REPORT ON EXPLORATION ACTIVITIES

SANTA TERESA PROSPECT

Maricunga Belt, Region 3, Chile

Carried out by

MINERA ATACAMA PACIFIC GOLD CHILE LIMITADA

ATACAMA PACIFIC

SBX CONSULTORES LTDA.

Andrew Hodgkin, June 2013

Front piece: Santa Teresa North target, strongly Au-anomalous in soil samples (blue tape), looking SE with argillic-carbonate alteration (pale tones), small exploration pit near figure and Trench 6 behind. Crags on ridge top are gabbro.

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Accompanying CD

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- MapInfo tables and workspaces for the maps in the report
- Shape files of the main layers used in the geology and alteration maps
- Geophysical report Jordan 2013b
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ABSTRACT

The Santa Teresa Prospect lies in the Maricunga Gold-Copper Porphyry District, equidistant between the Coipa Ag-Au mine (Compañia Minera Mantos de Oro) and the Cerro Maricunga advanced Au project (Atacama Pacific Gold Chile Ltda.), 10km NNE and SE respectively.

Geological mapping and geochemical soil and rock geochemistry confirm the general pattern of mineralization established by Cominco (1998) and Dietrich (2011). There are scattered weak gold and to a lesser extent copper and molybdenum anomalies over much of the property, most corresponding to the presence of quartz and quartz-magnetite-(chlorite) veining. A relatively late (early Miocene) dacitc-monzonitic intrusive event is believed to be responsible for this mineralization, which occurs both within and, particularly, in a halo surrounding small stocks and dyke-like bodies of porphyry.

The dacite intrusions occur in a complex geological setting in which Triassic clastic sediments, Jurassic carbonate sediments and Cretaceous andesitic volcanics have been previously intruded by gabbroic stocks and associated dioritic porphyries. The dacitic intrusions seem to be the last event before the 15-16Ma eruption of the Cerro Maricunga volcanic event which covers the Mesozoic units to the south and hosts the Cerro Maricunga gold porphyry deposit of Atacama Pacific Gold.

Vein mineralization of at least three types, Au, Mo-Au and Au-Ag-base metals, has been identified. The first two occur together over significant (>400m diameter) areas and form the two main geochemical-geological targets. The Au-Ag-base metal veins occur as very isolated, probably late, low temperature features.

Ground geophysical work, consisting of four IP lines and detailed magnetometry, however show a different and more challenging target in which the above pattern of mineralization may be attributed to leakage from a deep mineralized body which does not crop out , having been covered by a postulated east-verging fault block which makes up most of the exposed ground including the main gabbro body.

Three reverse circulation holes were drilled towards the deep geophysical target. Water problems and fault zones prevented them reaching the maximum depth and results remain inconclusive.

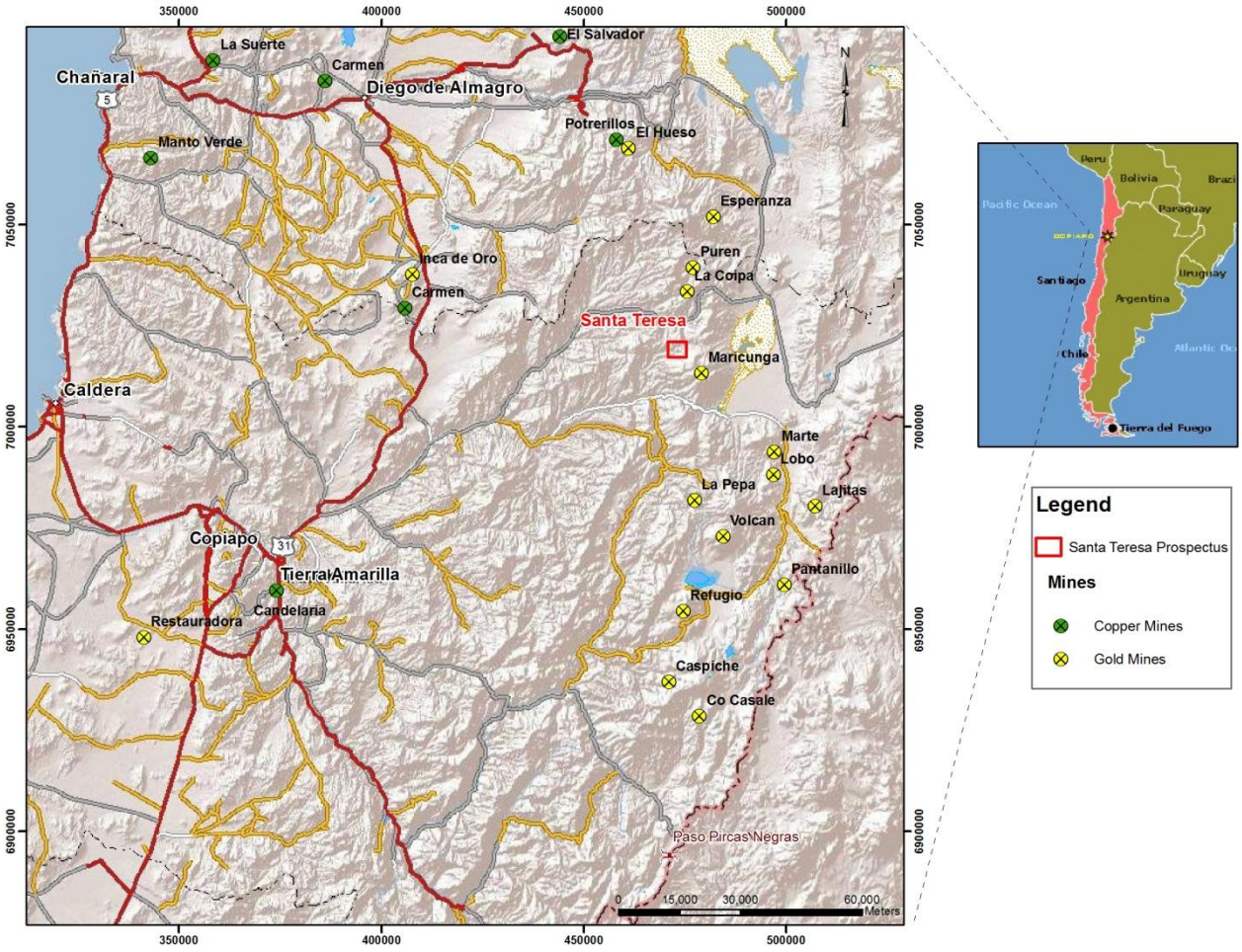

Figure 1: location and access of the Santa Teresa prospect

1. INTRODUCTION

1. Background

The Santa Teresa prospect consists of properties owned by Enrique Viteri and explored by Atacama Pacific under an option to purchase agreement signed in August 2011. They lie largely within the large ground position of Atacama Pacific's Cerro Maricunga project (Figure 2).

