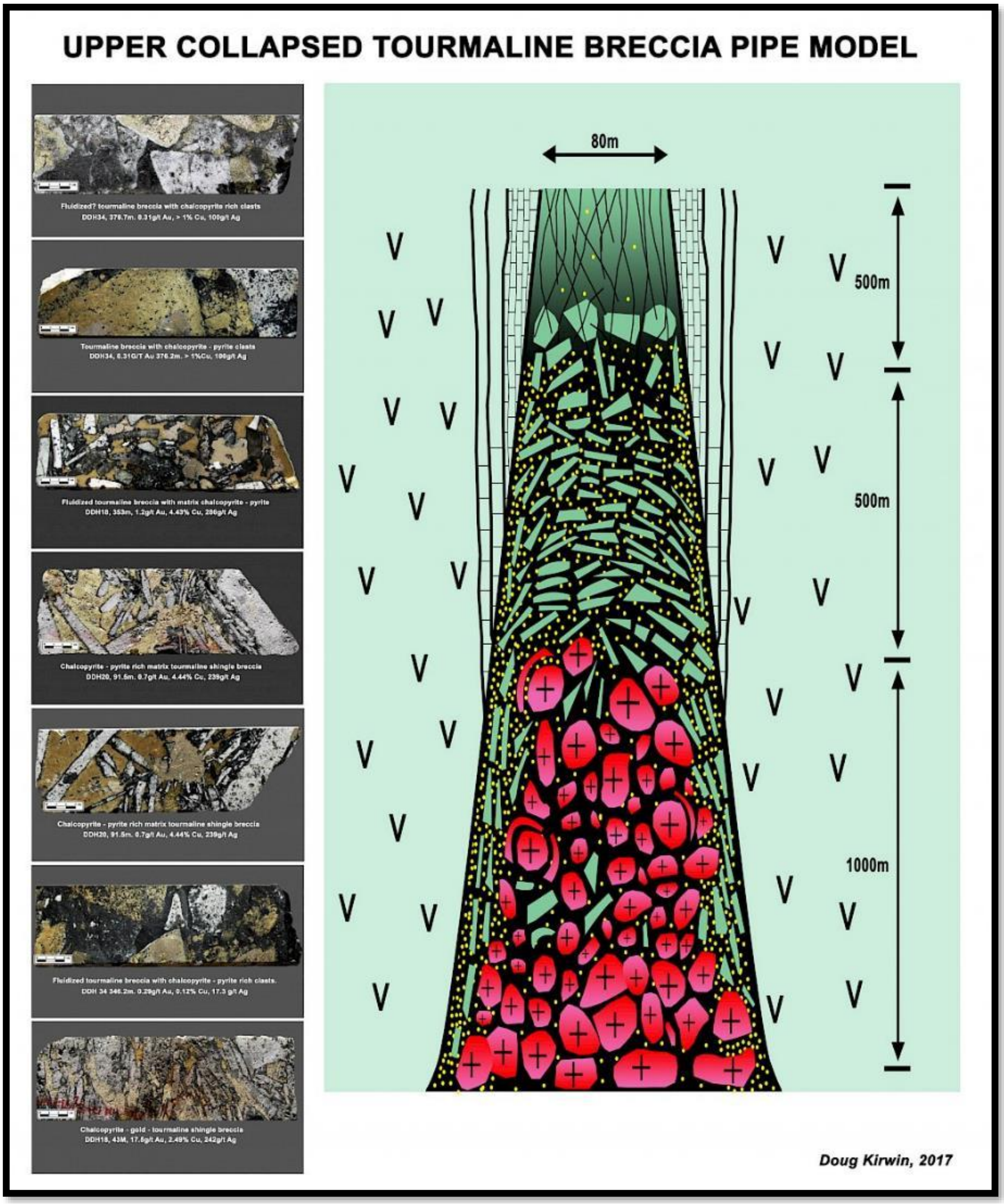


Figure 17 Upper Collapsed Tourmaline Breccia Pipe Model

Mineralization within the breccia pipes is usually located at the periphery of the pipe and particularly at the arcuate or narrowing points of the breccia in plan (Figure 18 & Figure 19) (Kirwin, 2018).

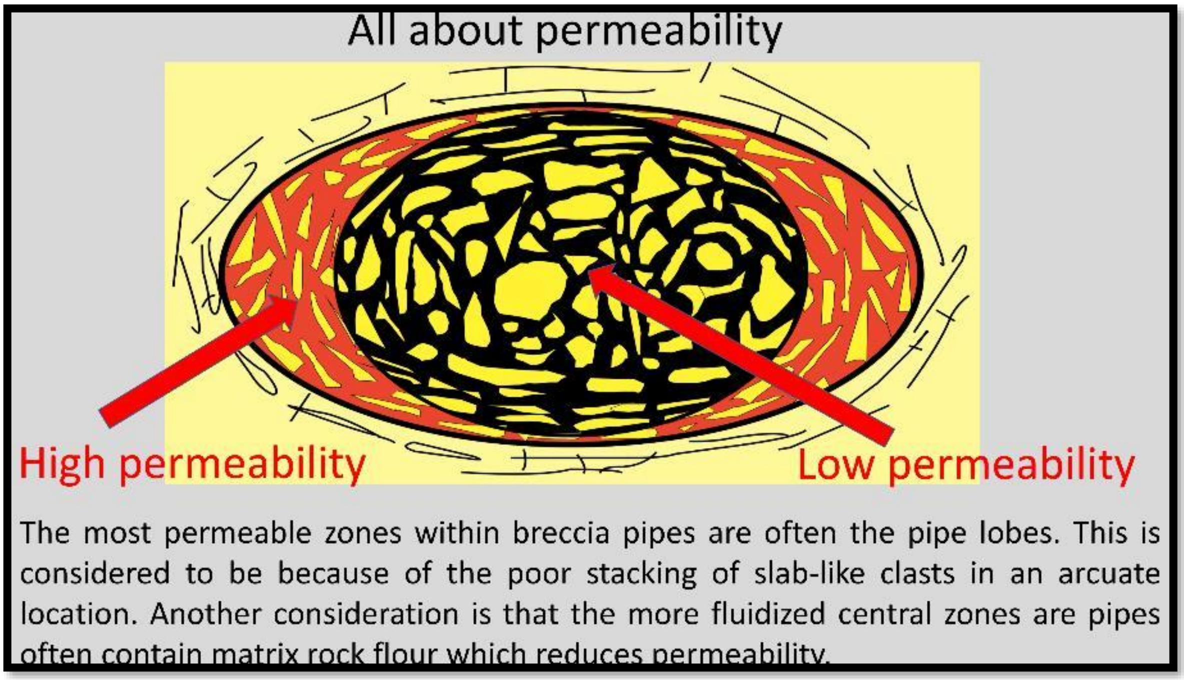


Figure 18 Mineralization within pipes in plan

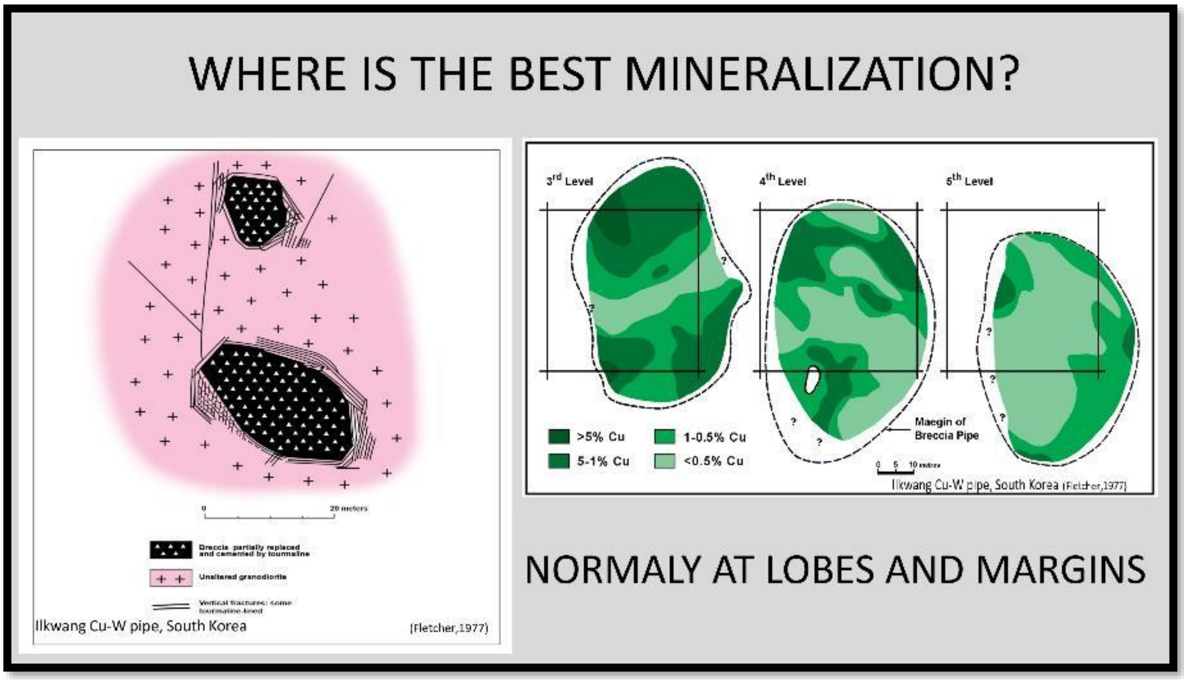


Figure 19 Examples of mineralization focii within the tourmaline breccias

Persistence in exploring these breccia pipes has proved to be highly beneficial, if we consider one of the most successful recent breccia pipe explorers namely Chakana Copper and their Soledad project in Peru (Table 4). The orientation of the mineralisation is assumed to be vertical but the table does not give sufficient information to be able to calculate the estimated true width.

	DDH#	From(m)	To (m)	Interval*	Au (g/t)	Ag(g/t)	Cu%	Cu_eq%*	Au_eq g/t*
Bx 1	SDH17-018	0.00	209.00	209.00	2.22	69.6	0.96	3.01	4.60
	including	0.00	40.00	40.00	4.21	18.6			4.45
	including	40.00	114.00	74.00	3.31	65.5	1.11	3.83	5.86
	SDH18-059	0.00	233.00	233.00	1.36	57.2	0.85	2.24	3.42
	including	0.00	46.00	46.00	2.11	26.1			2.45
	including	46.00	233.00	187.00	1.18	64.9	1.05	2.38	3.63
	SDH18-077	0.00	244.00	244.00	1.41	55.6	0.91	2.31	3.53
	including	0.00	50.00	50.00	1.68	17.7			1.91
	including	50.00	244.00	194.00	1.34	65.4	1.13	2.57	3.92
Bx 5	SDH17-041	0.00	176.00	176.00	1.81	27.5			2.17
	including	12.00	176.00	164.00	1.68	27.4	0.51	1.84	2.82
	SDH18-080	0.00	264.00	264.00	1.30	24.3	0.71	1.77	2.70
	including	0.00	30.00	30.00	1.33	45.8	0.05		1.93
	including	30.00	264.00	234.00	1.30	21.6	0.79	1.82	2.79

Table 4 Chakana Copper's Soledad project recent drilling example intersections

9 Mineralization

There are three areas of mineralization that were the focus of the previous explorers, namely, San Francisco mine, Quebrada Seca and the Chorrillos Breccia.

9.1 San Francisco Deposit

Mineralization at the San Francisco mine complies with the (Cu, Mo, Au, Ag, As, Bi, Pb and Zn) metal association described and the 'inverted carrot' morphology also is supported by the deeper workings and drilling demonstrating that the deposit is more extensive in the lower levels. The breccia textures of the Soledad deposits of Peru (Section 8) are clearly similar to those found at San Francisco mine and elsewhere within the project (Figure 20), thus supporting the view that these deposits are of similar metallogenesis.

The breccia typically has angular flattened clasts of the host rock, containing 3 to 20 % of tourmalinic quartzite with several sulphide generations (Lencinas, 1990).

The breccia is oxidized and leached almost entirely at between 23 and 35 meters in depth. There follows an area of supergene enrichment of around 35 meters of vertical thickness, which contains higher grades of Au, Ag, Cu, Pb, Zn, Bi (Lencinas, 1990).

Below which the primary ore is up to a known depth of 170 meters (Drilling P-2) where the metalliferous content is notably inferior, which may be due to lack of supergene enrichment or because the grades have moved laterally (Figure 19) or both (Lencinas, 1990).

It is shaped as a "Pipe" or a sub-vertical chimney, elongated in WNW-ESE direction with a noticeable narrowing to the centre which amounts to only 1/3 of the maximum width. This way, it has a resemblance in plan to the figure eight. In this manner, the breccia can be divided into two sectors or areas that have been designated as NW area and SE area (Lencinas, 1990).

The NW area has a defined pitch (rake) in NW direction with a value of 76 degrees. The SE area has a similar pitch in WNW direction with 86º (Lencinas, 1990).

The breccia is composed by clasts of rocks of mainly quartzite cemented by 3% to 20 % of tourmaline- quartz matrix with a variety of metalliferous sulphide minerals within the breccia matrix in the primary zone (Lencinas, 1990).

Within the oxidized and leached area, mineralization is mainly limonite, scorodite and other oxides/arsenates of the various metals present with the primary ore, such as the copper minerals malachite, azurite, chrysocolla which have remained mainly in the southern part of the breccia (Lencinas, 1990).

The supergene enrichment area at 23 to 35m depth, with around 35 meters of thickness below that, presents primary and supergene sulphides of mainly copper minerals (Lencinas, 1990).

The mineralogy of the primary sulphides is listed in order of importance as follows:

Mineral	Content %
Iron pyrites	3 – 12 %
Arsenopyrite	1 – 6 %
Chalcopyrite	0.1 – 3 %
Galena	0.1 – 1 %
Zinc sphalerite	traces – 0.3 %
Bismuthinite	traces – 0.5 %

Other metalliferous minerals possibly noted within the deposit are native gold, electrum, famatinite, tennantite, cassiterite and scheelite. For the supergene zone there is also chalcocite, covellite, native bismuth and cuprite.

The distribution of the primary minerals is irregular but the main zones of mining have invariably focused on the breccia pipe walls where grades a considerably better (Figure 34) (Lencinas, 1990).

Figure 20 Sulphide mineralised matrix of a shingle breccia from the San Francisco mine

Workings at San Francisco consists of various tunnels and shafts with the predominate workings being along the breccia – host rock contact (Figure 21).

Figure 21 Surface and underground workings at the San Francisco mine

Figure 22 San Francisco surface workings

Figure 23 Mineralized shingle breccia underground at the San Francisco mine (350mm field view)

Figure 24 Vertical fracturing of the host wall rock near the tourmaline breccia contact

9.2 Quebrada Seca

The gold and base metal quartz veins have been repeatedly sampled at the surface during various exploration campaigns and especially at Quebrada Seca. Texturally the veins within the San Francisco project are crystalline, massive and occasionally vughy. They have a typical Cu, Mo, Au, Ag, As, Bi, Pb and Zn metal association supporting the view that this type of mineralization is directly related to the tourmaline breccia mineralizing event (Figure 25). The veins/shear zones therefore constitute a secondary target to the main tourmaline breccia type.

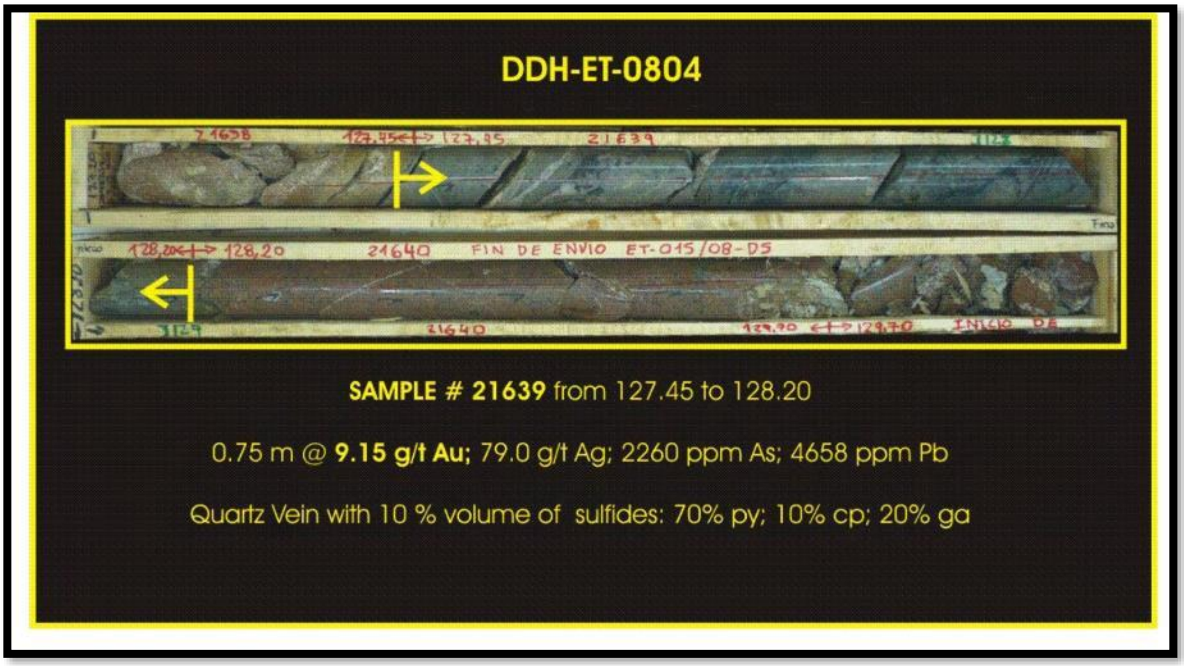


Figure 25 High grade narrow intercept from Quebrada Seca and metal association (Lara, 2009).

Figure 26 Typical quartz pyrite vein intersected in the drilling at Quebrada Seca.

Quartz veining at Quebrada Seca is shown in the geologic map (Figure 27). Quartz vein thicknesses are rarely greater than 1 m and most are approximately 50 cm thick. Individual veins can be traced for several hundred meters, but most are shorter. Veining is more common in the intrusive rocks. This is considered due to the mechanical properties of the igneous rocks that allow fractures to propagate and stay open during mineralization. Veins are enriched in Au, Ag, As, Bi, Cu, Pb, Sb, and Zn. Vein mineralogy is quartz ± calcite, sericite, and sulphides. Sulphides of mostly pyrite, with lesser chalcopyrite, galena and sphalerite, while geochemistry suggests sulpho-salts with antimony and arsenic are also likely. Many of the samples collected at the surface were oxidized, limonitic and gossanous (Wyck, 2008).

