Form 43-101F1
Technical Report
Effective Date: November 9, 2017
Revised Date: May 25, 2018

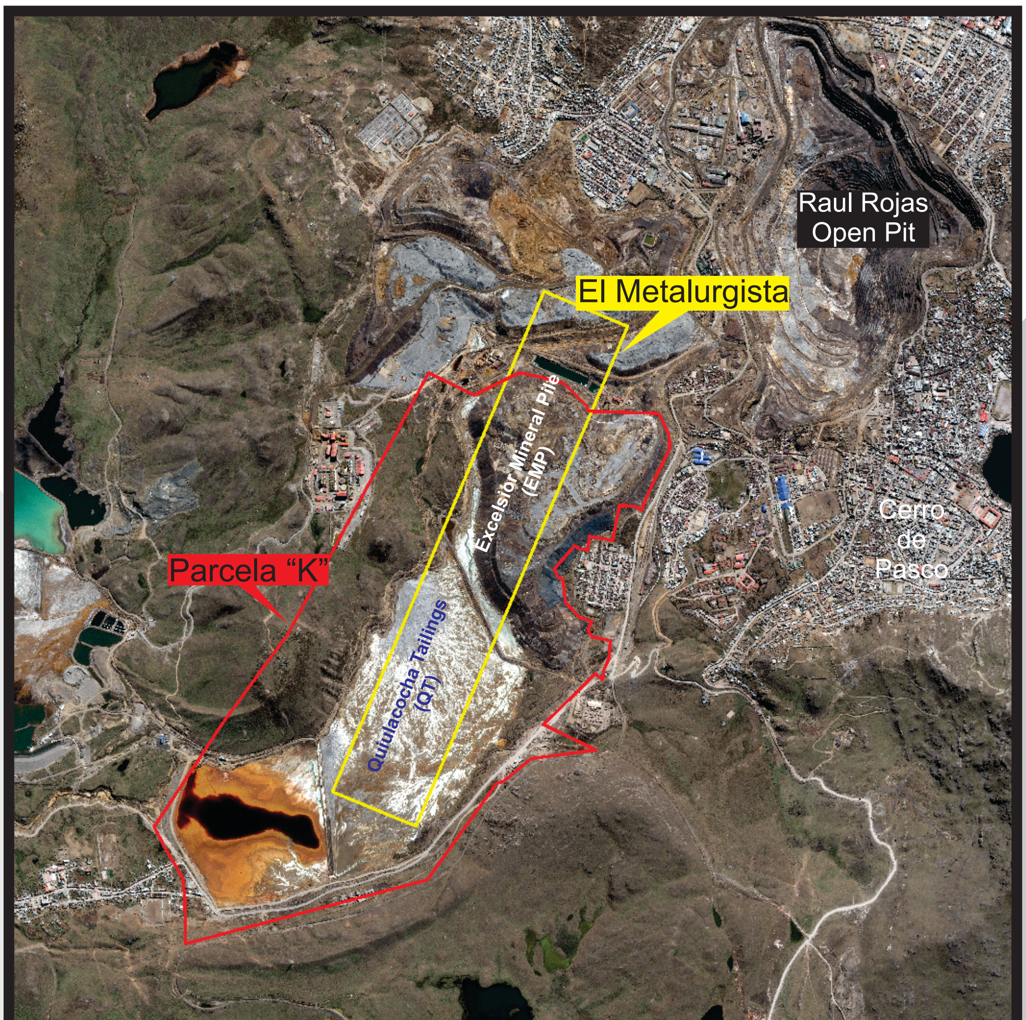
Michel Boily, PhD., geo.

GENIUS PROPERTIES

The Excelsior Property

The Excelsior Mineral Pile (EMP) and Quiulacocha Tailings (QT) associated with the Cerro de Pasco Mine, Cerro de Pasco District, Altiplano Region, North-Central Peru

GENIUS PROPERTIES LTD.



Satellite view of the Cerro de Pasco area showing the ancient Raul Rojas open pit and the Quiluacocha Tailings (QT) and Excelsior Mineral Pile (EMP).

GÉON

CERTIFICATE OF QUALIFICATIONS
DATE AND SIGNATURE

I, Michel Boily, Ph.D., P. Geo. HEREBY CERTIFY THAT:

I am a Canadian citizen residing at 2121 de Romagne, Laval, Québec, Canada.

I obtained a PhD. in geology from the Université de Montréal in 1988.

I am a registered Professional Geologist in good standing with l'Ordre des Géologues du Québec (OGQ; permit # 1097). I have praticed the profession of geologist for the last 41 years.

I had the following work experience:

From 1986 to 1987: Research Associate in Cosmochemistry at the **University of Chicago**, Chicago, Illinois, USA.

From 1988 to 1992: Researcher at **IREM-MERI/McGill University,** Montréal, Québec as a coordinator and scientific investigator in the high technology metals project undertaken in the Abitibi greenstone belt and Labrador.

From 1992 to present: Geology consultant with **Geon Ltée,** Montréal, Québec. Consultant for several mining companies. I participated, as a geochemist, in two of the most important geological and metallogenic studies accomplished by the Ministère des Richesses naturelles du Québec (MRNQ) in the James Bay area and the Far North of Québec (1998-2005). I am a specialist of granitoid-hosted precious and rare metal deposits and of the stratigraphy and geochemistry of Archean greenstone belts.

I have gathered field experience in the following regions : James Bay, Quebec; Strange Lake, Labrador/Quebec; Val d'Or and Rouyn-Noranda, Quebec; Grenville (Saguenay and Gatineau area); Cadillac, Quebec; Otish Mountains, Quebec, Lower North Shore, Quebec,Sinaloa, Sonora and Chihuahua states, Mexico, Marrakech and Ouarzazate, Morocco, San Juan, Argentina, Nicaragua and Central Peru

I am the author of the 43-101F1 Technical Report entitled : "The Excelsior property, The Excelsior Mineral Pile (EMP) and Quiulacocha Tailings (QT) associated with the Cerro de Pasco Mine, Cerro de Pasco District, Altiplano Region, North-Central Peru written for GENIUS PROPERTIES LTD. with an effective date of November 9, 2017 (Revised on May 25, 2018).

I consent to the filing of this report with any stock exchange and any 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.

As of the date of the certificate, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

The Qualified Person, Michel Boily, has written this report in its entirety and is responsible for its content.

I read the National Instrument 43-101 Standards of Disclosure for Mineral Projects (the "Instrument") and the report fully complies with the Instrument.

I am an independent qualified person, QP, according to NI 43-101. I have no relation to GENIUS PROPERTIES LTD. according to section 1.5 of NI 43-101 and thus I am independent of the Issuer. I am also independent of the Vendor. I am not aware of any relevant fact which would interfere with my judgment regarding the preparation of this technical report.

As of the effective date of November 9, 2017 (Revised on May 25, 2018) to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the report not misleading.

Michel Boily, PhD., Geo.
Dated at Montréal, Qc
May 25, 2018,

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ITEM1 SUMMARY

Genius Properties Ltd. proposes, through the acquisition of the El Metalurgista and Parcela "K" concessions, to exploit the mineralized material contained within the Excelsior Mineral Pile (EMP) and Quiulacocha Tailing (QT) forming residues generated by the processing of the Cerro de Pasco Mine Pb-Zn-Ag-Cu ore located in east-central Peru.

The Excelsior project consists of the the El Metalurgista Concession and Parcela "K" surface land, the latter including the previous concession. Both are situated 310 km by road northeast of the capital city of Lima, at close proximity to the city of Cerro de Pasco and Cerro de Pasco mine, east-central Peru. El Metalurgista occupies an area of 95.74 ha and was optioned by Genius from Mr. Manuel Lizandro Rodríguez-Mariátegui, whereas the Parcela "K" surface land covers an area 293.5ha and is the process to be acquired by Genius.

Best historical Mineral Resources Estimates for the EMP generated "Indicated Resources"[+], with a Pb cut-off of 0.8 wt. %, of 13.74 Mt @ 0.09 wt. % Cu, 0.74 wt. % Zn and 64.6 g/t Ag with Pb+Zn wt.%=2.38; whereas the "Inferred Mineral Resources"[+] totaled 29.15 Mt @ 0.09 wt. % Cu, 0.76 wt. % Zn and 66.9 g/t Ag with Pb+Zn=2.30 wt. %. The combined "Inferred and Indicated Mineral Resources"[+] generated 42.89 Mt @ 0.09 wt. % Cu, 0.73 wt. % Pb , 1.59 wt. % Zn and 66.1 g/t Ag (76.4 M Oz) with Pb+Zn= 2.33 wt. %. For the North and South Quiulacocha Tailings, the best estimate generated a total "Indicated Mineral Resources"[+] of 2.94 Mt @ 43.1 g/t Ag, 418 ppm Cu, 0.79 wt. % Pb and 1.43 wt. % Zn. These estimates need to be updated into 43-101 compliant Mineral Resources Estimates.

[+] *The estimates presented above are treated as historic information and have not been verified or relied upon for economic evaluation by the Issuer or the writer. These are considered historical Mineral Resources and do not refer to any category of sections 1.2 and 1.3 of the NI-43-101 Instrument such as Mineral Resources or Mineral Reserves as stated in the 2010 CIM Definition Standards on Mineral Resources and Mineral Reserves. The explanation lies in the inability by the author to verify the data acquired by the various historical drilling campaigns and other sampling works. The author has read the documents pertaining to the description of the different methods used in the historical evaluation of the Mineral Resources. The Issuer has not done sufficient work yet to classify the historical estimates as current Mineral Resources or Mineral*

Reserves. Therefore, the Issuer is in the opinion that the above quoted resources for the EMP cannot be relied upon.

The Cerro de Pasco district lies on the Andean Puna, at an elevation of 4,300 m ASL and exposes Devonian metasediments of the Excelsior Group, conglomeratic and sandstone red beds of the Permo-Triassic Mitu Group, Upper Triassic-Lower Jurassic carbonates (Pucará Group). Following multiple early Miocene deformation episodes, the region was affected by intense magmatic activity during the mid-Miocene, forming large diatreme-dome complexes in the Cerro de Pasco district.

The magmatic core of the Cerro de Pasco area consists of a large Miocene diatreme-dome complex, 2.5 km in diameter, which was formed by a succession of phreatomagmatic and magmatic events. Epithermal base metal mineralization took place, mainly in carbonate rocks along the eastern margin of the magmatic complex. The Cerro de Pasco deposit is distinct by the occurrence of an N-S–trending, 1.5-km long, 250-m wide, and more than 550-m deep, funnel-shaped massive pyrite-quartz body that replaced mainly carbonate rocks from the Pucará Group, as well as, subordinately, the diatreme dome complex. At least five main pipe-like, up to 150-m-wide, massive pyrrhotite-dominated bodies have been recognized. They grade outward into massive Fe-rich sphalerite (up to 80% in volume) and galena. High-sulfidation mineralization took place prior to the formation of the pyrite-quartz body. The mineralization consists of E-W–trending Cu-Ag-(Au-Zn-Pb) enargite pyrite veins hosted by the diatreme breccia and includes at least eight zoned Zn-Pb-(Ag) and Ag-Cu-Bi replacement orebodies in the eastern part of the deposit.

The material for the Quiulacocha Tailings (QT) derives from the exploitation and processing of the polymetallic Zn-Pb-(Ag-Bi-Cu) deposit at Cerro de Pasco. It is located 1.5 km SSW of the mine. The QT cover a surface of 114 ha and contain approximately 79 Mt tailings @ ~ 50 wt% pyrite. The tailings are partially overlain by the Excelsior Mineral Pile (EMP). During the first part of the 20^{th} century, copper mineralization associated with enargite was mined with the flotation plant for the Cu-ore located in the southwestern part of the QT. The deposition of tailings at Quiulacocha ceased in 1992 after 50 years of operation. Two different types of tailings were distinguished: a) Cu-rich sulphide tailings, and b) Zn-Pb-rich sulphidic tailings. The Cu-sulfide tailings are characterized by a mineralogy composed of pyrite, enargite, chalcopyrite, sphalerite and galena. The Zn-Pb-rich sulfidic tailings are defined by a mineralogy composed of pyrite, sphalerite, galena and pyrrhotite. The Quiulacocha Tailings have developed an oxidation zone with a thickness ranging from several mm to a maximum 25 cm (pH =1.9 to 4.8). The mineralogy of the oxidation zone is characterized by residues of pyrite, quartz and secondary phases such as jarosite, gypsum, siderite, and Fe-hydroxides, mainly goethite.

The Excelsior Mineral Pile (EMP) was filled from 1943 until 2000, initially as a deposit for rocks with non-economic Cu and later for non-economic Zn and Pb concentrations. The stockpile occupies an area of 94 ha and is located in the SW corner of the open pit mine at the bottom of a valley that consists of Devonian phyllites and shales. It contains 26,400,000 m^3 of fragmentary rocks and in part partly overlies the downstream Quiulacocha tailings. The EMP is made of rock fragments presenting an average size of 10 cm, which can reach up to 2.5 m in diameter. The stockpile consists of three terraces constructed by the release of fractured rocks at the slopes of the different terraces representing a mix of various rock types. The EMP is constituted mainly of three different assemblages: 1) sulfide-rich rocks from the quartz–pyrite ore body accompanied by Fe-oxide-rich oxidation products near the surface, 2) sericitized monzonites/volcanic rocks and 3), carbonate (dolomitic) rocks from the host rock formation. Metal-bearing minerals consist of sphalerite, tennantite, cerussite, enargite, galena (Ag-rich) and sphalerite.

Flotation tests were carried out in 2009 by Volcan Compañia Minera S.A.A. on samples collected from trial pits dug in the EMP. Then, further testing were conducted on ore-rich bearing zones with samples selected from RC drill holes fragments and then tests were carried out on composite samples. Overall, the best case scenario yielded recovery rates of 36.69% (Zn), 34.56% (Pb) and 35.73% (Ag in the Pb concentrate). However, in 2012 Cerro de Pasco Resources (CDPR) conducted a review of the existing historical metallurgical data produced by Volcan S.A.A, Centromin, and Cerro de Pasco Copper Corporation. CDPR presented their findings to improve the recovery of Cu, Pb, Zn, and Ag contained within the EMP. New metallurgical testing was conducted at the Volcan laboratory in Cerro de Pasco. Investigations sought to maximize the efficiency of the metallurgical recovery by: a) Evaluating various new and conventional methods to improve the recovery of sulphides and oxides, b) Evaluating the impact of other operational parameters such as grind size and flotation residence time and c), Creating two flotation circuits one for sulphides and the second for oxides.

Recovery metallurgical testing were carried out by CDPR at a pilot plant in San Expedito (a small concentrator now decommissioned) to develop three scenarios for the project implementation. In an optimistic scenario, a 50 wt. %, Pb concentrate is produced with an 80 % recovery. A maximum zinc concentrate of 55 wt. % is obtained with a recovery of 85%, whereas a 63% recovery rate is attained for silver. The projected lead circuit will produce a bulk concentrate based on the optimistic scenario. The circuit will accommodate two rougher stages, one scavenger stage and a flotation circuit for the tailings first cleaner and scavenger concentrate generating a lead flotation of 0.14 wt. % Pb. In the second rougher stage, the lead oxides will be recovered and will be subject to a sulphidation process. The circuit will incorporate four cleaning stages. A bulk concentrate of 4.33 wt. % Cu and 43.03 wt. % Pb will be obtained in the fourth stage. The Zn circuit will include two rougher stages and one scavenger stage. In the second rougher stage, the zinc oxides will be recovered and will be subject to a sulphidation process. The circuit will also contain four cleaning stages. In the fourth stage, the achieved zinc concentrate is 55.00 wt. % Zn and will be processed in two flotation cells.

A series of metallurgical tests were conducted by Centromin in 1998 to evaluate the extraction of economic minerals from the QT via a flotation process. Samples were collected considering the material grain size since the flow of the tailings particles and subsequent sedimentation were sorted by gravitation. CDPR presented, based on Centromin historical results, expected metallurgical results including Cu, Pb, Zn and Ag grades and recoveries with a 3,000 tpd feed. Estimated final grades of 50 wt. % (Pb), 55 wt. % (Zn) and 2800 ppm (Ag), corresponding to recoveries of 85.7%, 85.1% and 55.1% respectively were obtained. Data for a proposed flotation circuit (rougher+scavenger+cleaner) were put forward.

There were at least three historical attempts to establish Mineral Resources Estimates for the EMP and two proposed estimates for the QT. These estimates all have deficiencies that would render them, in their current state, non-compliant with the current NI43-101 norm and CIMM norms for Mineral Resources estimates. The best historical Mineral Resources estimates for the EMP and QT were presented above.

Exploitation of the QT and EMP material needs to take into account operational and environmental restrictions. For instance, the QT and EMP are located in an urban area with limited water resources for mining operations, whereas the extracted material contains a high sulfide content that will generate acid water.

Mining of the EMP should be highly mechanized and selective with the cut and loading done by hydraulic shovel and transport carried out by trucks and dump trucks. The removal and managing of the remaining rubble will be assigned to tractors, front loaders and graders. The mining operations will start in the SW sector, adjacent to the industrial area to be terminated in the sector adjacent to the Champamarca Urban Community, leaving for the last exploitation stage a berm of rubble (currently covered by a geomat). This berm will serve as a buffer zone separating the mining operations from the community.

The proposed exploitation of the QT entails the construction of an "Ancillary Tailings Deposit" allowing waste dumping during the early exploitation periods, until the creation of internal spaces within the QT through the construction of rock fills retaining walls. The work will consist to first liberate areas within the QT from the edge of the tailings through the re-pulping and pumping of tailings. After clearing different areas, retaining walls will be built from various fronts with rock fill provided by waste material from the EMP. During the re-pulping processing, mud pumps with direct control system will be installed and the tailings will be humidified by the injection of water until a homogeneous pulp of constant volume is obtained and then directed toward the processing plant. Re-pulping of the QTP sludge will proceed by using pressurized water to transport it toward the processing plant where the pulp will be reconditioned before entering the plant. The pulp transported to the processing plant will be send to collector tanks equipped with mechanical stirrers. The pulp pumped from these tanks will be sorted through a system of hydro-cyclones, with the overflow sent to a thickening tank and then to a differential flotation procedure while the hydro-cyclones underflow will be recycled to be grinded.

Mining the QT and EMP will require: a) Processing Plant, b) Acid Water Treatment Plant, c) Ancillary Tailings Deposit, d) Top soil deposit, e) Workshops, f) Offices, g) Basic installations, h) Truck yard, h) Industrial water network system and i), Electric energy network system. For economic, operational, environmental and social criteria, CDPR should use all available spaces located at the right side margin, NW of the QT and EMP sites within the Parcela "K", to build the installations.

The processing plant should treat the mineralized material provided by the QT and EMP in a 30/70 proportion. The plant will receive the overflow pulp from the re-pulping hydro-cyclones containing 30% to 60% solid material. The pulp will proceed to a differential flotation system where it will produce initial bulk concentrates and final concentrates. A Zn, Pb, Ag initial bulk concentrate is generated from the EMP with an Ag–rich tailings from the QT will be undergo a cyanidation stage.

The Zn-Pb-Ag bulk concentrate will first undergo bio-lixiviation before entering a solid/liquid separation phase. The produced Pb-Ag-rich solid phase will be submitted to another lixiviation process to recover silver and lead and finally be submitted to the refining stage. The liquid phase will pass through an iron elimination process followed by solvent extraction and electro-procurement. Finally an organic reactive is used for zinc extraction by acid mean and zinc cathodes are obtained by the application of electric power. The QT material obtained from the differential flotation banks will be sent to a cyanidation process to recover Ag after entering the refining stage. All liquid/solid residues used up in the cyanidation process enter a cyanide elimination process before being discharged to the new tailings as "waste".

Construction of a water acid treatment plan is required. The precipitation of sulphate on surfaces where acid water drains suggested the presence of a high concentrations sulfur as well high contents of dissolved metals such as iron, zinc, copper, arsenic and manganese. High concentrations of dissolved sulphates imply a two stage treatment; the first one to eliminate the sulphates and a second stage to precipitate the left-over sulphates with the remainder of the metallic elements. The solid material produced during the first stage is separated via Flotation by Dissolved Air (FAD). During the second stage, muds produced are recirculated with High

Density Muds (HDS); improving the kinetic and precipitation of dissolved metallic elements. After mixing the mud with lime, this solution will be directed to a first reactor filling it with the acid water and then in a second reactor injected with air or ozone. The reactor tanks feed a sedimentation pond where solid/liquid separation is carried out.

CDPR put forward an Environmental Management Plan consisting of several different programs, including: a) Residue management program, b) Ancillary tailings deposit, c) Modification of the Main Dyke, d) Air quality control program, e) Superficial waters quality control program, f) Effluent monitoring Program and g), noise Control Program

During closure, the waste material processed from the EMP must be moved to different locations to that of the exploited material and must be enclosed in a neutral material containing limestone. After compacting, the waste material will be covered by a layer of impermeable material, a draining layer, a top soil layer and a cover of vegetation. This must be conducted with the construction of a principal and a secondary draining systems. The layout of the discarded material from the EMP should not modify the current topography, which is a fundamental aspect of the Closure Plan that will influence the social perception and control the visual impact. The Closure Plan must include a reinforcement of the floating dyke and the main dyke must be rehabilitated or reconstructed. The internal waste pile must be flooded with sufficient water to avoid the generation of acid water.

The author strongly recommends the updating of the historical Mineral Resource Estimate established for the QT and EMP into Mineral Resources compliant with the current CIMM and NI43-101 norms. This reclassification entails the acquirement of Assay Certificates for data (including duplicates and standards) generated from 2004 to 2012, re-sampling of the EMP pits and RC drill material, possible twin holes and the calculation of sample density from material collected in different zones of the EMP. Resources recalculation, for both the EMP and QT, should be carried out with a software specifically designed for the task. A Pre-Feasibility Study is the next logical route Genius should take to justify continued investment in subsequent phases leading to exploitation.