The area covered by the properties (Fig 2) is irregular, about 3.0km by 2,8km. Exploration described in this report extends over an area slightly larger than this (5km by 5km).

2. Access

Access is from Copiapó (airport and main national highway) by travelling up Quebradas Paipote and Codocedo along the salt-sealed international road towards Argentina. At 132km (and 2km past the entrance to the Mantos de Oro Coipa mine entrance), a 4km project road leads to the Atacama Pacific base camp and the start of the Santa Teresa properties. This road continues SE through the center of

the prospect, eventually leading to the Cerro Maricunga project. A track leads off the access road to the southern part of Santa Teresa prospect and continues down Quebrada Larga to Quebrada Paipote.

3. Physical setting of the Project.

The prospect covers gentle topography between 3800 and 4100m with highest points (to 4300m) formed by craggy bluffs rising out of this. Quebrada Larga, known to Coya groups as Quebrada Bailahuen, drains most of the prospect to the west and Quebrada del Toro drains the eastern border. Both are ephemeral streams of the Paipote river system, draining towards the Pacific Ocean. Climate is dry and cold, typical of high altitude at this latitude, with the possibilities of both winter (Mediterranean) and summer (monsoonal) snow or rain storms. Precipitation is less than 20mm, sufficient to support sparse grass cover, with low bushes in the valleys.

4. Previous work

One collapsed and tiny exploration adit is the only evidence of mining activity. Cominco in 1998 carried out extensive trenching and surface sampling (477 chip and channel samples, not all of which have been located, plus at least 4 stream samples) and contracted out three IP lines (to Quantec). Results of this work was given to Atacama Pacific Gold in a data package by Enrique Viteri. Since that work, several other companies have looked at the properties but are not believed to have done significant work (some soil sample lines are also assumed to be by Cominco.

5. Work carried out by Atacama Pacific

The geological work was undertaken by SBX Consultores Ltda. on behalf of Atacama Pacific Gold Chile and consists of the following:

- 1:25,000 scale geological mapping of the prospect by Andreas Dietrich (2011) as part of a district scale mapping project.
- 1:10,000 scale geological mapping of the prospect area by Andrew Hodgkin (this report).
- Relocation and reinterpretation of Cominco samples and maps.
- 113 rock chip samples, mostly selected for potentially mineralized features and to verify Cominco data (repeat samples) by Dietrich and Hodgkin (Au by fire assay and ICP multi-element analyses by Actlabs).
- 19 channel samples of one Cominco Trench (Nº8, fire assay Au and Cu by AAS by Geoanalítica).

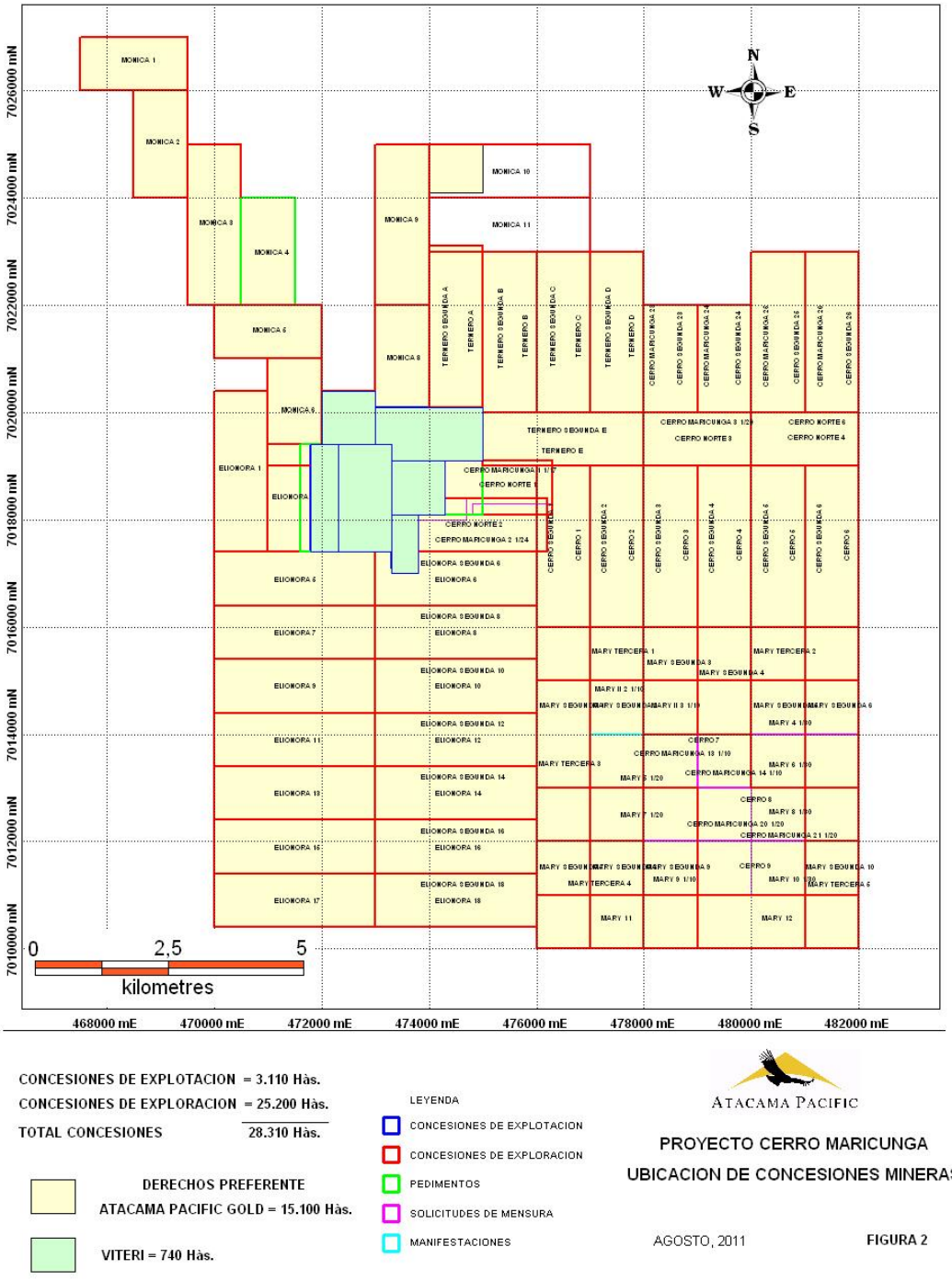

Figure 2: mining property of Atacama Pacific Gold and Enrique Viteri, August 2011.

- 581 soil samples sieved to -120# and analyzed for Au fire assay (30gr) and ICP multi-elements by Actlabs. Given that much of the area is covered by shallow colluvium, this program was designed to cover the whole project area, initially along ridges and spurs.
- 5 Induced Polarization-Resistivity lines spaced 1km apart and totaling 27.9km, carried out by Argali Geofísica EIRL.