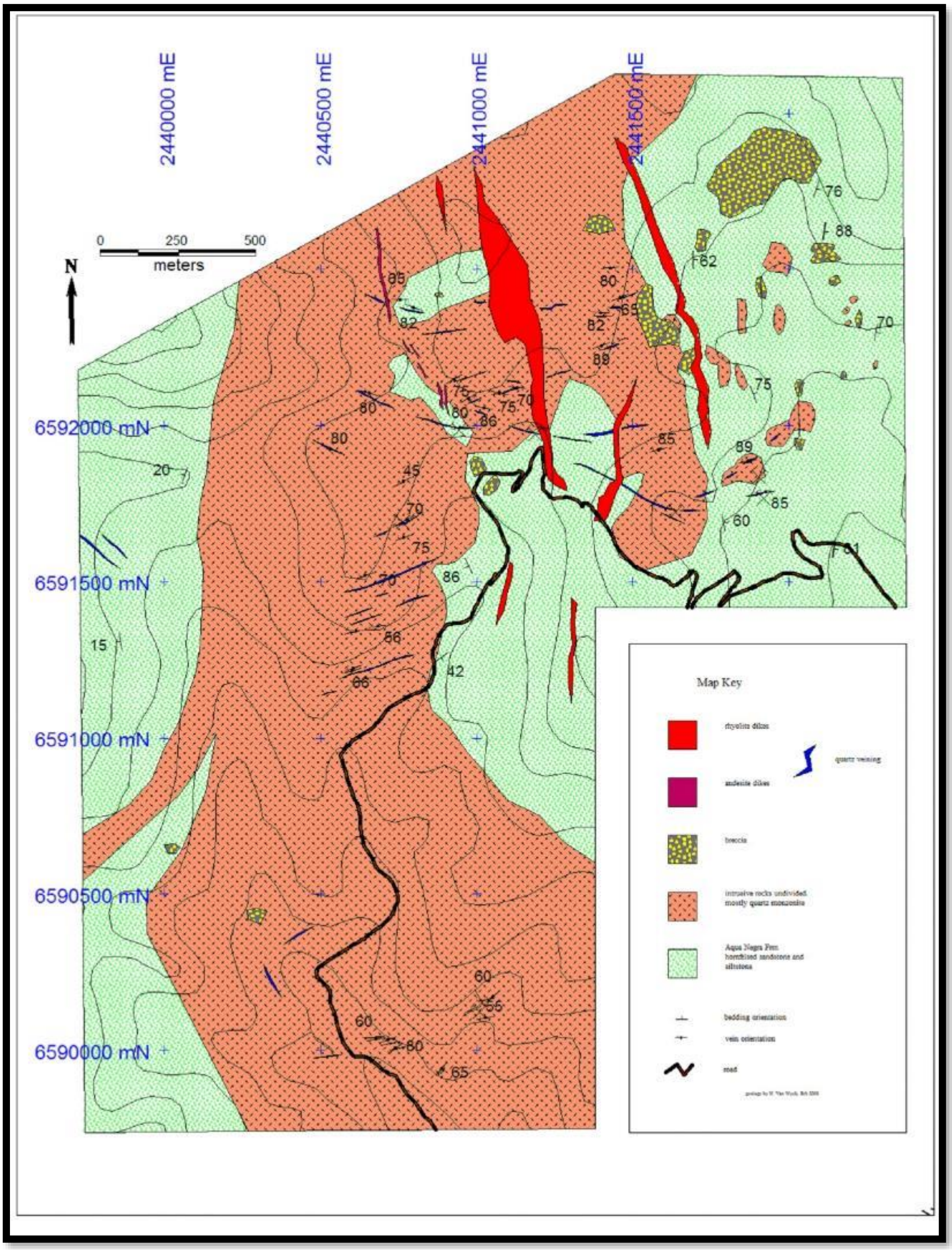


Figure 27 Geology of the Quebrada Seca area, San Francisco property (Wyck, 2008)

Most veins contain alteration halos of predominantly sericite. At the Amancay mine, south of Quebrada Seca, strong veining and sericite alteration yielded positive gold assays however, the strike length of the alteration mapped at the Amancay mine is less than 50 m, and the size of the waste rock suggests a small operation. Furthermore, the geophysical data from the IP traverse across the mine does not show a large anomaly beneath the workings (Wyck, 2008). The Amancay mine is excluded from the San Francisco project by a small mining claim.

Both the quartz veins and the breccia pipes are considered to be part of the same mineralization event and is related to hydrothermal fluids evolved from the same deep-seated source. These fluids would then be focused into structures and develop into vein-like deposits (Amancay) or breccia pipe deposits (San Francisco).

Rock chip sampling at Quebrada Seca showed a number of veins (at least 8) with consistent gold grades of >1ppm and highly anomalous base metal grades. Drilling of five of these veins with four RC holes intersected narrow low-grade veins which is consistent with the description by Wyck above (Figure 27).

Soil geochemical anomalies in the Quebrada Seca area are consistent with the narrow-veined nature of the outcropping quartz veins and the rock chip results.

A broader soil polymetallic anomaly occurs north of Quebrada Seca and is centred on 2,440,655E 6,592,233N, which occurs outside of the mapped area and appears to be a tourmaline breccia pipe based upon the dark rock outcrop shown in the satellite image.

9.3 Chorrillos Breccia

The Chorrillos area was the focus of the first drilling by Solitario in 1995. The area contains a quartz tourmaline breccia pipe, approximately 100 m in diameter that stands topographically 20m higher than the surrounding area. Several adits were driven into the various parts of the breccia pipe on copper mineralization. Other breccia pipes can be seen extending off the property to the north (Figure 5), and the size and distribution suggests a strong and widespread mineralizing system (Figure 28).

Figure 28 Photo of the Chorrillos tourmaline breccia outcrop with drill collar DDH-ET-801.

Figure 29 Tourmaline mineralization of the joints of the host rock at Chorrillos

Tourmaline mineralization is present as joints in granitic rocks is present in various samples located at Chorrillos as well as orbicular tourmaline mineralization (Figure 29 & Figure 8). Massive tourmaline - quartz veining is the general manifestation of the Chorrillos breccia (Figure 30).

Figure 30 Massive tourmaline quartz outcrop at Chorrillos

Figure 31 Quartz-tourmaline breccia with granodiorite clasts drilled at Quebrada Seca

Figure 32 Adit workings on the SE part of the Chorrillos breccia

There are a number of adits present at Chorrillos that have dumps that are commonly covered in copper oxide type mineralization. Most of these adits are driven from the southeast toward the NW into the breccia (Figure 32).

Drilling of the Chorrillos has been carried out via two RC holes and a diamond drill hole (DDH-ET-801), which will be discussed below in more detail in the drilling section. An example of the high grade zone of >1%Cu (upper limit of assay technique used) shows that the mineralization is directly related to the quartz-tourmaline breccia present at Chorrillos (Figure 33).

Figure 33 Drill hole DDH-ET-801 125-128.2m with assay of >1%Cu

10 Exploration

Exploration has consisted of geological mapping, geochemistry and drilling. This information has been consolidated to enable a comprehensive view of the project as a whole, where this information has been available. The IP geophysical information has not yet been sourced from previous explorers.

Exploration by TCC has largely been of a confirmatory nature where they have been resampling old drill core and replicating underground sampling taken from the San Francisco de los Andes mine.

From the signing of the Joint Venture agreements in September 2018 to July 2019, Turmalina Copper Corp (TCC), and its Argentinean Subsidiary Aurora Mining, have spent CAD$156,796.76 on exploration at the San Francisco property (Table 5).

Description	Amount (CAD$)
Consulting - Local consultants	$ 2,277.43
Consulting – Surveyors	$ 2,180.59
Contractors - Technical staff	$ 22,177.06
Field Camp - Operating Costs (rental, food, consumables, safety)	$ 63,453.72
Field Camp - Communication (satellite phone)	$ 2,532.60
Field Camp - Vehicle Hire & Fuel	$ 8,594.99
Field Camp - Capital (computers, software, printers and electronics)	$ 10,487.90
Geochemistry – Assay	$ 14,862.63
Drilling Contractor	$ 114,998.40
Downhole Survey Equipment	$ 13,632.96
Earthworks	$ 53,647.44
Domestic flights	$ 7,334.06
Local Accommodation	$ 4,476.81
Technical Data	$ 412.77
Total	$ 321,069.36

Table 5 Exploration Expenditure by TCC

10.1 Property geochemistry

A database of the available geochemistry from the different exploration programs has been compiled as listed in the following table. (Table 6).

In 1995 Solitario conducted a rock chip sampling program of 309 samples. This data has not been sourced to date. In 2005/2006 Petra Gold conducted a rock chip sampling program of 157 samples. Later sampling by Petra Gold JV partners added to the soil, lag, rock and stream sediment sampling database. Wyck also carried out check sampling in 2008, which confirmed the previous work, however some of his data is missing as he reported taking 488 samples (Wyck, 2008).

TCC has conducted channel sampling from the underground workings at San Francisco mine with 56 channel samples and has also conducted 70 rock chip samples from various locations. This information is still being compiled for assay and sample location data. The author viewed the underground channel sampling system and locations, as well as examining and comparing the assay sheets to the evident base metal mineralization while underground. It is clear that there is good visual correlation between the base metal mineralization and the high-grade base metal assays.

Program	Year	Rock	Soil	Lag	SSS	Total
Solitario	1995	0				0
Petra Gold	2006	157			2	159
Buenaventura	2006	351	59			410
TNR Gold	2007	136				136
Petra Gold	2008	226	608	282	131	1247
Wyck	2008	1	104			
TCC	2019	126				
		997	771	282	133	2078

Table 6 Geochemical sampling summary

The main coverage of the project has been in the form of stream sediment, grid-based soil sampling and rock chip surveys. The stream sediment survey of 131 samples for 34km^2 is at a density of 3.85 samples per km^2.

Apart from the detailed soil sampling at Quebrada Seca, a broader coverage was undertaken at on a 100m x 200m grid covering the western portion of the central and northern mining claims.

Rock chip sampling was used to compliment the soil sampling coverage as well as samples taken from various areas of interest, including more detailed channel sampling at San Francisco mine site.

The geochemistry data not only illustrates the areas that have been sampled and within those areas the zones of anomalism, but also illustrates the large number of breccias in the central and eastern portions of the project that have not been sampled. In the southern Cupro II tenement, it also highlights the lack of sampling there and in addition there is no mapping either.

10.2 Prospect specific mapping and geophysical interpretation

In 2007-2008, the Quebrada Seca and Chorrillos breccia pipe areas were selected by Petra Gold and TNR as the most promising areas. In 2008, 43.4line-km of IP geophysics was completed over the Quebrada Seca area and 19.6 line-km were collected over the San Francisco mine area. The reason that data was collected over the latter area was to allow a comparison of the geophysical signature over a known breccia pipe against any potential buried blind targets. Geophysical data for the Chorrillos area was reprocessed and incorporated into the Quebrada Seca geophysical report (Chen, 2008).

The San Francisco mine has been held a mining licence for many years and was therefore excised from the Petra Gold and associated company's exploration activities.

10.2.1 San Francisco

10.2.1.1 Geology

The San Francisco de los Andes mine is a hydrothermal breccia-pipe of magmatic affiliation and complex geometry. The breccia intrudes into hornfelsed quarzitic sediments of the Agua Negra formation.

The breccia is elongated in a WNW-ESE direction with a major axis between 67 and over 78 m and a width which varies from 5 meters to more than 30 meters.

Mapping and geochemical channel sampling have been conducted thoroughly at the San Francisco mine, especially from the main underground adit level.

The San Francisco mine is a typical tourmaline breccia with Au, Ag, Cu, Pb, Zn & Bi mineralization. The pipe is in the form of two lobes. The mine also has been drilled with seven holes completed for 741.6 meters. Drilling indicates that the pipe is getting larger at depth.

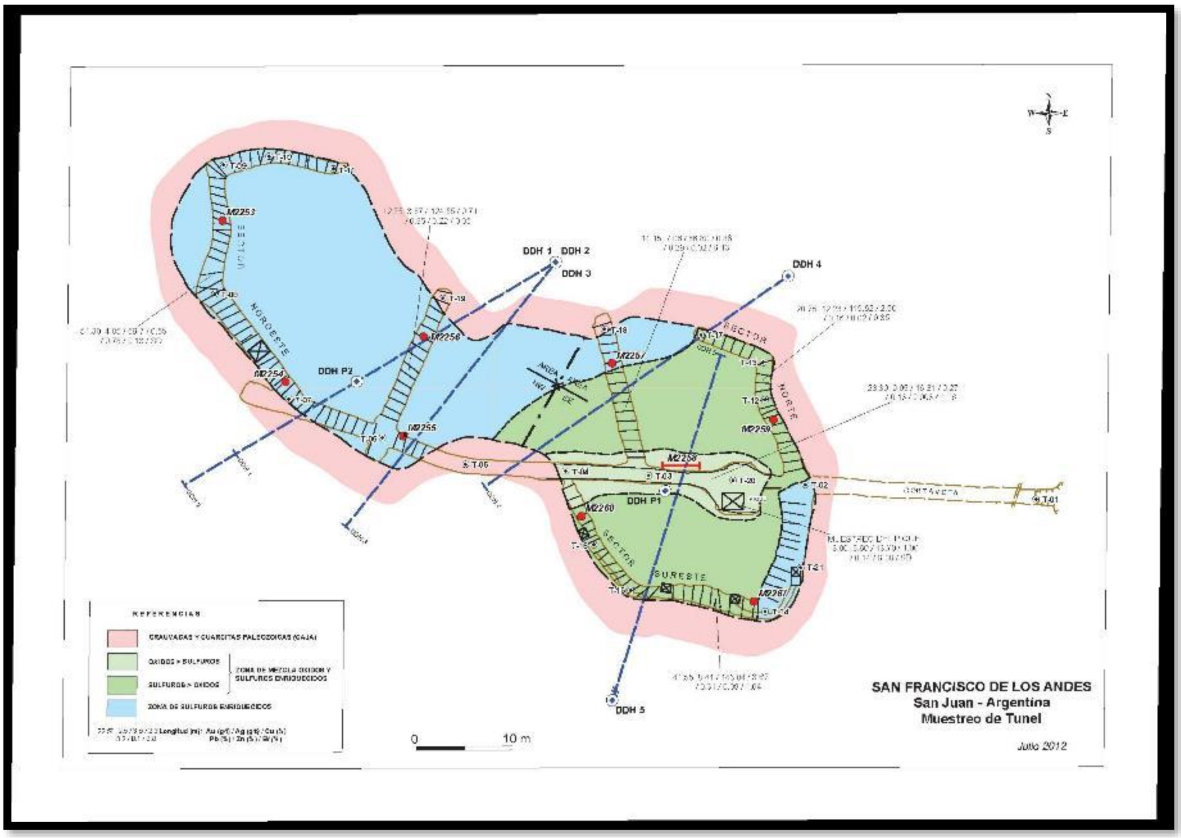


Figure 34 San Francisco main adit level mapping and sampling (after Lencinas, 1990)

10.2.1.2 Geochemistry

Grid based soil sampling has not been conducted, but rather a more detailed rock channel sampling program using electric jack hammers and rock saws has been carried out by Turmalina Copper staff. This work was conducted to check previous sampling done by Minera Aguilar (Figure 34). This 2012 map is a digital tracing update of the original 1990 plan created by Minera Aguilar staff (Lencinas, 1990).

A visual inspection of the maps that presented the data shows that in general the new underground channel sampling and assays confirms the earlier underground sampling assays, with the exception that the assay accuracy of the original sampling has been shown to be unreliable (discussed in Section 14.2). In terms of visual mineralization such as zones that are galena rich, assays were elevated for lead and this applies to other visual mineralization too.

10.2.1.3 Geophysics

An IP survey was conducted at the San Francisco mine during the same program as he other Petra Gold prospects. The mine is the largest in the property area and mined high-grade sulphide ore from a breccia pipe. Waste material on the dump commonly contained greater than 5 wt % sulphide, and consequently Petra Gold expected the IP survey to show a strong chargeability response on the geophysical survey. The mine is a steeply plunging pipe-like body.

The geophysics section shows a steeply dipping contact defined by a zone of high chargeability to the south separated by a 400 m zone of low chargeability to the north. In plan, this low chargeability zone has a WNW trend towards the Amancay mine area. The resistivity section and maps do not show features clearly identifiable with the San Francisco mine (Wyck, 2008).

The zone of high chargeability is large. On the plans of the chargeability at 250 m below the surface, the area of >20ms chargeability covers an area 1 km long by 500 m wide. This area is far larger than the San Francisco breccia pipe. The resistivity over this same area was generally lower than elsewhere (Wyck, 2008).

10.2.2 Quebrada Seca

Mapping in the Quebrada Seca area led to selective sampling of the exposed quartz veins (Figure 35). In addition, a soil grid with samples collected along the same north-south oriented geophysical lines was completed. Most soil samples were collected at a 100 m spacing, however Petra Gold collected independently a detailed 25 m spaced soil samples centred over the area with high gold values in exposed quartz veins (Wyck, 2008).

10.2.2.1 Geology

The Quebrada Seca area is a central magmatic intrusion emplaced into an antiformal fold of Aqua Negra Formation arenites and semi-pelites. Intrusive contacts are sharp and faulted in places. Tourmaline breccias appear preferentially located along or close to intrusive-sediment contacts. Quartz veining is preferentially hosted within the intrusive rocks and they are of lesser extent within the adjacent meta-sediments (Figure 35) (Wyck, 2008).

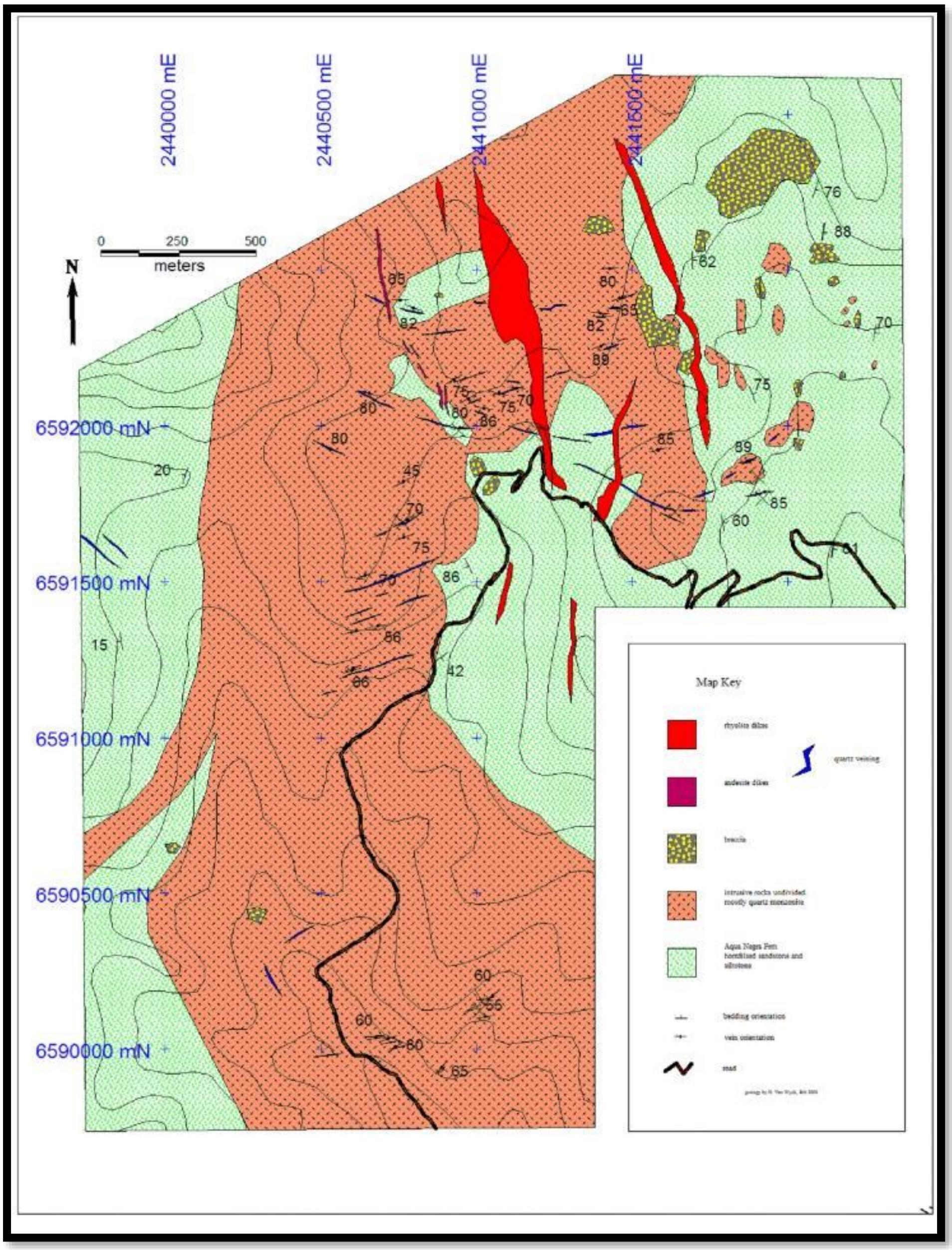


Figure 35 Quebrada Seca mapping (Wyck, 2008)

10.2.2.2 Geochemistry

Although past explorers, such as Buenaventura and Petra Gold, identified the numerous auriferous polymetallic quartz veins and their regional trend of WNW, E-W to ENE, at Quebrada Seca, no significant mineralization has been found to date. The veins appear to be narrow as described previously as being generally less than 0.5m wide (Wyck, 2008).