ITEM 2 INTRODUCTION AND TERMS OF REFERENCE

On August 5, 2017, Genius Properties Ltd. of St-Sauveur, Québec, Canada, mandated Michel Boily (PhD, geo) to write a 43-101F1 Technical Report on the Excelsior Property located in the Cerro de Pasco District of Peru, near the city of Cerro Pasco, which constitutes a property of merit for Genius Properties. The purpose of this report is to describe the geological, structural and metallogical characteristics of the property, describe the exploration work carried out by past mining companies, present a description of historical Mineral Resource Estimates and metallurgical testing. This report will also include a summary of recent metallurgical, environmental and proposed infrastructural works leading to the exploitation of the tailings and stockpile defining the Excelsior property and closure of the operations. It will comply with the Canadian Securities Exchange (CSE) regulatory requirements and follow the guidelines and framework defined in the Form 43-101-F1 pertaining to National Instrument 43-101: "Standards of Disclosure for Mineral Projects". The author based his report on data, maps and reports provided by Genius Properties. Data and information were also extracted from reports available in the public record and within INGEMET website in Peru. Some of these reports were prepared before the implementation of NI 43-101 norms and did not follow the accepted rules and procedures. Although many authors of such reports appear to be qualified and the information was prepared to standards acceptable to the exploration community at the time, the data does not fully meet present requirements. Furthermore, several authors of former documents, while qualified to conduct the prescribed work, are members of associations whose status would not be sufficient to qualify them as QP according to th NI43-101 norm.The author does not take responsibility for the information provided from such sources. The author however believes the information provided is verifiable in the field, and that it is a reasonable representation of the mineralization. The author was prevented to visit the property due to the harsh climatic conditions prevailing at the time of writing this report. The author is planning to visit the site in July 2018.

The author has relied upon a limited amount of correspondence, pertinent maps and agreements information that described the Agreement into which Genius Properties Ltd. entered into the Excelsior project. The author has also reviewed the El Metalurgista Concession titles forming part of the Excelsior property and found that they were in good standing. The author does not accept any responsibility for errors pertaining to this information.

Units presented in this report use the metric system. Precious metal concentrations are given in grams of metal per metric ton (g/t) or in parts per million metal (ppm). Reference to base metals is reported in weight percent (wt. %) or ppm. Tonnage figures are in dry metric tons unless otherwise stated. Currency units used are the Canadian Dollar ($CAD) or United States of America Dollar ($USD), as specified. The weight and the measurement which are used in the course of this study are in conformity with the nomenclature of the international system (IS).

ITEM 3 RELIANCE ON OTHER EXPERTS

The author has read the Genius Properties Ltd. opinion concerning the legal status of the El Metalurgista Concession prepared on June 6, 2017 by Rodrigo, Elias and Medrano, Abogados; a legal firm located in Lima, Peru. The author has used excerpts of the document upon writing the following item.

ITEM4 DESCRIPTION AND LOCATION

4.1- The El Metalurgista Mining Concession

The El Metalurgista Concession is situated 310 km by road northeast of the capital city of Lima. It belongs to the Cerro de Pasco map sheet (22k) within the Department of Pasco, Province of Pasco, Simon Bolivar District. The district hosts multiple mining operations and is strongly associated with lead/zinc/silver sulphide ore deposits as well as large copper porphyries.
The Concession occupies an area of 95.74 hectares. The El Metalurgista claim lies between the city of Cerro de Pasco to the northeast, and the town of Quiulacocha to the southwest. The UTM coordinates of the concession boundaries are given in Appendix 1. The approximate center coordinates of the Concession are: 360699mE and 8817995mN (WGS84, Zone 18S) or Long. -76°16’25’’ and Lat. 10°41’24’’ (Figure 1). The Mining Concession was staked in 1972 and the title was granted in 1989. It was staked under a different system relative to the one currently in use. The title under such abrogated regime would include the “dumps, tailings and slag located within the area of the mining concession”. This is in contrast to the current system, in which the mining concession grants only the right to exploit “metallic” or “non-metallic” minerals. The

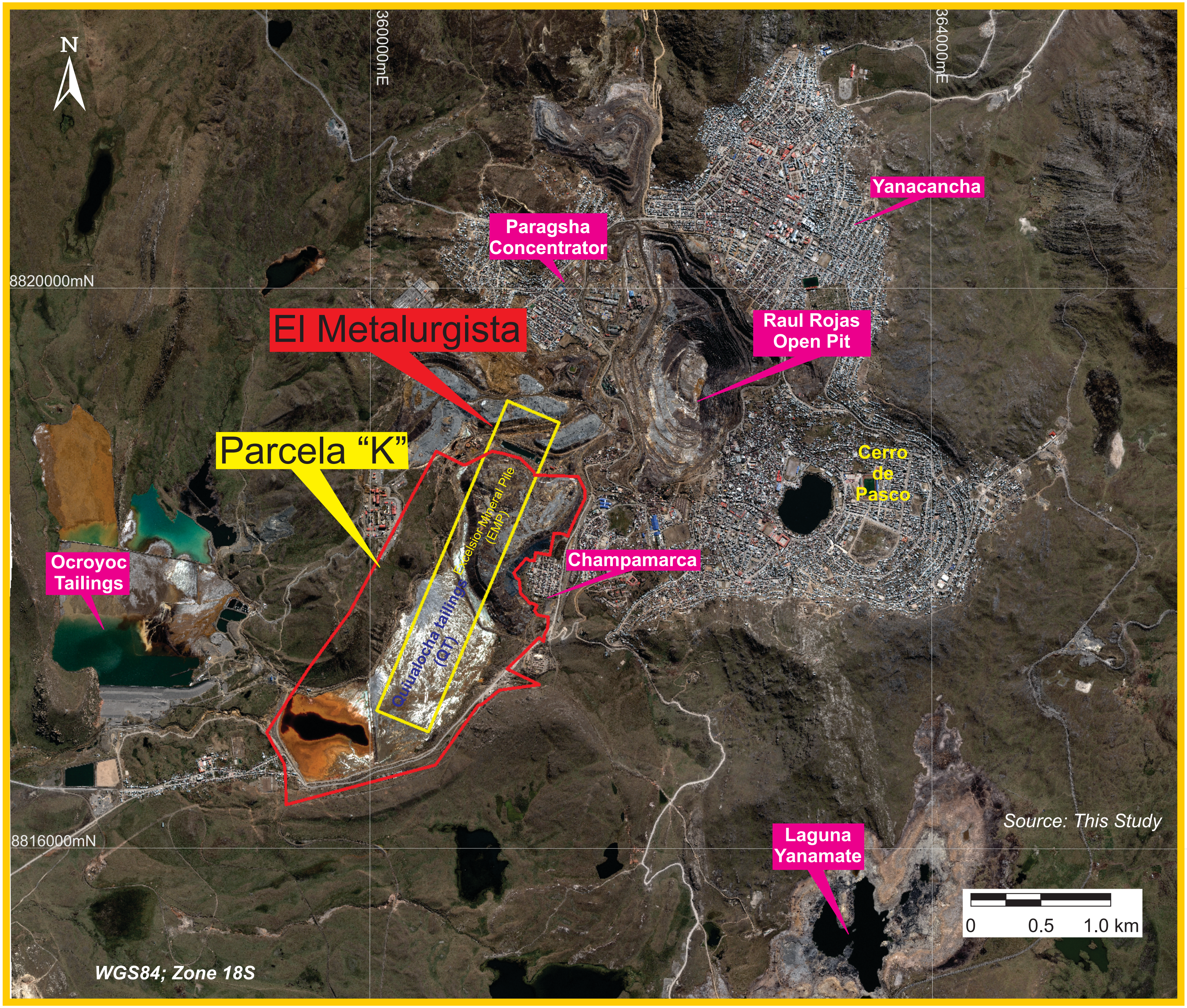


Figure 1. Localization and boundaries of the El Metalurgista and Parcela "K" concessions.

Concession has achieved the granting of a firm and definitive concession (see Appendix 2). The Concession was granted under Legislative Decree No. 109, the former Peruvian Mining Law. It is good standing (as confirmed by the information obtained from INGEMET) and is recorded in file No. 20002396 of the Mining Rights' Registry of Huancayo. As per the information obtained from the Public Registry, the Concession is free and clear of recorded encumbrances (including securities on movable goods). As per the information available in INGEMMET, there are no outstanding debts regarding the validity fees and minimum production penalties applicable to the El Metalurgista concession. According to the information obtained from the Public Registry, the registered title holder of the Concession is Victor Ramón Justo Eduardo Freundt Orihuela. Genius Properties Ltd. or its subsidiary is currently not recorded as the mining assignee of the Concession. However, the Agreement has already been submitted for registration by CDPR. Pursuant to Peruvian law, in order for any acts or agreements related to mining properties (such as the Agreement) to have enforceability before the State and third parties, they must be recorded with the Public Registry. The Agreement has been formalized in a public deed, but has not been recorded yet.

4.2- Parcela "K"

The Parcela "K" surface land (293.5 ha) falls outside and within the Excelsior Stockpile. Parcela "K" is situated in the Cerro the Pasco Province near the core of the urban district of Champamarca at an altitude of 4,300 m ASL. The center of Parcela "K" sits at latitude 10°39' S and longitude -76°00'W corresponding to UTM values of 361000E and 88181850N (WGS84; Zone 18S) (Figure 1). The northern and eastern boundaries of the Excelsior stockpile coincides with the northeastern limits of Parcela "K" about 500 m to the southwest of the Cerro de Pasco Mine open pit. It is owned by Activos Mineros S.A.C. ("AMSAC"), a Peruvian State-owned company. AMSAC was established in 1999 to remedy all remaining liabilities of Centromin (late Peruvian State run mining company) concerning the Cerro de Pasco Mine and as such is the owner of material outside of the El Metalurgista Mining Concession and within Parcela "K".

AMSAC was nominated, by Supreme Decree, the company responsible to carry out the remediation and to establish agreements with private companies to transfer all accumulated

wastes such as dumps and tailings, among them the Quiulacocha Tailings pond and the Excelsior stockpile after the closure of the Cerro Pasco Mine. CDPR started in early 2012 to gain access over the entire area known as Parcela" K" and is planning to acquire the entire area. At the time, CDPR formed, with the Ministry of Energy and Mines and rural communities located within the area occupied by the stockpile and tailings, a "dialogue table" with the objective of suspending AMSAC activities to undertake a closure plan, and to transfer Parcela "K" to CDPR.
In conclusions, CDPR/Genius both expect soon to extend their mineral rights over the entire EMP following an agreement with Activos Mineros.

4.3- Agreements

An option agreement (the "Option Agreement") dated February 14, 2017 was entered between Victor Ramon Just Eduardo Freundt Orihuela, (the "Vendor") and Cerro de Pasco Resources S.A., ("Cerro de Pasco"). In accordance with article 165 of the Peruvian General Mining Law, the Vendor, being the sole and exclusive owner of the mining right of the "EL ETALURGISTA" Concession (the "Concession") located in the district of Simon Bolivar, Province and department of Pasco, has granted Cerro de Pasco an irrevocable and exclusive option to acquire 100% of the Concession (the "Option"), subject to compliance by Cerro de Pasco with the terms and conditions set forth in the Option Agreement.

The price for the transfer of 100% of the mining property is the sum of $USD853, 700 ("The Transfer Price"). The Option will remain in effect until November 30, 2017, unless this time limit is extended by mutual agreement. The term of the option holder is mandatory and voluntary for Cerro de Pasco. As a result, Cerro de Pasco may terminate the Option Agreement at any time and without cause, by issuing a notification to the Vendor by way through of a notary deed.

Cerro de Pasco can also acquire ownership of the Concession concomitant with this Option, giving Cerro de Pasco a mining right with regard to the Concession. In accordance with the terms and conditions provided in the Option Agreement, once the Option will have been exercised by Cerro de Pasco, Cerro de Pasco will constitute a charge on the Concession in the form of the 2% royalty (the "Royalty") in favor of the Vendor and payable by Cerro de Pasco. The Royalty will be effective upon start of commercial production, will be applied to all the products coming from the Concession, and will subsist as long as there are products to be extracted therefrom. The transfer of the Concession, in whole or in part, by Cerro de Pasco entails the transfer of obligation to pay the Royalty and in such case a third party purchaser shall be bound by the terms and conditions of the Option Agreement in such a way that the Vendor remains beneficiary of the rights to the Royalty.

Subject to Cerro de Pasco exercising the Option in accordance with the terms of the Option Agreement, and once the start of the commercial production is confirmed, Cerro de Pasco will have an option to buy back the Royalty from the Vendor ("Repurchase Option"), in exchange for the following consideration:

a) the sum of $US3, 000,000.00 if Cerro de Pasco exercise the option to buy within the first 24 months of the start of commercial production; or

b) the sum of $US3, 500,000 if Cerro de Pasco exercises the option to buy after 24 months of the verified start of commercial production and up to 36 months after the verified start of commercial production; or

c) the sum of $USD4, 000,000 in case Cerro de Pasco exercises the option to buy after 36 months of the verified start of commercial production and up to 48 months after the start of commercial production.

Pursuant to a merger agreement executed on November 9, 2017 by and between Genius Properties Ltd., ("Genius") and Cerro de Pasco (the “Merger Agreement”), Genius and Cerro de Pasco agreed to merge Cerro de Pasco with a branch of Genius to be established under Peruvian laws (“BranchCo”) such that existing security holders of Cerro de Pasco will become security holders of Genius (the “Transaction”). GENIUS PROPERTIES LTD., is a corporation incorporated under the Canada Business Corporations Act, having a place of business at 22, Lafleur, suite 203, Saint-Sauveur, Québec, J0R 1R0; ("Genius") and CERRO DE PASCO

RESOURCES S.A., is a corporation incorporated under Peruvian laws, having a place of business at Calle Manuel Gonzales Olaechea 401, San Isidro, Lima, Peru; ("Cerro de Pasco"). Genius is a Canadian mineral exploration company focused on developing projects with some of the world's most critical metals and minerals.

Cerro de Pasco currently holds mineral rights on the Above Ground Orebody contained within the Concession (the "Mineral Rights"). Cerro de Pasco is currently in negotiation with Activos Mineros in order to extend Cerro de Pasco's interest to the surface rights of the Parcela "K" (the "Surface Rights" and collectively with the Mineral Rights, the "Property").

The Transaction is subject to a number of conditions precedent, including the receipt of all requisite regulatory, corporate and shareholder approvals, including that of the Canadian Securities Exchange. Specific conditions that must be met in relation to the closing of the Transaction include, among others:

(i) the completion of a reorganization by Genius which will result in the spin-off of Genius' properties;

(ii) the approval of the Transaction by the board of directors and the shareholders of both parties;

(iii) the approval of the Transaction by the CSE; and

(iv) the absence of material change in the business and operations of Cerro de Pasco and Genius. Genius and Cerro de Pasco will enter into the merger agreement to amalgamate pursuant to the terms of applicable Peruvian laws and continue as one corporation on the terms and conditions set out in the merger agreement. Genius, with the full cooperation and assistance of Cerro de Pasco, shall use reasonable Best Efforts to obtain all orders required from the applicable Governmental Body and the CSE (subject to escrow conditions imposed by the CSE or applicable Laws) to permit the issuance and first sale of the Genius Securities issuable pursuant to the Transaction without qualification with, or approval of, or the filing of, any prospectus or similar document, or the taking of any proceeding with, or the obtaining of any further order, ruling or consent from, any Governmental Entity under any Canadian federal, provincial or territorial securities or other Laws or pursuant to the rules and regulations of any Governmental Entity administering such laws, or the fulfillment of any other legal requirement in any such jurisdiction (other than, with respect to such first resales, any restrictions on transfer by reason of, among other things, a holder being a "control person" for purposes of Canadian federal, provincial or territorial securities Laws).

Upon the fulfillment of the necessary conditions to this Agreement, the Parties shall jointly file with the relevant Peruvian Governmental Body, the Articles of Merger and/or such other documents as are required to be filed under Peruvian laws for acceptance by the relevant Peruvian Governmental Body to give effect to the Merger, pursuant to the provisions of Peruvian laws.

In accordance with the terms of the Merger Agreement, Genius will issue a sufficient number of common shares of its share capital to allow the current shareholders of Cerro de Pasco to hold, in the aggregate, 75% (subject to an increase in certain circumstances as described below) of the total number of common shares of Genius issued and outstanding after the Transaction. Genius will also make cash contributions in the form of loans (the "Cash Contributions") to Cerro de Pasco in an aggregate amount of US$2,500,000 (a portion of US$250,000 of which has already been made) to be expended on the development of the Property, for metallurgical testing and to cover capital requirements related to community relations, permitting and general and administrative expenses.

The percentage of common shares to be held by the Cerro Shareholders may be increased pro rata if the Cash Contribution made by Genius is of a total amount of less than US$2,500,000.

As a result of the Proposed Transaction, the board of directors of Genius shall be comprised of six directors, four of which will be appointed by Cerro de Pasco and two of which will be current directors of Genius.

In summary, Cerro de Pasco and Genius shall effect the Proposed Transaction by merging Cerro de Pasco with a branch of Genius to be established under Peruvian laws, such that existing security holders of Cerro de Pasco will become security holders of Genius. In accordance with the terms of the Proposed Transaction, Genius shall : (i) issue a sufficient number of common shares of its share capital to allow the current shareholders of Cerro de Pasco to hold, after such issuance, in the aggregate, 75% of the total number of common shares of the Corporation issued and outstanding after the Proposed Transaction and, (ii) make a cash contribution in the form a loan to Cerro de Pasco in an aggregate amount of US$2,500,000, of which US$250,000 have already been made.

ITEM 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1- Accessibility

The El Metalurgista Concession is situated 170 km SE of Lima as crow flies. Traveling by car or 4 x 4 vehicle from Lima to Cerro de Pasco takes about 6 to 7 hours via Highway 20A provided there are no unforeseen hurdles (rock-falls, landslides, vehicular accidents, snowstorms, fog, etc.) (Figure 2). One can also travel by plane from Lima to the city of Jauja and then by car for 140 km to Cerro de Pasco.

5.2- Climate

At 4,330 ASL, Cerro de Pasco possesses an Alpine Climate. The town experiences two distinct seasons: a wet season lasting from November to April characterized by frequent rain and snow (1,847 mm) and a dry season extending from May through October with minimal rain (249 mm). Maxima and minima temperatures for December and June are: 13.0°C to -0.1°C and 12.7° to -4.0°C respectively, with the average yearly temperature hovering around 5.5°C.

5.3- Local Resources and Infrastructure

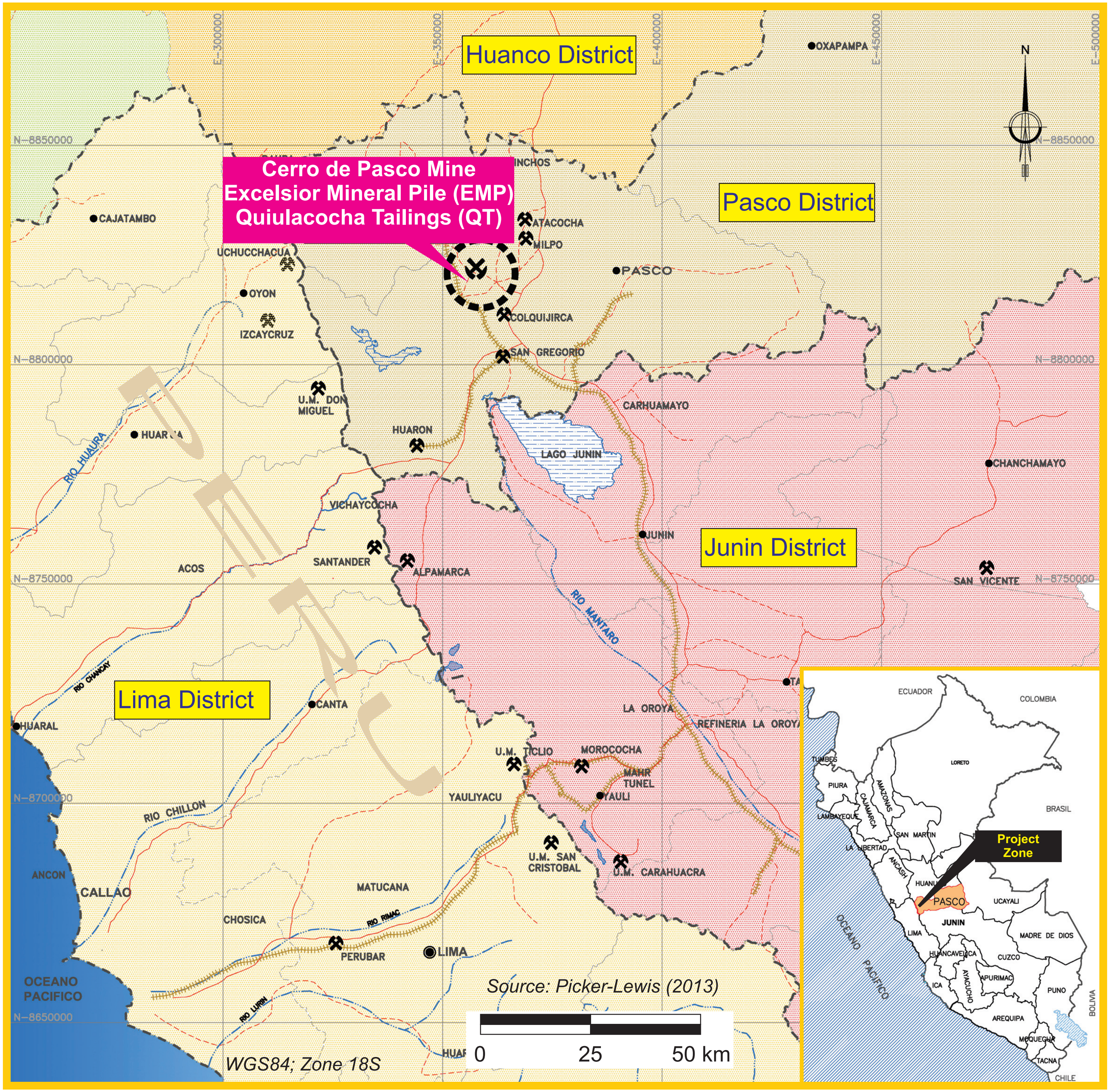


Figure 2. Localization of the Cero de Pasco (Zn-Pb-Ag (Cu)) Deposit in Peru

Cerro de Pasco (population 66,252) is a mining town build on the development of a world-class Zn-Pb-Ag-Cu deposit that has been in production for more than a century. The El Metalurgista Concession sits immediately west of the Cerro de Pasco city limits. The site underwent continuing mining operations by Volcan Compañia Minera SAA and others. There is a long-standing tradition in support of the mining industry by the population who possesses various expertise tied to mining operations. Therefore, there is a skilled mining workforce at Cerro de Pasco, All goods and services needed for the project could also be procured in the capital Lima accessible by a paved road from Cerro de Pasco. The latter holds a university that includes a faculty of geology and possesses all the amenities and services such as electric power, railway, water service, modern hotels, two hospitals (one of which includes an intensive-care unit) and restaurants.