- 60 ground magnetometry lines spaced 100m apart and totaling 307.95km, by Argali Geofísica EIRL. Both 2013 geophysical surveys are part of a larger survey of the Atacama Pacific Gold property.
- 3 inclined reverse circulation holes totaling 956m with analyses of Au by fire assay and Cu and Mo by AAS. Results from a shallow water monitoring drill hole are included also.

6. Map Datums

Mapping was done with a Garmin GPS using the Provisional South American 1956 datum and though other work, for example soil sampling, was done with a modification of this ("user grid"), for the maps presented here PSAD56 as recorded by the GPS is used (both datums are in the data bases.

2. GEOLOGY OF THE SANTA TERESA PROSPECT

1. Overview of district geology

The prospect area consists of a thick sequence of Mesozoic sediments and volcanics intruded by plutons and dykes of several different ages and character, and folded and/or tilted mainly along NW structures. This sequence, with Permo-Triassic intrusions and volcanics not present here, forms the basement to extensive Miocene volcanism which includes subvolcanic, magmatic complexes associated with "Maricunga style" Au-Cu mineralization; the products of one such event (Cerro Maricunga complex) unconformably overlie the basement rocks immediately to the south of the prospect.

The area is covered by the Salar de Maricunga 1:100,000 scale geological map (Cornejo et al., 1998) from which the unit names and age dates below are taken.

2. Clastic sediments (Triassic continetal-marine: Estratos el Mono)

This unit forms the main host rock to gold vein mineralization in the south of the prospect. It is made up of several different lithologies:

- Quartz-feldspar sandstone (arkose) and very coarse sandstone (grit) making up about 75% of this unit in the prospect area, generally as yellow brown colored units.
- Arkosic conlomeratic sandstone and conglomerate (about 10%)
- Volcanic sandstone (about 5%), greenish and composed of lithic and feldspar grains.
- Black carbonaceous siltstone and fine sandstone (about 10%).

Mapping indicates that the main black siltstone bed underlies the main conglomerate-arkose bed in the north of the prospect, but the stratigraphic position of other occurrences to the south is uncertain and some may be in-faulted blocks.

3. Carbonate sediments (Jurassic marine, Formación Montandón; possibly Formation Asientos or Formación Lautaro)

Well bedded fossiliferous calcareous sandstone, calcarenite, limestone and marl conformably overlie the clastic sediments in two main belts, in the south and along the eastern border. A volcanic phase locally observed at the top of this may be the Upper Jurassic Estratos de Vicuñita basaltic andesite unit.

4. Older volcanics (Lower Cretaceous continental: Estratos de Cerro los Carneros)

A suite of generally dark coloured porphyritic andesitic lavas and volcanic breccias which unconformably overlie the older units sub-horizontally. High potassium trachytic and basaltic andesites are described byCornejo et. al (1998). The unit occurs on most of the higher ground in the prospect, characteristically with associated ocoite dykes and sills, and seems the preferred host to gabbroic intrusion. In the north part of the prospect this is the main host of weakly mineralized quartz and quartz-magnetite veins.

Photo 1: typical float of lapillitic tuff (?) unit showing different alteration styles. Northern project area.

A sub-unit of this lithology is a polymict Lapilli Tuff which has distinctive ochrous (oxidized) or greenish (reduced) alteration colors; it occurs in the north of the prospect, intercalated with dark lava-breccia beds. The strong limonitic nature suggests an original sulphide component and the clast-supported texture including altered clasts suggest a possible (partial) origin as an explosive (phreatic or phreatomagmatic) breccia. In places it seems to have been transported by mass wasting, giving an apparently wider distribution than originally the case. Though seen only once to include veins, it does have occasional anomalous gold in soil and rock samples.

5. Intrusions of different ages

There are 4 main types of intrusion in the prospect area (age dates are from Cornejo et al 1998):

- **Gabbroic stocks and mega-dykes** probably related to the Monzogabbros de Codecedo (65±2Ma, Paleocene) are black, massive, coarse grained, strongly magnetic and dense. They form the two highest peaks where intruding the older volcanic unit, often with a decametric halo of aphanitic andesitic rock (microdiorite or meta-andesite porphyry) along the contact.
- **Fine grained diorite to monzodiorite porphyry**, occur as stocks and probably mega-sills often close to gabbro stocks and of similar age to these (probably between 69±4 and 66±2Ma according to nearby age dates) They intrude the sedimentary sequences in the southern part of the prospect, particularly along the contact of the clastic and carbonate sediment units, where the black siltstone is strongly baked. A darker more porphyrytic and andesitic variety also occurs, which contains stronger disseminated pyrite. Both are indicated to be a host of weak veining.
- **Dacitic porphyry and quartz porphyry** (monzonite?) occur as minor (>100m diameter) stocks and irregular bodies scattered over the prospect. More leucocratic and quartz bearing than the diorites, they tend to be altered-leached and may contain veining. They are likely to be a motor of the gold mineralization both in the South and North of the prospect. Their age is open to question: most likely 59-65Ma (similar to most of the other intrusions in the area), but possibly associated to the Miocene Coipa event (25-21Ma); granodiorite and dacite porphyry stocks of 45-38Ma (Eocene) also occur in the vicinity.
- **Dacitic-aplitic dykes**: these are characteristically orange-weathering poorly outcropping dykes forming swarms in some areas, isolated dykes in others.
- **Andesitic porphyry dykes and sills** occur as irregular-discontinuous bodies within the older volcanics on the east of the project and more rarely in clastic sediments to the east of the area.
- **Ocoite dykes:** these are generally NS-trending sub vertical bodies up to 3m wide which cut principally the older volcanics but extend locally into the underlying units. They are coarse grained, dark brownish-grey, strongly feldspar porphyritic rocks with a friable texture and weak magnetism at surface. They are not observed in mineralized areas.

Younger volcanics (Miocene)

Ashflows and laharic deposits of the 16-14Ma Cerro Maricunga stratovolcano on-lap onto the basement rocks described above from the SE and E. A non-consolidated pumice-rich and pinkish ash flow (Maricunga Ignimbrite) forms a distinctive basal unit but is probably less than 10m thick under the more andesitic pyroclastic, laharic and lava deposits of the Miocene volcano.

6. Structure

In the prospect area the sedimentary sequence is folded and / or tilted along NS and EW structures in response to the NNE trending compressive tectonics (thrust and fold belt). Cretaceous volcanics are by and large sub-horizontal but show normal(?) displacement along NW and NE (to EW) faults, commonly putting them into juxtaposition with limestone units.