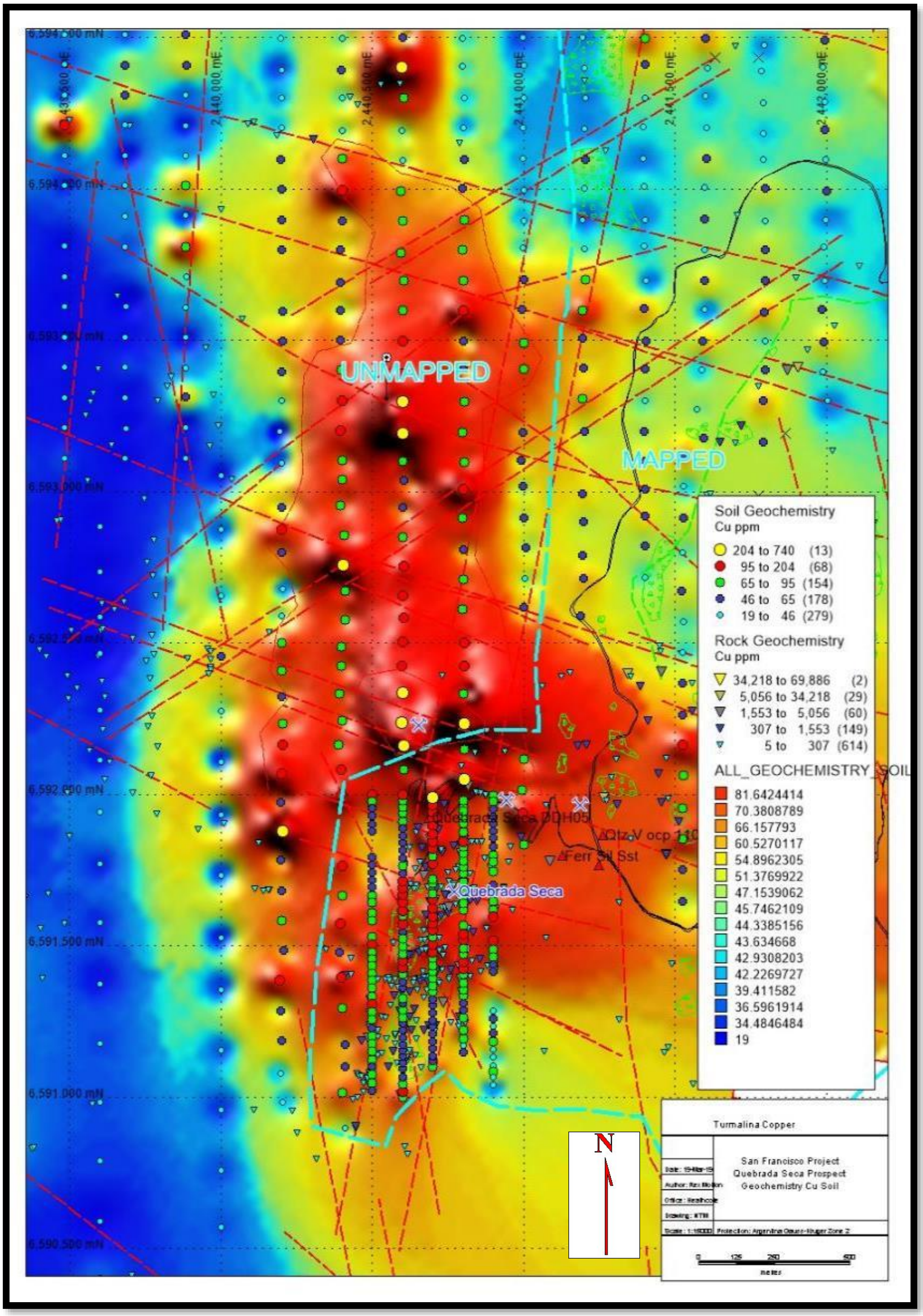


Figure 36 Copper in soil anomaly image and point map at Quebrada Seca

More impressive is the broader soil anomalous trend, which occurs as a north-south corridor of widespread gold and base metal soil anomalism heading north from the Quebrada Seca area. Much of this anomalous area is not mapped as shown in the accompanying figure, with the North-South light blue line defining the mapped/unmapped areas. Within this trend, many of the higher-grade localised copper and/or gold soil anomalies shown by this map could be due to breccia pipe outcrops or larger relatively unexplored quartz veins, which also show an ESE & ENE trends. This area is also lacking in rock chip sampling despite are large number of rock chips having been taken to the west of this area.

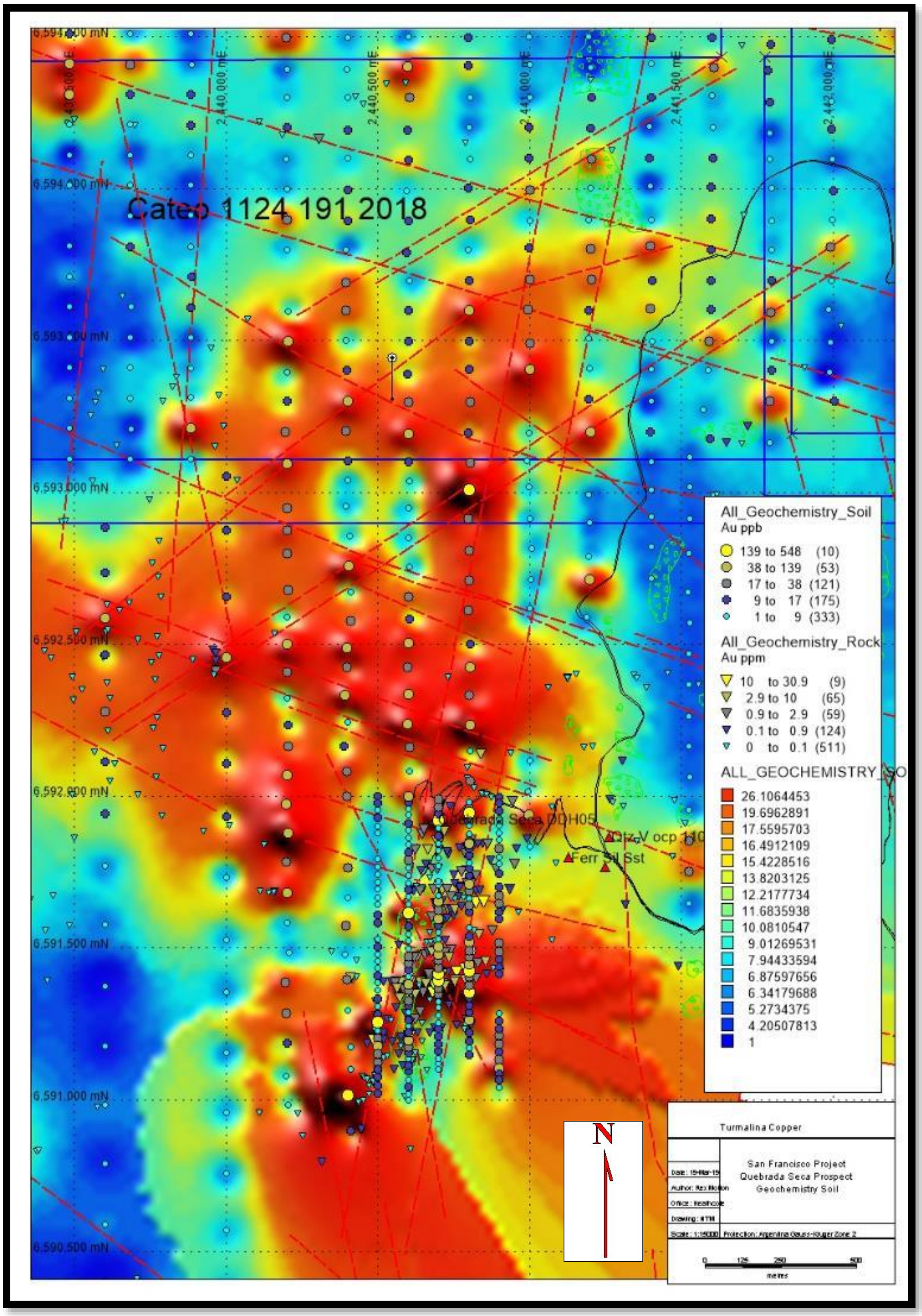


Figure 37 Gold in soil anomaly image and point map at Quebrada Seca

10.2.2.3 Geophysics

The Quebrada Seca area was traversed by seven 3D-IP geophysical lines. Inversion and analysis of the data permits division of the area into zones of high and low resistivity and zones of high chargeability (Chen, 2008). The main zone of high chargeability occurs along the northern end of the detailed Quebrada Seca (20m x 100m) grid and further north. The soil sampling at the northern end of this grid is increasing in anomalism and the later broader sampling shows a strong gold and base metal anomaly located in the vicinity of 2440600E 6592250N.

In the central portion of the Quebrada Seca 3D-IP grid over the zone with quartz veining with anomalous Au values, there is weak correlation between zones of high resistivity and Au in soil anomalies with the one area of high chargeability lying between two soil anomalies. However, the overview geophysical interpretation by Chen (2008) shows a broad zone of high chargeability extending SE. In summary, the geophysical data agrees with the structural and geochemical studies in the Quebrada Seca area showing two broad NW-SE oriented anomalies overlapping areas of anomalous soil geochemistry (Wyck, 2008).

10.2.3 Chorrillos Breccia Prospect

Mapping was conducted in the northern part of the prospect area in conjunction with the collection of 124 soil samples over a grid measuring approximately 1.7 km x 0.8 km.

10.2.3.1 Geology

The geology of the Chorrillos area is largely composed of a monzonite intrusive that has a number of tourmaline breccia pipes within it as well as within the nearby metasediments of the Aqua Negra formation (Figure 38).

An overview photograph of the area, presented earlier in the report, shows the prominent tourmaline breccias and in the middle distance the altered intrusive stock (Figure 5).

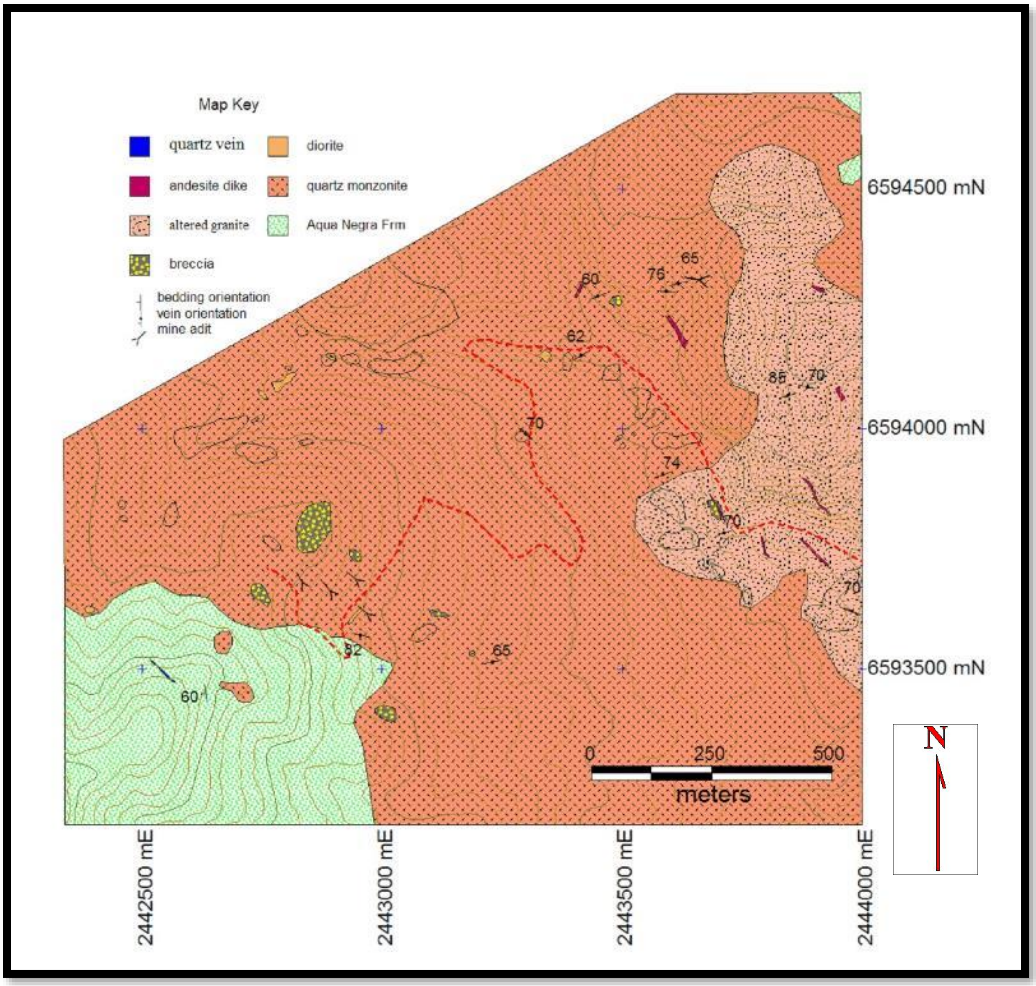


Figure 38 Chorrillos geology map (Wyck, 2008)

Mapped intrusive rocks are biotite granodiorite grading to quartz monzonite, magnetic diorite and an altered granite.

Tourmaline breccias are emplaced into the granodiorite and possess strong annular alteration haloes around the pipes. Previous exploration at Chorrillos had opened up several trenches adjacent to the main breccia pipe. The trenches exposed a well-developed annular alteration zone, that on account of the recessive nature are generally obscured by colluvium. The alteration haloes can approach widths of 100 m and consist of mostly sericite and lesser argillic altered granodiorite. Orbicular tourmaline rosettes within granodiorite also occur at Chorrillos (Figure 39). The Chorrillos breccia pipe is elliptical in shape with its long axis approximately 100 m in length, oriented NE and the minor axis measuring around 70 m (Wyck, 2008).

The largest area of alteration is associated with a granite (NB also mapped as rhyolite-dacite by Juarez) plug east of the Chorrillos breccia pipe, toward the eastern property boundary. The area stands out due to its pinkish color. The field notes distinguished this unit from the grey granodiorite as having a higher k-feldspar content, which possibly is due in part to potassic alteration. In addition to the strong overall potassic alteration, this unit possesses a superimposed zone of phyllic alteration defined by spaced veins of pyrite and quartz (Wyck, 2008). The author did not visit this area and cannot comment on these findings.

10.2.3.2 Structure

The Aqua Negra Formation shows bedding dipping SW at 60 degrees (Wyck,2008). Quartz veins with tourmaline alteration haloes consistently had strikes oriented NW. Four adits developed around the Chorrillos breccia pipe all were oriented NW and were developed on NW striking mineralized structures. All mapped andesite dykes similarly had NW strikes. In comparison, all mineralization within the altered granite porphyry was within NE oriented structures (Wyck, 2008).

Figure 39 Orbicular tourmaline granodiorite at Chorrillos.

10.2.3.3 Geochemistry

The adits adjacent to the Chorrillos breccia pipe were developed on NW trending mineralized structures. Exposures present in the roof and back walls showed quartz veins of less than 5cm wide with a glassy quartz rich core and vein margins with chalcocite, bornite, chalcopyrite and minor pyrite. Alteration haloes were narrow and sharp. Veining is not continuous and the adits rarely extended far into the hillside.

The soil geochemistry data discussed is not available apart from the map shown below (Figure 40).

The soil geochemistry shows that there are two areas of potential mineralization in the Chorrillos area. Soil anomalies are broadly associated with the tourmaline breccia pipe that was the focus of earlier drilling and historic mining. The anomalies were not centred on each other or the pipe, but the distribution can be explained by down slope dispersion and that there are several breccias in the area. The second area is shown by anomalous Pb, Zn and Cu associated with an altered granite porphyry adjacent to the eastern property line. The coincidence of alteration mineralogy, the favourable geochemistry and the presence of a small breccia pipe here makes this an area of interest (Wyck, 2008).

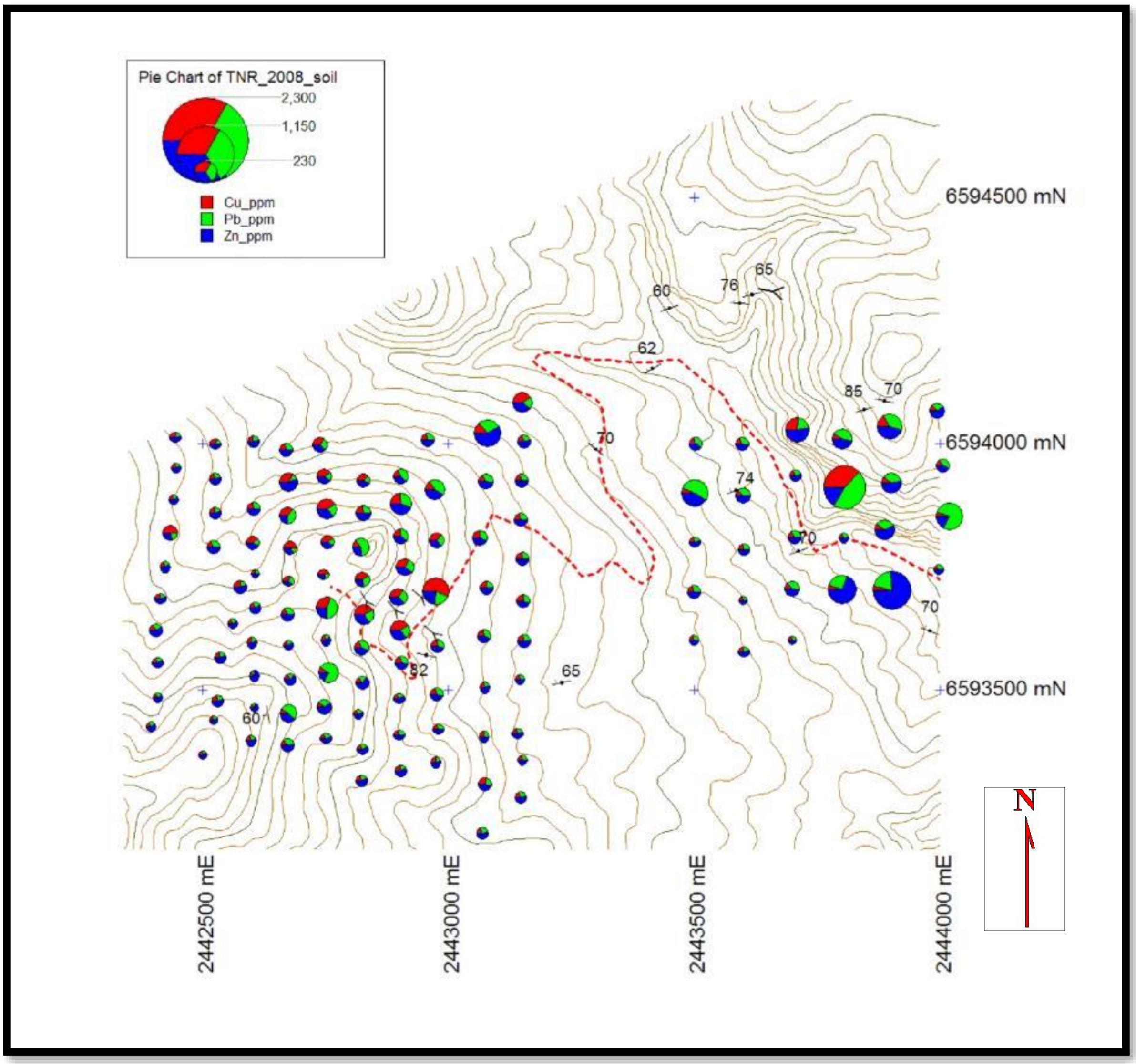


Figure 40 Soil Cu, Pb, Zn geochemistry at the Chorrillos prospect.