5.4- Physiography

The Project is within an "Altiplano" (upland plateau) in the "Sierra" (highlands) of west-central Peru. The Puna has been sculpted by glaciers flattening the terrain, forming valleys and depositing moraines. After the retreat of the glaciers, a series depression were filled by glacial meltwater and now by the pluvial recharges and seepages from the surrounding lands. Therefore, lakes and lagoons (Punrun, Acucocha, Huaroncocha, Shegue, Alcacocha) are principally of glacial origin. The capital, Cerro de Pasco, is located on the Bombon plateau, an extensive cold high-altitude plain (Puna) flanked by the Western and Eastern Cordilleras that extend to the Junín region. The Pasco Province is the site of he most important watershed in the country; the Nudo de Pasco at the convergence of the various Cordilleras of the Andes. The Nudo de Pasco, consisting of a high Andean plateau, divides the northern and southern Andean Mountains.

5.5- Fauna and Flora

In the Peruvian Puna, such as near Cerro de Pasco, the fauna is not large and varied. The animal species included the grey deer of the Andes, the vizcacha, the condor, the taruca, the guinea pig in addition to live camelids such as llamas and the vicuña. Other highland species are the wildcat, the skunk, the vulture, and various birds of the family of the partridges.

In the high Puna, grass and small stands of quenuales are present. Around 4,000 m, the quinual or quenual trees constitute remnants of ancient forests. Grasses predominate, such as the ichu grass and the chiligua.

ITEM 6 HISTORY

6.1- The Quiulacocha Tailings (QT)

The area of the Quiulacocha Tailings (QT) was formerly a natural lake receiving tailings from copper mineral processing, mainly enargite (Cu_3AsS_4), since the early 20th century, from a small now closed concentration plant located in the southeast border of the QT. From 1943 until 1992 the largest volume of tailings was issued from the Paragsha and San Expedito concentrators processing lead and zinc minerals. In 1992, the QT reached full capacity and now occupies an area of 115 Ha. The residues from the Paragsha concentrator were sent, without previous classification or thickening, directly to the QT until 1965 at which point hydraulic back-fill started to be used in underground operation. From then to 1992, the residues were classified in cyclones, sending the thick portion (35%) to the mine as back fill and the fine portion (65%) to the QT. In the QT, there is a natural segregation of particle size, with the thicker sand particles in the higher part of QT proximal to EMP with fines migrating towards the tailings dam.

From 1997-2002, CENTROMIN carried out series of efforts and actions towards the surficial water management with the purpose of preventing sediments coming from the QT and EMP to contaminate the San Juan River. More recently, Activos Mineros S.A.C. performed a series of important groundworks in the area. A summary of the intervention on the QT by Centromin and Activos Mineros is detailed below:

1997-	Pilot parcels
1998-	3,400 m of internal ditches/trenches
	Pumping water system to the Ocroyoc tailings currently owned by Volcan
1999	Quiulacocha stabilizing berm

?- Engineering detail of the acid water Neutralization Plant – (Golder Associates)
Over 6,000 m of crest channel construction
Closure Engineering Detail Study (CESEL)
Reshaping the slope and overall stabilization of the tailings dam wall
Intercepting screen to capture subterranean waters (Champamarca Community)

2008-2009 Installation of 60,000 m^2 of Geomat in the surrounding areas of the Champamarca community

2012- Development of a Closure Plan (Approved by the Ministry of Energy and Mines, Directorial Resolution No. 253 -2012)
Initial negotiations have been started with Cerro S.A.C. (ex Volcan S.A.A.) for the construction and operation of a system for acid water treatment in QT

Finally, between 2003 and 2004, Cory Gold Mining completed drilling using an auger rig on portion of the QT.

6.2- The Excelsior Mining Pile (EMP)

The EMP contains from 85 to 95 Mt of predominately low grade mineralization extracted from the Raul Rojas Mine. When the Cerro de Pasco underwent privatization in September 1999; both the EMP and QT were given in a transfer option to Volcan Compania Minera S.A.A. for a one-year period, during which the company used the EMP to dump the stockpile from the Raul Rojas Mine until September 2000. Then, Volcan decided to return the EMP and QT to Centromin which has since then assumed the responsibility to remediate the liabilities related to the tailings and stockpile.

6.3- Metallurgical testing: Volcan S.A.A. (2009)

The flotation tests were first carried out by Volcan on samples collected from trial pits dug in the Excelsior pile. Then, further testing were conducted on ore-rich bearing zones with samples selected from RC drill holes fragments and then tests were carried out on composite samples. Composite samples were treated only when the total Pb+Zn concentrations > 2.5 wt. Averages recoveries obtained were: 35.9 % (Pb), 41.6 % (Zn) and 28.2 % (Ag). The same samples were also tested at the Plenge laboratory and even presented lower recovery rates (Table 1).

Head Grades			Concentrates			Recoveries (%)		
Pb (wt. %)	Zn (wt. %)	Ag (g/t)	Pb (wt. %)	Zn (wt. %)	Ag (g/t)	Pb	Zn	Ag
1.11	2.35	59	43.2	46.4	1299	32.1	37.6	16.5

Table 1. Plenge laboratory metallurgical test results for test pit composites.

During the course of RC drilling performed by Volcan in 2009, five samples from deeper zones of the EMP containing > 2.5 wt. % Pb + Zn were composited into one sample. Furthermore, all RC samples with Pb + Zn concentrations > 2.5 wt. % were regrouped into one major composite representing the entire EMP. Metallurgical testing carried out by Volcan and Plenge are presented in. Cerro de Pasco then produced the following concentrate grade and recovery rates from testing the general composite (Table 2).

	Grades			**Distribution**		
Products	**Pb (wt. %)**	**Zn (wt. %)**	**Ag (g/t)**	**Pb**	**Zn**	**Ag**
Head grade	1.13	2.91	58.00	100.00	100.00	100.00
Pb conc	49.10	5.72	1557.37	44.30	2.01	35.94
Zn conc	1.06	46.60	108.40	2.35	40.31	6.16
Tailings	0.62	1.74	26.52	53.35	57.68	57.90
				% Industrial Recovery		
				41.6	37.9	33.8

Table 2. Summary of the tests conducted on composite samples by the Cerro de Pasco laboratory.

In conclusions, Wheeler (2009) presented the best case metallurgical parameters determined from various metallurgical testing and from Volcan's experience with other marginal Pb, Zn and

Ag ores at the Cerro de Pasco mine (Table 3). Overall the best case scenario yielded recovery rates of 36.69% (Zn), 35.56% (Pb) and 35.73% (Ag in the Pb concentrate).

		Base Case (%)	Low (%)	High (%)
Processing Recoveries	Zn	36.69	34.83	41.60
	Pb	35.56	33.21	36.60
	Ag g/t in Pb conc.	35.73	31.86	26.10
Concentrate Grades	Zn	42.00	46.00	42.70
	Pb	30.00	48.00	46.30
	Ag g/t in Pb conc.	1209 g/t	1920 g/t	1700 g/t

Table 3. Estimated metallurgical parameters for the EMP mineralized material.

6.4- Historical Mineral Resource Estimates

6.4.1- The Excelsior Mineral Pile (EMP)

There were at least three historical attempts to establish Mineral Resources estimates for the EMP. These estimates all carry deficiencies that would render them, in their current state, non-compliant with the current NI43-101 and CIMM norms for Mineral Resources estimates.

6.4.1.1- Mineral Resources Estimates: Volcan Compañia Minera S.A.A. (2004)

In 2004, Volcan S.A. which operated the Cerro de Pasco mine turned their attention on their “low Pb-Zn-Ag concentration” Excelsior stockpile that constituted the waste material of their open pit and underground operations. The “Excelsior dump" had a useful life of approximately 26 years, from 1970 to 1996. The EMP underwent two distinct periods of dumping that formed at least three specific rock piles: a) Zone A forms the oldest lower pile, with an average height of 45 to 50 m to an altitude of 4330m. The lower EMP zone contains oxidized material, volcanic rocks, limestones, pyrite-rich rocks with copper-silver and pyrite-rich rocks with low content of Pb-Zn minerals (Figure 3), b) Material of Zone B was deposited on the platform formed by Zone A deposit. It consists mostly of volcanic rocks provided from the exploitation of the G3 cut on the west wall pit and to a lesser extent by limestones from the eastern wall H2 cut and c), Zone

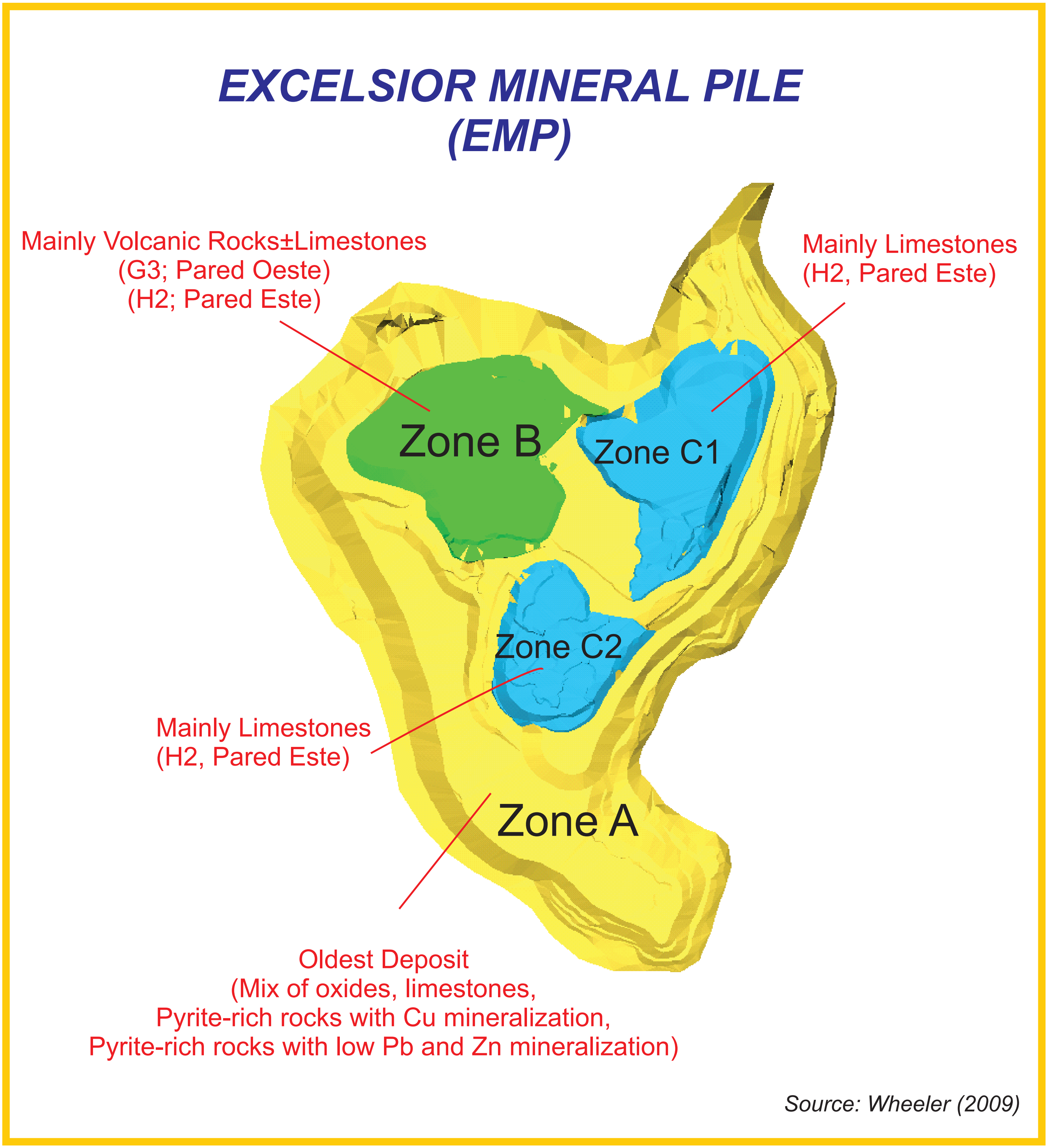


Figure 3. Classification of the Excelsior Mineral Pile (EMP) according to the types of mineralization, gangue material, degree of oxidation and provenance from the Raul Rojas open pit.

C also deposited on the Zone A platform is made up of limestone extracted from the eastern wall H2 cut.

Volcan performed five RC drill hole in the EMP. The first five holes were collared in the material belonging to Zone A (the oldest dump site), whereas the sixth hole was drilled on the platform of Zone B. Sampling of zone C material at the surface provided average concentrations of 4.14 wt. % Pb, 1.84 wt. % Zn and 59 g/t Ag. Volcan contented Zone C contained approximately 10.4 Mt of mineralized material of which 5.2 Mt would be exploitable. Volcan surmised the 2004 drill holes cut only 15% of the Zone A thickness and thus estimated a tonnage of 11.0 Mt of low-grade mineralized rocks. Zone B was not evaluated. A total of 16.2 Mt of historical resources was inferred by Volcan

6.4.1.2- Mineral Resources Estimates: Volcan Compañia Minera S.A.A. (2009)

A restricted number of grab samples from the Excelsior stockpile was collected prior to 2009 to ascertain its economic value in Cu, Zn, Pb and Ag, These samples not used in the Mineral Resource estimate calculations nonetheless delineated the superficial zones classified as C1, C2 and D in addition to the other already defined zones (e.g. A, B, C; see section 6.4.1.1).

Test pit sampling was carried out under the supervision of Volcan's Exploration Department with an excavator producing 50 to 60 kg of rock. The location of the test pits is reproduced in Figure 4.

74 reverse circulation (RC) drill holes were completed by AK Drilling International with two Foremost Prospector 4 x 4 Buggy Rigs. Samples were taken at 2 m depth intervals. A uniform density of 2.43 g/cm^3 was adopted. The localization of the 74 RC drill holes are reported on Figure 4.

Wheeler's modeling and resources estimation relied strongly on the regrouping of rocks forming the EMP into specific zones according to their main periods of deposition. Thus:

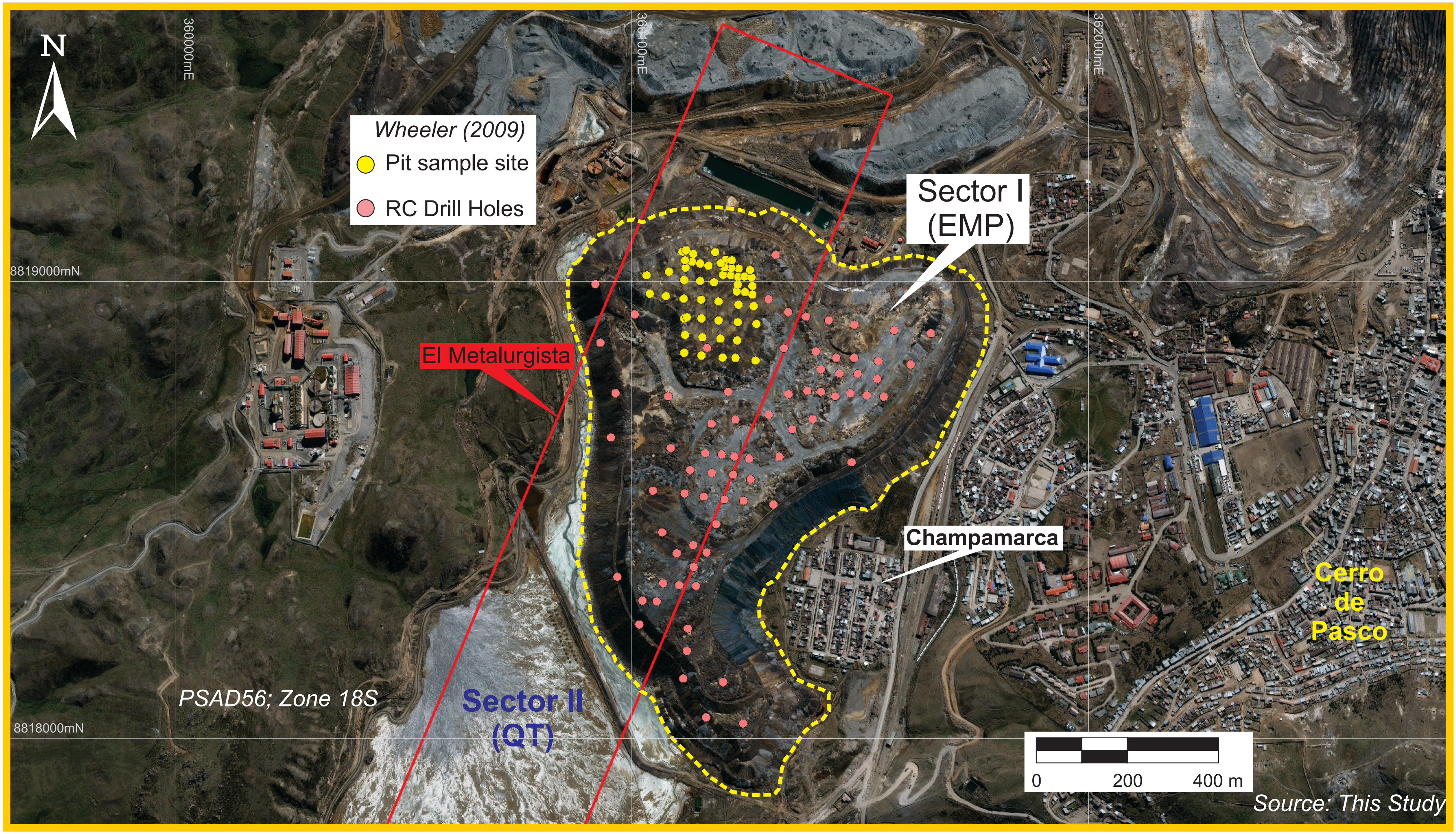


Figure 4. Localization of the pit sample sites and RC drill holes performed by Volcan Compañia Minera SAA in 2009 on the EMP.

Zone A constituted the deepest and oldest part of the stockpile with a height varying from 50 to 70 m. The zone is composed of a mix of materiel of different lithologies, issued from waste excavated in the main Cerro open pit that included oxides, volcanic rocks, limestones, pyrite-rich rocks mineralized in Cu-Pb and pyrite-rich rocks having low concentrations of Pb and Zn. Zone B was deposited on the top of Zone A in the NW corner of the stockpile of Zone A. It contains principally volcanic rocks from the waste stripping of cut G3 (Pared Oeste) and include a small amount of limestones from cut H2 (Pared Este). Zones C1 and C2 were dumped in the NE corner and at the center of Zone A stockpile (Figure 3). The materiel is mainly composed of limestones mined from the H2 cut (Pared Este). Zone D is located between Zones C1 and C2 and consists of limestones having variable Pb-Zn-Ag grades extracted from cut H2 (Pared Este).

Wireframe models of each zone, except for Zone D which was included with Zone A, were composed to assign the sample data to a specific zone. Verifications of the data during the import and processing into the Datamine software were checked as followed: a) establishing plans of the drill holes collars, b) checking the FROM-TO sequences, c) Range check on all grade fields and d), drafting sections of the drill holes data. Concerning the sample data from the RC holes, 127 check samples were taken from specific boxes and sent to the ALS Chemex Laboratory in Lima, Peru for external assaying.

Wheeler's Mineral Resources estimate was build according to the following steps: a) Wireframes of different segments of the EMP were used to select and allocate the available sample data, b) The drill hole data was composited into 5 m lengths, to correspond to the test pit data and to be consistent with future processing, c) the composite data was analyzed and the obtained geostatistical information used in the establishment of grade estimate parameters, d) a volumetric block model was constructed using 10 x 10 x 5 m parent cells, e) Concentrations of lead, zinc and silver were interpolated into model blocks, e) Resources categories were generated in the model based primarily on sample spacing and f), the block model served as a basis for calculating the Mineral Resources and used for subsequent mine planning.

During the compositing process, the recovery of the RC drill samples served as a weight-grading factor, to provide a better average grade for each composite. However, average composite concentrations were also calculated without recovery weighting and also used in subsequent calculations. The test pits were commonly spaced on a 50 x 50 m grid. However, in the upper C1 and C2 dump zones, the spacing was approximately 34 x 34 m. The RC drill holes were collared at various spacing usually in the range of 40 to 50 m. Wheeler (2009) undertook further analyses by establishing decile plots. This allowed capping of silver analyses during the formation of composites, whereas cappings of 180 g/t and 200 g/t were established for Zones B and D respectively, while no capping was necessary for Zones A and C. Variographic analyses were completed on composite. A block model was constructed allowing a build-up of a volumetric block model for the EMP. The grade estimation for the final applied specifications were supported by three key parameters: for well-formed blocks, a slope of regression of the true block grade against the estimated block grade (>0.9), the weight of mean for a simple kridging operation (<0.9) and the cumulative sum of negative weights (<5%). A typical block for "Indicated"[*] Mineral Resources was chosen for the estimation test in which drill holes are spaced at a maximum of 50 m or less. Ordinary kridging test was run for this block for interpolating the Zn grade and the selected composites retained to examine the kridging weights applied.

Wheeler (2009) interpolated all principal Zn, Pb and Ag concentrations using ordinary kridging. For validation and comparative purposes, other grade values were determined by other methods such as nearest neighbor (NN), inverse-distance weighing and kridging of composites where the RC composites are unweighted. The model variogram for zinc assisted in the establishment of the resource classification. Wheeler's validation of the Mineral Resources calculation hinged on: a) the examination of plans and section with superimposed grade values, b) an average kriged metal concentrations in zone for "Indicated"[*] resources with no applied cut-off was compared with the average grades from nearest neighbor and inverse-distance estimations, as well as with the average composite grades. A summary of the Mineral Resources is presented in Table 4 for the different zones defined by Wheeler (2009) for the entire EMP stockpile. Cut-offs of 0, 2.0 and 2.5 wt. % Pb+Zn wt. % were applied.