The main fault structure is a NW-trending lineament up to 200m wide which passes through the center of the prospect and continues, under cover, towards the similarly aligned mineralization at Cerro Maricunga project. Though poorly exposed, this fault zone shows displacement and is a strong magnetic and IP feature with some geochemical surface response. Other NW fractures and faults and a set perpendicular to this form an orthogonal conjugate matrix locally, but other directions are important as shown by NS and EW dykes, for example.

7. Hydrothermal Alteration and Metamorphism

The following alteration and metamorphism styles are recognized:

- **Argillic –carbonate alteration** of volcanics in the area of Trench 6, where associated with highly anomalous soil samples (Santa Teresa North). This occurs as ochrous strongly decomposed rock without any veining or silicification. The inferred areal extent is <500 x<200m; the anomalous soil samples extend outside it.

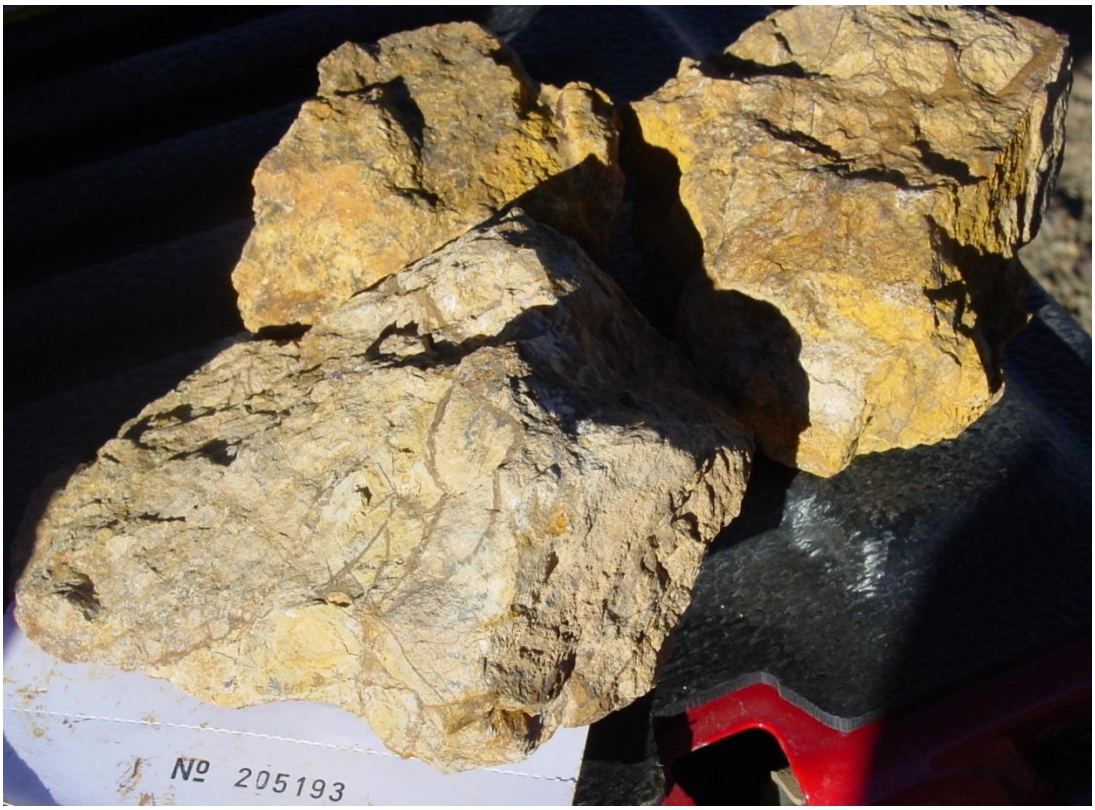

Photo 2: Carbonate veining in argillic alteration from Trench 6. Sample 205193: 150ppb Au, 410ppm As.

- **Argillic-silica alteration with strong jarosite-limonite.** This affects the lapilli tuff unit where attractive ochrous colors are developed in association with weak pervasive silicification of clasts. Seemingly mainly supergene, generated by coarse pyrite content, albitization and silicification are evidence of hydrothermal origin (Cornejo 2012, sample 202030). Some of the unit may be phreatic breccia. Isolated rock and soil anomalies in Au suggest local mineralization.
- **Sericitic –argillic alteration** of arkoses and dacite-diorite intrusions. This is characteristic of the Santa Teresa South area where both arkose and dacitic intrusions are affected, suggesting a possible relation to Au mineralization there. In the northern Santa Teresa area, the diorites are coarsely pyritic and show only incipient argillic alteration.
- **Tourmaline-sericite alteration**. This is locally developed east of the main saddle area, adjacent to gabbro, apparently preferentially affecting volcanics and a dioritic stock. Structurally controlled “dykes” within this area give an irregular shape. Tourmaline is generally disseminated or as incipient rosettes but also occurs with silica as cement to a scoriaceous breccia.

Photo 3: Tourmaline blades in fine diorite intrusion, Portezuelo area

- **Hornfels**: three types of hornfels are recognized:
  - black siltstone (lutites) on the edges of diorite intrusions where they are dense, massive, non-magnetic and non-pyritic;
  - dark green-grey very fine, very magnetic, massive andesitic rocks bordering the gabbro stocks.

        - Hornfels of andesitic volcanics (possible "spotted hornfels") occurs, though it is not often clear in hand specimen (e.g. Cornejo 2012, sample HST-170)
    - **Recrystallization of limestone and marl.** This phenomena occurs in the limestone unit in the Santa Teresa South area where it consists of semi-crystalline carbonate rock apparently without prograde (e.g. garnet, actinolite) or retrograde (epidote, sulphides) minerals. It is hard to define limits. Note: limestone in general give a altered pale tonal signature in most images.

8. Mineralization

Overview: Mineralization Santa Teresa property is located in the Mesozoic –Cenozoic "basement" to the Miocene Maricunga style porphyry gold-copper systems and as such, several models have been proposed:

- **La Coipa analogue**, used by Cominco (Viteri, 2010), based the fact that the El Mono Formation (clastic, Triassic) is the mineralized basement at the Coipa and Can Can Ag-Au ore bodies, where black shales host much of the gold component.
- **El Hueso – Jerónimo analogue** due to the presence at Santa Teresa of gold mineralization in limestone (Lautaro Formation here, the Asientos Fm. at Jerónimo, both Jurassic as is the host rock at Jerónimo). The 10g/t Au sample of Cominco (re-sampled at 4g/t by Dietrich) is in this unit, though from a thin vein in the carbonate rocks rather than in replaced coquinitic sediments as at Jerónimo.
- **A porphyry Cu-Mo-Au analogue** such as the mineralized stocks at Coya (near Potrerillos) in similar host rocks and structural setting. Stocks dated at 37-31Ma in the vicinity of Santa Teresa make this a possibility. Emplacement of the Potrerillos ore body along thrust planes under compressive conditions is an analogue for the structural – geophysical model developed here (Yañez 2013).
- **Skarn mineralization**, suggested by Dietrich (2011) and Cominco (1998), particularly for Santa Teresa South, is based on the widespread presence of hornfels and re-crystallized limestone in this area, probably related to gabbro and dioritic intrusions. However as mentioned above, no true skarn features have been observed.