10.2.3.4 Geophysics

A geophysical survey was conducted at Chorrillos in 1996 (Jones, 1996) and the survey consisted of ground magnetics, resistivity/conductivity and gradient array IP on 7 north-south lines totalling approximately 25 line-km with a 400 m line spacing. The ground magnetic and conductivity data match the mapped geology quite well; the southern sediment-intrusive contact is well imaged and the total field magnetic data shows the more strongly altered granite intrusive as a magnetic low. The prominent tourmaline breccias show as subtle annular anomalies. In addition, the geophysics data also shows the strong NW -SE orientation to contacts between geophysical domains, which presumably mark fault and intrusive contacts (Wyck, 2008).

Two EW oriented IP lines were run just north and south of the main Chorrillos breccia pipe. The data array was a dipole-dipole configuration with a 100 m spacing. A section of superimposed drilling onto the southern dipole-dipole IP line (N93700) is presented below, together with a plan of the geology. The geophysical data shown was reprocessed by SJ Geophysics from the original Quantec data (Chen, 2008). The IP indicates that the drilling by Solitario in 1996 did not extend deep enough to evaluate the target (Wyck, 2008) (Figure 41).

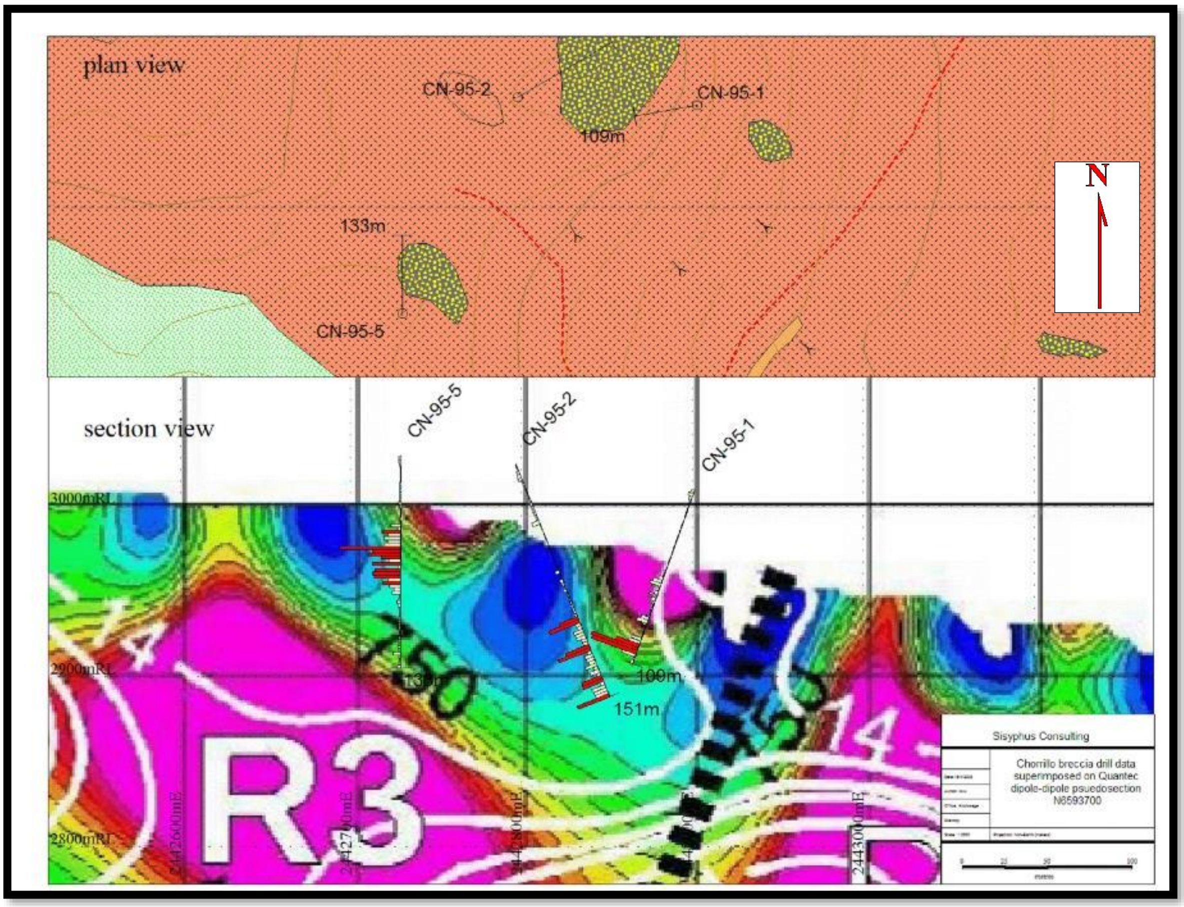


Figure 41 Solitario drilling & IP geophysics section and geological plan at Chorrillos (Wyck, 2008)

11 Drilling

11.1 General

There have been three drilling programs held within the San Francisco project.

Initially two vertical diamond drill holes were drilled at San Francisco mine by the Argentine Mines Department and then later a five drill-hole program Compania Minera Aguilar SA at the San Francisco mine for a total of 421.6 meters was completed in 1990. The core for the initial two holes DDH_P1 & DDH_P2 is not available, but the remaining 5 five holes was held in storage by Minera Aguilar. The drill core for DDH05 was BQ 36.5mm in diameter and for DDH02 the core size was NQ 47.6mm. The core was split in half for assaying. Turmalina Copper used the remaining core from two of these holes for re-assaying (DDH02 & DDH05) as a means of comparative assay study for the old assays.

Later Solitario Resources (Drinkard, 1996) drilled five RC holes for a total of 632 meters at various locations in the Chorrillos area.

In 2008, Petra Gold in association with TNR drilled another eight diamond holes for a total of 1961 meters at various locations within the project area (Table 7).

Hole ID	Easting	Northing	RL	Depth	Azimuth	Dip	Prospect
CN-95-1	2442893	6593764	3004	109	260	-70	Chorrillos
CN-95-2	2442791	6593767	3016	151	60	-65	Chorrillos
CN-95-3	2444138	6595059	3027	151	16	-56	Chorrillos Far NE
CN-95-4	2443357	6594543	2871	88	0	-90	Chorrillos NE
CN-95-5	2442726	6593637	3018	133	360	-70	Chorrillos SW
DDH-ET-0801	2442793	6593762	3032	440.4	60	-60	Chorrillos
DDH-ET-0802	2442727	6593631	3018	200	0	-70	Chorrillos SW
DDH-ET-0803	2443040	6588518	2577	317.2	240	-70	SE of San Francisco
DDH-ET-0804	2440700	6591715	3090	398.2	180	-70	Quebrada Seca
DDH-ET-0805	2440698	6591939	3100	202.1	180	-50	Quebrada Seca
DDH-ET-0806	2440599	6591414	3029	202.6	180	-60	Quebrada Seca
DDH-ET-0807	2440808	6591493	3022	200.5	180	-60	Quebrada Seca
DDH_P1	2442588	6589281	2722.16	150	0	-90	San Francisco
DDH_P2	2442557	6589292	2722	170	0	-90	San Francisco
DDH01	2442578	6589304	2736	55.9	239	-48	San Francisco
DDH02	2442578	6589304	2736	125.75	239	-69	San Francisco
DDH03	2442578	6589304	2736.37	49.4	218	-45	San Francisco
DDH04	2442600	6589303	2730.8	99.9	235	-66	San Francisco
DDH05	2442575	6589242	2713.7	90.65	17	-51	San Francisco

Table 7 Drillhole Summary Table

Assay and geological logging results for all of this drilling has been compiled from plans, sections and the original tables. Given the era of the drilling, no assay checks or quality control sample data is available.

Drill collar locations have been confirmed by ground checking with handheld GPS units. In the case of the Petra/Solitario holes, the drill collars are marked in concrete at each site (Figure 42 & Figure 43). The drill holes at San Francisco are marked by the original steel casing.

Only downhole surveys were conducted for the 2008 drilling carried out by Petra/TNR and have been incorporated into the database.

Figure 42 Photo of DDH-ET-801 collar at Chorrillos

Figure 43 Collar marker for hole CN-2-95

Information about the depth & orientation has also been compiled from the original sources as much as possible. Inspection of some of these drill sites confirmed their location.

11.2 San Francisco Mine

The initial drilling was carried out by the Mines Department of holes DDH_P1 (150m) and DDH_P2 (170m). These drill holes were placed within each lobe of the breccia and drilled vertically entirely within the breccia pipe (Figure 4). This was followed by a five-hole drill program at San Francisco in 1990. The following mineralised intercepts are summarised based upon a 1000ppm copper minimum grade and a 3m interval maximum of internal waste as well as a minimum mineralised intercept of 3 meters, based upon the complete assay work sheets.

The drilling is in various orientations and inclinations, including some vertical holes that have drilled down the ore zone associated with the vertical tourmaline breccia pipe. These vertical holes have no width component (NA) and the other holes have horizontal widths calculated according to the inclination of the hole. Holes with multiple intercepts have overall horizontal width of mineralisation shown.

Hole ID	Inclin.	Hor. Width	From	To	Interval	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Bi ppm
DDH_P1	-90	NA	30.70	77.35	46.30	5.15	99.15	5131	2495	356	511
DDH_P1			77.35	97.50	20.15	no core recovered					
DDH_P1			97.50	115.00	17.50	0.02	26.64	2373	5329	5380	47
DDH_P1			125.90	133.40	7.50	0.76	38.11	3270	1915	603	39
DDH_P2			25.65	66.00	40.35	4.88	43.36	8323	4630	2373	470
DDH_P2	-90	NA	70.90	122.50	51.60	0.13	35.50	3637	1189	3855	1538
DDH_P2			127.50	152.30	24.80	0.02	4.81	3142	2485	1947	16
DDH01	-48	8.2	38.55	53.20	14.65	1.73	53.81	4416	1616	256	207
DDH02	-69	31.0	35.55	92.65	57.10	2.04	118.91	4669	21931	5753	147
DDH02	-69		95.70	122.50	26.80	0.52	93.04	4752	8474	5667	1037
DDH03	-45	6.4	40.35	49.40	9.05	1.02	68.71	24917	1512	157	940
DDH04	-66	21.0	30.90	34.90	4.00	2.63	23.38	1195	911	23	710
DDH04	-66		42.50	74.25	31.75	3.05	56.26	9829	5872	3485	359
DDH04	-66		83.55	94.65	11.10	0.58	33.46	7023	1072	1148	25
DDH05	-51	25.0	44.35	84.25	39.90	3.88	71.14	10958	2377	946	918

Table 8 Mineralised intercept summary from San Francisco mine by Minera Aguilar (1990)

11.3 Chorrillos

The RC percussion drilling carried out in the Chorrillos area by Solitario in 1995 has recorded copper mineralised intercepts at the main Chorrillos breccia as well as the smaller tourmaline breccia located 170m to the southwest, Chorrillos South West.

The overall mineralised horizontal width is estimated based upon a vertical pipe and ore zone interpretation. Where there are a number of intercepts within the same hole that are close by each other the overall width is presented, such as hole CN-95-2, as this is a reasonable mining scenario.

Hole ID	Inclin.	Horiz. Width	From	To	Interval	Au ppm	Ag ppm	Cu ppm	Prospect
CN-95-1	-70	1.8	57	62.5	5.5	0.02	2.69	1168	Chorillos
CN-95-1		4	93	105	12	0.03	10.23	3049	Chorillos
CN-95-2	-65	22	99	103	4	0.07	1.5	3024	Chorillos
CN-95-2			107	113	6	0.03	4.07	1126	Chorillos
CN-95-2			117	125	8	0.02	1.5	2125	Chorillos
CN-95-2			129	151	22	0.03	4.89	1630	Chorillos
CN-95-5	-70	15	43	87	44	0.03	3.35	2183	Chorillos SW

Table 9 Mineralised intercept summary from Chorrillos by Solitario (1995)

11.4 Quebrada Seca

The diamond drilling program by TNR/Petra conducted in 2008 located minor gold mineralization at Quebrada Seca (Table 10).

The orientation of the mineralization at Quebrada Seca is not known and appears to be hosted by quartz veins or veinlets in various orientations that are relatively small.

Hole	From (m)	To (m)	Interval (m)	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Bi ppm	Location
DDH-ET-0804	100.70	101.70	1.00	0.36	5.32	153	1195	2103	2.5	Quebrada Seca
DDH-ET-0804	127.40	128.20	0.80	9.15	78.98	2260	4658	651	145.4	Quebrada Seca
DDH-ET-0804	295.40	297.30	1.90	2.03	24.45	595	5827	3590	11.37	Quebrada Seca
DDH-ET-0805	93.20	94.70	1.50	0.96	0.25	113	23	90	2.5	Quebrada Seca
DDH-ET-0806	23.00	24.60	1.60	0.51	4.22	73	2563	378	20.3	Quebrada Seca
DDH-ET-0806	36.60	38.10	1.50	0.22	0.73	117	155	524	16.9	Quebrada Seca
DDH-ET-0807	57.00	57.90	0.90	1.77	6.36	262	496	1064	13.3	Quebrada Seca
DDH-ET-0807	127.70	129.00	1.30	0.21	31.58	163	1789	1609	339.8	Quebrada Seca

Table 10 Mineralised intercept summary from Chorrillos & Quebrada Seca by TNR/Petra (2008)

12 Sampling Method and Approach

A summary of the various assay techniques used for the geochemical surveys illustrates that 1941 samples have Au, Cu, Pb, Zn, As, Mo and possibly Ag assays.

Samples	Count	Method
No Assays	55	
Au	410	Fire Assay
Cu	410	Acid digest/AAS finish
Pb	410	Acid digest/AAS finish
Zn	410	Acid digest/AAS finish
Ag	293	Acid digest/AAS finish
As	410	Acid digest/AAS finish
Mo	410	Acid digest/AAS finish
Au & 43 element scan	1531	Fire Assay & ICP

Table 11 Assay technique summary for the geochemical sampling

The soil sampling that was conducted by Petra and TNR used the grid that was marked up and used by the geophysicists for the IP survey so that the actual location control would be expected to be quite good. Onsite sampling was not supervised by geologists which is why there is no lithological logging of the soils samples that were taken. The grid used for the soil sampling is 200 m line spacing (E-W) and sampling undertaken every 100 meters (N-S) (Wyck, 2008).

An area of approximately 1.7 x 2.7 km was sampled (approximately 475 hectares). Following this survey centred over the area containing gold-base metal quartz veins, a second soil survey was completed over the most promising target area, which was considered to be a quartz veined porphyry target by TNR. This survey was based on 75 x 75 m soil grid and covered and area of approximately 114 hectares. In both of these cases typical soil samples were collected by digging with a shovel or pick axe down to bedrock and collecting an approximately 1 kg soil sample. No sieving was used. The soils in this area are lithosols/talus fines – there is very little vegetation and A and B soil horizons are not developed (Wyck, 2008).

Practically all the samples were assayed for gold by fire assay 50-gram charge with a 0.01ppm lower detection limit for rocks and a 1 ppb detection limit for soils. Wyck (2008) primarily focused on mapping and sampling quartz veins. Rock chip samples were for the most part selective rock chips, rather than spatially representative rock chips. Quartz vein samples focused on limonite-rich portions of veins, or texturally banded and distinct portions of veins. Sample sizes of 1 kg were typical and a selective hand sample was retained for later thin sectioning. No uniform sample density was utilized, but each vein was sampled at least once. Because of the selective nature of the rock sampling the values reported are likely to over emphasize grade (Wyck, 2008).

Inspection of the drill core from both the San Francisco and Chorrillos/Quebrada Seca drilling show that the core was half split at San Francisco and half cut for the Petra/TNR drilling. Half of the core was sent for assay. The remaining core is in remarkably good condition and it is easy to navigate through the core boxes (Figure 44, Figure 45 & Figure 46).

Samples from the early 1995 Solitario RC drilling such as chip trays are apparently not available.

Turmalina Copper Corporation (TCC) have conducted resampling of two drill holes at San Francisco, namely DDH02 and DDH5, where the entire remaining half core was sent for laboratory analyses. Therefore, there is no longer any remaining core from those two holes where new assays have been generated.

Figure 44 San Francisco drillhole DDH04 portion of the tourmaline breccia intercept.

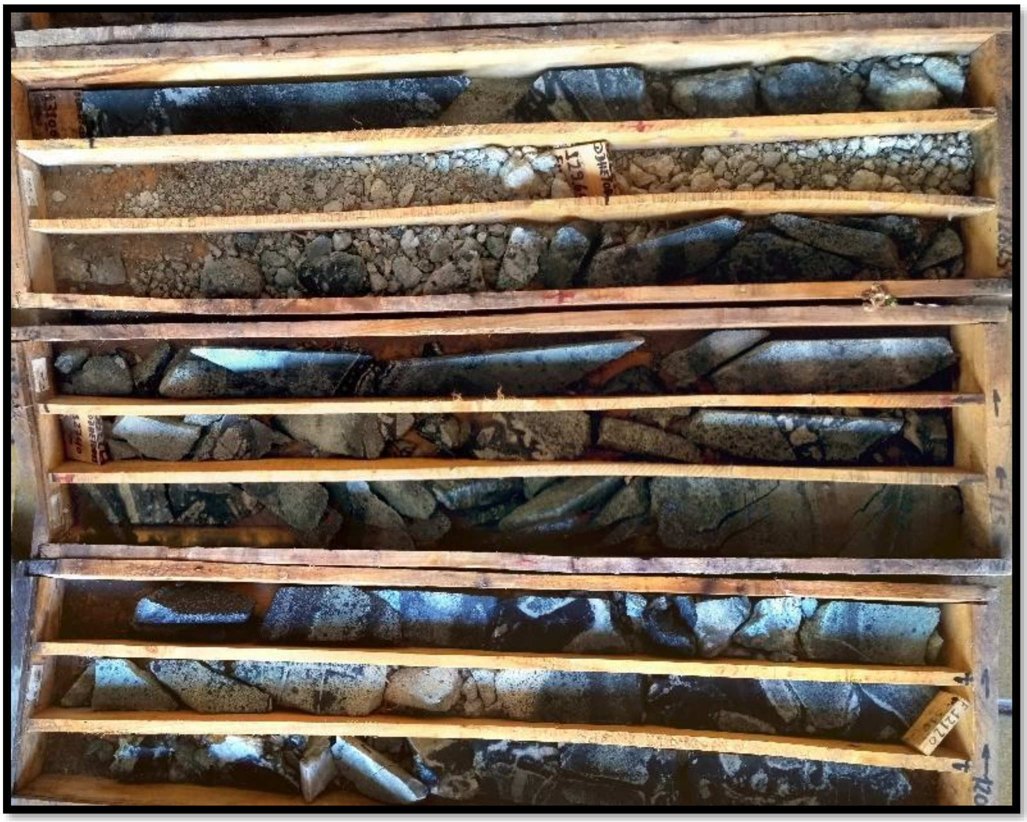


Figure 45 DDH-ET-801 drill core from the Chorrillos Prospect

Figure 46 DDH-ET-802 drill core from the Quebrada Seca prospect

13 Sample preparation, analyses and security

Sample preparation for the 1990 San Francisco drill core was carried out Minera Agular staff who split the core in half and submitting the samples to a local mine-based laboratory.