Cut-off (Pb+Zn wt. %)	Category	Tonnes (Mt)	Pb+Zn (wt. %)	Pb (wt. %)	Zn (wt. %)	Ag g/t
0	Indicated*	34.8	2.18	0.65	1.54	50.2
	Inferred	41.7	1.96	0.60	1.36	44.8
2	Indicated	19.8	2.59	0.72	1.87	50.8
	Inferred	19.0	2.46	0.73	1.73	44.7
2.5	Indicated	9.7	2.97	0.78	2.20	50.8
	Inferred	7.6	2.79	0.85	1.95	18.8

Table 4. Summary of Historical Resources for the EMP, categorized as "Indicated and Inferred"*, for Zn+Pb wt. % cutoffs of 0, 2 and 2.5 respectively.

** The estimates presented above are treated as historic information and have not been verified or relied upon for economic evaluation by the Issuer or the writer. These are considered historical Mineral Resources and do not refer to any category of sections 1.2 and 1.3 of the NI-43-101 Instrument such as Mineral Resources or Mineral Reserves as stated in the 2010 CIM Definition Standards on Mineral Resources and Mineral Reserves. The explanation lies in the inability by the author to verify the data acquired by the various historical drilling campaigns and other sampling works. The author has read the documents pertaining to the description of the different methods used in the historical evaluation of the Mineral Resources. The Issuer has not done sufficient work yet to classify the historical estimates as current Mineral Resources or Mineral Reserves. Therefore, the Issuer is in the opinion that the above quoted resources for the EMP cannot be relied upon.*

6.4.1.3- Mineral Resources Estimate: CDPR (2013)

The most recent Mineral Resources estimate was established by CDPR in 2013, but was not published in a document. The authors here refers to memorandum, maps, drawings and data provided by CDPR to describe the processes and results of the calculations

CDPR developed a Mineral Resources estimate in two parts: a) a 3D modeling based on the information available at the time to CDPR (contour lines, drill logs, geochemical assays for the 74 RC holes), b) the creation of a block model, the delimitation of different zones and sub-zones mineralized in Pb-Zn-Ag and solely Ag, a statistical treatment of the data, the determination of search volumes and estimation parameters, a definition of the estimator, and interpolation of concentrations and blocks.

The density of *in situ* ore from the Cerro de Pasco mine ranges from 3.5-4.3 g/cm^3, due to presence of heavy metals such as Pb, Zn and Cu. The EMP is composed principally of pyrite (5.0 g/cm^3), limestone (2.7 g/cm^3) and un-mineralized volcanic rocks (2.9-3.1 g/cm^3). Through the log description of 2009 RC drill holes, CDP classified the EMP into two main mineralized types: sulphides and oxides which were then subdivided according to the composition of the metal-bearing minerals and gangue material. Then an average density was calculated for each sub-zone of the sulphide and oxide zones. Note these densities are not based on any determination in the laboratory and do not account for the porosity of the EMP. The pores are probably filled by water or secondary recrystallized minerals.

A 3D model of the EMP was created using the intersection of the RC drill holes with the base of the stockpile (usually the QT surface) and form the high resolution altitude contour lines of the stockpile. Prior to the interpolation of element concentrations, the block model defined the limits of the sub-zones (ex: 1A, 1B, 1B, 1C, 1D, 2A, 3A; see Table 5) using the Nearest Neighbor (NN). Concerning the search volumes and estimation parameters the Inverse Square of the Distance (IDC) was utilized as the principal interpolator related to the interpolation method. The results of the bulk Resources Estimate are given in Table 6. The applied cut-off is 0.8 wt. % Pb

The Mineral Resources are here subdivided so to differentiate Ag-rich sub-zones (1C, 1D, 3A) and Pb+Zn-rich sub-zones (1A, 2A, 3B) (Table 6 and Figures 5a, b). “Indicated Resources”[#] with a Pb cut-off of 0.8 wt. % lead to a tonnage of 13.74 Mt @ 0.09 wt. % Cu, 0.74 wt. % Zn and 64.6 g/t Ag with Pb+Zn wt.%=2.38; whereas the “Inferred Mineral Resources”[#] totaled 29.15 Mt @ 0.09 wt. % Cu, 0.76 wt. % Zn and 66.9 g/t Ag with Pb+Zn=2.30 wt. %. The combined “Inferred and Indicated Mineral Resources”[#] generated 42.89 Mt @ 0.09 wt. % Cu, 0.73 wt. % Pb , 1.59 wt. % Zn and 66,1 g/t Ag (76.4 M Oz) with Pb+Zn= 2.33 wt. %.

[#] *The estimates presented above are treated as historic information and have not been verified or relied upon for economic evaluation by the Issuer or the writer. These are considered historical Mineral Resources and do not refer to any category of sections 1.2 and 1.3 of the NI-43-101*

Table 5. Defined limits of the sub-zones of the Block Model created by the Nearest Neighbor (NN) method within the block model.

SUB_ZONE	FIELD	NREC	NSAMP	NMISVAI	NUMTRACK	MINIMUM	MAXIMUM	RANGE	TOTAL	MEAN	VARIANCE	STD_DEV	COEF_VA
1A	Ag	425	425	0	425	1.00	329.00	328.00	21085.00	49.61	2228.52	47.21	0.95
	Cu	425	425	0	425	0.01	8.00	8.00	40.68	0.10	0.16	0.40	4.19
	Pb	425	425	0	425	0.03	4.32	4.29	347.21	0.82	0.30	0.55	0.67
	Zn	425	425	0	425	0.26	5.87	5.61	954.43	2.25	0.94	0.97	0.43
1B	Ag	86	86	0	86	4.00	394.00	390.00	8011.00	93.15	3609.64	60.08	0.64
	Cu	86	86	0	86	0.01	0.55	0.55	10.08	0.12	0.01	0.10	0.86
	Pb	86	86	0	86	0.26	3.95	3.69	87.68	1.02	0.43	0.66	0.64
	Zn	86	86	0	86	0.23	8.15	7.92	187.86	2.18	1.85	1.36	0.62
1C	Ag	116	116	0	116	33.00	256.00	223.00	11936.00	102.90	2300.95	47.97	0.47
	Cu	116	116	0	116	0.02	0.80	0.78	17.90	0.15	0.01	0.12	0.78
	Pb	116	116	0	116	0.18	2.46	2.28	76.19	0.66	0.12	0.35	0.53
	Zn	116	116	0	116	0.12	3.40	3.28	93.59	0.81	0.30	0.55	0.68
1D	Ag	17	17	0	17	1.00	177.00	176.00	20528.00	33.27	621.10	24.20	0.75
	Cu	17	17	0	17	0.01	0.89	0.89	41.31	0.07	0.01	0.09	1.39
	Pb	17	17	0	17	0.10	2.99	2.89	371.57	0.60	0.15	0.39	0.65
	Zn	17	17	0	17	0.39	0.69	0.30	1180.04	0.92	0.70	0.84	0.44
2A	Ag	617	617	0	617	1.00	177.00	176.00	20528.00	33.27	621.10	24.92	0.75
	Cu	617	617	0	617	0.01	0.89	0.89	41.31	0.07	0.01	0.09	1.39
	Pb	617	617	0	617	0.10	2.99	2.89	371.57	0.60	0.15	0.39	0.65
	Zn	617	617	0	617	0.39	6.69	6.30	1186.04	1.92	0.70	0.84	0.44
3A	Ag	167	167	0	167	8.00	344.00	336.00	16949.00	101.49	2868.63	53.56	0.53
	Cu	167	167	0	167	0.01	0.79	0.79	22.63	0.14	0.02	0.13	0.92
	Pb	167	167	0	167	0.10	4.79	4.69	167.52	1.00	0.49	0.70	0.69
	Zn	167	167	0	167	0.13	4.42	4.29	151.32	0.91	0.63	0.79	0.88
WASTE	Ag	575	575	0	575	1.00	261.00	260.00	14224.00	24.74	351.21	18.74	0.76
	Cu	575	575	0	575	0.01	1.90	1.90	36.69	0.06	0.01	0.10	1.57
	Pb	575	575	0	575	0.01	1.78	1.78	194.83	0.34	0.06	0.24	0.72
	Zn	575	575	0	575	0.04	2.36	2.32	424.16	0.74	0.15	0.38	0.52

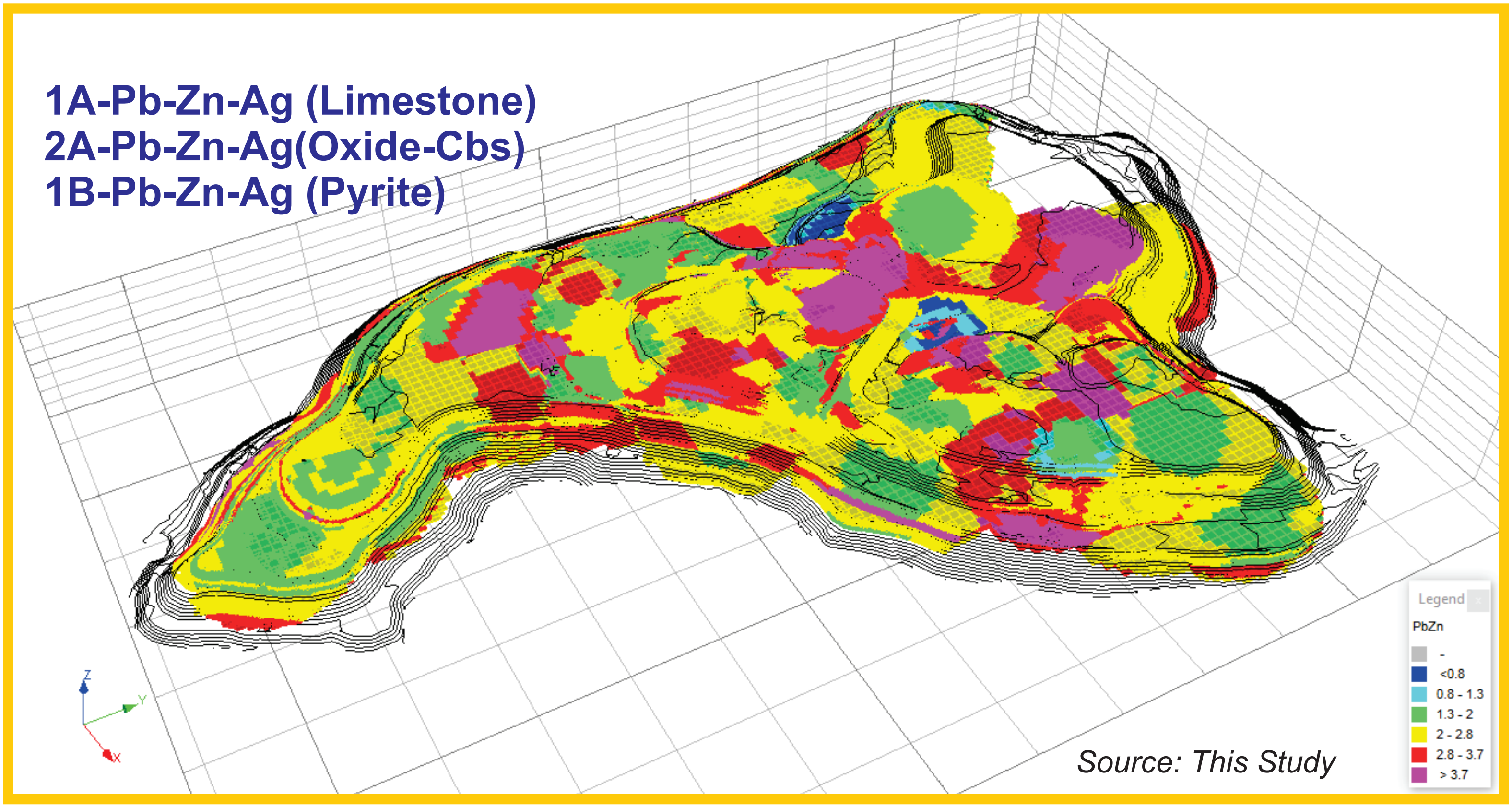


Figure 5a. Distribution of Zn+Pb (wt. %) concentrations within the EMP according to the different sub-zones.

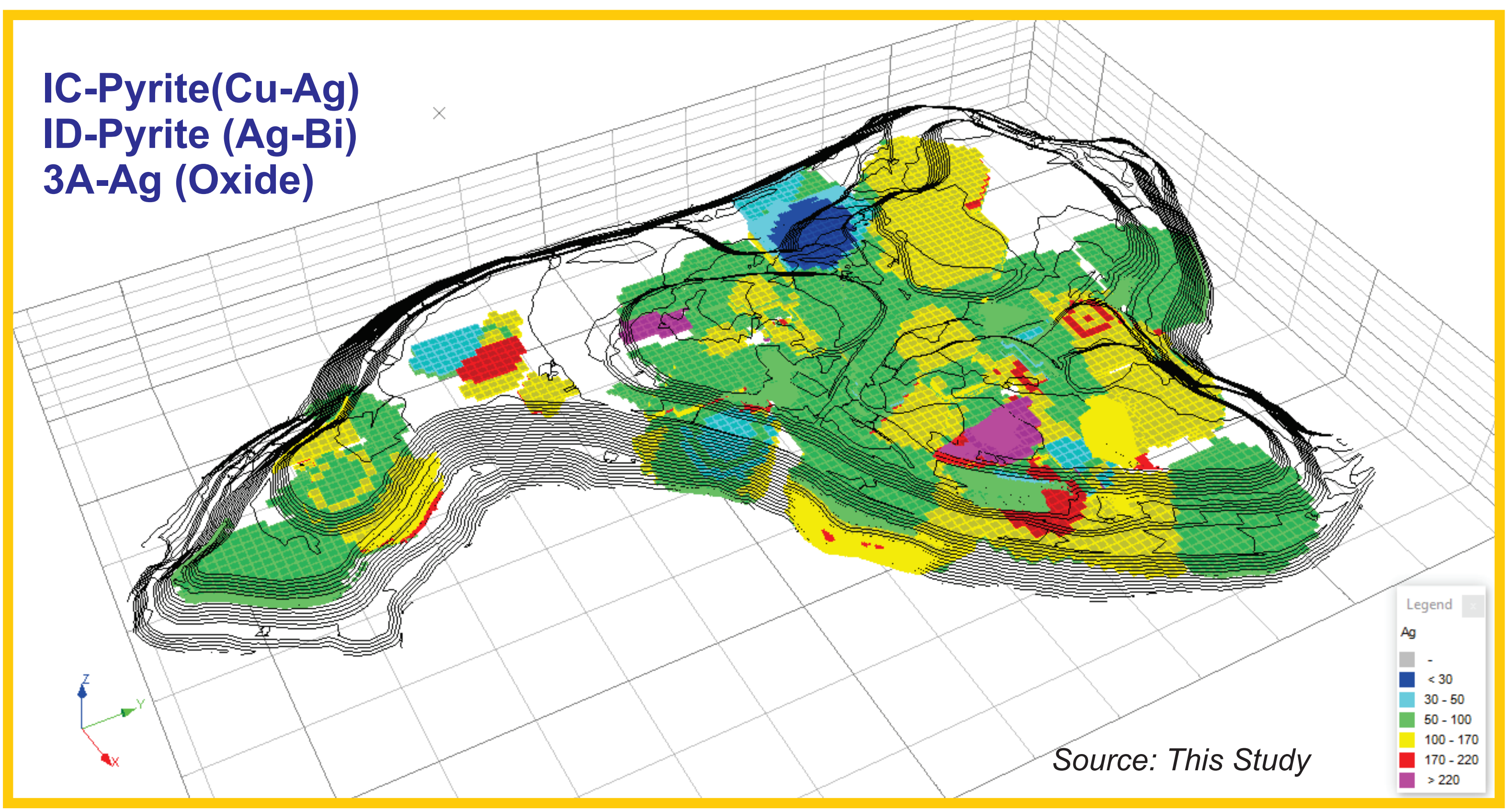


Figure 5b. Distribution of Ag (g/t) concentrations within the EMP according to the different sub-zones.

Table 6. Mineral Resources Estimate, EMP using a 0.8 wt. % Pb cut-off. The Mineral Resources are subdivided so to differentiate into Ag-rich sub-zones and Pb+Zn-rich sub-zones.

Sub-Zone	Sub-Zone (Min)	Class	Volume	Density	Tonnes	Pb+Zn (wt. %)	Cu (wt.%)	Pb (wt.%)	Zn (wt. %)	Ag (g/t)
1A	Pb-Zn-Ag (Limestone)	2	1,343,921	3.07	4,123,336	2.98	0.07	0.79	2.19	47.10
2A	Pb-Zn-Ag (Oxide)	2	1,916,046	2.18	4,176,981	2.45	0.06	0.57	1.88	30.90
1B	Pb-Zn-Ag (Pyrite)	2	198,073	3.74	740,794	3.15	0.11	0.90	2.25	83.49
1A+1B+2A		**Total Pb-Zn-Ag**			**9,041,111**	**2.75**	**0.07**	**0.69**	**42.60**	
1C	Py (Cu-Ag)	2	359,610	3.92	1,409,669	1.44	0.15	0.64	0.80	103.42
1D	Py (Ag-Bi)	2	400,311	3.59	1,437,115	1.80	0.16	0.85	0.95	124.66
3A	Ag (Oxide)	2	464,934	4.00	1,859,737	1.79	0.12	0.94	0.86	98.87
1C+1D+3A		**Total Ag**			**4,706,522**	**1.69**	**0.14**	**0.82**	**0.87**	**106.92**
		Indicated Resources			**13,747,633**	**2.38**	**0.09**	**0.74**	**1.65**	**64.62**

Sub-Zone	Sub-Zone (Min)	Class	Volume	Density	Tonnes	Pb+Zn (wt. %)	Cu (wt.%)	Pb (wt.%)	Zn (wt. %)	Ag (g/t)
1A	Pb-Zn-Ag (Limestone)	3	2,891,022	3.07	8,867,535	2.89	0.07	0.77	2.12	45.40
2A	Pb-Zn-Ag (Oxide)	3	3,669,668	2.18	7,999,877	2.36	0.06	0.58	1.78	32.92
1B	Pb-Zn-Ag (Pyrite)	3	449,668	3.74	1,681,757	2.96	0.10	0.80	2.16	78.93
1A+1B+2A		**Total Pb-Zn-Ag**			**18,549,168**	**2.67**	**0.06**	**0.69**	**1.97**	**43.06**
1C	Py (Cu-Ag)	3	888,098	3.92	3,481,343	1.35	0.16	0.60	0.75	104.63
1D	Py (Ag-Bi)	3	821,740	3.59	2,950,048	1.84	0.14	0.89	0.95	123.27
3A	Ag (Oxide)	3	1,041,627	4.00	4,166,510	1.77	0.11	0.91	0.86	101.30
1C+1D+3A		**Total Ag**			**10,597,901**	**1.65**	**0.14**	**0.80**	**0.85**	**108.51**
		Inferred Resources			**29,147,069**	**2.30**	**0.09**	**0.73**	**1.56**	**66.86**

Sub-Zone	Sub-Zone (Min)	Class	Volume	Density	Tonnes	Pb+Zn (wt. %)	Cu (wt.%)	Pb (wt.%)	Zn (wt. %)	Ag (g/t)
Waste		2	3,595,401	2.92	10,498,571	1.06	0.06	0.32	0.74	23.49
		3	5,650,755	2.92	16,500,205	1.06	0.06	0.32	0.74	23.83
			Waste		**26,998,777**	**1.06**	**0.06**	**0.32**	**0.74**	**23.7**

Instrument such as Mineral Resources or Mineral Reserves as stated in the 2010 CIM Definition Standards on Mineral Resources and Mineral Reserves. The explanation lies in the inability by the author to verify the data acquired by the various historical drilling campaigns and other sampling works. The author has read the documents pertaining to the description of the different methods used in the historical evaluation of the Mineral Resources. The Issuer has not done sufficient work yet to classify the historical estimates as current Mineral Resources or Mineral Reserves. Therefore, the Issuer is in the opinion that the above quoted resources for the EMP cannot be relied upon.

6.4.2- The Quiulacocha Tailings (QT)

6.4.2.1- Mineral Resources Estimates: Volcan Compañia Minera S.A.A. (2009)

In 2009, John Brophy carried out an auger drill program producing 105 vertical holes distributed in two sectors of the QT which constituted part of the El Metalurgista Mining Concession. 47 auger holes were collared in the southern section and 58 in the northern sector (Figure 6). Over 256 samples of tailing materiel were acquired at 2 m depth intervals. The assay results obtained for Cu, Zn, Pb and Ag provided the basis for a Mineral Resources Estimates detailed in the 43-101 Technical Report entitled: “Metalurgista Zn-Pb-Ag Project, West-Central Peru, Resource Estimate for Part of the Quiulacocha Tailings of the Cerro de Pasco Mine” written by John Brophy in 2009.

256 tailings samples were collected from a hundred and five 50-m spaced vertical auger holes reaching depths from 2.0 to 13.5 m over portions of the northern and southern QT. The specific gravity of each collected QT sample was determined by decanting one liter of QT material from each auger sample into a graduated container, and then weighing the contents of the container on an electronic scale. The obtained specific gravity of 2.35 g/cm^3 for from 256 samples was considered to be quite accurate, particularly inasmuch with a low standard deviation (0.15 g/cm^3). A “dry” specific gravity of 1.90 g/cm^3 was obtained.

Auger holes were spaced at 50 m interval in two areas of QT: a) QT North (63 samples from 47 auger holes within a ≈90,000 m^2 area) and QT South (193 samples collected from 58 auger holes within a ≈135,000 m^2 area). Assay samples represent core intercepts ranging from 0.2 to 5.15 m, although the majority of assay samples (82%) represents 2.0 m intervals of tailings material.