Mineralization identified so far in the property is principally gold related to quartz veins. Data from Cominco (1998) established the following areas of interest which are by and large confirmed by SBX work (new names):

- **Santa Teresa South**, on both sides of Quebrada Larga, where a series of channel samples in trenches and outcrops gave values up to 0.6g/t Au.
- **Santa Teresa North** where trenches were dug but results are not in the data package, is a second area of veining lying on both sides of the main access road.
- **Quebrada Toro** where a single chalcedonic vein in limestone had 4-10g/t Au.

Mineralization in these areas was checked by rock sampling (Dietrich 2011) and by rock and soil sampling (this work) which, in general confirmed and better defined these areas and identified one more weakly mineralized area.

Santa Teresa South

This is a sub-circular area 700m in diameter with weakly gold-anomalous soil and rock samples. Molybdenum tends to be anomalous in both rocks and soils. The area is well confined by sampling and probably is limited by faults on its western side and by non-mineralized intrusive to the south and east. Two generations of quartz veins occur, early dark quartz-magnetite veins, generally <5mm and later drusy translucent quartz veins up to 15cm thick. The former are probably responsible for gold mineralization; they may be banded and superficially resemble the "black banded veins" of Maricunga porphyries. The latter, though they may also have Au <100ppb, often carry Mo, occasionally as visible molybdenite clots (rock samples have a maximum of 140ppm Mo (SBX) and 342ppm Mo(Cominco). Most of both vein types occur in clastic sediments on the borders of a dacitic and dioritic-monzonitic stocks which themselves may carry fine sheeted veins of both types.

The evidence from rock sampling is of consistently anomalous Au averaging about 0.25ppm. Grades from Cominco channel sampling and select sampling rarely exceed 0.5ppm Au (maximum 0.53ppm from 290 rock samples, both chip and channel). Grades from 67 SBX mostly select rock samples, including some repeat Cominco samples, confirm the tenor of mineralization (Dietrich 2011 and this work). The maximum Au value in rocks was 0.49ppm Au. Copper values in both sets of rock samples are below 660ppm (Cominco) and 250ppm (SBX). In soil samples, the area is characterized by values of above 50ppb Au, but only rarely over 200ppb; these are considered low level anomalies.

In contrast to the arkosic sediments and intrusions, the black meta-siltstones seem to be poorer in mineralization. This is clearly established by Cominco's selective sampling according to rock type, as well as by field observations. Though clearly related to dacitic intrusions, the mineralization in this area is considered not to have a metamorphic (or skarn) element.

One RC hole (STR-002) was drilled in this area, oriented 045^{o} (inclined at 60^{o}) towards a geophysical anomaly, but collared in the center of the anomalous area. Analytical results for Au, Ag, Cu and Mo indicate weak anomalies in all elements over much of the hole with the best intercept (14m, 14-28m) of 144ppb Au, 110ppm Cu, 0.3ppm Ag and 27ppm Mo.

Photo 4: Black microcrystalline quartz veining, sheeted, in phyllic altered arkose, Santa Teresa South. Sample 205273 of float: 47ppb Au 7 ppm Mo.

Santa Teresa North

This area has similar vein character and geochemical characteristics to the Southern Target, albeit with higher Au in soils and, as yet few rock samples. It is a less well confined area probably oriented north-south, about 1000m by 400m. It is defined mainly by Au and Mo in soil samples with several low tenor rock anomalies, mainly from dark, banded quartz veining in outcrops. Thin drusy quartz veins occur as well though relations between the two types are uncertain. Host rocks are mainly andesitic lavas and volcanic breccias, but include a very fine, strongly magnetic andesite elsewhere interpreted as a hornfels facies of the gabbro, which occurs within and just west of the anomaly.

A very small (2m wide) exploration pit in this area gave 124ppb Au, 29ppm Ag and 447ppm Cu from the dump material of a white coarse quartz vein with traces of copper and iron oxides (sample 205194). Soil samples in the area are of similar tenor.

Soil sampling suggests that the best area, including 4 samples over 100ppb with a maximum of 590ppb Au, lies on either side of the Quebrada Larga tributary, mostly in yellow strongly argillized volcanics. Cominco Trench 6 is on the southern border; although this was not re-sampled systematically by SBX and Cominco results are not available, 5 select and short channel rock samples show values <30 ppb Au except for one of 150ppb. All samples are from very fine intrusive or volcanic rock with carbonate-clay alteration and/ or quartz-carbonate veining.

On the other hand, Cominco Trenches 7 and 8 lie on or outside the northern border of the anomaly, with quartz veining also continuing outside this. Systematic chip-channel sampling of Trench 8 by SBX showed Au <20ppb in the veined andesite volcanics and <60ppb in the non-veined dacite intrusive (Table A1-4).

There are no drill holes in the Santa Teresa North area, but a shallow vertical water monitor hole (CMA-05, 30m deep) was drilled just outside the inferred eastern border of the anomaly into volcanics and quartz dacite porphyry. This has very weakly anomalous Au and Cu (best sample 34ppb and 210ppm respectively at 8-10m). Most of the hole is in strongly argillized texture-destroyed rock probably part of the argillic alteration zone.

Photo: sample 202030 Santa Teresa North: 281ppb Au, 21ppm Mo in select sample of microcrystalline quartz veining.

Quebrada Toro

The area of interest here is very poorly defined because it consists of isolated microcrystalline quartz veins in barren host rocks, most of which are limestone. Soil sampling shows no significant anomaly and the target is based on 8 rock samples. Most of the samples are from the EW jasperoidal veinlet identified by Cominco which runs up to 10ppm Au (Cominco result confirmed by SBX sampling, Dietrich 2011; petrographic sample 205246, Cornejo 2012) with high Ag, Pb, Zn, Ba, Sb, As and Mn amongst other elements analyzed. Another vein with copper oxides and chalcocite was found 250m north also with a strong Ag-Pb-Zn-Cu signature (sample 205080, 46ppm Ag). This vein trends NW in andesitic volcanics. There are no intrusions recognized in the area except for irregular andesite dykes and sills.

These veins, together with another thin vein within the gabbro well to the west (samples 202023, 205081), suggest a gold-silver-base metal vein event variably associated with As, Sb, Ba and Mn, which occurs as isolated thin veins in any wall rock. It is indicated to be low temperature feature, though its temporal relation to the Au-Mo events is uncertain.