TCC has conducted further core analyses to repeat some of the assays & review the potential for bias. The mineralised intercepts were repeated by ALS Global on the remaining half core for DDH02 & DDH05. The core was sampled at the same intervals used previously and delivered to the ALS Global sample preparation facility in Mendoza. The prepared pulps were forwarded to their analysis laboratory in Santiago, Chile. Samples were dried, crushed and pulverised, prior to analysis by Au-AA24 and ME-MS41 techniques. Au-AA24 is a standard 50g fire assay using lead collection and aqua regia digest and AAS finish. ME-MS41 is an aqua regia digest and an ICP-MS (Inductive coupled plasma – Mass spectrometer) analysis using a 0.5g charge suitable for low level detection and includes 53 elements. The drill core was analysed in a single batch with job number ME18326761 completed on 19 January 2019 and consists of 81 samples. This batch has 12 sets of laboratory duplicates and 37 sets of standards and blanks analysed by ALS Global. TCC also added 5 standards and 6 blanks to the same batch to ensure assay quality. The ICP-MS assays included boron in the suite, and given the high levels of tourmaline in the samples it would have been expected to yield a response however aqua regia is not suitable for this process and a four-acid digest with hydrofluoric acid is necessary for that to yield a meaningful assay.

The sampling handling, preparation and analyses conducted by TCC for the resampling of the drill core and the rock chip sampling are of an adequate standard. The earlier assaying techniques used by Minera Aguilar are not of sufficient quality to allow future usage such as in resource estimation.

Sample preparation for the early drilling conducted by Solitario in 1995 is unknown and the samples analyses were for Au, Ag and Cu – all in the ppm range. The assay results appear to be adequate for the information available and the collection and presentation of the data was of a high standard despite the lack of quality control information available.

Sample preparation methods and analytical techniques used by Petra/TNR during the 2000 decade are consistent. Rock, soil and stream silt samples were assayed at the same facility – Alex Steward Assay (ASA) in Mendoza, utilizing the same sample preparation codes and almost identical analytical packages. Soils and stream silts were prepared using prep code P-2, which is dry entire sample in electric ovens, complete sieve to <#80 mesh, split 200 gm for analysis. Rocks were prepared using prep code P-5, which is dry entire sample in electric ovens, then complete crush of sample in jaw crushers to #10 mesh, split sample to 0.8 kg with riffle splitter and finally pulverization of sample to 85% under #200 mesh (Wyck, 2008).

Petra/TNR samples analysed for gold using conventional fire assay techniques on a 50 g sample, finished by atomic absorption methods with a minimum detection limit of 0.01 ppm. Soils and silts were analysed to a 1 ppb detection limit for gold. The remaining elements were analysed using ICP-OES following aqua regia digestion (Wyck, 2008).

In 2008, Wyck delivered all samples directly to the assay laboratory and so the samples were either on site or in Petra Gold's secure warehouse facilities in San Juan prior to delivery. Alex Steward Assay (ASA) Argentina is a certified ISO 9001 :2000 company for the preparation and analysis of geochemical samples (Wyck, 2008).

For the geochemical ground surveys conducted by TNR/Petra in 2008 a series of rock and soil sample blanks were introduced into the sample stream. All of these samples returned background values. In addition, the assay lab repeated every 10^{th} sample. These reported values showed no significant variation. Commercial pulp standards were not used in the Petra Gold & TNR sampling; however, the results produced by ASA based on the requirements of ISO 9001:2000 certification were considered satisfactory (Wyck, 2008).

The author believes that geochemical and drilling exploration work conducted by Petra Gold and TNR staff used adequate sample handling and laboratory preparation and that the selection of the analytical techniques were appropriate for the task of discovering further mineralization. There does not appear to be any abnormal or erroneous sets of data within the review. Interpretation of this data is presented in Section 19.

14 Data Verification

14.1 Regional Geochemistry

The regional geological and topographical mapping was presented as raster images rather than vector data. The drilling data was presented as scans of sections, maps, assay sheets & geological logs. Some of the geological logging had been transposed into Excel spreadsheets or was originally done in Excel. The assays are recorded in Excel spreadsheets (Petra) or as scanned copies of the original assay work sheets (Minera Aguilar drilling).

The Petra Gold/TNR geochemical data of soil, rock and streams sediment samples, includes rock descriptions, coordinate locations in Gauss-Kruger Campo Inchauspe Zone 2 projection and assay spreadsheets. The assay data was not the original assay data from the laboratory but rather a compilation of the information gathered. The underground sampling of the San Francisco mine was presented as scanned maps and scanned original assay sheets. Resampling of the underground drives carried out by TCC included sampling locations and original assay sheets.

Petra/TNR conducted some geochemical sample assay quality checks in 2008 of both rock chips and soil samples. An attempt to investigate gold grade variability from rock samples where five (5) samples were collected from the same area as previously reported and the assay results indicate that gold is not uniformly distributed in the quartz veins (Wyck, 2008).

Petra/TNR staff under the guidance of Dr Wyck also collected duplicate soil samples during the January-February 2008 and the assays showed consistent results. Wyck concluded that he has no reason to be sceptical of any previously reported sample results and to the best of his knowledge, the previously collected sample database appear to reflect reasonable sampling procedures to produce accurate and reliable results (Wyck, 2008).

I concur with Dr. Wyck about the information gained from Petra Gold and TNR, such that to the best of my knowledge, the previously collected sample database appears to reflect reasonable sampling procedures to produce accurate and reliable results.

14.2 San Francisco Drill Core Resampling

For the 1990 diamond drilling at San Francisco, the original assay sheets were used by the author to create the current database. The new assays from ALS Global for resampling of drill holes DDH02 & DDH05 have been entered into the database in preference to the original assays as the technology used for these assays and the presence of standards, duplicates and blanks within the batch gives greater confidence as to their accuracy. All assay data is presented in parts per million (ppm). Comparisons of this old and new data are presented as scatter plots, R squared values and trendline equations (Table 12, Figure 47-Figure 51).

Element	Formula	R2 value	Notes	Correlation
Ag	Y=0.9471X	0.0095	Extreme 577ppm in ALS single sample	0.2880
Au	Y=0.5509X	0.7285	Gold results overestimated previously	0.9030
Bi	y=0.4421X	-0.109	Rare very high ALS results, no correlation	-0.1238
Cu	Y=0.8802X	0.7423	High grade outliers are higher in ALS	0.8658
Pb	Y=2.13X	0.0886	Lead results underestimated	0.3207
Zn	Y=1.1397X	0.6389	Maximum 10000 ppm in old data	0.7994

Table 12 Data Analysis for the resampling of San Francisco drill core

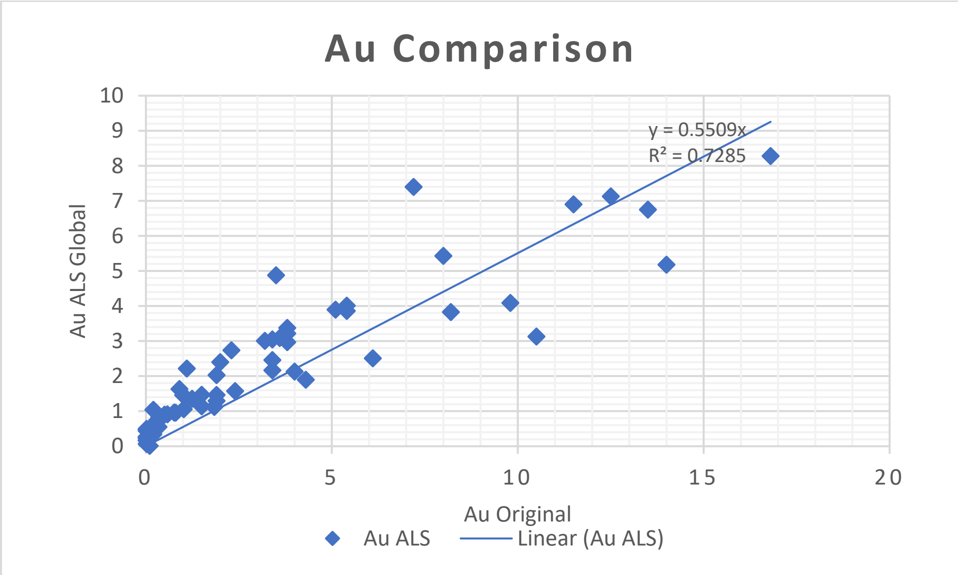


Figure 47 Gold comparison of old and new assays at San Francisco drilling in ppm

Generally, the old assays overestimate the grades for Au, Ag & Cu metals, and underestimate the grades for Pb & Zn. Bismuth assays are almost random and lack correlation. ALS assays also occasionally show high grade assays which appear to have been not detected previously and this applies to Cu, Ag, and especially Pb. The zinc data suffers from the highest level of detection (overscale) in the old data was 10000 ppm, but even with this limitation the ALS assays actually found samples previously assayed at 10000 ppm to be significantly lower than that and as low as 3210 ppm. Based upon this information the old assay data set should not be used in any future resource estimation and is an indication of mineralization only.

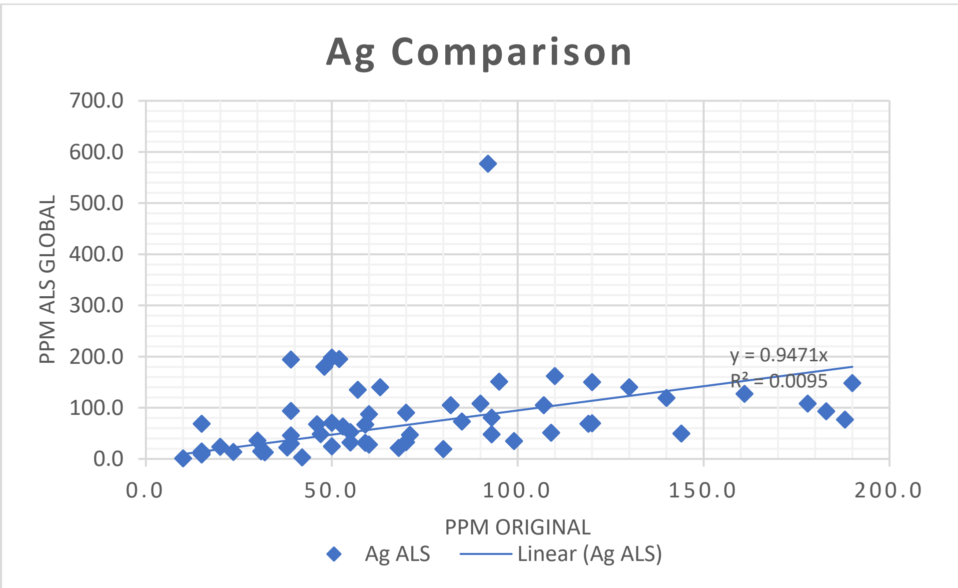


Figure 48 Silver comparison of old and new assays at San Francisco drilling

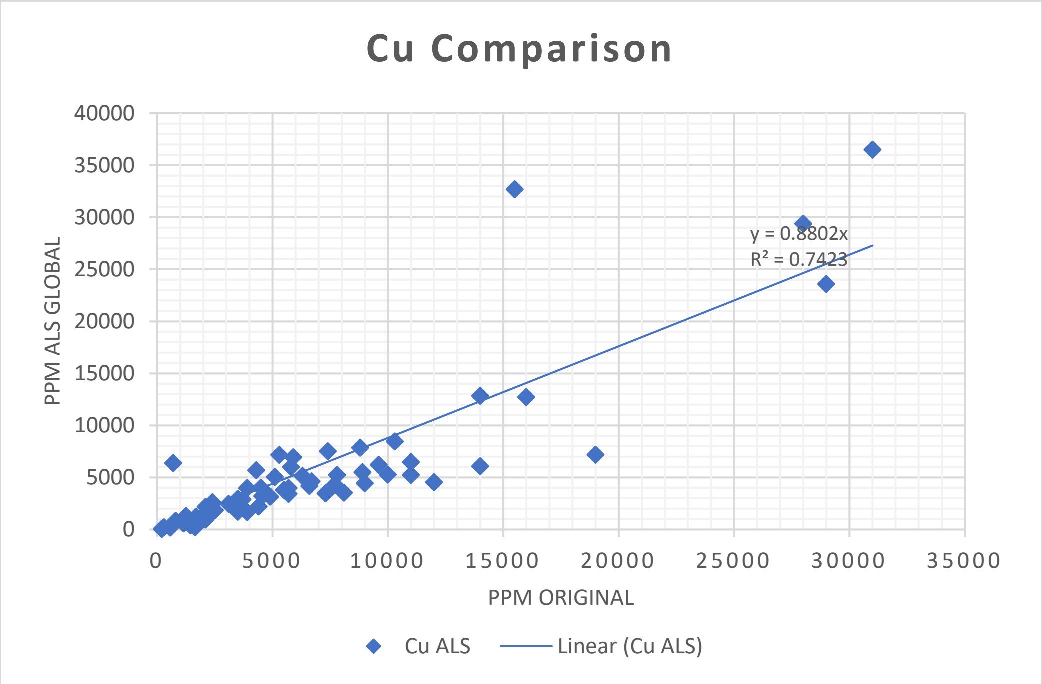


Figure 49 Copper comparison of old and new assays at San Francisco drilling

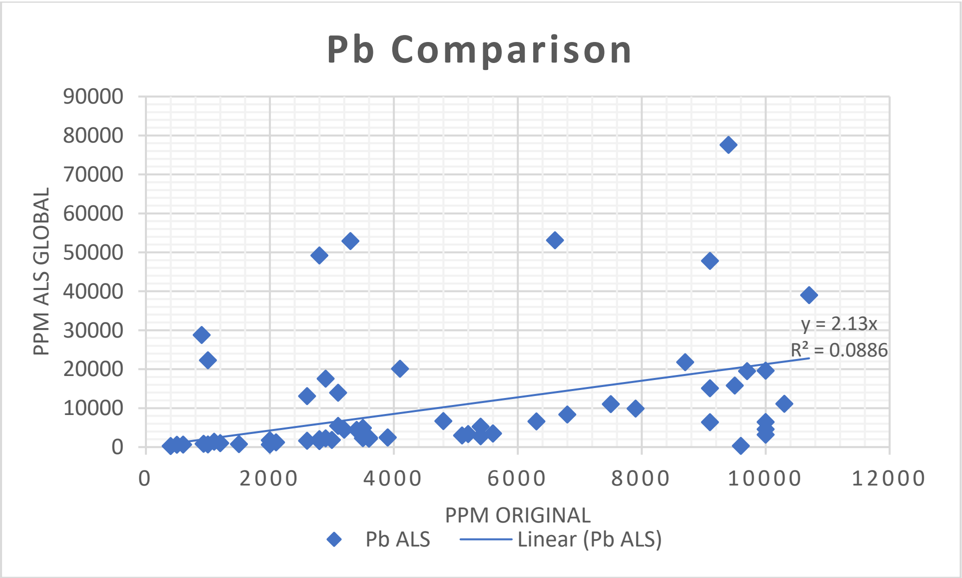


Figure 50 Lead comparison of old and new assays at San Francisco drilling

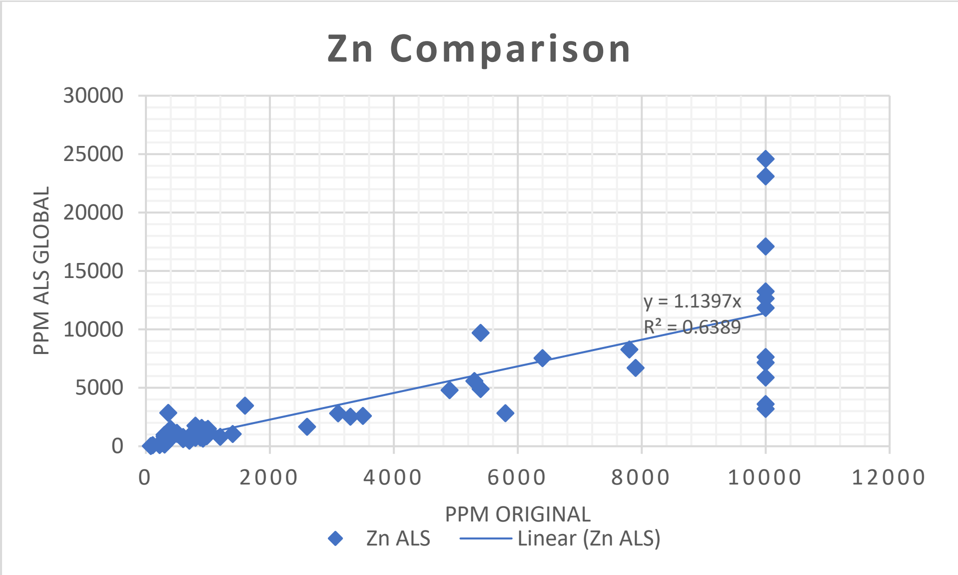


Figure 51 Zinc comparison of old and new assays at San Francisco drilling

14.3 Standards verification

Assay standards and blanks included by TCC for the resampling of drill from holes DDH02 & DDH05 in batch ALS ME18326761 gave consistent results for gold analysis. Of the six blank samples four were below detection at 0.005ppm and the others recorded assays of 0.006 & 0.011, which is considered insignificant in gold mineralised drilling. The OREAS standards are presented as a graphic of pair sets between the actual OREAS gold concentration and the recorded ALS assay. The R^2 correlation value is 0.9963, which is very close to the perfect score of 1.

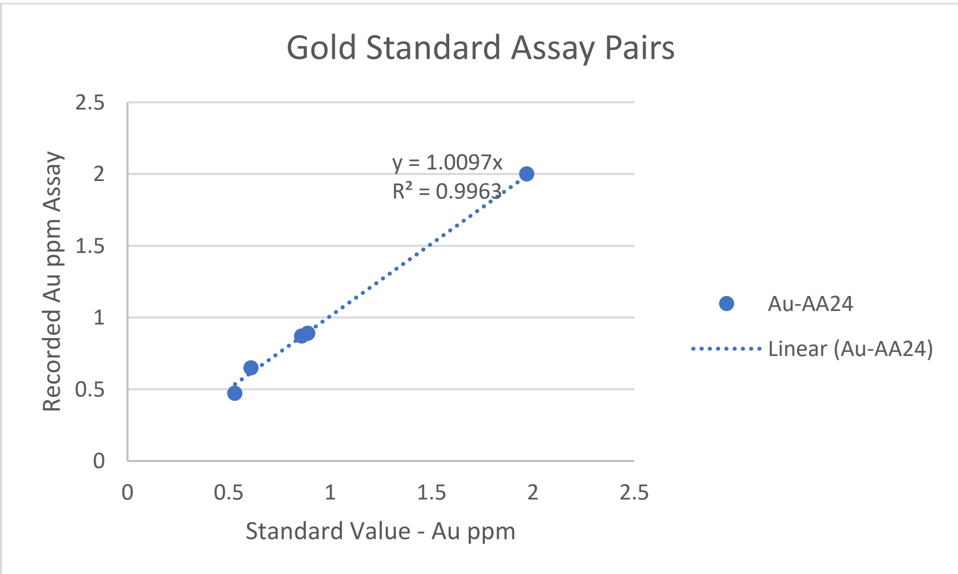


Figure 52 Gold Standard Assay Pairs ME18326761 Batch

15 Adjacent property

Although other mining and exploration tenements occur within the area of the project, the only other significant exploration or mining activity is the Casposo gold project. The Casposo gold project is partially owned and wholly managed by Austral Gold Limited (Austral Gold) and Australian Stock Exchange company which restarted the mine in 2016/2017 and is located 44km south of San Francisco and 25km northwest of Calingasta township.