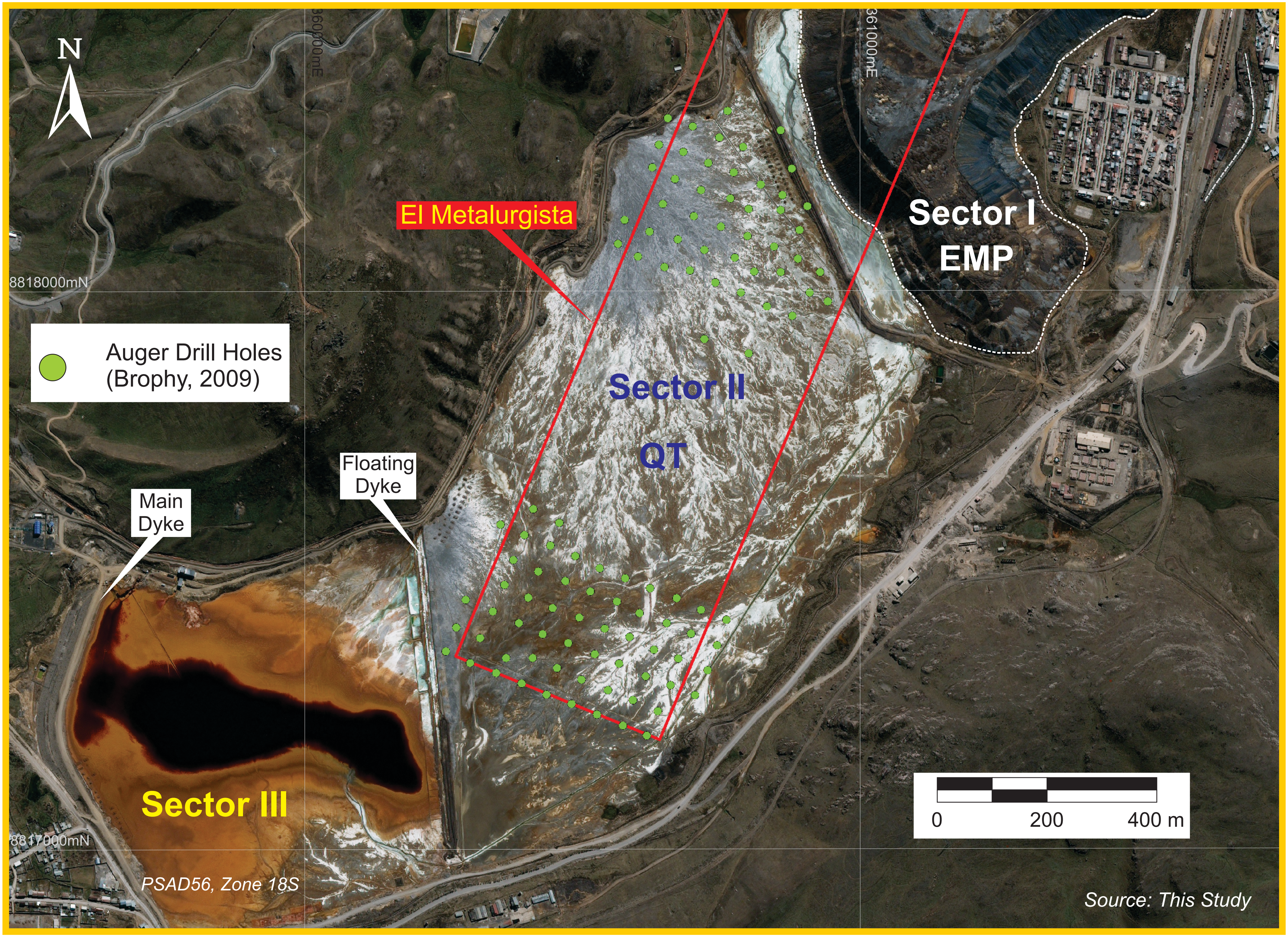


Figure 6. Localization of the Auger drill holes performed by Volcan Compañia Minera SAA in 2009 on the Quiulacocha Tailings, El Metalurgista Concession.

Brophy (2009) calculated Mineral Resources for the QT North and South areas only, which are separated by 200,000 m^2 of additional tailings.

Brophy (2009) calculated the following Mineral Resources based on the raw data and the calculations presented for QT North and South. "Measured Mineral Resources"[&] were calculated to an average depth of 3.17 m for QT North, and 6.75 m. for QTP South. "Indicated Mineral Resources"[&] were given for an average depth of 10.0 m for QT North and South. Given that nine auger holes drilled past a depth of 10.0 m did not encounter the tailings/lake-sediment contact, a minimum depth of 10.0 m for the QT is considered a reasonable assumption.

"Measured Mineral Resources"[&] were calculated based on the actual vertical depth of individual auger holes. The grade of each auger hole is based on the assay values. However a "weighted average grade" is calculated where more than one sample was taken from an individual auger hole. Each auger hole is given an area of influence of 50 m X 50 m. Brophy (2009) calculated Mineral Resource by taking the weighted average grade of all samples from individual auger holes, multiplying this average by the depth of the hole, the area of influence (50 m X 50 m), and by the specific gravity (1.9 g/cc^3) of the tailings. Brophy (2009) calculated a "Measured Mineral Resource"[&] of 680,500 t @ 41.23 ppm Ag, 1.36 wt. % Zn, and 0.55 wt. % Pb for the QT North, whereas QT South has a "Measured Mineral Resource"[&] of 1,770,600t @ 44.39 ppm Ag, 1.53 wt. % Zn, and 0.96 wt. % Pb.

[&] *The estimates presented above are treated as historic information and have not been verified or relied upon for economic evaluation by the Issuer or the writer. These are considered historical Mineral Resources and do not refer to any category of sections 1.2 and 1.3 of the NI-43-101 Instrument such as Mineral Resources or Mineral Reserves as stated in the 2010 CIM Definition Standards on Mineral Resources and Mineral Reserves. The explanation lies in the inability by the author to verify the data acquired by the various historical drilling campaigns and other sampling works. The author has read the documents pertaining to the description of the different methods used in the historical evaluation of the Mineral Resources. The Issuer has not done sufficient work yet to classify the historical estimates as current Mineral Resources or Mineral Reserves. Therefore, the Issuer is in the opinion that the above quoted resources for the EMP cannot be relied upon.*

6.4.2.2- Mineral Resource Estimate: BO Consulting S.A.C. (2012)

In 2012, BO Consulting S.A.C., an engineering firm of Peru, , has written A "JORC compliant Report" on behalf of Cerro de Pasco Resources S.A. for the Lima Stock Exchange (LSE) entitled "Estimated Mineral Resources of the tailings from the Laguna Quiulacocha". The report made use of assay results of the auger drilling performed in 2009 and supervised Brophy (2009).

Drilling of 31 auger wells was performed by BO Consulting. One representative sample was collected from each well. A total of 31 samples were submitted for analysis. The determination of the moisture content and the apparent specific gravity were carried out on 10 samples.
The validation of Brophy's assay database allowed BO Consulting to make use of the concentrations to perform a Mineral Resources estimate. A conventional method of polygons with a Nearest Neighbor (NN) was implemented taking into account the 50 m spacing of the auger drill holes and the average 2 m depth length of tailings (sludge) samples. The wet density of the Quiulacocha Tailings, used in BO Consulting estimate, is that calculated by Brophy (i.e. 2.35 cm^3) from 268 specific gravity measurements. Selections of samples defining the top and bottom of the mineralization structure were defined to construct the wireframe structure within the limits of the property. The Resource Estimate was performed using the Ordinary Kriging method (OK) via the Datamine software.

The DATAMINE software then calculated the Mineral Resources which were then classified into the Indicated categories[@].

Zone	Resources Category	# Block	Metric Tons (t)	Ag (ppm)	Cu (ppm)	Pb (wt. %)	Zn (wt. %)
QTP North	Indicated[@]	42	1,119,274	41.2	263	0.57	1.35
QTP South	Indicated	50	1,821,833	44.2	513	0.93	1.48
Total	***Indicated***	***92***	***2,941,107***	***43.1***	***418***	***0.79***	***1.43***

Table 7. Historical Mineral Resources (classified as "Indicated"[@]) calculated in 2012 by BO Consulting for the QTP North and South.

[@] *The estimates presented above are treated as historic information and have not been verified or relied upon for economic evaluation by the Issuer or the writer. These are considered historical Mineral Resources and do not refer to any category of sections 1.2 and 1.3 of the NI-43-101 Instrument such as Mineral Resources or Mineral Reserves as stated in the 2010 CIM Definition Standards on Mineral Resources and Mineral Reserves. The explanation lies in the inability by the author to verify the data acquired by the various historical drilling campaigns and other sampling works. The author has read the documents pertaining to the description of the different methods used in the historical evaluation of the Mineral Resources. The Issuer has not done sufficient work yet to classify the historical estimates as current Mineral Resources or Mineral Reserves. Therefore, the Issuer is in the opinion that the above quoted resources for the EMP cannot be relied upon.*

6.5- Mineral Processing and Metallurgical Testing

6.5.1- Metallurgical Testing of the EMP Material (CDPR, 2012)

In 2012, CDPR conducted a review of the existing historical metallurgical data produced by Volcan Compañia Minera S.A.A., Centromin, and Cerro de Pasco Copper Corporation (Anonymous, 2012). In his report, CDPR presented findings to improve the recovery of Cu, Pb, Zn, and Ag contained within the EMP. 24 individual laboratory flotation tests were performed on samples collected from the stockpile. The metallurgical testing was conducted at the Volcan laboratory in Cerro de Pasco. Investigations sought to maximize the efficiency of the metallurgical recovery by: a) Evaluating various new and conventional methods to improve the recovery of sulphides and oxides, b) Evaluating the impact of other operational parameters such as grind size and flotation residence time and c), Creating two flotation circuits one for sulphides and the second for oxides.

The assay result for a mix sample from the EMP yielded 0.61 wt. % Pb, 2.10 wt. % Zn and 49 g/t Ag. Laboratory testing generated recoveries of 73.6% (Zn), 69.7% (Pb) and 56.9% (Ag) indicating high recoveries efficiencies can be achieved by optimizing the use of reagents and the flotation procedures. Recovery metallurgical testing were carried out by CDPR at a pilot plant in San Expedito (a small concentrator now decommissioned) to develop three scenarios for the project implementation. In an optimistic scenario (Table 8) a maximum 50 wt. %, lead concentrate was produced because the maximum grade obtained in the test/assay was 59.46 wt. % Pb. An 80 % lead recovery is envisaged because the minimum lead displacement to zinc concentrate was 0.76%. A maximum zinc concentrate of 55 wt. % is obtained because a maximum grade of 64.0 wt. % Zn is attained in the test/assay. The zinc recovery is 85% because the minimum zinc displacement to the lead concentrate was 2.46%.

6.5.2- Redesigning of the Flotation Circuits

CDPR used metallurgical test works and their operational experience to redesign a flow sheet showing an increase in the metallurgical yield of the EMP materials.

6.5.2.1- Zinc and Lead Flotation Circuits

Low zinc and lead recoveries were previously attributed to a reduced floatability using non-suitable reagents, a low kinetic floating capacity and low Zn-Pb concentrates grade given the lack of selectivity when bypassing the cleaning stages. Here the optimistic scenario is put forward. To obtain the proposed zinc recovery (Table 9), the circuit will include two rougher stages and one scavenger stage. In the second rougher stage, the zinc oxides will be recovered and will be subject to a sulphidation process (Figure 7). The circuit will also contain four cleaning stages. In the fourth stage, the achieved zinc concentrate was 55.00 wt. % Zn and was be processed in two flotation cells (Table 10). The metallurgical balance of the EMP material for a notional 10,000 tpd throughput is given in Table 11.

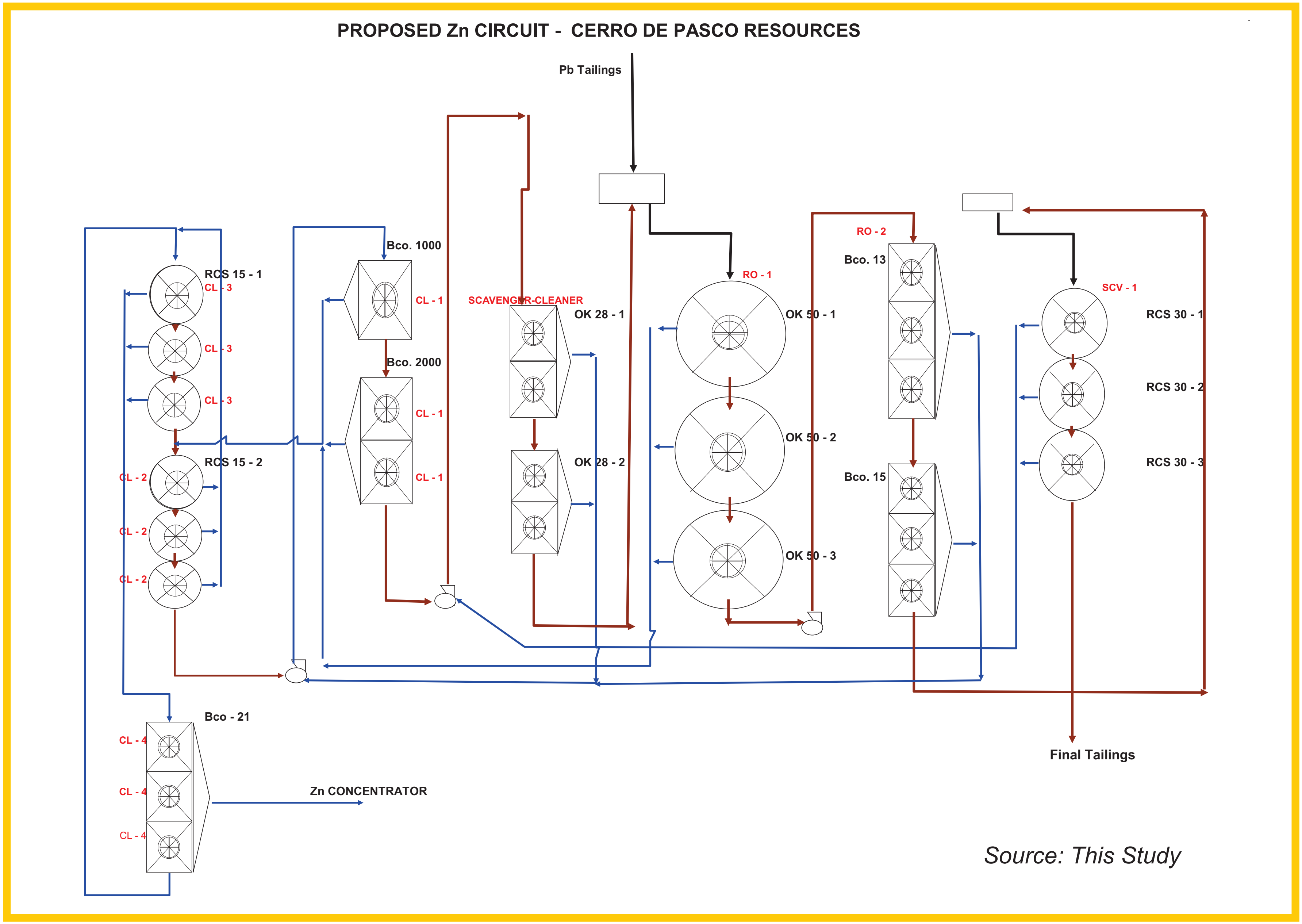


Figure 7. Proposed Zn circuit for the EMP material, CDPR.

Table 8. Optimistic and scenario for the recovery of the EMP material.

METALLURGICAL BALANCE - EXCELSIOR ORE									
OPTIMISTIC SCENARIO									
		GRADES				RECOVERY (%)			
PRODUCT	TMS	Cu (wt. %)	Pb (wt. %)	Zn (wt. %)	Oz Ag/t	Cu	Pb	Zn	Ag
Head Ore	**417.00**	0.10	0.70	2.40	0.60	100.00	100.00	100.00	100.00
Conc. Copper	0.79	**26.00**	2.00	3.00	**50.00**	**50.00**	0.54	0.24	**15.59**
Conc. Lead	4.67	0.65	**50.00**	5.00	**19.00**	7.36	**80.00**	2.33	**34.88**
Conc. Zinc	15.47	0.24	0.57	**55.00**	2.00	8.96	3.04	**85.00**	12.16
Tailing	396.07	0.04	0.12	0.31	0.24	33.68	16.42	12.43	37.37
Head calc.	417.00	0.10	0.70	2.40	0.61	100.00	100.00	100.00	100.00
Concentrate Bulk Calc.	**5.46**	**4.33**	**43.03**	**4.71**	**23.50**	**57.36**	**80.54**	**2.57**	**50.47**
Tailing Bulk Calc.	**411.54**	**0.04**	**0.14**	**2.37**	**0.31**	**42.64**	**19.46**	**97.43**	**49.53**

Table 9. Expected performance of the zinc rougher and scavenger circuit for the processing of the EMP material.

PROJECTIONS FOR THE FLOTATION PLANT: CERRO DE PASCO RESOURCES									
Cu-Pb-Zn-Ag GRADE DISTRIBUTION FOR ZINC FLOTATION FLOW									
ROUGHER + SCAVENGER CIRCUIT									
Product		**GRADES**				**DISTRIBUTION (%)**			
	TMSPH	**Cu (wt. %)**	**Pb (wt. %)**	**Zn (wt. %)**	**Ag***	**Cu**	**Pb**	**Zn**	**Ag**
Feed Circuit. Rougher I Zinc									
Fresh Head Zinc (Lead tailing)	411.54	0.04	0.14	2.37	0.31	78.50	70.20	77.10	50.40
Meddle tailing Zinc	120.43	0.04	0.20	2.40	1.03	21.50	29.80	22.90	49.60
Total	531.97	0.04	0.15	2.38	0.47	100.00	100.00	100.00	100.00
Combined Head	531.97	0.04	0.15	2.38	0.46				
Flot. Rougher I Zinc Product									
Conc. Rougher I Zinc	22.09	0.08	0.40	25.00	1.20	12.60	11.00	43.60	10.80
Tailing Rougher I Zinc	509.88	0.02	0.14	1.40	0.43	87.40	89.00	56.40	89.20
Total	531.97	0.03	0.15	2.38	0.46	100.00	100.00	100.00	100.00
Feed Circuit Rougher II Zinc									
Tai l i ng Rougher I Zi nc	509.88	0.02	0.14	1.40	0.43	100.00	100.00	100.00	100.00
Product. Flot. Rougher II Zinc									
Conc. Rougher II Zinc	32.90	0.12	0.30	13.00	1.10	24.90	13.70	59.90	16.60
Tailing Rougher II Zinc	476.98	0.03	0.13	0.60	0.38	75.10	86.30	40.10	83.40
Total	509.88	0.03	0.14	1.40	0.43	100.00	100.00	100.00	100.00
Feed.Circ. Scavenger I Zinc									
Tailing Rougher II Zinc	476.98	0.03	0.13	0.60	0.38	100.00	100.00	100.00	100.00
Product Flot. Scavenger I Zinc									
Conc. Scavenger I de Zinc	80.91	0.05	0.25	2.00	1.05	22.60	29.70	56.50	47.20
Tailing Final	396.07	0.04	0.12	0.31	0.24	77.40	70.30	43.50	52.80
Total	476.98	0.04	0.14	0.60	0.38	100.00	100.00	100.00	100.00
Feed.Circ. Medios Zinc									
Tailing First cleaning stage	57.52	0.07	0.20	7.00	2.00	49.88	36.25	71.33	57.52
Conc. Scavenger I de Zinc	80.91	0.05	0.25	2.00	1.05	50.12	63.75	28.67	42.48
Total	138.43	0.06	0.23	4.08	1.44	100.00	100.00	100.00	100.00
Head test	138.43	0.06	0.23	4.08	1.44				
Product Flot. Meddle Zinc									
Conc. Meddle Zinc	18.00	0.15	0.40	15.30	4.20	35.92	23.02	48.80	37.87
Relave Meddle Zinc	120.43	0.04	0.20	2.40	1.03	64.08	76.98	51.20	62.13
Total	138.43	0.05	0.23	4.08	1.44	100.00	100.00	100.00	100.00

Table 10. Expected performance of the zinc cleaner circuit for the processing of the EMP material.