Main Ridge

This is a very poorly constrained area identified along one line of soil samples which have consistently but weakly anomalous Au up to 35ppm plus coincident Mo to 7ppm. Cu is not anomalous though Ag, Pb and Zn are supportive. No geological explanation for the anomaly was seen; it occurs in arkosic conglomerates, black siltstones and overlying andesitic volcanics without obvious veining or intrusions.

Further sampling and mapping is needed to confirm this anomaly; until then, it is considered tentative.

Other gold anomalous and non-anomalous areas

The pattern of soil values in Au outside the areas described above indicate no well defined pattern, in spite of isolated sometimes high individual samples. In particular, the following hypothetical targets failed to be confirmed or are weak:

- **The NW structural corridor** along the main access road to the Cerro Maricunga project (and possibly aligned with that mineralization) shows scattered higher values in Au which includes parts of Santa Teresa North target. However the pattern is inconsistent in Au and without support from Mo outside Santa Teresa North. The “Portezuelo” area marked on maps is an envelope around anomalous soil samples.
- **The lapilli tuff or breccia unit**, considered on account of its alteration and occasional anomalous gold results in rock samples to be promising, gives no consistent pattern in precious and base metals in soils.
- **The limestone units** everywhere show very low geochemical response, thus confirming field observations that skarn mineralization is not important, at least at surface.
- **The phyllic altered, tourmaline bearing zones**, in addition to being small are also fairly geochemically dead in 13 SBX and Cominco rock samples except for As and low level anomalous Mo and Zn; (Sr and V are also probably high). Two Cominco samples apparently from this area with very high Ag and base metal values were not able to be located. Soil samples show low anomalies but this may be due to the association of the altered zone with gabbros which have a high background.

The distribution of selected other elements

Copper values in rocks are not strong, with maximum values in of 1100ppm (SBX) and 666ppm (Cominco), both in vein samples. Given the size of the databases, the lack of extensive leaching and the fact sampling has been focused on vein samples, this is discouraging. There are higher values within the North and South target areas (to

666ppm in rocks). In the case of soil samples, in the North and South targets, values are weakly anomalous (50-100ppm), indicating a weak correlation. However Cu in soils shows consistent low anomalies (>100<250ppm) closely associated with the gabbro bodies.

Silver and lead - zinc mineralization is very local, associated with silica veins in the Quebrada Toro area and elsewhere, where Ag correlates very well with Pb and Zn in rock samples. Low level anomalies of Ag also occur with tourmaline-sericite altered zones. Soil samples show no significant anomalies in Ag (maximum value of 0.78ppm). Only 39 soil samples have > 25ppm Pb and these generally lie within the areas of anomalous gold, including the Main Ridge anomaly. In Zn soil anomalies show a broader spread than Pb.

Molybdenum mineralization occurs in the three main Au anomalous areas and also as scattered rock anomalies associated with alteration of different types particularly the phyllic altered samples such as those in the tourmaline –sericite zones.

3. GEOPHYSICS

The area of Santa Teresa was included in a ground magnetic survey of much of the Atacama Pacific exploration property (approximately 60 lines oriented north-south and spaced 100m apart for a total 308 line km). In addition 5 IP-R ES lines were carried out in and adjacent to Santa Teresa. (Initially 3 lines 2km apart were planned, but spacing was closed to 1km on receiving interesting results, giving a total of 25.6 line kilometers). All work was done by Argali Geofísica E.I.R.L. (Jordan 2013b, Figure 5 shows the limits of the geophysical work).

Previous IP-RS work by Quantec for Cominco in 1998 (3 lines with a total of 10.2 line kilometers) was reinterpreted by Argali as a control of the 2013 work (Jordan 2013b).

The above work was analyzed for SBX by Gonzalo Yañez (2013). The conclusions of his report are summarized here.

> The analysis of magnetometric and IP-RES results indicates that magmatic systems, from the Palaeocene to Upper Miocene, have followed preexisting regional transpressional structures oriented NW. The Palaeocene magmatism of the extreme NW (Santa Teresa) consisted of highly magnetic bodies (gabbros, diorites) which, following compression-uplift-erosion processes were left exposed at surface in a hanging wall position. This differential uplift of the NW block would have conditioned the existence of two domains of superficial permeability (0-500m), to the SE composed of semi-permeable Miocene volcano-clastic sequences (Cerro Maricunga) and a NW domain in which the permeability is restricted to a system of NW transpressive faults. Later, and probably during the early phase of Miocene magmatism in the Maricunga Belt (20-24Ma), a hydrothermal system would have developed principally beneath the seal imposed by the hanging wall Palaeocene magmatism. This hydrothermal system shows a strong IP signal with good definition of a peripheral zone of high chargeability surrounding a moderately polarized nucleus. In addition there is a possibility of associating chargeability to limestone sequences in the Mesozoic country rock. The Maricunga sector also shows a strong NW structural control with dyke-like magnetized bodies on the flanks of the mineralized body, even if in this case the

mineralization is more recent (<16Ma). The IP signal on the NW periphery of the mineralized body is very weak, indicating therefore the termination of this. As a result of this study, two exploratory drill holes are proposed in Santa Teresa to validate the hypothesis of a blind hydrothermal system. *(Yañez, 2013, Executive Summary)*