Casposo is a typical low sulphidation epithermal style gold–silver deposit where mineralization is hosted within rhyolite – andesite flows and breccias. Veins are typically banded quartz–chalcedony colloform – crustiform banded with quartz – carbonate infill. Mineralization is associated with an assemblage consisting of quartz, chalcedony, adularia, calcite, illite, sericite and trace sulphides. Gold and silver occur as electrum, native silver, sulfosalts and silver sulphides. The mine operated by Austral Gold produced 166194 tonnes of ore to the end of 2018 at a grade of 2ppm Au and 277.3 ppm Ag for 11,564 oz Au & 1,213,316 oz Ag at a cash operating cost of $1362 per Au equivalent ounce (Altman, 2016).

Casposo occurs in a thick intrusive and volcanic sequence assigned to the Permian-Triassic Choiyoi Group, which overlies the Carboniferous-Lower Permian metasediments of the Agua Negra formation rocks present within the San Francisco project and therefore its mineralization is not directly relevant to the current project, but it is the only known nearby precious metal project that is active. Should the Choiyoi Group formation be found to occur within the San Francisco project, subject to further mapping, then this type of mineralization would be also relevant.

The author has been unable to verify the information related to the Casposo gold project, and this information is not indicative of the mineralization of the current project.

16 Mineral Processing and metallurgical testing

Composite samples were taken from the San Francisco mine for metallurgical test work in either 1990 or 2012 or both. The 1990 samples were delivered to Bolivia, but the results of the investigations are not currently available.

The mineralization present at San Francisco mine, is a polymetallic base and precious mineral assemblage, which in the primary ore zone is composed of fairly coarse-grained chalcopyrite, galena, pyrite, arsenopyrite & sphalerite. Minor other base metal minerals also occur as well as gold and silver mineralization. Such an assemblage is similar to many volcanogenic hosted massive sulphide (VHMS) deposits and the metallurgy of which is well known and such deposits are treated fairly readily generally through flotation processes.

17 Mineral resource and mineral reserve estimates

There are no NI43-101 compliant reserve or resource estimates available for the San Francisco project.

There is one historic resource estimate at the San Francisco mine by Compania Minera Aguilar (Wyck, 2008), however the re-sampling of drill-holes DDH02 & DDH05 do not give confidence to this resource estimate and all the San Francisco mine drilling will need to be revised in light of this new resampling assay data (Section 14). There are many other shortcomings to this resource report and therefore reporting this resource is likely to be misleading and has been omitted.

18 Other relevant data and information

No other relevant data or information is considered necessary.

19 Interpretation and conclusions

The San Francisco project has two areas of focus, the San Francisco mine and the surrounding area comprising the various mining claims.

19.1 San Francisco Mine

The San Francisco operated from 1941 to 1980 and produced 2420 tons of material grading 6-7% copper and 1.43% bismuth (Lara, 2006). In 1990, a considerable amount of exploration and development work was also done with seven diamond holes completed for 741.6 meters. This deposit is a tourmaline breccia deposit with copper, lead zinc, silver and gold mineralization. These polymetallic tourmaline pipes are a distinctive class of intrusion-related breccias which vary considerably in size and metal content. They are considered to be derived from granitic to granodioritic magmas initiated at deeper crustal levels than generally much larger copper-bearing pipes associated with porphyry copper deposits, and can although they have limited lateral extent, they can extend for up to 2km at depth (Figure 17). Drilling at the Chakana project in Peru, which has the same type of deposits, has yielded recent substantial drill intersections that augur well for the San Francisco mine and this project (Table 4). These pipes are also largely vertical in orientation.

Although the grades in the primary ore are not as rich as the supergene zone, drilling within the breccia is not necessarily going to give a typical grade for the overall body as illustrated in previous diagrams and in particular the historic development of the mines contact zones for the better grades (Figure 19 & Figure 34). Drilling should therefore focus on taking this into account and target not only the breccia but also the contact zones and the acute lobes of the breccia.

19.2 Regional Exploration

In terms of the larger overall project, previous mapping programs have established that there are 62 breccia outcrops of elongated to circular shapes and ranging up to 6.3 hectares in areal extent, held within the current tenements. Most of these outcrops are considered to be tourmaline – quartz breccias, however it is noted that sections of the drill core from Quebrada Seca were logged as tourmaline breccia when they were actually tourmaline altered granite and not true breccias. Revision of the drill core and new logging would be worthwhile.

Out of all the mapped breccias, only 6 breccia outcrops are greater than 1 hectare (10,000m2) in area, and these are all along the west side of the project on an NNE trend. Five breccia outcrops are either external or partly external to the project with the remaining 62 breccias held within the Cupro I, Solitario and Cateo mining claims. In the southern mining claim of Cupro II (1247 hectares) and the San Francisco mine site, only one breccia has been mapped, which is the San Francisco mine itself. This paucity in breccia outcrops is likely the result of the Cupro II tenement not having been geologically mapped.

Past exploration has focused on looking for porphyry copper deposits which was thought to occur within the ground. Results have not confirmed the project to have sizable porphyry copper mineralization, but have highlighted the potential for a large field of mineralised tourmaline breccias. Of minor interest is the Quebrada Seca prospect where mineralised quartz veining has received attention on the basis of a possible porphyry copper, but this prospect appears to be related to the tourmaline breccia mineralization event and not porphyry related.

The completion of stream sediment survey is required in areas with a paucity of sampling such as the central east area where most of the breccias occur. The stream sediment data available to date shows a relatively consistent set of areas that are gold and base metal mineralised, namely the western N-S corridor, including Quebrada Seca, showing stronger copper anomalism and the eastern central and southern area including the San Francisco mines showing gold anomalism (Figure 53 & Figure 54). In general, the zinc stream sediment survey confirms the copper stream sediment results and the arsenic tends to corelate with the gold results (Figure 55 & Figure 56). Further more detailed sampling will improve this interpretation as well as help target the better mineralised breccias that are likely to occur within these areas.

Although these breccia pipes are small aerially, they have substantial grade, are vertically extensive and are known to become larger at depth. Given there are so many potential ore bodies, a central processing facility could serve well the entire breccia pipe field with a number of mining operations taking place in parallel.

Geochemical exploration does not require widespread soil sampling for what are really obvious targets, however rock chip sampling of the individual breccias would remain a key assessment method where the level of mineralization could be compared for the various prospects.

Because there are so many targets, methods need to be developed to prioritise the better ones. Clearly criteria such as size is important, but within each breccia system the breccia clast composition may also help in determining the level of erosion for each pipe (Figure 17). Other methods such as Fe/Mg ratios could be helpful in understanding whether the breccias is mineralised or not (Dill et al, 2012). Some of the smaller exposures could mean that there is a large breccia pipe that has not been eroded to any significant extent. Geophysical techniques such as IP or maybe ground magnetics could be trialled to form a geophysical model to be able to rapidly assess the potential of each exposure.

19.2.1 Quebrada Seca

In the vicinity of Quebrada Seca and particularly to the north the area of (100 x 200) soil sampling has highlighted a broad area of base metal and gold anomalism, with various peak anomalies. This northern & western area has not been mapped and it would appear likely that there is a continuation of the tourmaline breccia pipe field in the east into this area. The copper anomaly map shows at least 11 distinct peak Cu &/or Au anomalies present in the area that would be in addition to the 62 mapped breccia pipes mapped to the east (Figure 57).