PROJECTIONS FOR THE FLOTATION PLANT: CERRO DE PASCO RESOURCES									
Cu-Pb-Zn-Ag GRADE DISTRIBUTION FOR ZINC FLOTATION FLOW									
CLEANING CIRCUIT									
Product		**GRADES**				**DISTRIBUTION (%)**			
	TMSPH	**Cu (wt. %)**	**Pb (wt. %)**	**Zn (wt. %)**	**Ag***	**Cu**	**Pb**	**Zn**	**Ag**
Feed. First cleaning stage									
Conc. Rougher II Zinc	32.90	0.12	0.30	13.00	1.10	36.30	38.70	22.40	18.10
Conc. Meddle Zinc	18.00	0.15	0.40	15.30	4.20	24.80	28.20	14.40	37.90
Tailing Second cleaning stage	60.43	0.07	0.14	20.00	1.45	38.90	33.10	63.20	43.90
Total	111.33	0.10	0.23	17.17	1.79	100.00	100.00	100.00	100.00
Feed Test	111.33	0.09	0.21	17.15	2.73				
Product First cleaning stage									
Conc. First cleaning stage	53.81	0.12	0.23	28.00	4.30	61.60	51.80	78.90	66.80
Tailing First cleaning stage	57.52	0.07	0.20	7.00	2.00	38.40	48.20	21.10	33.20
Total	111.33	0.09	0.21	17.15	3.11	100.00	100.00	100.00	100.00
Feed Second cleaning stage.									
Conc. First cleaning stage	53.81	0.12	0.23	28.00	4.30	64.90	50.20	49.20	61.10
Conc. Rougher I Zinc	22.09	0.08	0.40	25.00	1.20	17.80	35.80	18.00	7.00
Tailing Third cleaning stage	28.71	0.06	0.12	35.00	4.20	17.30	14.00	32.80	31.90
Total	104.61	0.10	0.24	29.29	3.62	100.00	100.00	100.00	100.00
Feed test	104.61	0.09	0.26	29.29	3.03				
Product Second cleaning stage									
Conc. Second cleaning stage	44.17	0.11	0.38	42.00	4.50	53.50	66.50	60.60	69.40
Tailing Second cleaning stage	60.43	0.07	0.14	20.00	1.45	46.50	33.50	39.40	30.60
Total	104.61	0.09	0.24	29.29	2.74	100.00	100.00	100.00	100.00
Feed Third cleaning stage.									
Conc. Second cleaning stage	44.17	0.11	0.38	42.00	4.50	91.30	67.60	72.70	73.60
Tailing Fourth cleaning stage	15.47	0.03	0.52	45.00	4.60	8.70	32.40	27.30	26.40
Total	59.64	0.09	0.42	42.78	4.53	100.00	100.00	100.00	100.00
Feed test	59.64	0.10	0.42	42.78	4.53				
Product Third cleaning stage									
Conc. Third cleaning stage	30.93	0.13	0.65	50.00	4.80	70.00	85.40	60.60	55.20
Tailing Third cleaning stage	28.71	0.06	0.12	35.00	4.20	30.00	14.60	39.40	44.80
Total	59.64	0.10	0.39	42.78	4.51	100.00	100.00	100.00	100.00
Feed Fourth cleaning stage									
Conc. Third cleaning stage	30.93	0.13	0.65	50.00	4.80				
Product Fourth cleaning stage.									
Conc. Fourth cleaning stage	15.47	0.24	0.57	55.00	2.00	88.80	52.30	55.00	30.30
Tailing Fourth cleaning stage	15.47	0.03	0.52	45.00	4.60	11.20	47.70	45.00	69.70
Total	30.93	0.13	0.55	50.00	3.30	100.00	100.00	100.00	100.00

METALLURGICAL BALANCE 10000 TMSPD									
		GRADES (wt.%)				RECOVERY %			
Product	TMS/HOUR	Cu	Pb	Zn	Oz Ag/t	Cu	Pb	Zn	Ag
Ore Head	**417.00**	0.10	0.70	2.40	0.60	100.00	100.00	100.00	100.00
Conc. Copper	0.79	**26.00**	2.00	3.00	**50.00**	**50.00**	0.54	0.24	15.59
Conc. Lead	4.67	0.65	**50.00**	5.00	**19.00**	7.36	**80.00**	2.33	34.89
Conc. Zinc	15.47	0.24	0.57	**55.00**	2.00	8.96	3.02	**85.00**	12.16
Tailing	396.07	0.04	0.12	0.31	0.24	33.68	16.43	12.43	37.37
Ore Head Calc.	417.00	0.10	0.70	2.40	0.61	100.00	100.00	100.00	100.00
Concentrate Bulk Calc.	**5.46**	**4.33**	**43.03**	**4.71**	**23.50**	**57.36**	**80.55**	**2.57**	**50.47**
Tailing Bulk Calc.	**411.54**	**0.04**	**0.14**	**2.37**	**0.31**	**42.64**	**19.45**	**97.43**	**49.53**

Table 11. General metallurgical balance for EMP material at a notional 10,000tpd throughput.

6.5.3- Metallurgical Testing of the QT material (Centromin, 1998)

6.5.3.1- Flotation Process

A series of metallurgical tests were conducted by Centromin in 1998 to evaluate extraction of economic minerals via a flotation process. Samples were collected considering the material grain size since the flow of the tailings particles and subsequent sedimentation were sorted by gravitation. Table 12 illustrates an example of the floatability of lead and zinc for coarse -grained tailings material at a rougher stage and show the rougher concentrate grades and recovery rates.

6.5.3.2- Metallurgical Testing of QT Material and Flotation Circuit (CDPR, 2012)

CDPR presented, based on Centromin historical results, expected metallurgical results including Cu, Pb, Zn and Ag grades and recoveries with a 3,000 tpd feed (Anonymous, 2012). Table 13 presents final grades of 50 wt. % (Pb), 55 wt. % (Zn) and 2800 ppm (Ag), corresponding to recoveries of 85.7%, 85.1% and 55.1% respectively. An example of the data for a proposed flotation circuit (rougher+scavenger+cleaner) is given in Table 14 for Pb and Zn; showing the grades and distributions including Cu and Ag.

Table 12. Metallurgical testing on coarse material from the QTP, Sector I.

SECTOR 1: COARSE-GRAINED MATERIAL									
METALLURGICAL SAMPLES FROM QTP									
Tyler Mesh: 45% -200 mesh									
STANDARD CONDITIONS MILL PLANT "PARAGSHA"									
PRODUCTS		**GRADES**				**DISTRIBUTIONS (%)**			
	% WEIGHT	**Pb (wt. %)**	**Zn (wt. %)**	**Ag (g/t)**	**Fe (wt, %)**	**Pb**	**Zn**	**Ag**	**Fe**
Test # 1									
Froth Ro. Lead	4.65	6.10	6.00	288.00	41.50	59.53	20.58	20.01	4.36
Froth Ro. Zinc	6.90	1.00	8.55	135.00	36.00	14.48	43.53	13.92	5.62
Final tailing	88.45	0.14	0.55	50.00	45.00	25.99	35.89	66.07	90.02
Ore head Calc	100.00	0.48	1.36	67.00	44.20	100.00	100.00	100.00	100.00
Ore head tested		0.45	1.40	65.00	45.50				
PRODUCTS		**GRADES**				**DISTRIBUTIONS (%)**			
	% WEIGHT	**Pb (wt. %)**	**Zn (wt. %)**	**Ag (g/t)**	**Fe (wt, %)**	**Pb**	**Zn**	**Ag**	**Fe**
Test # 2									
Froth Ro. Lead	8.50	3.24	3.75	130.00	55.00	70.99	27.86	25.45	9.37
Froth Ro. Zinc	12.30	0.40	5.23	70.00	45.70	12.68	56.22	19.83	11.27
Final tailing	79.20	0.08	0.23	30.00	50.00	16.33	15.92	54.72	79.36
Ore head Calc	100.00	0.39	1.14	43.00	49.90	100.00	100.00	100.00	100.00
Ore head tested		0.35	1.00	45.00	50.00				
PRODUCTS		**GRADES**				**DISTRIBUTIONS (%)**			
	% WEIGHT	**Pb (wt. %)**	**Zn (wt. %)**	**Ag (g/t)**	**Fe (wt, %)**	**Pb**	**Zn**	**Ag**	**Fe**
Test # 3									
Froth Ro. Lead	7.70	3.70	3.55	265.00	40.50	57.98	25.29	34.04	7.18
Froth Ro. Zinc	9.40	1.05	6.65	112.00	41.00	20.09	57.84	17.56	8.87
Final tailing	82.90	0.13	0.22	35.00	44.00	21.93	16.87	48.40	83.95
Ore head Calc	100.00	0.49	1.08	60.00	43.40	100.00	100.00	100.00	100.00
Ore head tested		0.45	1.00	65.00	40.50				

METALLURGICAL BALANCE - TAILING POND QUIULACOCHA (QT)									
		Grades				Recovery (%)			
PRODUCT	TMDPH	Cu (wt. %)	Pb (wt. %)	Zn (wt. %)	Ag g/t	Cu	Pb	Zn	Ag
Ore Head	125.00	0.10	0.60	1.30	50	100.00	100.00	100.00	100.00
Conc. Lead	1.29	4.50	50.00	4.70	2800	54.79	85.73	3.72	55.11
Conc. Zinc	2.51	0.26	0.40	55.00	540	6.19	1.34	85.09	20.78
Final Tailing	121.20	0.03	0.08	0.15	13	39.02	12.93	11.19	24.11
Ore Head Calc.	125.00	0.08	0.60	1.30	52	100.00	100.00	100.00	100.00
Lead Tailing Calc.	123.71	0.04	0.09	1.26	24	45.21	14.27	96.28	44.89

Table 13. Metallurgical balance, QT.

6.6- Proposed Mining Method

In 2013, CICA INGENIEROS CONSULTORES PERÚ S.A.C. prepared a document written in Spanish for Cerro de Pasco Resources entitled: Exploitation of Excelsior and Quiulacocha Deposits (Picker-Lewis, 2013).

6.6.1- Exploitation of the EMP

Mining of the EMP should be highly mechanized and selective with the cut and loading done by hydraulic shovel and transport carried out by trucks and dump trucks. The removal and managing of the remaining rubble will be assigned to tractors, front loaders and graders. Since the EMP was built using 100 t dump trucks, several 100 t loads would have come from one particular group of trucks from the open pit or undergoing works, so that the stockpile would have grown with loads having similar properties and grades being placed together. These small loads should be extracted using 30-50 t backhoes and 20 t trucks under close geological supervision (CDPR, personal communication). Selective mining is planned using a 2 m or 5 m bench height, top-down mining configuration. CDPR believes at least 75% of the EMP material can be visually separated into extractable material/waste on the basis of the mineralization content. The mining operations will start in the SW sector, adjacent to the industrial area to be

Table 14. Proposed Pb flotation circuit for the treatment of the QT material. Cleaner.

MILL PLANT FOR QUIULACOCHA TAILINGS									
GRADE DISTRIBUTION Cu-Pb-Zn-Ag FLOTATION FLOW OF LEAD									
CLEANER CIRCUIT									
		GRADES				DISTRIBUTION (%)			
PRODUCTS	**TMDPH**	**Cu (wt.%)**	**Pb (wt. %)**	**Zn (wt. %)**	**Ag g/t**	**Cu**	**Pb**	**Zn**	**Ag**
Feed First Cleaner									
Conc. Rougher I Lead	12.61	0.70	6.00	3.60	350.00	60.38	39.42	37.57	38.79
Tailing Second cLeaner	3.50	0.95	20.00	8.00	1900.00	22.77	36.51	23.20	58.51
Conc. Scavenger Cleaner. Lead	3.08	0.80	15.00	15.40	100.00	16.85	24.07	39.24	2.71
Total	19.19	0.76	10.00	6.30	593.00	100.00	100.00	100.00	100.00
Feed tested	19.19	0.76	10.00	6.30	593.00				
Products First Cleaner									
Conc. First Cleaner	4.79	1.90	28.00	5.50	2070.00	62.50	**70.00**	21.74	87.34
Tailing First Cleaner	14.37	0.38	4.00	6.60	100.00	37.50	30.00	78.76	12.66
Total	19.16	0.76	10.00	6.33	593.00	100.00	100.00	100.00	100.00
Feed. Second Cleaner									
Conc. First Cleaner	4.79	1.90	28.00	5.50	2070.00	60.13	56.78	56.33	61.81
Tailing Third Cleaner	3.09	1.95	33.00	6.60	1980.00	39.87	43.22	43.67	38.19
Total	7.88	1.92	29.96	5.93	2035.00	100.00	100.00	100.00	100.00
Feed Tested	7.88	1.92	30.00	5.93	2035.00				
Products Second Cleaner									
Conc. Second Cleaner	4.38	2.70	38.00	6.50	2143.00	78.03	**70.37**	50.39	58.50
Tailing Second Cleaner	3.50	0.95	20.00	8.00	1900.00	21.97	29.63	49.81	41.50
Total	7.88	1.92	30.00	7.17	2035.00	100.00	100.00	100.00	100.00
Feed Third Cleaner	4.38	2.70	38.00	6.50	2143.00	71.13	69.30	73.13	73.24
Conc. Second Cleaner	1.71	2.80	43.00	6.10	2000.00	28.87	30.70	26.87	26.76
Tailings Fourth Cleaner	6.09	2.73	39.41	6.39	2103.00	100.00	100.00	100.00	100.00
Total	6.09	2.73	39.40	6.39	2103.00				
Feed Tested									
Products Third Cleaner	3.00	3.53	46.00	5.50	2230.00	63.71	**57.48**	44.69	52.20
Conc. Third Cleaner	3.09	1.95	33.00	6.60	1980.00	36.29	42.52	55.31	47.80
Tailing Third Cleaner	6.09	2.73	39.40	6.06	2103.00	100.00	100.00	100.00	100.00
Total									
Feed Fourt Cleaner	3.00	3.53	46.00	5.50	2230.00				
Conc. Third Cleaner									
Products Fourth Cleaner									
Conc. Fourth Cleaner	1.29	4.50	50.00	4.70	2800.00	54.66	**46.58**	36.62	51.22
Tailings Fourth Cleaner	1.71	2.80	43.00	6.10	2000.00	45.34	53.42	63.38	48.78
Total	3.00	3.53	46.00	5.50	2343.00	100.00	100.00	100.00	100.00

terminated in the sector adjacent to the Champamarca Urban Community, leaving for the last exploitation stage a berm of rubble (currently covered by a geomat). This berm will serve as a buffer zone separating the mining operations from the community. Preliminary estimates calculated by CICA Ingenieros stipulated only 30% EMP material is suitable to be treated by the processing plant; the rest is considered as waste. To decrease the waste volume, limestone will be used as rock fill for the QT; such as the divisions of containment dykes within the tailings. Waste material will be kept at the opposite side of the advancing operations and used for a progressive closure implying reforestation and hydraulic management (Figures 8, 9, 10).

6.6.2 Exploitation of the QT

6.6.2.1- Mining

The proposed exploitation of the QT entails the construction of an "Ancillary Tailings Deposit" allowing the waste to be dumped during the early exploitation periods, until the creation of internal spaces within the QT through the construction of rock fills retaining walls (see Figure 11).

6.6.2.2- Internal Waste Deposit

The work will first consist of liberating areas within the QT from the edge of the tailings through the re-pulping and pumping of tailings. The specific areas of the liberated zones will depend on the geotechnical parameters of the saturated tailings. The basement rocks devoid of tailings will be exposed as floor rocks which will be dug up until reaching a maximum possible operational depth. Since the QT was dumped in a lake, it is estimated that the floor material will contain organic and loamy material, and will need to be filled by rock so to prevent pollution of the new tailings.

After clearing different areas, retaining walls will be built from various fronts with rock fill provided by waste material from the EMP. In order to increase the stability of the new waste material, the unprocessed material from the EMP can be dumped with the new waste material

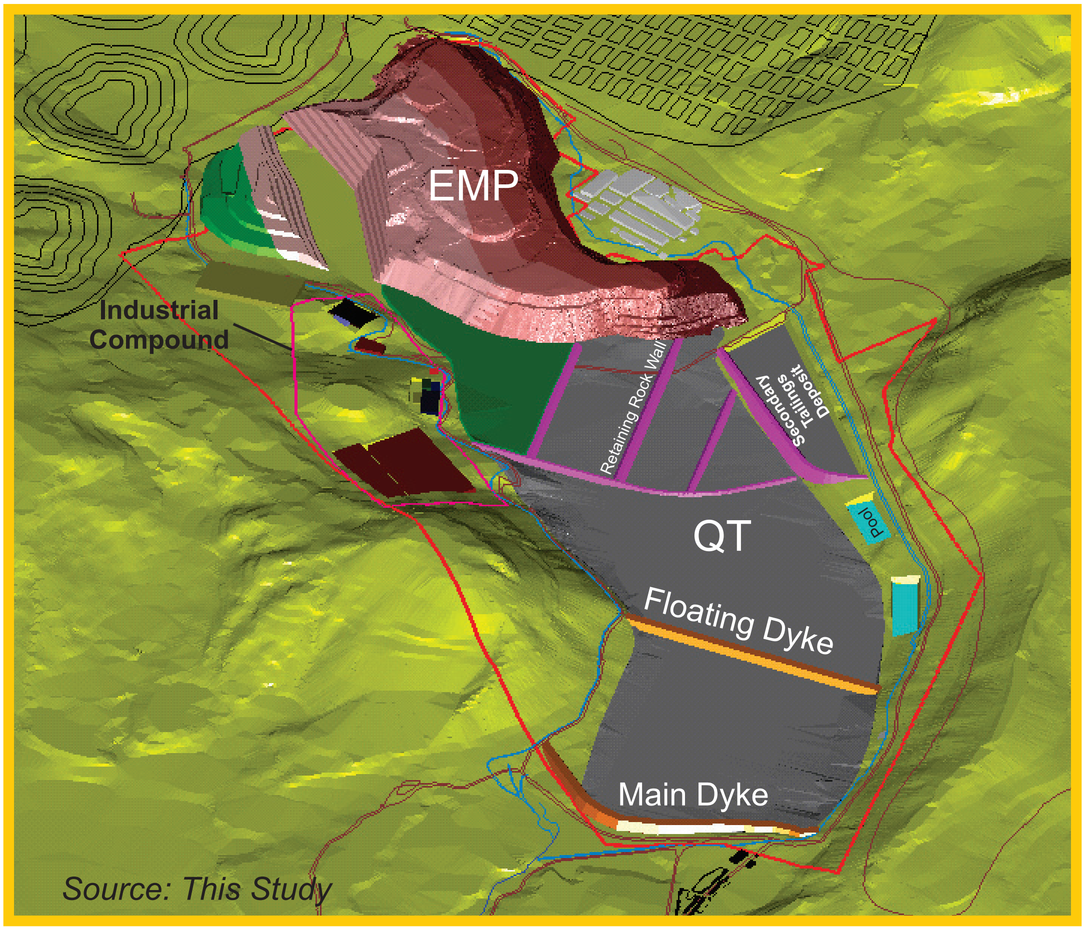


Figure 8a. Exploitation of the EMP (Phase I).

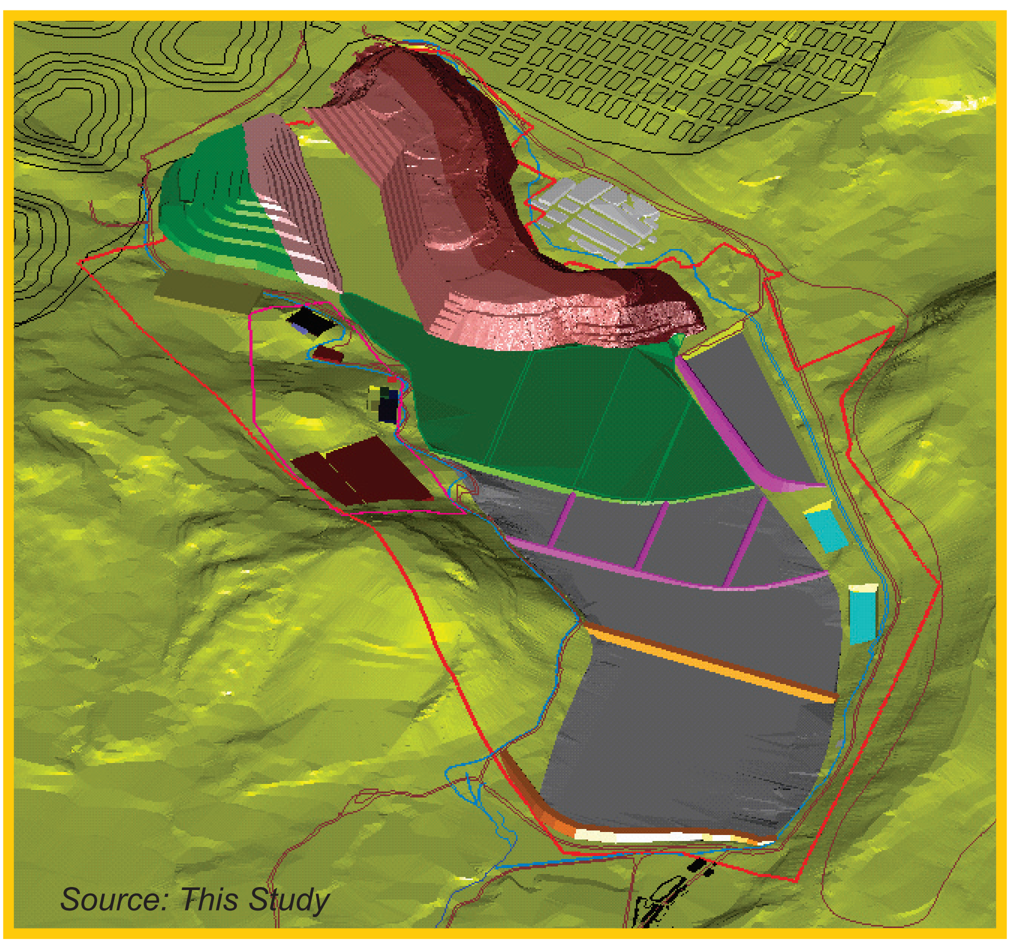


Figure 8b. Exploitation of the EMP (Phase II).

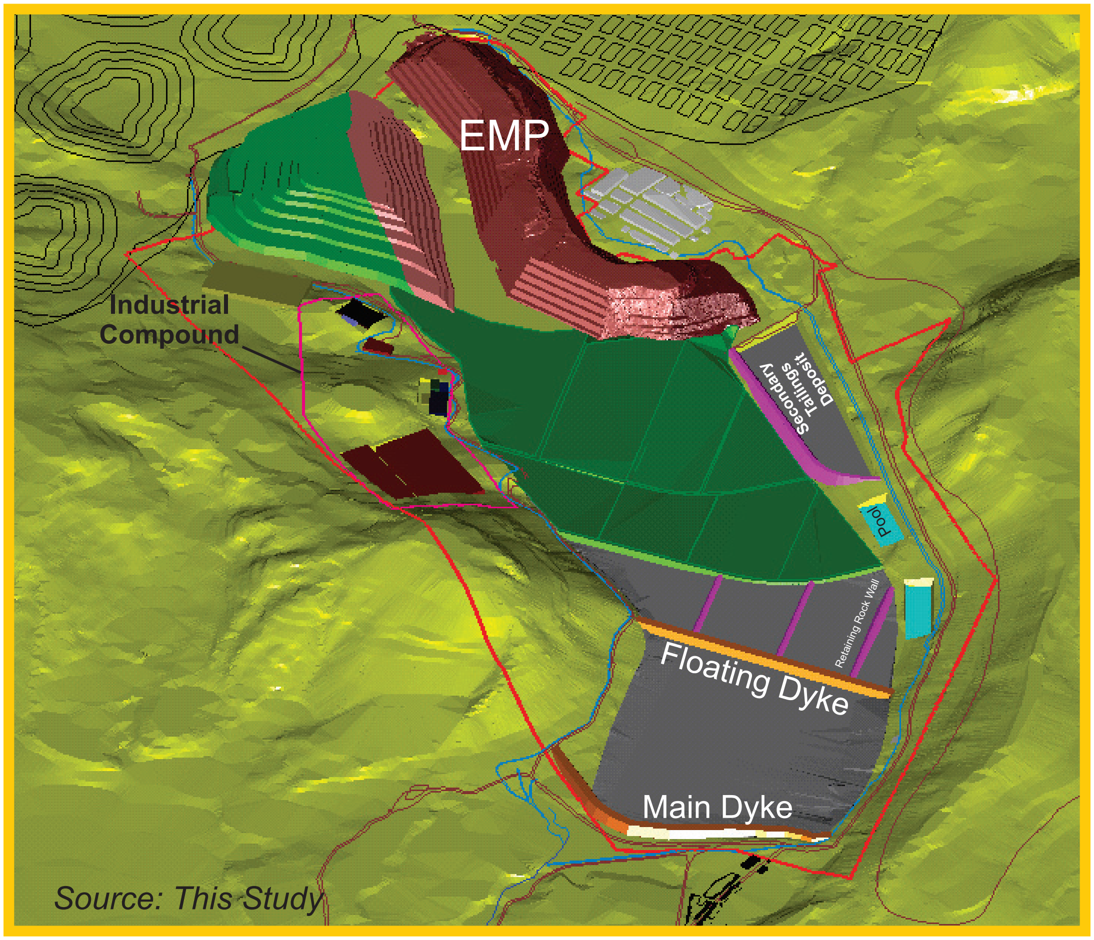


Figure 9a. Exploitation of the EMP (Phase III).