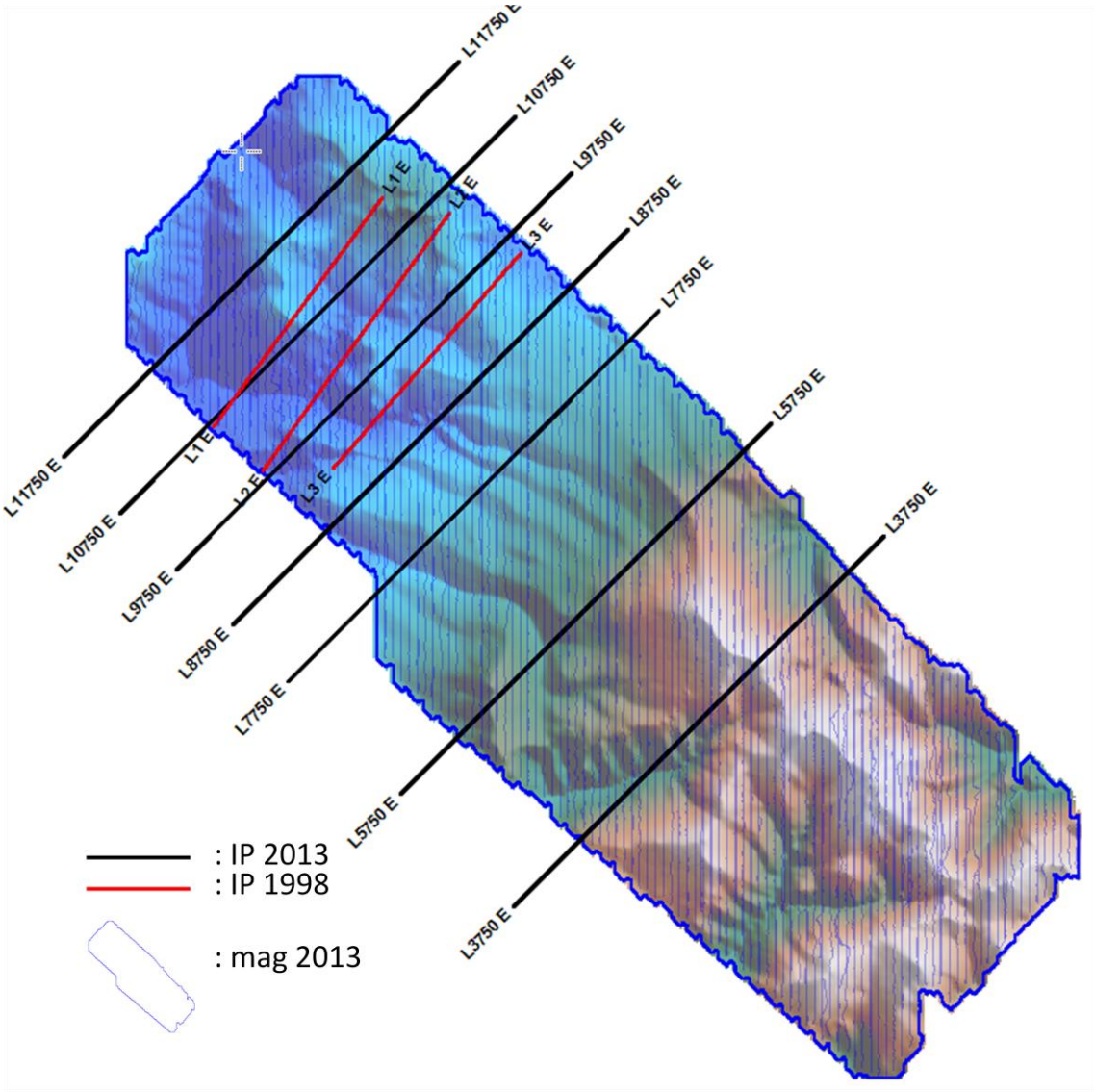

Figure 5:Location of IP-RES profiles superimposed on a digital terrain model of the ground magnetic survey (lines shown).

4. GEOCHEMISTRY

Rock geochemistry

113 rock samples were collected by SBX and have been analyzed for Au by fire assay on 50gr (with an AAS finish) either by Activation lab (samples of this work) or by Geoanalítica Lta. (Dietrich 2011 samples). 107 have ICP results by Activation Laboratories in Coquimbo.

Most rock samples are of selected areas of interest, mainly of veins and alteration features. Table A1-1 in the Appendix gives description and analytical results and selected correlation coefficients. Only one trench was chip-channel, Trench 8 on account of strong veining observed in volcanics in contact with dacite porphyry. Table A1-4 gives the results.

There is a well defined group of Ag – Cu - Pb – Zn - Cd – Ba – As – Sb + Mn (base and pathfinder elements) which correlate strongly together (a correlation coefficient >5). Au on the other hand has weaker association with this same group (<0.4). The appearance of pathfinder "epithermal" elements with base metals is not unusual in mesothermal vein systems, probably indicating a relatively high level.

Mo correlates slightly better with fellow siderophile elements than it does with members of this group. The lack of a clear Au-Mo correlation suggests that in the case of the drusy quartz veining at Santa Teresa South, the Mo-Au association may be suspect (though more selective geochemistry is needed here).

Soil geochemistry

A limited soil orientation survey suggested that sieving to -120# gave better results than -80# and that "Lag" sampling didn't give better results. A program of ridge and spur sampling was planned as the most efficient way of quickly covering the considerable areas of sub-crop and colluvium. The first pass of this program has been completed, with a sample spacing of 50m which was closed to 25m in areas of obvious interest. Second phase sampling, where closer spacing would be carried out in anomalous zones, has been completed in only a couple of areas.

Samplers were experienced geological assistants, accompanied by a geologist about 15% of the time. A Garmin GPS was used to locate sample points. Features such as the coordinates, depth, colour, granulometry, contamination and obvious mineralization for each sample were annotated onto the sample cards.

The 580 soil samples were each taken at 20-30cm depth from a single pit using iron or steel instruments (shovel, geological hammer and sieve). About 500 grams was rough sieved to approximately -10# in the field and to -120# after drying in Activation Laboratory's Coquimbo facility, where each sample was analyzed for Au by fire assay on a 30gram subsample and, after agua regia extraction, subject to ICP analysis for 21 elements. The pre-seived portion of the first 29 samples was erroneously ground to -120# and given 50gr fire assay analysis. These samples were not subject to ICP treatment, awaiting re-sampling which never took place).

5. DRILL RESULTS

The three angle RC holes plus a short vertical water well have, at best, weakly anomalous Au, Cu, Ag and Mo mineralization. All were stopped due to water problems. The following two tables summarize the hole parameters, followed by a brief description. The geological log of each hole with assay results of each 2m sample are attached as an appendix.

TABLE OF COLLAR LOCATIONS AND VECTORS OF REVERSE CIRCULATION DRILL HOLES, SANTA TERESA PROSPECT								
SONDAJE	**E_PSAD56**	**N_PSAD56**	**E-User**	**N_user**	**Elev.m.**	**Azimuth**	**Angle**	**Length_m.**
STR-001	472,889	7,019,862	472,869	7,019,901	4,148	217.23	-64.22	144
STR-002	472,506	7,017,985	472,486	7,018,024	3,877	43.07	-61.33	362
STR-003	472,052	7,018,379	472,032	7,018,418	3,962	45.43	-59.72	450
CMA-05	473,663	7,018,857	473,643	7,018,897	4,065	0	90	30
Total, meters								**986**

TABLE SUMMARIZING GEOCHEMICAL DATA FROM REVERSE CIRCULATION DRILL HOLES AND TRENCH 8, SANTA TERESA PROSPECT									
Hole	**Depth meters**	**Au-ppb av.**	**Au-ppb Max.**	**Cu-ppm Av.**	**Cu-ppm Max.**	**Ag-ppm av.**	**Ag-ppm Max.**	**Mo-ppm Average**	**Mo-ppm Max.**
STR-001	144	3.26	63	58	140	0.24	0.8	3.03	7
STR-002	362	47.84	244	58	220	0.10	0.7	9.18	65
STR-003	450	2.80	33	11	150	0.65	39.9	2.11	6
CMA-005	30	22.93	34	109	210	n.a.	n.a.	n.a.	n.a.
Total m.	**986**								
Trench 8	98	30	82	76	98	n.a.	n.a.	n.a.	n.a.
Note: averages are for the whole hole. On the accompanying logs, correlations between elements are shown.									