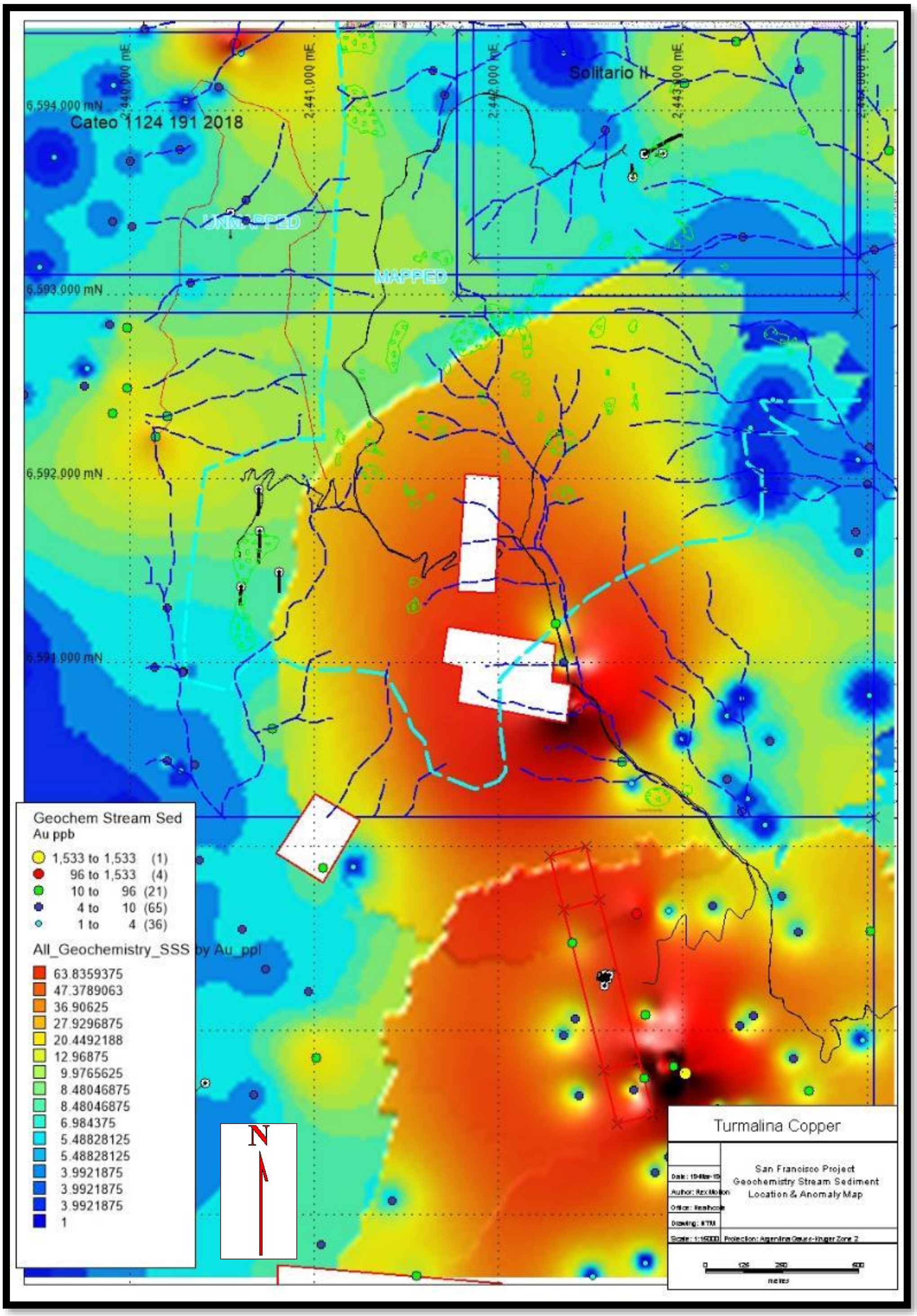


Figure 53 Regional stream sediment data anomaly map for -80# Au ppb

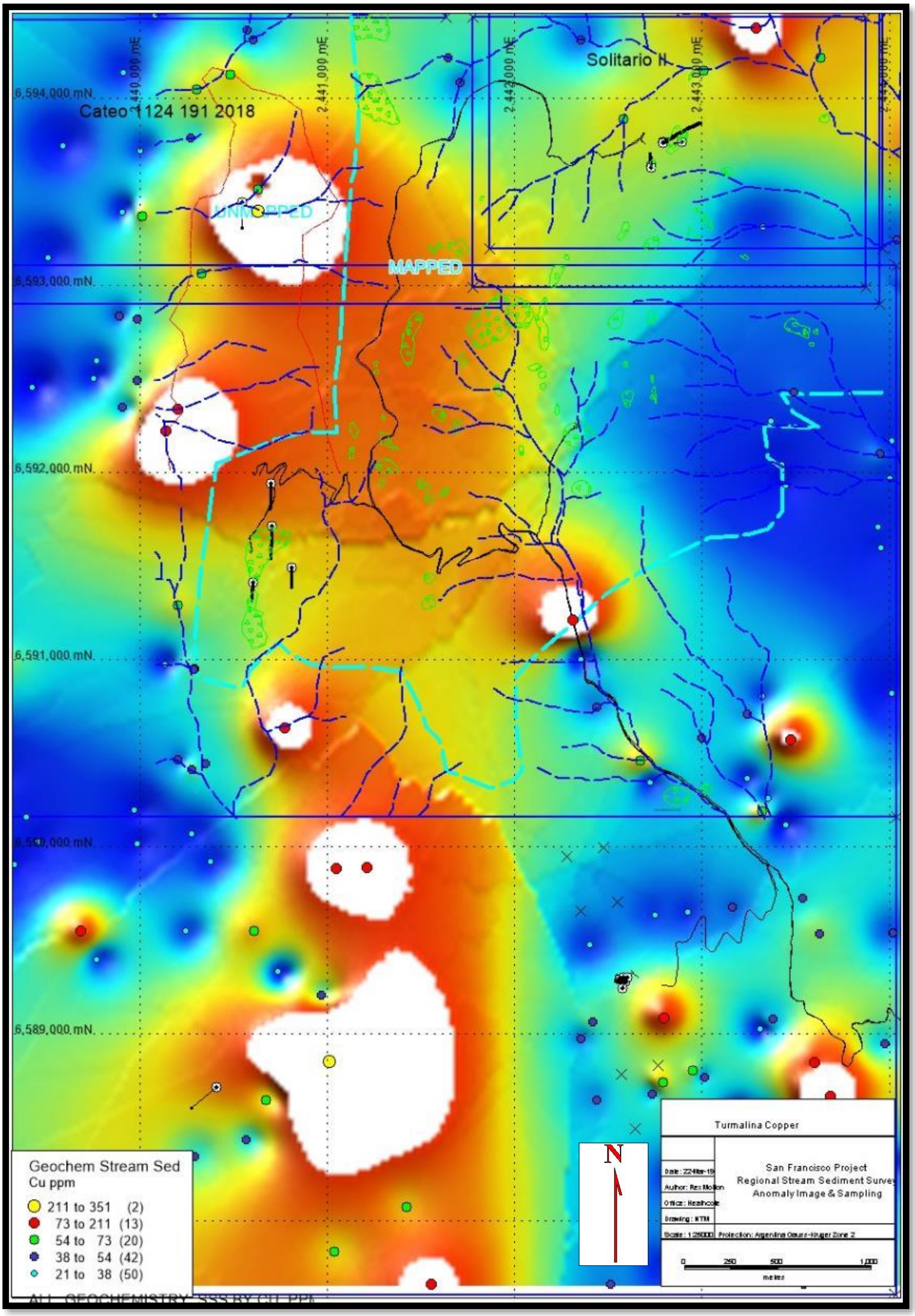


Figure 54 Regional stream sediment data anomaly map for -80# Cu ppm

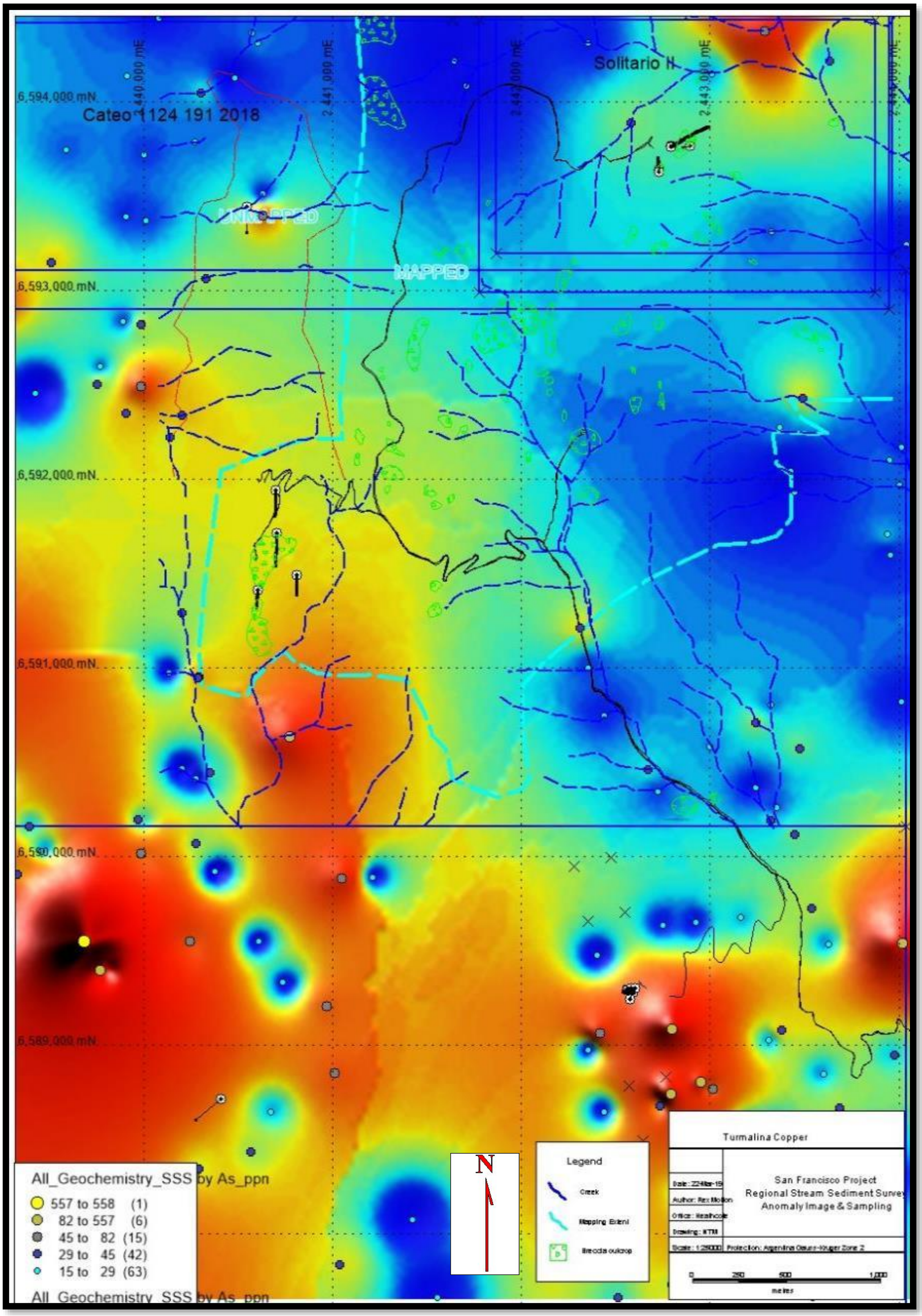


Figure 55 Regional stream sediment data anomaly map for -80# As ppm

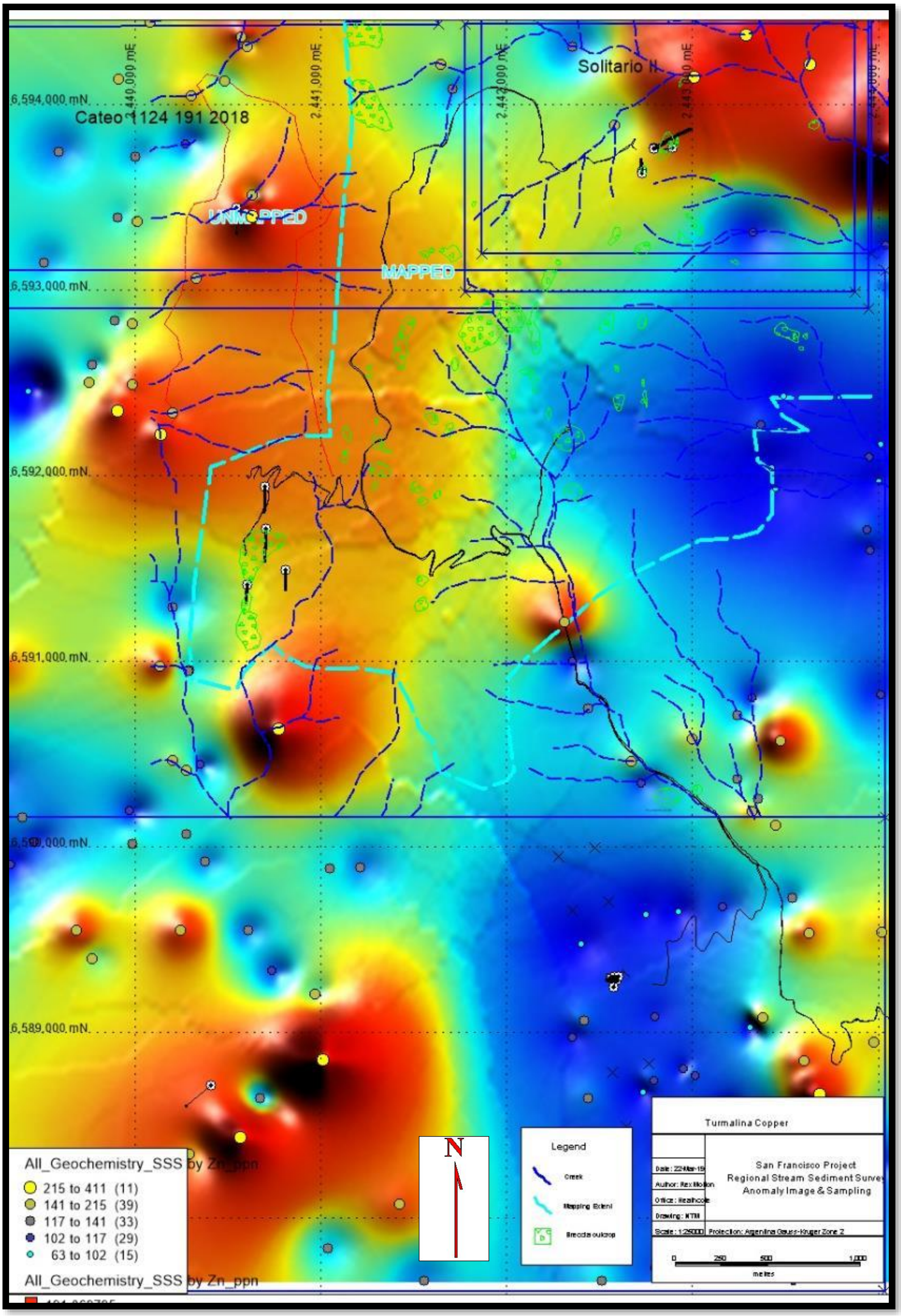


Figure 56 Regional stream sediment data anomaly map for -80# Zn ppm

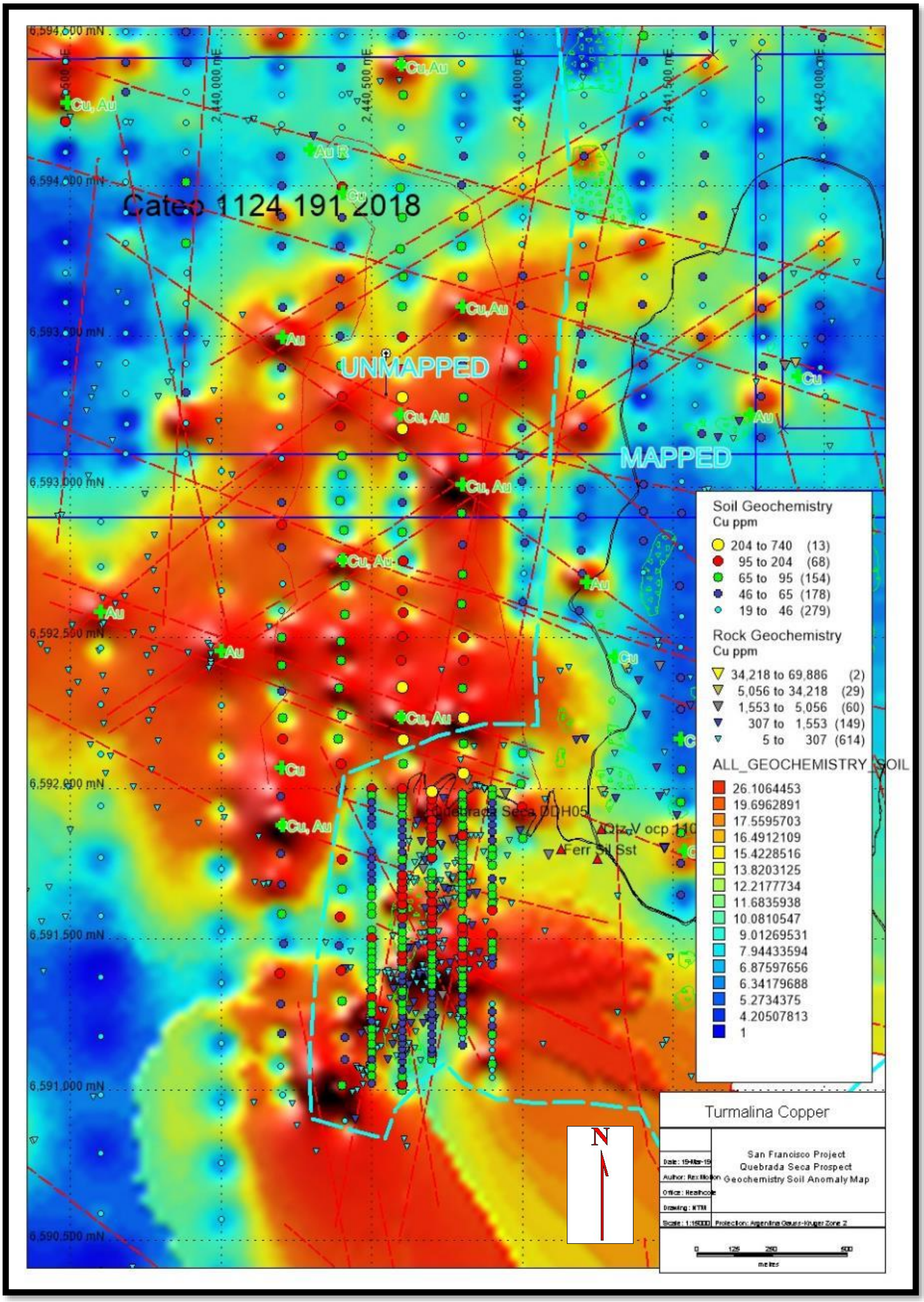


Figure 57 Copper geochemistry in the Quebrada Seca area

19.2.2 Chorrillos

The Chorrillos area has a number of features that confirm its exploration potential. Four separate breccias have been drilled with seven drill holes and two of these breccias have yielded elevated (>1000ppm) copper mineralization over significant downhole widths in five holes. In regard to the other two drill holes; drill hole CN-95-03 is external to the project area and has failed to intersect a tourmaline breccia and the other drill hole CN-95-04, within the project area, intersected tourmaline breccia in the first 66m, but this was apparently unmineralized. Generally, this drilling is essentially scout drilling as a first pass type activity and no further drilling has taken place since it was completed in 2008.

The best drill intercept from the main Chorrillos breccia pipe is from diamond drill hole DDH-ET-0801 with 48 meters of 6279ppm Cu, 1160ppm Pb & 949ppm Zn from 109.3m depth with other intervals above and below this intercept.

The best drill intercept at the Chorrillos South West breccia is from RC percussion drill hole CN-95-5 with 44 meters of 2183ppm Cu from 43m depth.

Hole ID	From (m)	To (m)	Interval	Au ppm	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Bi ppm	Location
DDH-ET-0801	97.2	103.7	6.5	0.01	1.06	4455	80	8	9.5	Chorrillos
DDH-ET-0801	109.3	157.3	48.0	0.02	4.74	6279	1160	949	13.9	Chorrillos
DDH-ET-0801	162.3	172.3	10.0	0.02	4.88	2116	985	1205	25.7	Chorrillos
CN-95-5	43.0	87.0	44.0	0.03	3.35	2183	NS	NS	NS	Chorrillos SW
DDH-ET-0802	40.0	52.1	12.1	0.01	0.79	2172	104	39	166.5	Chorrillos SW

Table 13 Chorrillos Best Drilling Intercepts

Another area of mineralization east of Chorrillos is within the most altered intrusive stock along the eastern property boundary. Here a Pb – Zn soil anomaly coincides with the strongest alteration exposed at the surface (Wyck, 2008) (Figure 5). Quartz vein rock chips have yielded gold to 1.11ppm associated with 4549 ppm Pb. An adit exists here driven ENE into the hill following a vein (2443810E 6594050N). This area is also mapped as being a rhyolite or porphyritic dacite (D.S. Juarez map, undated). A major WNW/ESE fault is inferred from the linear drainage pattern as well which may have some bearing on the mineralization present here.

20 Recommendations

The entire data set needs to digitised into vector or database formats, rather than scanned raster images. It is apparent that the mapping carried out previously by Petra/TNR staff was in a vector format as used in MapInfo or ArcGIS. If this vector data could be sourced then it would certainly help with the forward program. This should include all geological mapping and all topographic information.

The IP geophysics reports need to be sourced and reviewed for applicability to tourmaline breccia pipes.

20.1 San Francisco Mine

Drilling of the San Francisco mine should be a high priority with a drill pattern aimed at covering the entire breccia and particularly the acute lobes at the NW and SE ends of the breccia. It is also preferred, from a resource estimate point of view, to keep the various drill holes on similar azimuths to aid in the interpretation of the resource. To do this, the orthogonal pattern of two perpendicular drill orientations are proposed (1) NE/SW & (2) NW/SE (Table 14 & Figure 58). This pattern would also largely avoid hitting mined sections, rather than drilling from within the mine environs.

Id	UTME	UTMN	RL	Depth (m)	Azim	Dip	Projection
SFD01	2442607	6589294	2728	80	210	-60	Arg GK Z2
SFD02	2442590	6589306	2730	80	210	-60	Arg GK Z2
SFD03	2442572	6589314	2737	90	210	-60	Arg GK Z2
SFD04	2442555	6589324	2739	80	210	-60	Arg GK Z2
SFD05	2442586	6589257	2723	80	30	-60	Arg GK Z2
SFD06	2442568	6589267	2723	80	30	-60	Arg GK Z2
SFD07	2442549	6589274	2726	80	30	-60	Arg GK Z2
SFD08	2442534	6589288	2730	80	30	-60	Arg GK Z2
SFD09	2442528	6589319	2730	200	120	-60	Arg GK Z2
SFD10	2442610	6589269	2730	200	300	-60	Arg GK Z2
SFD11	2442607	6589294	2730	170	210	-75	Arg GK Z2
SFD12	2442590	6589306	2730	170	210	-75	Arg GK Z2
SFD13	2442572	6589314	2737	170	210	-75	Arg GK Z2
SFD14	2442555	6589324	2739	170	210	-75	Arg GK Z2
SFD15	2442586	6589257	2723	170	30	-75	Arg GK Z2
SFD16	2442568	6589267	2723	170	30	-75	Arg GK Z2
SFD17	2442549	6589274	2726	170	30	-75	Arg GK Z2
SFD18	2442534	6589288	2730	170	30	-75	Arg GK Z2
SFD19	2442528	6589319	2730	300	120	-70	Arg GK Z2
SFD20	2442610	6589269	2730	300	300	-70	Arg GK Z2
				3010			

Table 14 Proposed San Francisco Drilling

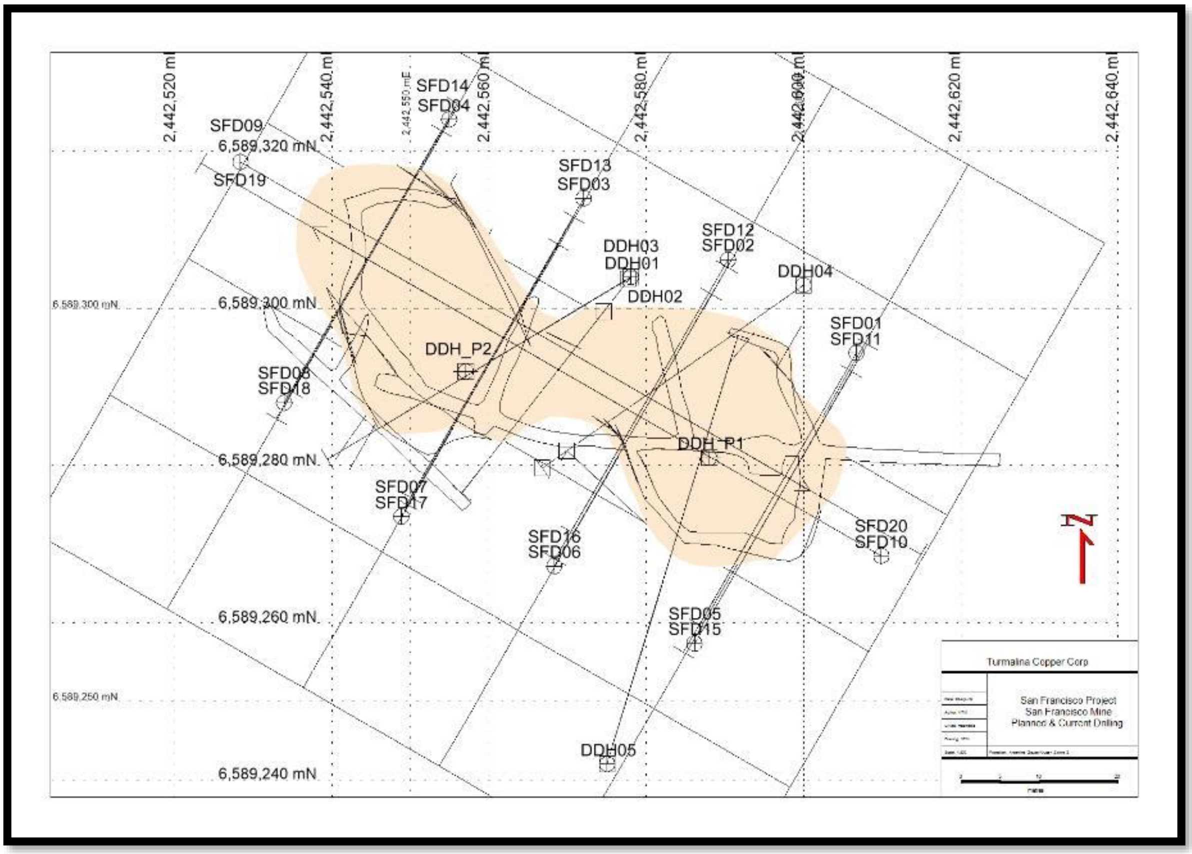


Figure 58 Current and Proposed Drilling of San Francisco mine.

An example of one of the cross sections is shown to demonstrate the drill pattern (Figure 59). The breccia pipe may well bell out as drilling gets deeper and a contingency to add additional drilling until each drill hole reaches the footwall of the pipe is required in budgeting the current proposal, which would drill out the upper 160 meters of pipe. These drill holes are placed on 20m sections which is fairly tight pattern and would likely yield a resource estimate. The initial could be carried out on 40-meter sections which would allow a more knowledgeable overview to be gained prior to the 20m infill drilling pattern, which is important if the pipe is going to change areal extent with depth.

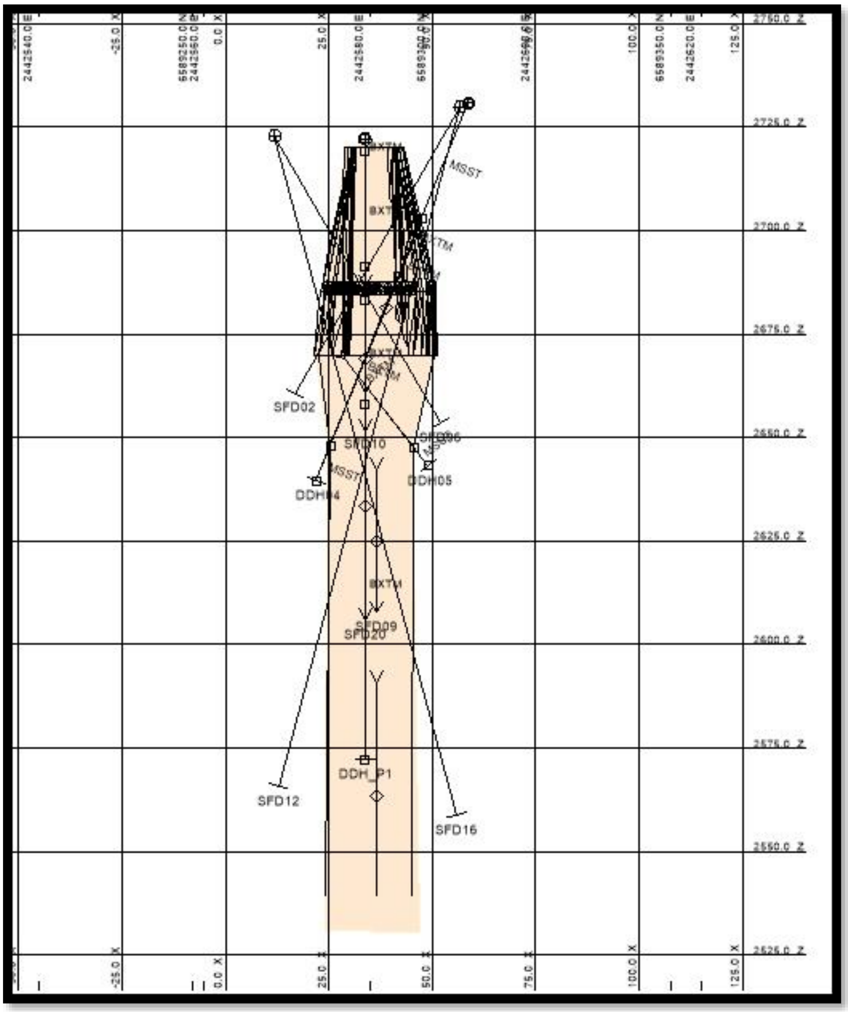


Figure 59 Proposed drill section and inferred pipe location example.

20.2 Chorrillos Program

Existing data justifies a follow up drilling program at Chorrillos and Chorrillos Southwest breccias, which could be done in conjunction with the drilling program recommended for San Francisco mine. A hole is recommended that will drill from the southern elongated end toward the north at the main Chorrillos breccia pipe. The drilling that has been completed to data indicates a southerly plunging pipe toward the proposed drill collar and this hole would potentially intersect the acute parts of breccia pipe. Another hole is proposed at the Chorrillos Southwest which is perpendicular to the previous holes, which appear to have clipped the west side of the pipe, this new drilling from the east to the west would attempt to cover the entire width of the pipe, if it doesn't plunge to the south or north. The proposed collar locations, azimuths and dips are summarized below.