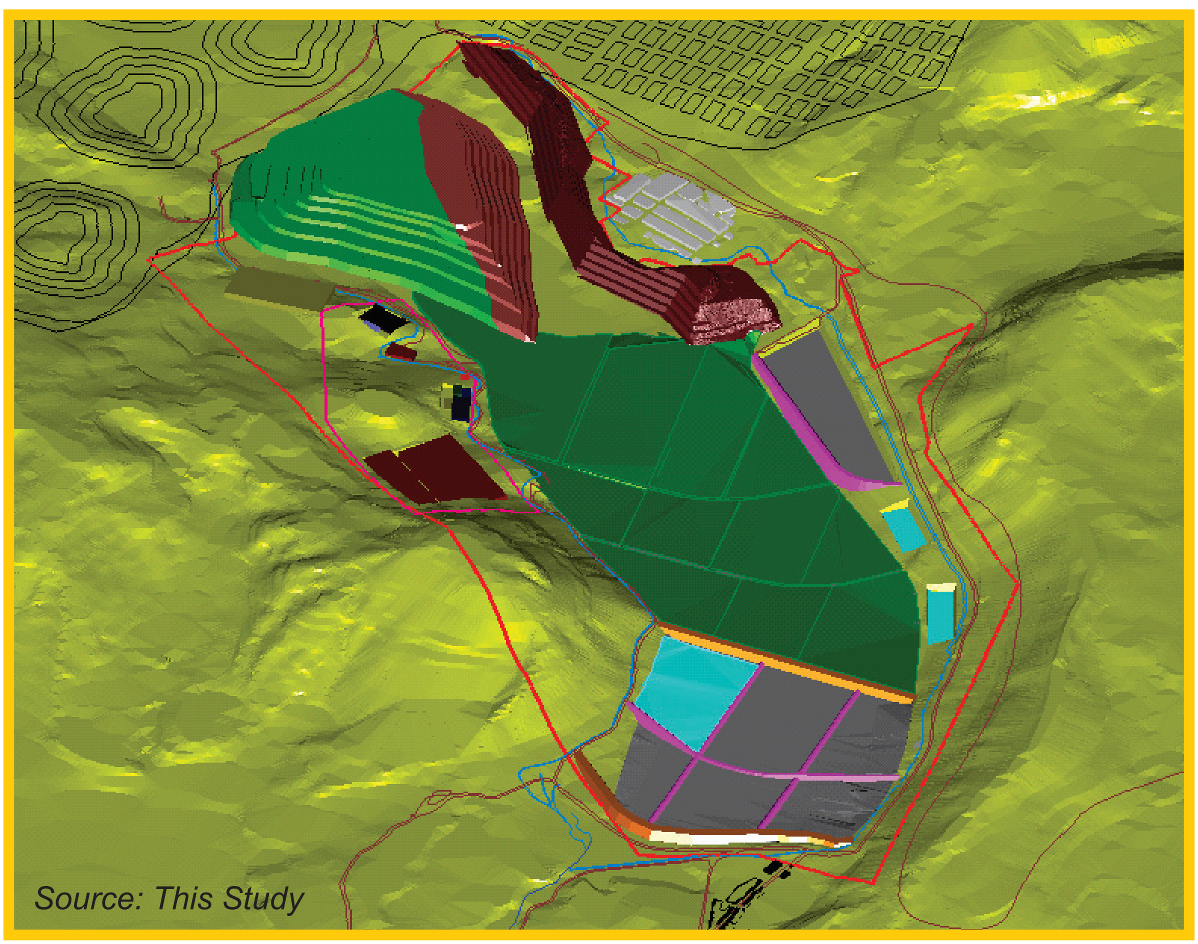
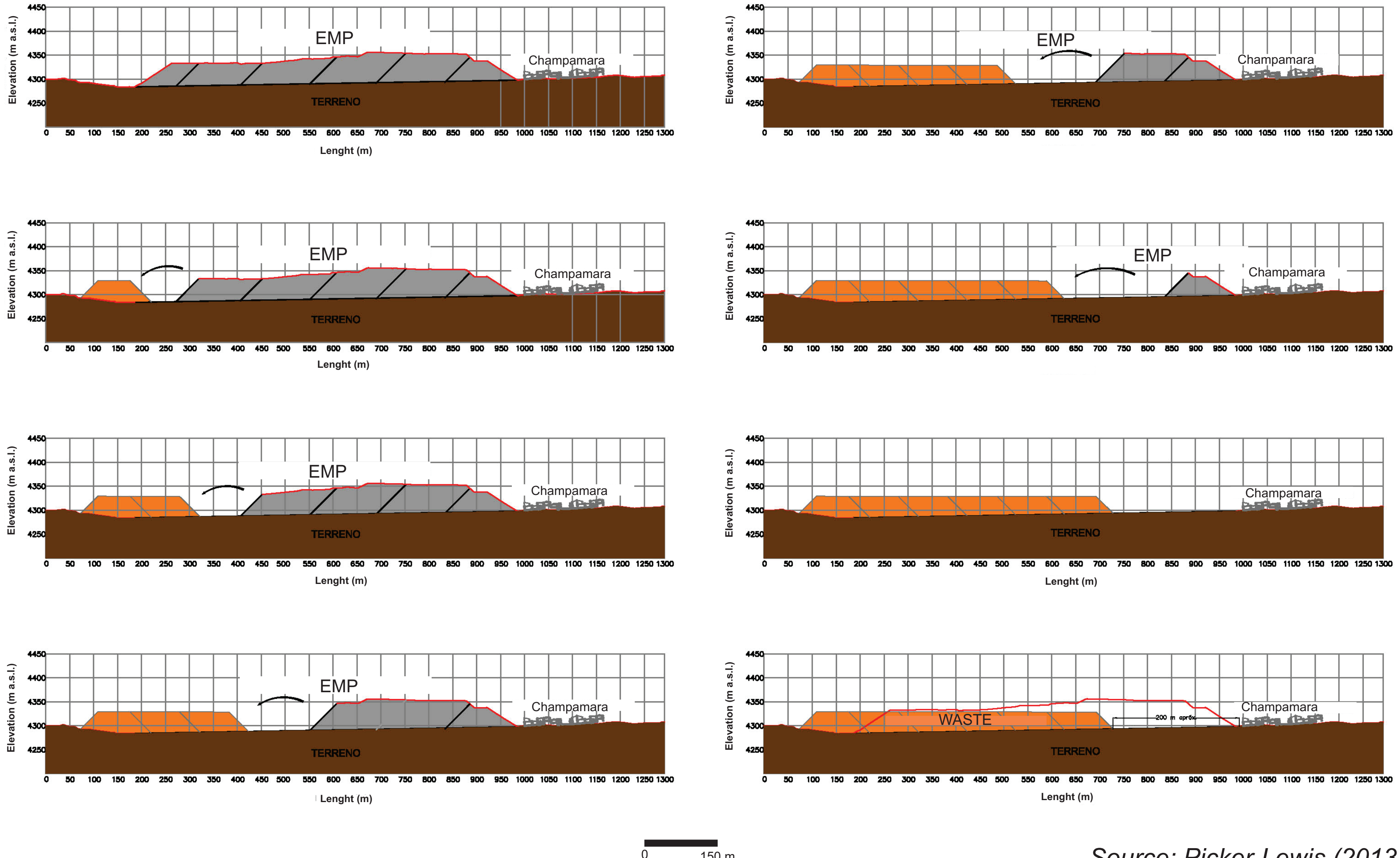


Figure 9b. Exploitation of the EMP (Phase IV).



Source: Picker-Lewis (2013)

Figure 10 Longitudinal view of the different stages of mining operation on the EMP.

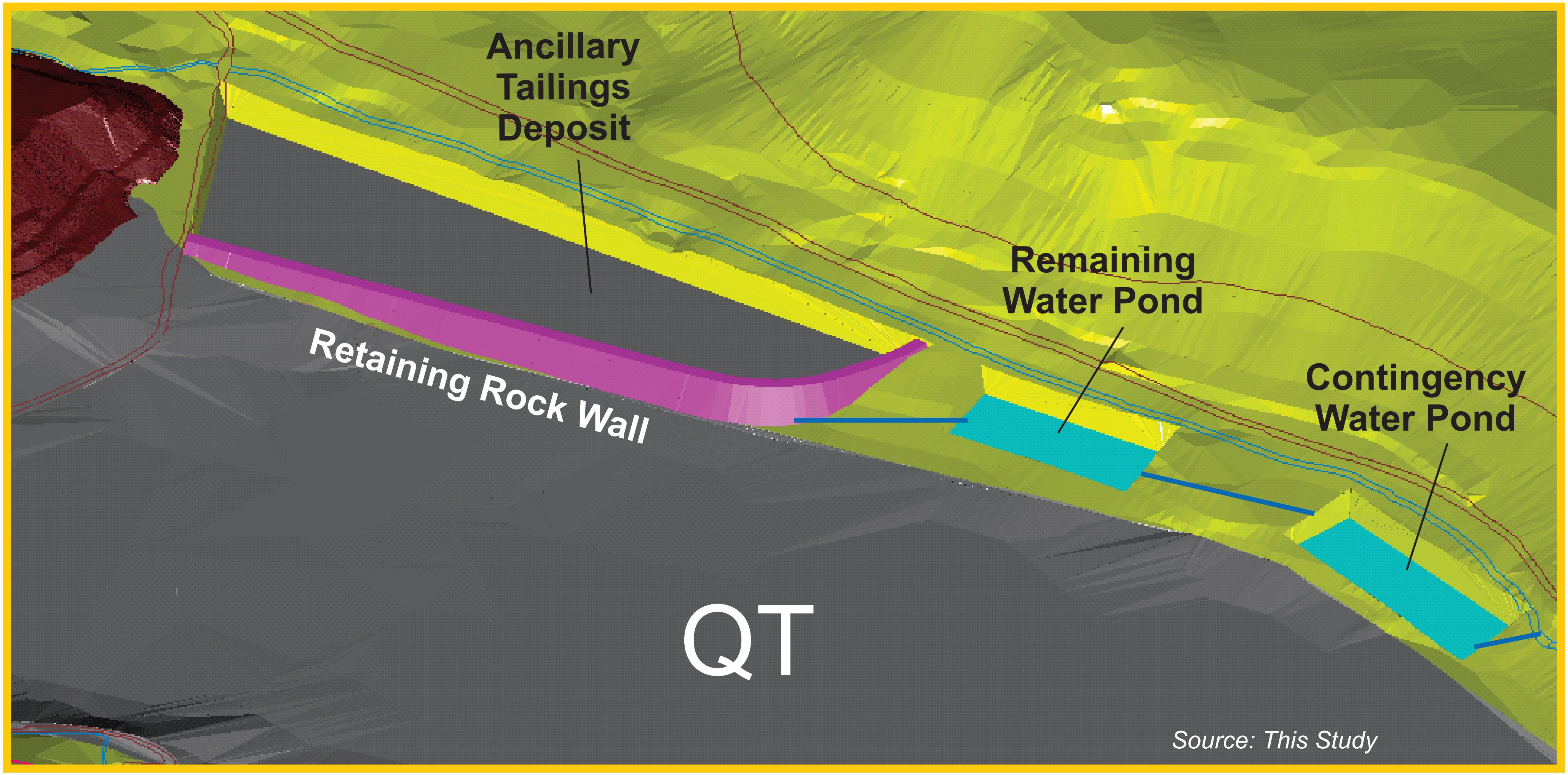


Figure 11. Closer view of the ancillary tailings deposit and the remaining and contingency water ponds a the border of the QT.

from the QT and the waste muds from the Acid Water Treatment Plant (AWTP). Thus, the operation of the Champamarca intercepting screen capturing the subterranean water seepages flowing toward the QT must be reviewed. The construction of an additional screen may be necessary since it will reduce the amount of water entering the EMP and therefore the QT, facilitating the re-pulping and construction of retaining walls (Figure 12).

During the re-pulping processing, mud pumps with direct control systems will be installed and the tailings will be humidified by the injection of water until a homogeneous pulp of constant volume is obtained and then directed toward the processing plant. The full capacity of the new internal waste deposit, especially in Sector II, must take into account the total amount of waste to be stored provided: a) by the waste material form the processing plant (QT and EMP treatment), b) muds from the PTAA and c), discarded material from the EMP.

Storing the waste in Sector II will be particularly problematic due to the high degree of water saturation in the tailings related to the flow received from runoff and seepage from the highest part of the QT. Therefore, the allocated space must be larger at the lower end of the tailings and the work must progress from the highest to the lowest segments, because the area located between the last rock fill and the main dyke will still retain waters generated from the QT and EMP. However, the volume of water will decrease progressively upon the build-up of other areas circumscribed by rock retaining walls and from the proposed work in other sectors especially related to a progressive operating closure aiming at capturing the largest amount of water derived from subterranean seepages entering the QT and EMP. Note the QT will be mixed with acid water during reprocessing and the composition of the mud must be undergo metallurgical testing before being entering the processing plant (Figure 13).

6.6.2.3- Re-Pulping of the QT

Re-pulping of the QTP sludge will proceed by using pressurized water to transport the material toward the processing plant where the pulp will be reconditioned before entering the plant. Spraying pressurized water is done so that the pulp migrates gravitationally from the work front towards the pool containing the pump which will aspire the pulp to a 30% to 60% solid. This

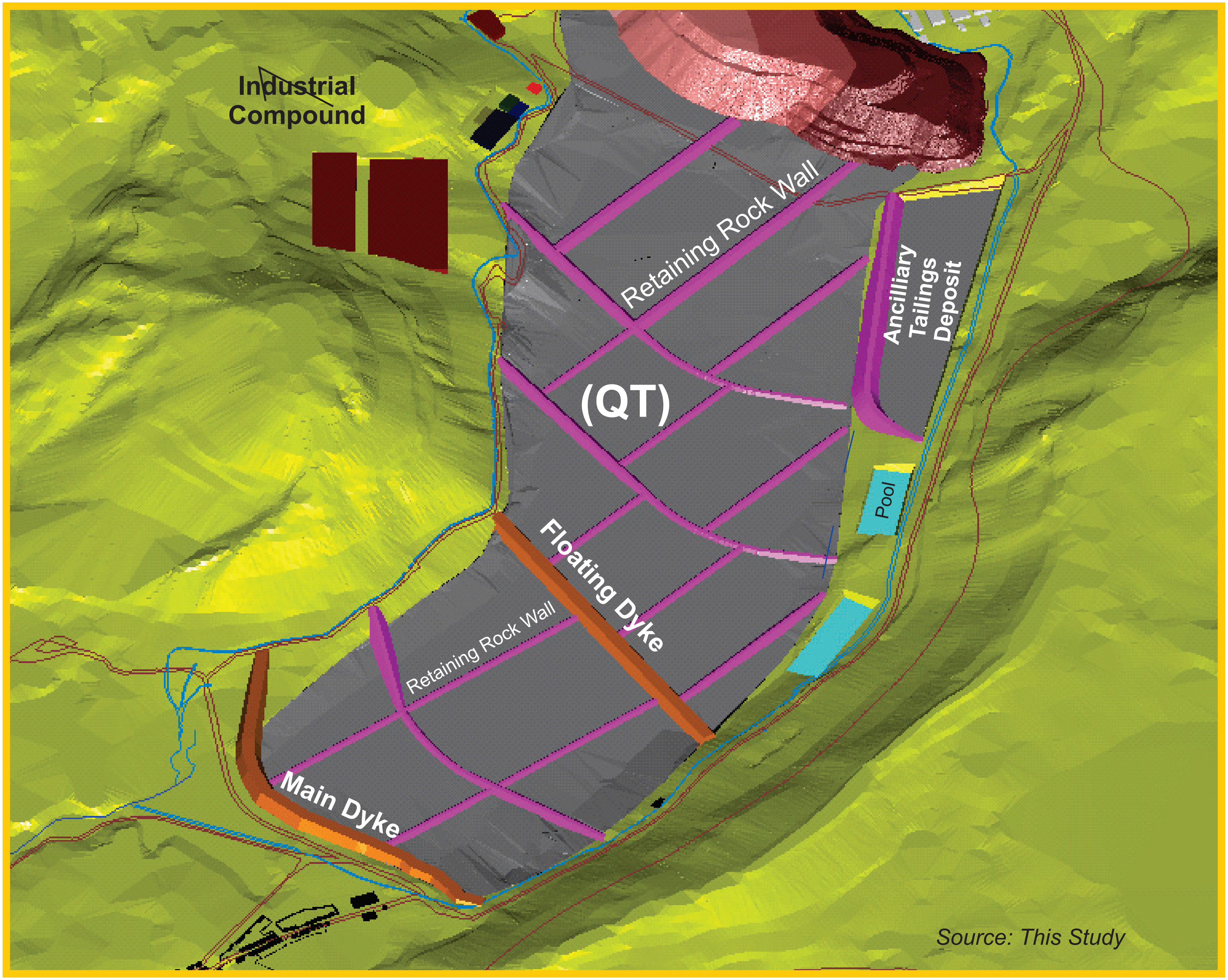
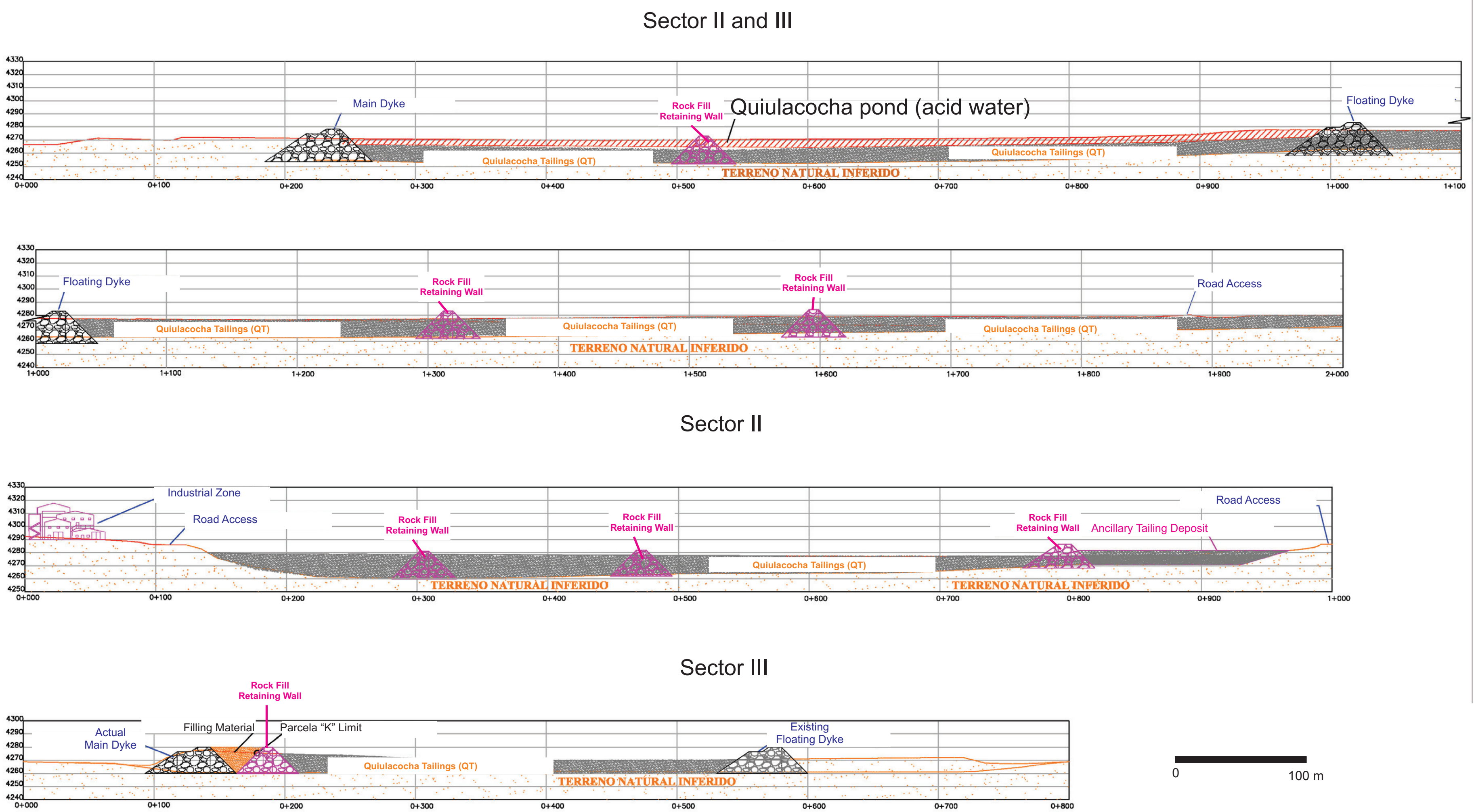


Figure 12. Exploitation of the Quiulacocha Tailings (QT) by the construction of retaining rock walls. The construction material is provided by waste rock from the EMP.



Source: Picker-Lewis (2013)

Figure 13. Longitudinal view of the exploitation of the QT, CDPR.

stage will transform QT material into pulp of optimal physical characteristics ready for processing by differential flotation.