STR-001: this hole was aimed at the major NW lineament and the deep geophysical target where it is indicated to be closest to the surface (close to proposed drill hole P1, Yañez, 2013). Soil sampling suggests only weak Au anomalies in argillized limonitic lapillitic tuff units. The hole is barren in all 4 elements (average for the hole 3ppb Au with a maximum of 63ppb); Ag has some values >0.5ppm below 56m (maximum 0.8ppm) and Mo values are high relative to the Clarke value. An intercalated lapilli tuff - andesite sequence occurs to 64m, as a t surface, in which the weakest values occur. This is variably argillized and propylitic, though some alunite and jarosite and silicification noted in clasts suggests possible advanced argillic alteration to this depth.

STR-002: this was aimed at the deep target (close to proposed hole P2, Yañez, 2013) and collared in the center of the Santa Teresa South gold anomaly. It encountered more weak anomalous Au (average 72ppb and maximum 244ppb Au) to 170m where values drop below 50ppb. Cu, Mo, and Ag follow the same pattern with Mo in particular being anomalous (65ppm maximum). The Au:Mo correlation is weakly positive (0.22). The hole is in alternating quartz dacite and andesite porphyry to the end, with no significant difference in their mineralization. A fine diorite stock (or sill) on the contact of clastic and carbonate sediments was not reached. (The hole was collared on intrusive within the clastic sediments and was oriented sub-parallel to the attitude of bedding).

STR-003: this hole was drilled towards the deep geophysical target in an area without surface mineralization. Like the outcrop near the collar, it was logged as being in arkosic sandstones with occasional andesite dykes. The hole is unmineralized in Au to the end (450m) with a maximum value of 33ppb at 434m in black fine sediments. Cu and Mo are likewise very low, but Ag has scattered values >5gr with a maximum of 36ppm over 4m from 304m, in arkosic sediments. Correlations between elements are very low (<0.15).

CMA-005 (30m): samples from this vertical water monitoring hole show relatively anomalous Au (23ppb average, 34ppb maximum) and Cu (109ppm average) compared to the other holes. Ag and Mo were not analyzed. It lies 250m east of the high soil samples of North Santa Teresa in dacitic porphyries and fine andesite volcanics.

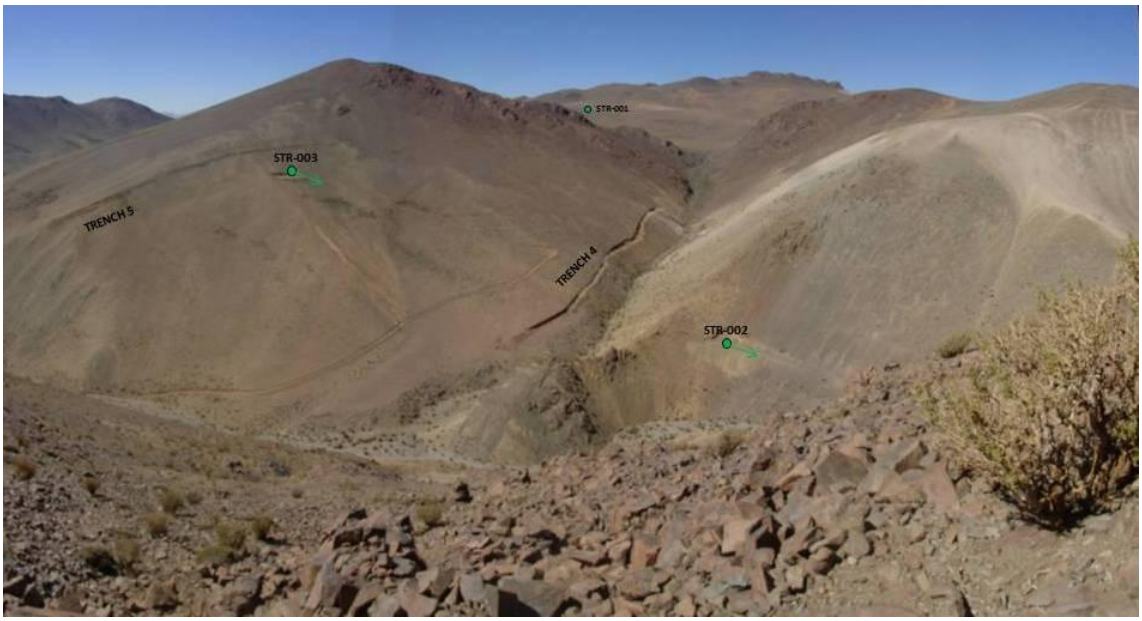

Photo 6: Santa Teresa South from the west showing drill pads and the main Au-anomalous ridge left of STR-002. The highest ridges are of gabbro Pale area on near shoulder is mainly limestone, in distance lapilli tuffs. Blocky rubble in foreground is fine diorite. The position of STR-001 is very approximate, on the main access road.

6. CONCLUSIONS

Mineralization styles and intensities

- The sampling of rocks and soils indicates low level anomalies principally of Au and to a lesser extent of Cu and Mo which correspond to the main quartz veining observed; two quartz vein events are recognized (early dark finely crystalline quartz ± Au ± chlorite ± magnetite) and late drusy quartz ± Mo ± Au). The soil anomalies, depending how they are defined, are of significant size, with an apparent first order control by proximity to dacitic late intrusions. However rock sampling and two RC holes probably reflect their normal levels of mineralization and therefore they do not appear economically interesting.

  The age of this mineralization is likely to be early Miocene, similar to the first phase of Maricunga magmatism (20-21Ma). However the associated magmatism is very restricted in size (apophyses and dyke-like bodies) and apparently deep (giving mesothermal vein associations). No obvious association of mineralization with black shales on the one hand or with limestones (skarn) on the other is observed.

  Isolated and thin (<0.2m) low temperature silica veins with very high Ag-Pb-Zn and variable Au (to 10g/t) arguably follow a WNW trend, possibly a mega lineament. Their thickness and discontinuity are it unlikely they could be of economic interest.

There are geophysical indications for blind mineralization beneath a possibly NE- vergent over-thrust plate including the main gabbro (Yañez, 2013, Jordan, 2013). The best geological and geochemical evidence is found in the areas of tourmaline- sericite alteration and brecciation, which could due to emanating volatiles from a porphyry system below; geochemically weak Mo, As and Ag anomalies occur in and around this in soil and/or rock samples.

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Appendix 1

Rock and Soil sample Results

Table A1-1 SBX Rock sample description and analytical results
Table A1-4 Trench 8 analytical results

(Note TablesA1-2, 3 and 5 of SBX soil and Cominco rock samples are in digital form only – see accompanying CD)

Appendix 2

Drill hole logs and results

STR-001
STR-002
STR-003
CMA-005

Appendix 3

Petrography

Cornejo 2012 petrographic report with minor additions.

Appendix 4

Analytical Reports