Hole id	UTME	UTMN	RL	Depth	Azim	Dip	Prospect	Projection
TCC-19-1	2442822	6593674	3010	300	15	-60	Chorrillos	GK Inchs Z2
TCC-19-2	2442770	6593650	3010	200	270	-70	Chorrillos	GK Inchs Z2

Table 15 Chorrillos Proposed Drilling

20.3 Regional Program

The San Francisco property needs to complete the mapping program and in conjunction with this continue the stream silt survey to cover the entire property. It is estimated that 120 stream silt samples sieved to -80# would be required to infill the previous program for the entire project. A list covering the northern and central areas is supplied in the appendices, which could be fed into a GPS for site location. The mapping program covering the entire non-mapped portions of the project need to be completed at a scale of 1:5000, with particular note taken of tourmaline mineralization, quartz veining and any breccia deposits.

A rock chip sampling program should be conducted to cover the entire set of 62 breccias, assuming they are all tourmaline breccias. These breccia locations are listed in the appendices.

Re-logging of all the available drill core could be carried out with a greater focus on features and textures important to tourmaline breccia mineralization rather than for porphyry copper type mineralization, as was previously the case at Quebrada Seca. Tourmaline mineralization and quartz veining may yield vectors to nearby blind mineralization at Quebrada Seca. The 3D-IP interpretation should also bare this in mind.

Apparently, the IP report (Chen, 2008) recommends a ground magnetometer survey should also be performed along the same lines utilized and surveyed for the 3D-IP survey and if possible, over an expanded area (Wyck, 2008). Some orientation ground magnetics over the better-known tourmaline breccias should be carried out initially as an orientation survey to see if such a technique would yield a useful response, especially in assessing how large the breccia pipe is at depth.

The completion of the mapping, rock and stream sediment sampling programs across the entire project will no doubt discover a number of targets worthy of follow up and probably drilling. Newly mapped areas will also require a rock chip survey for the encountered tourmaline breccias.

20.4 Budget & Exploration Program

A drill program to evaluate the resource potential at San Francisco and Chorrillos is recommended and this would take the form of a drill out at San Francisco to a nominated depth of about 170m below the surface and would be well within the primary ore zone. This initial budget is for an initial 12 months and includes the drilling proposed above plus a contingency.

The budget also includes a road infrastructure budget to improve the current dirt access road (Section 5) from the highway to the project site by grading a formed road and placing culverts in key creek crossings, as the 30km section takes about 1.5 hours to navigate and this means that 3 hours is lost each day commuting to work. A proper formed dirt road would take 1 hour round trip at 60km/h or less if the road is quicker.

Budget Category (Initial 12 Months)	**Amount (USD$)**
Corporate – Admin, Audit and Marketing	$ 49,000
Corporate – Legal & Listing Fees	$ 100,000
Staff – Wage & Travel	$ 858,500
IT/GIS – hardware, software, communications, data acquisition	$ 26,400
SfdLA	
Staff – Geos – SfdLA	$ 54,000
Contract – Earthworks and Road making	$ 50,000

Contract – Geology and Petrology	$ 18,000
Contract – Geophysics and Petrophysics	$ 120,000
Contract – Geochemistry and Assaying	$ 144,000
Contract – Legal	$ 20,000
Contract – Labour and Technicians	$ 57,000
Contract – DDH drilling (3700m)	$ 770,000
Contract – Surveying	$ 4,000
Contract – Environmental and Community	$ 8,000
Hire – Field Camp	$ 150,000
Hire – Local accommodation and Office	$ 6,100
Hire – light vehicle	$ 27,000
Hire – heavy vehicle, aircraft or equipment	$ 13,000
Supplies – Geological and Geochemical equipment and consumables	$ 18,000
Supplies – Office equipment and consumables (including postal)	$ 7,000
Supplies – PPE, Clothing and Miscellaneous	$ 5,000
Fees – Tenements – application and maintenance	$ 2,068
Fees – Option payments	$ 120,000
Total Budget	**$ 2,627,068**

Table 16 Initial Budget Estimate

A second phase 15-month exploration program is proposed to meet contractual commitments and the requirements herein, which includes;

- 3000m drilling on the breccia targets, including some further drilling at SfdLA as required.
- 9 months field mapping and sampling
- Further geophysics (likely IP lines over key breccias).

Budget Category	Amount (USD$)
Corporate – Admin, Audit and Marketing	
Corporate – Legal & Listing Fees	
Staff – Wage & Travel	$ 995,000.00
IT/GIS – hardware, software, communications, data acquisition	$ 10,500.00
San Francisco de Los Andes (SfdLA)	
Staff – Geos – SfdLA	$ 60,000.00
Contract – Road maintenance	$ 10,000.00
Contract – Geology and Petrology	$ 12,000.00
Contract – Geophysics and Petrophysics	$ 220,000.00
Contract – Geochemistry and Assaying	$ 108,000.00
Contract – Legal	$ 10,000.00
Contract – Labour and Technicians	$ 51,000.00
Contract – DDH drilling (3000m)	$ 360,000.00
Contract – Surveying	$ 4,000.00
Contract – Environmental and Community	$ 6,000.00
Hire – Field Camp	$ 105,000.00

Hire – Local accommodation and Office	$ 4,500.00
Hire – light vehicle	$ 21,000.00
Hire – heavy vehicle, aircraft or equipment	$ 14,000.00
Supplies – Geological and Geochemical equipment and consumables	$ 11,000.00
Supplies – Office equipment and consumables (inc postal)	$ 4,000.00
Supplies – PPE, Clothing and Miscellaneous	$ 4,000.00
Fees – Tenements – application and maintenance	$ 2,068.00
Fees – Option payments	$ 200,000.00
	$ 2,212,068.00

Table 17 Second Phase Budget.

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22 Abbreviations and Definitions

Symbol etc	GLOSSARY OF ABBREVIATIONS AND DEFINITIONS
$USD	United States Dollars
€	Euro currency
<	Less than.
>	Greater than.
°C	Degrees Celsius
AAS	Atomic Absorption Spectroscopy.
Ag	Symbol for the element silver
ArcGIS	A Geographic Information System (GIS) software
Assay	chemical test performed on a sample of ores or minerals to determine the amount of valuable metals contained.
Au	Symbol for the element gold.
AusImm	Australasian Institute of Mining and Metallurgy.
Bi	Symbol for the element bismuth.
Breccia	Breccia is a rock composed of broken fragments of minerals or rock cemented together by a fine-grained matrix that can be similar to or different from the composition of the fragments.
Bulk Mining	Large scale, mechanized mining without regard to separately mining discrete zones of mineralization.
Ca	circa annum, approximate year.
CIM	Canadian Institute of Mining, Metallurgy, and Petroleum.
Cm	Centimetres
Contact	A geological term used to describe the line or plane along which two different rock formations meet.
Corp.	Corporation
CP(Geo)	A Chartered professional is a person who has gained a specific level of skill or competence in a particular field of work, which has been recognised by the award of a formal credential by a relevant professional organization. In this case awarded by the CPPC, a committee of the AusIMM for achievements in the field of Geology. The Chartered Professional Program eligibility criteria are specified in Chartered Professional Regulation 10 (Chartered Professional admission). In summary, applicants must: • Hold current financial membership of The AusIMM at the grade of Member, Fellow or Honorary Fellow. • Hold an appropriate tertiary degree or equivalent relevant to the discipline in which accreditation is sought.

	• Have at least five years of relevant work experience within the mining industry in at least one Area of Practice in the discipline being applied for. • Demonstrate key competencies, detailed by a written response to Competency Statements providing clear evidence the applicant has worked competently in the area of practice and in the discipline applied for a period of at least 5 years since qualification. • Have three (3) sponsors who are familiar with and can substantiate the applicant's qualifications and experience. • Demonstrate a minimum satisfactory level of relevant Professional Development during the three years prior to the application for CP. This must be demonstrated by a completed AusIMM online PD logbook, providing evidence that in the last three years, the applicant has completed 150 hours of Professional Development.
CRM	Certified Reference Material for assaying
Cu	Symbol for the element copper.
Cut-off Grade	The lowest grade of mineralized rock that qualifies as ore grade in a given deposit, and is also used as the lowest grade below which the mineralized rock currently cannot be profitably exploited. Cut-off grades vary between deposits depending upon the amenability of ore to gold extraction and upon costs of production.
Deposit	An informal term for an accumulation of mineralization or other valuable earth material of any origin.
Dilution	Waste rock that is, by necessity, removed together with the ore in the mining process, thereby reducing the mined grade of the ore.
Dip	The angle at which a vein, structure or rock bed is inclined from the horizontal as measured at right angles to the strike.
Economic Pit- Shell	The spatial limits determined by an algorithm to define the optimum minable resources from an unconstrained resource model. The optimum ultimate pit of a mine is defined as the "pit shell", which is the result of extracting the volume of material that provides the total maximum profit while satisfying the operational requirements of safe wall slopes. The ultimate pit limit gives the shape of the mine at the end of its life. Usually this contour is smoothed to produce the final pit outline.
Fault	A break in the Earth's crust caused by tectonic forces which have moved the rock on one side with respect to the other.
Flotation	A milling process in which valuable mineral particles are induced to become attached to bubbles and float as others sink.
FSEG	Fellow of the Society of Economic Geology
g/t	Grams Per Metric Ton
Grade	Term used to indicate the concentration of an economically desirable mineral or element in its host rock as a function of its relative mass. With gold, this term may be expressed as grams per tonne (g/t) or ounces per tonne (opt).
ground magnetics	A ground-based survey technique that measures the variation in the earth's magnetic field and is a response to local rock iron content.
Ha	Hectares
Hanging Wall :	The rock on the upper side of a vein or mineral deposit.
High Grade	Rich mineralization or ore. As a verb, it refers to selective mining of the best ore in a deposit.
Horiz.	Horizontal
Hr	Hour(s)
Hydrothermal :	Processes associated with heated or superheated water, especially mineralization or alteration.
ICP	Inductively coupled plasma analysis, an analytical technique used for elemental determinations.
Inclin.	Inclination of the drill hole from the horizontal in degrees

Indicated Mineral Resource	An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that a pplying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.
Inferred Mineral Resource	An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
Intrusive	A body of igneous rock formed by the consolidation of magma intruded into other rock type.
IP	Induced Polarization Survey, an electrical geophysical technique
JORC	Joint Ore Reserve Committee Australasian Code.
Kg	Kilograms.
Km	Kilometres.
Leaching	The separation, selective removal or dissolving-out of soluble constituents from a rock.
LG	Low grade, as in the lower grade gold portion of a process stream.
m	Meters
M	million
m.a.s.l.	Meters above mean sea level.
Ma	Mega-annum (one million years).
MapInfo	A Geographic Information System (GIS) software
Measured Mineral Resource	A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.
Metallurgy	The science and art of separating metals and metallic minerals from their ores by mechanical and chemical processes.
Metavolcanic	Being or relating to a type of metamorphic rock originally produced by a volcano, either as lava or tephra, then buried and subjected to high pressures and temperatures, causing it to recrystallize.
Mineral	A naturally occurring homogeneous substance having definite physical properties and chemical composition and, if formed under favourable conditions, a definite crystal form.
Mineral Reserve	A Mineral Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which Mineral Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. The public disclosure of a Mineral Reserve must be demonstrated by a Pre-Feasibility Study or Feasibility Study. Note no Mineral Reserves are reported in this Technical Study.

Mineral Resource	A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Material of economic interest refers to diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals. The term mineral resource used in this report is a Canadian mining term as defined in accordance with NI 43-101 – Standards of Disclosure for Mineral Projects under the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum (the CIM), Standards on Mineral Resource and Mineral Reserves Definitions and guidelines adopted by the CIM Council on December 11, 2005 and recently updated as of May 10, 2014 (the CIM Standards).
mm	Millimeters.
mt or t	Metric tonnes.
NI 43-101	National Instrument 43-101 Standards of Disclosure for Mineral Projects
nT	Nanotesla, a unit of magnetic field intensity.
Open pit or cut	A form of mining operation designed to extract minerals that lie near the surface. Waste or overburden is first removed, and the mineral is broken and loaded for processing. The mining of metalliferous ores by surface-mining methods is commonly designated as open-pit mining as distinguished from strip mining of coal and the quarrying of other non- metallic materials, such as limestone and building stone.
Outcrop	An exposure of rock or mineral deposit that can be seen on surface that is not covered by soil or water.
oz or tr oz	Troy Ounces.
P80	80% passing, commonly used to designate particle size 80% of which will pass through a given screen opening.
Pb	chemical symbol for the metal lead
Plant	A building or group of buildings in which a process or function is carried out; at a mine site it will include warehouses, hoisting equipment, compressors, maintenance shops, offices and the mill or concentrator.
ppb	Parts per Billion.
ppm	Parts per Million.
QAQC	Quality Assurance/Quality Control, procedures implemented to assure integrity of results.
Qualified Person (QP)	Conforms to that definition under NI 43-101 for an individual (a) to be an engineer or geoscientist with a university degree, or equivalent accreditation, in an area of geoscience, or engineering, related to mineral exploration or mining; (b) has at least five years' experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these, that is relevant to his or her professional degree or area of practice; (c) to have experience relevant to the subject matter of the mineral project and the technical report; (d) is in good standing with a professional association; and (e) in the case of a professional association in a foreign jurisdiction, has a membership designation that (i) requires attainment of a position of responsibility in their profession that requires the exercise of independent judgement; and (ii) requires (A.) a favourable confidential peer evaluation of the individual's character, professional judgement, experience and ethical fitness; or (B.) a recommendation for membership by at least two peers, and demonstrated prominence or expertise in the field of mineral exploration or mining.
RC	Reverse Circulation Drilling.
Sb	chemical symbol for the metal antimony
SG	Specific Gravity.
Shoot	A concentration of mineral values; that part of a vein or zone carrying values of ore grade.
SMU	Selective mining unit.
SRK	SRK Consulting, an independent international consulting group focused on advice and solutions to earth and water resource industries.
Strike	The direction, or bearing from true north, of a vein or rock formation measure on a horizontal surface.

Sulphide	A group of minerals which contains Sulphur and other metallic elements such as copper and zinc. Gold and silver are usually associated with sulphide enrichment in mineral deposits.
T/O Study	Trade-off study, a technical and economic comparison of alternatives.
Till	Unsorted material deposited directly by glacial ice and showing no stratification.
Ton or Tonne	A metric ton of 1,000 kilograms (2,205 pounds).
tourmaline	Tourmaline is a crystalline boron silicate mineral compounded with elements such as aluminium, iron, magnesium, sodium, lithium, or potassium.
tpd	Metric Tonnes Per Day.
um	Micron (0.001 millimeter).
Vein	A fissure, fault or crack in a rock filled by minerals that have travelled upwards or laterally from a deep source.
VMS	Volcanogenic Massive Sulfide.
VRS GPS	Virtual Reference Station Global Positioning System.
Waste	Unmineralized, or rock which is insufficiently mineralized to mine at profit. XRD
XRD	X-ray diffraction, a rapid analytical technique primarily used for phase identification of a crystalline material.
XRF	X-ray fluorescence a non-destructive analytical technique used to determine the elemental composition of materials.
Zn	chemical symbol for the metal zinc
Zone	An area of distinct mineralization.

1 Appendices

1.1 Proposed Stream Sediment Locations

Proposed Stream Sediment Sampling for the northern and central areas. Gauss Kruger (Argentina) Zone 2 projection.

id	X	Y
SS01	2441968	6593506
SS02	2441985	6593430
SS03	2442212	6593574
SS04	2442413	6593668
SS05	2442580	6593825
SS06	2443170	6593560
SS07	2443179	6593509
SS08	2443106	6593261
SS09	2442370	6593694
SS10	2442861	6594131
SS11	2443715	6593425
SS12	2443101	6593244
SS13	2443736	6593251
SS14	2443168	6592569
SS15	2443150	6592546
SS16	2443356	6594575
SS17	2443317	6594555
SS18	2443078	6594420

SS19	2443625	6594384
SS20	2444018	6594045
SS21	2444062	6594044
SS22	2443938	6594401
SS23	2443449	6594158
SS24	2443510	6594181
SS25	2442705	6594295
SS26	2442847	6594183
SS27	2442903	6593247
SS28	2443506	6592856
SS29	2443685	6592602
SS30	2443848	6592332
SS31	2443817	6592303
SS32	2443149	6592466
SS33	2442926	6592859
SS34	2442796	6592698
SS35	2442369	6592363
SS36	2442339	6592381
SS37	2443194	6592284
SS38	2443190	6592251
SS39	2443143	6591992
SS40	2443250	6591866
SS41	2443806	6591978
SS42	2443814	6591933
SS43	2443181	6591182
SS44	2442927	6591046
SS45	2443043	6590625
SS46	2442991	6590606
SS47	2443035	6590825
SS48	2442693	6591469
SS49	2442268	6591425
SS50	2442066	6591614
SS51	2442075	6591711
SS52	2442271	6591858
SS53	2442386	6592158
SS54	2441780	6592289
SS55	2441783	6592252
SS56	2441884	6592446
SS57	2442288	6592020
SS58	2442223	6592018
SS59	2441942	6592504
SS60	2441906	6592502
SS61	2441900	6592879
SS62	2441925	6592894
SS63	2441884	6591437

SS64	2441487	6590163
SS65	2441322	6590157
SS66	2441068	6590159
SS67	2440929	6590730
SS68	2440922	6590686
SS69	2440651	6590640
SS70	2440501	6590221
SS71	2440194	6591386
SS72	2440081	6591435
SS73	2440112	6591464
SS74	2440840	6591159
SS75	2441064	6591584
SS76	2441009	6591829
SS77	2440976	6591838
SS78	2440189	6592267
SS79	2440584	6592456
SS80	2440583	6592124
SS81	2440823	6593125
SS82	2441634	6593776
SS83	2441435	6594112
SS84	2441441	6594546
SS85	2441439	6594569
SS86	2442087	6594465
SS87	2442108	6594498

1.2 Mapped Breccia Locations

This list is the location of the various mapped breccias that require field reconnaissance and rock sampling for assaying and description.

id	X	Y
TBX	2442852	6593775
TBX	2442916	6593797
TBX	2443132	6593606
TBX	2442738	6593648
TBX	2442730	6593224
TBX	2442952	6593274
TBX	2442948	6594117
TBX	2442303	6594857
TBX	2442319	6594798
TBX	2442346	6594832
TBX	2442579	6593292
TBX	2442225	6593046
TBX	2442277	6593149
TBX	2442019	6592843

TBX	2442146	6592795
TBX	2443288	6594848
TBX	2443324	6594866
TBX	2443491	6594902
TBX	2443365	6594512
TBX	2441268	6593995
TBX	2441246	6594480
TBX	2441300	6594726
TBX	2443224	6593148
TBX	2443508	6592771
TBX	2443607	6592751
TBX	2443585	6592685
TBX	2443025	6590305
TMS	2442865	6590267
TBX	2442843	6590191
TBX	2441723	6592597
TBX	2441896	6592820
TBX	2441598	6592305
TBX	2441685	6592244
TBX	2442114	6592550
TBX	2441911	6592438
TBX	2442150	6592461
TBX	2442033	6592118
TBX	2442225	6592339
TBX	2442538	6592822
TBX	2442729	6592828
TBX	2442603	6592393
TBX	2442745	6592412
TBX	2442729	6592401
TBX	2442733	6592499
TBX	2440609	6591213
TBX	2440682	6591563
TBX	2441548	6591432
TBX	2441538	6591308
TBX	2441697	6593199
TBX	2441595	6593215
TBX	2441557	6593192
TBX	2441824	6593463
TBX	2441142	6592226
TBX	2441127	6592103
TBX	2441307	6592034
TBX	2441290	6591944
TBX	2441548	6591862
TBX	2441492	6591936
TBX	2441625	6591899

TBX	2441296	6592291
TBX	2441331	6592167
TBX	2441256	6592578
TBX	2441260	6592539
TBX	2441449	6592714
TBX	2443654	6593892
TBX	2443011	6593354
TBX	2442341	6592197
TBX	2442357	6591910
TBX	2442570	6589291