During the re-pulping operation and tailings storage, the granulometric and physical-chemical characteristics of the particles will directly influence the settling and clarification procedures, water recovery, and will dictate the size of the tanks. The pulp transported to the processing plant will be sent to collector tanks equipped with mechanical stirrers. The pulp pumped from these tanks will be sorted through a system of hydro-cyclones, with the overflow sent to a thickening tank and then to a differential flotation procedure while the hydro-cyclones underflow will be recycled to be grinded. The basic equipment required is: a) Conventional ball mill, b) Pumping system, c) Re-pulping tanks, d) Hydro-cyclones system and e), Thickening tank.

6.7- Recovery Method

A flow sheet was elaborated by CICA (see Figure 14). However, there is still a conciliation to be worked out between the more general flotation procedures proposed by CICA and the detailed flotation processes established by CDPR, in which oxide and sulphide circuits are described.

A processing plant should treat the mineralized material provided by the QT and EMP in a 30/70 proportion. The plant will receive the overflow pulp from the re-pulping hydro-cyclones containing 30% to 60% solid material. The pulp will proceed to a differential flotation system where it will produce initial bulk concentrates and final concentrates. The flotation circuit will mainly consider the mineralogical composition of the processed material. A Zn, Pb, Ag initial bulk concentrate generated from the EMP with an Ag–rich tailings from the QT will be undergo a cyanidation stage.

The Zn-Pb-Ag bulk concentrate will first undergo bio-lixiviation before entering a solid/liquid separation phase. The produced Pb-Ag-rich solid phase will be submitted to another lixiviation process to recover silver and lead and finally be submitted to the refining stage. The liquid phase will pass through an iron elimination process followed by solvent extraction and electro-

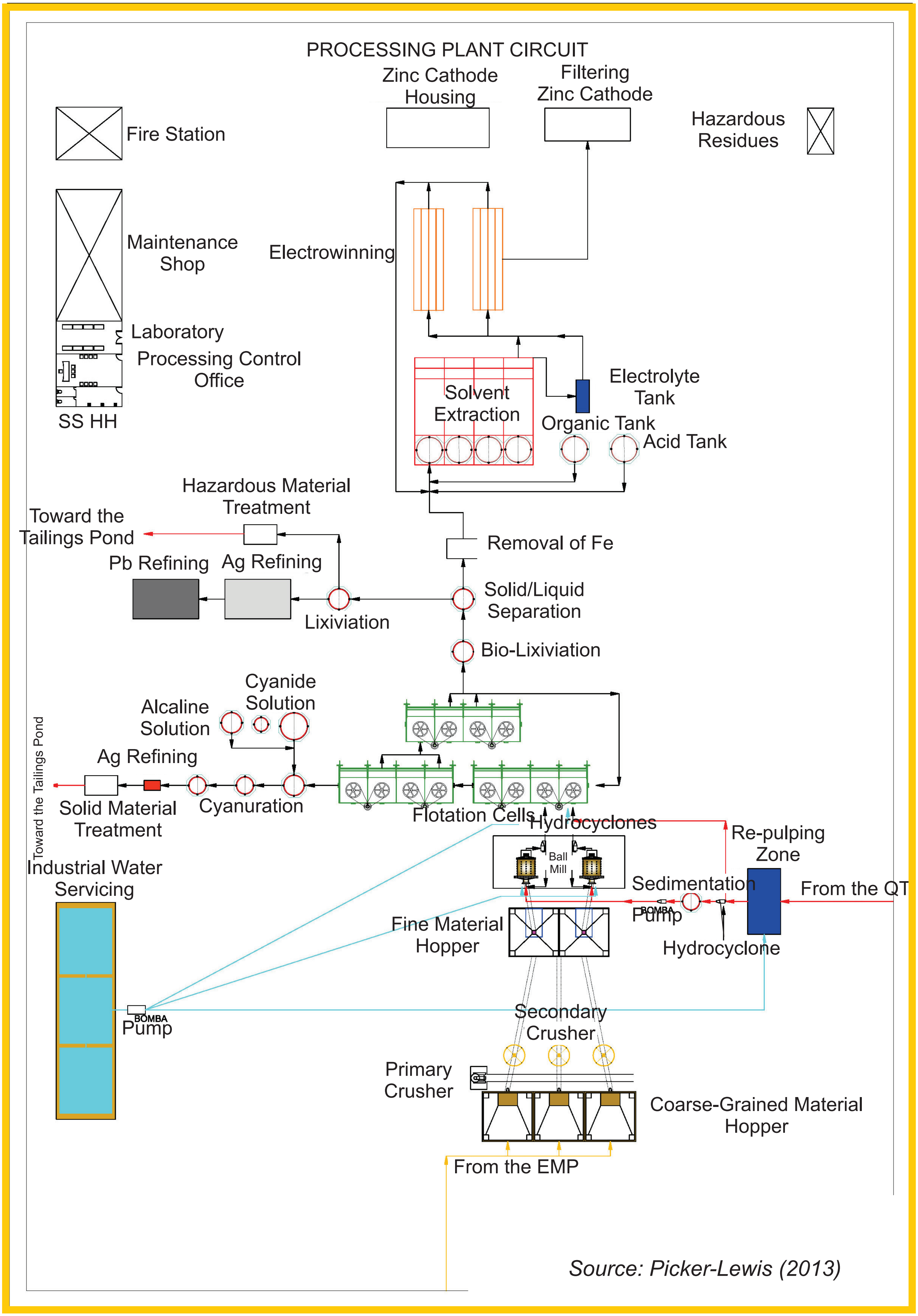


Figure 14. Proposed design of the processing plant, CDPR.

procurement. Finally an organic reactive is used for zinc extraction by acid mean and zinc cathodes are obtained by the application of electric power.

The QT material obtained from the differential flotation banks will be sent to a cyanidation process to recover Ag after entering the refining stage. All liquid/solid residues used up in the cyanidation process enter a cyanide elimination process before being discharged to the new tailings as “waste”.

6.8 Project Infrastructure

The infrastructure proposed for mining exploration was detailed in the document entitled “Exploitation of Excelsior and Quiulacocha Deposits”, Prepared by CICA INGENIEROS CONSULTORES PERÚ S.A.C for Cerro de Pasco Resources, written in 2013 by A. Picker-Lewis.

6.8.1- Installations, Equipment and Components

Mining the QT and EMP will require: a) Processing Plant, b) Acid Water Treatment Plant, c) Ancillary Tailings Deposit, d) Top soil deposit, e) Workshops, f) Offices, g) Base Camps, h) Truck yard, h) Industrial water network system and i), Electric energy network system. For economic, operational, environmental and social criteria, CICA Ingenieros proposed to use all available spaces located at the right side margin, NW of the QT and EMP sites within the Parcela “K”, to build the installations.

6.8.2- Mining Installations and Industrial Area

6.8.2.1 - Processing Plant

The processing plant will be divided into different processing areas: a) Raw Material Area where the material to be processed from the EMP will be stored. Before entering the crushing phase, the material will be stored into a coarse material silo after sieving by shaking, b)

Crushing Area containing a primary jaw crusher, a secondary conic crusher and a fine material silo to store the crushed material, c) Grinding Area where a ball mill and/or bar mill will be assembled accompanied by hydro-cyclones and pumps and silos for storing limestone rocks, d) Re-pulping Area having a re-pulping pool equipped with a stirring system, hydro-cyclones and a pumping system, e) Flotation Area equipped with flotation tanks, stripping towers, recovery basins, and cleaners, f) Solid/Liquid Separation Area containing a sedimentary basin, g) Extraction Area for Solvents and Electro Procurement (winning) including an area with tanks for acid solutions, organic solutions, discharged electrolytes, etc., a zone for solvent extraction zone (mixers and separation tanks), an electro procurement zone (electrowinning) and an area for building an electric power station, h) Lixiviation Area composed of bio-lixiviation and lixiviation tanks and ancillary equipment, i) Cyanidation Area including cyanidation tanks and equipment for addition of reactive solutions, j) Refining Area for lead refining and silver refining, k) Reactive Solutions Areas with industrial water pools and for the preparation of reactive solutions, l) Area For Storing Supplies and a Services Warehouse providing space for: compressed air processing and equipment, industrial and drinking water stations and a firefighter station (Figure 15).

6.8.2.2- Acid Water Treatment Plant

The solid material produced during the first stage is separated via Flotation by Dissolved Air (FAD). The FAD/HDS acid water treatment has the advantage of low lime consumption, reduced energy use and low maintenance cost. The sulphate contents of the acid drainage must be eliminated to avoid excessive gypsum formation. The FAD process occurs through the addition of a selective reactive to concentrate sulphates with some metals, to float and evacuate them as muds before entering the second stage. This corresponds to a recirculation system with High Density Muds (HDS); a process improving the kinetic and precipitation of dissolved metallic elements. After mixing the mud with lime, this solution will be directed to a first reactor filling it with acid water and then in a second reactor injected with air or ozone. The reactor tanks must contain a stirring system with an ozone or air dispenser. The reactor tanks feed a sedimentation pond where solid/liquid separation is carried out. A percentage of these are re-

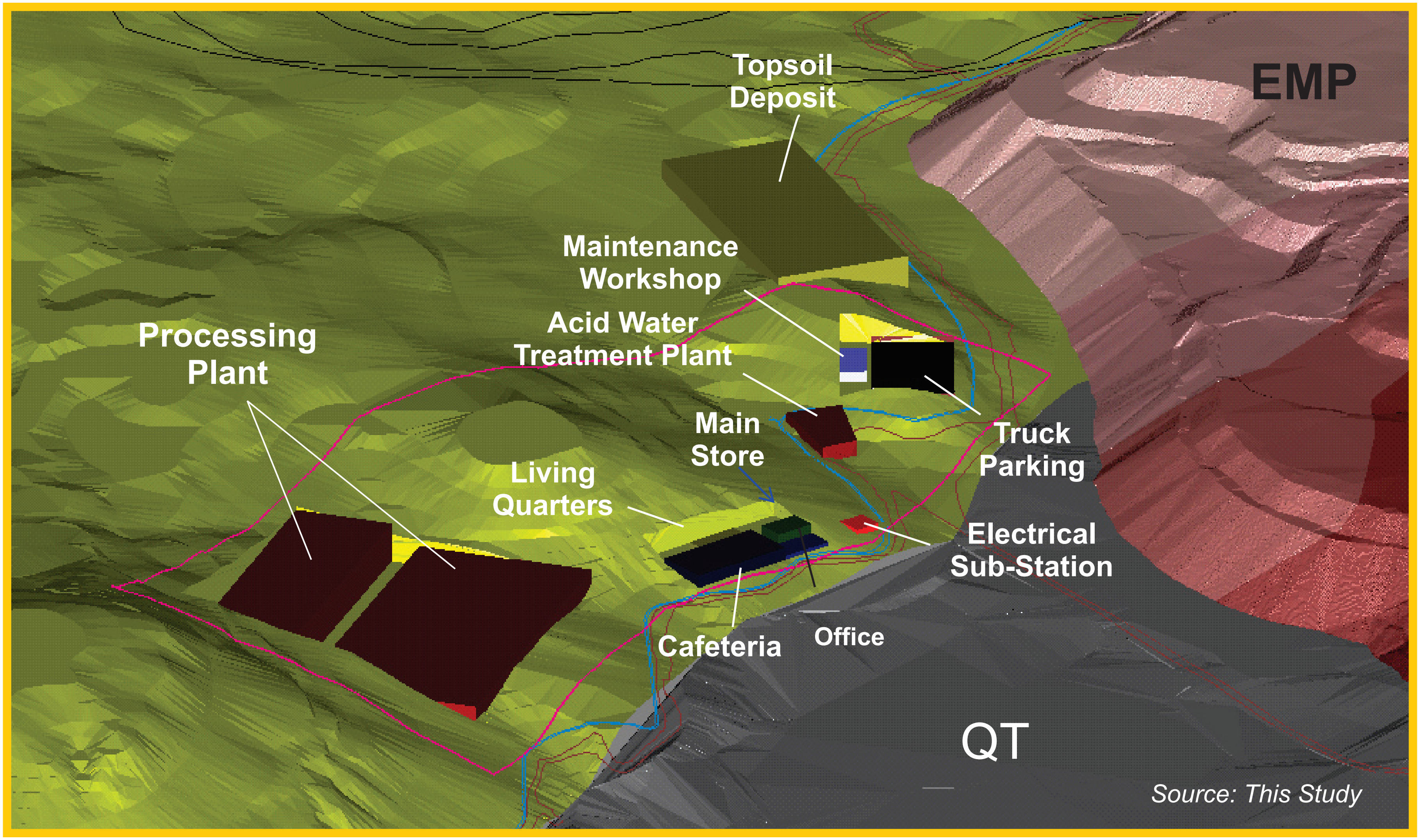


Figure 15. View and description of the future industrial compound.

circulated and the left-overs sent to the new tailings zone. The overflowing water issued from the clarifier will be reused in the ore processing plant and the water treatment plant.

The acid water treatment plant will need the following components: a) Acid drainage collector pit forming the entry flow from a collector well (homogenization), b) Feeding pumps to the plant with two pumps transporting acid water from the collector pit to the treatment plant, c) Lime/mud mixing tank. This is a steel tank equipped with a stirrer to mix the recirculated mud with fresh lime and to transport the solution by gravity to the first reactor tank, d) Reactor tanks will need an optimum residence time to carry out the oxidation/neutralization of the solution. The lime/mud mixture will enter the first reactor followed by the acid solution and a second reactor feed by air or ozone, e) Mud recirculation pumps, f) Water tanks**,** g) Water pumps, h) Air compressors for ozone processing or equipment, i) Air compressors automatically controlled, j) Lime silo, k) Ball mill, l) Milk of lime pumping case, storage tanks, transfer pumps, pump and m), Flocculent preparation package (Figure 16).

6.9- Environmental Studies

Picker-Lewis (2013) considered these aspects in the document entitled "Exploitation of Excelsior and Quiulacocha Deposits", prepared by CICA INGENIEROS CONSULTORES PERÚ S.A.C for Cerro de Pasco Resources.

6.9.1- Superficial Hydraulic Management

Currently, the management of superficial waters in the area is accomplished by two surrounding channels constructed by Activos Mineros S.A.C. during the PAMA period. One channel is located on the left margin and sends surface waste/sewage water from the population and the superficial runoff towards the new Oxidation Plant of Cerro de Pasco city located downstream of Quiulacocha . The other one starts in the industrial zone of Cerro S.A.C. and terminates in the Main Quiulacocha Dam where it discharges to the Quiulacocha Gorge. The concrete-built channels prevent seepage to the EMP and QT sites. The Quiulacocha Tailings has a system of surface channels with some stretches covered by a geomembrane which leads the acid waters

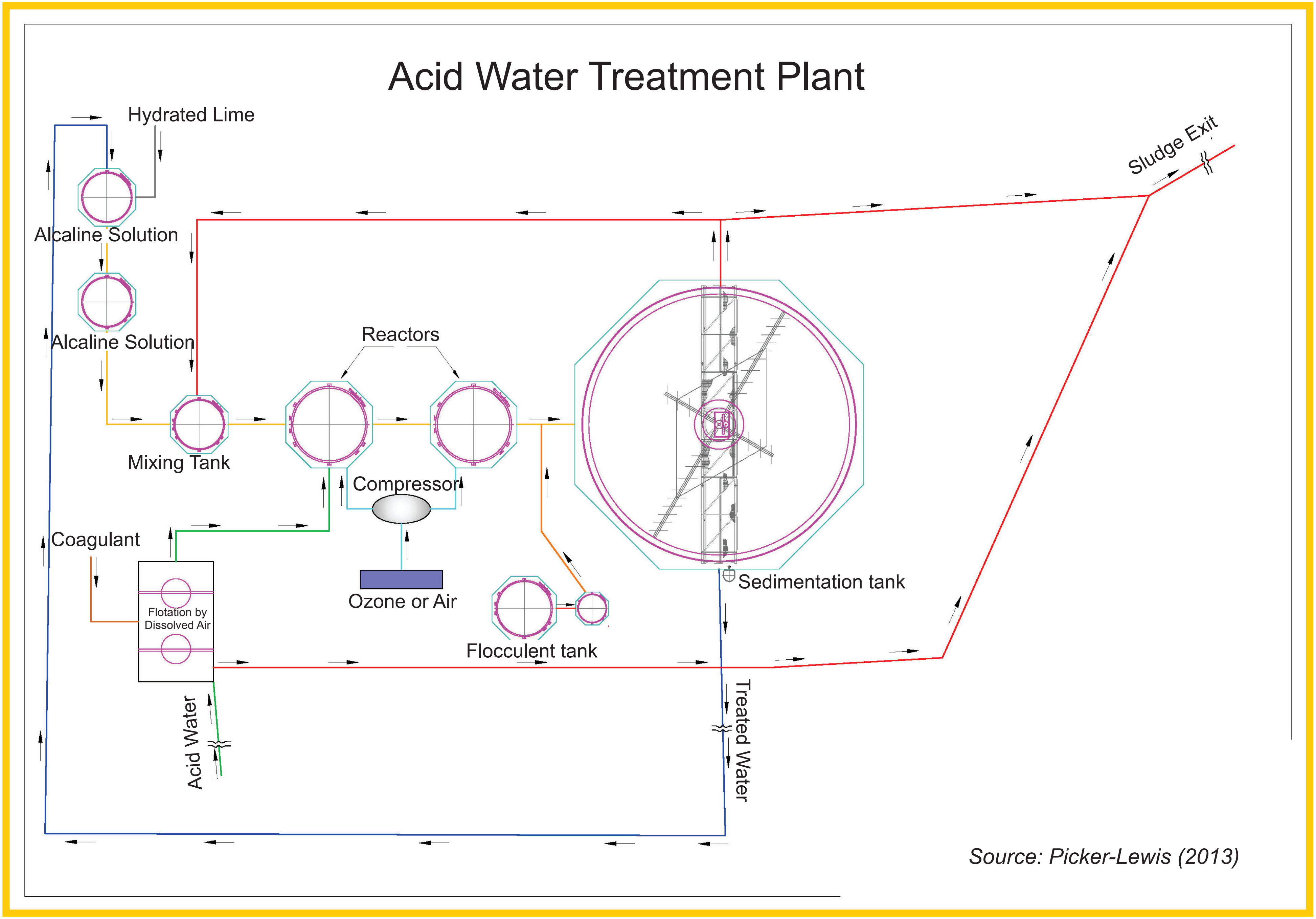


Figure 16. Proposed design of the acid water treatment plant, CDPR.

towards the low part near the Main Quiulacocha Dyke where it is accumulated. The accumulated acid waters near the Main Dyke are pumped toward the Ocroyoc Tailings where it merges with the discharged water pumping the tailings water processed from the Paragsha Plant (operated by Cerro S.A.C). A neutralization process is then carried out. Ancillary pumps control the seepage in the shoulder of the dam wall. The acid waters are directed toward the lake formed in the high part of the dam.

6.9.2- Environmental Management Plan

The Environmental Management Plan established by CICA Engineiros consists of several different programs

6.9.2.1- Residue Management Program

This includes the installation of a residue management (industrial and sanitary) and the characterization of all solid residues (e.g. separation between domestic, industrial and hazardous residues).

6.9.2.2- Ancillary Tailings Deposit

The residues (waste) produced from the processing plant after treatment of material provided by the QT and EMP will generate natural water seepages flowing toward the two sites. These waters can be collected and used in the processing plant and for the acid water treatment. During mining operations, industrial water filling cisterns will be sprayed on access ramps and paths to maintain humidity to avoid dust generation.

6.9.2.3- Modification of the Main Dyke

The right extremity of the Main Dyke is on the surface land owned by Cerro de Pasco S.A.C. and needs to be relocated within the limits of Parcela “K”.

6.9.2.4- Air Quality Control Program

Air quality monitoring will evaluate: a) Particles <10 µm (PM10), b) Particles < 2.5 µm (PM2.5), c) Sulfide dioxide (SO_2), d) Nitrogen dioxide (NO_2), e) Carbon monoxide (CO), f) Lead (Pb), and g), Arsenic (As). The concentrations results will be compared with limits established by the national standard regulations regarding air environmental quality and the established values in the maximum permissible limits of the mining sector for arsenic concentrations.

6.9.2.5- Superficial Waters Quality Control Program

Monitoring sites to collect water will be installed and the quality evaluated related to the Standards of Water Quality – Category 3.

6.9.2.6- Effluent Monitoring Program

Effluent monitoring will be carried out at different discharge sites for the following parameters: pH, oils and greases, total metals (As, Cu, Cd, Hg, Pb, Zn), total CN, Fe, TSS, Cr^{+6}, and evaluated regarding the maximum permissible limits for the discharge of liquid effluents in mining-metallurgical activities.

6.9.2.7- Subterranean Water Quality Monitoring Program

The quality of subterranean waters will be controlled at specific monitoring sites around the area of the project. The quality will be evaluated in reference to the Standards of Water Quality – Category 3, the national standards of environmental quality for subterranean water – Category C, and the subterranean water for the conservation of the environment (MINAM).

6.9.2.8- Top Soil Deposit

The construction of the infrastructure in the industrial area will lead to the extraction of an important quantity of top soil which needs to be kept in a suitable area to be used later during the closure of the mining operations

6.9.2.9- Noise Control Program

The implantation of monitoring sites where noise level could be higher than normal due to the mining activities is necessary. The monitoring results will be contrasted with national standards of environmental quality for noise.

6.9.3- Closure Plan

6.9.3.1- EMP

According to some estimations from CICA Engenieros and CDPR, from 30% to 50% of the EMP material is suitable for exploitation. Therefore 50% to 70% is considered as waste material with no economic value and must stay within the CDPR concession. The waste material must be removed and sealed as the exploitation operations progress toward closure.

The waste material must be moved to different locations to that of the exploited material. Waste material has a strong potential to generate acid water (ex: pyrite-rich rocks) and must be enclosed in a more neutral material containing limestone. During exploitation, the waste must be carried and deposited respecting the slope design proposed for closure and must be compacted with a roller to reduce the permeability, total volume and stability. Compacting will avoid a "chimney effect" due to air circulation in the deposited waste, reducing the possibility of generating acid water. The disposed compacted waste will be covered by a layer of impermeable material, a draining layer, a top soil layer (organic material) and a blanket of vegetation. This must be conducted with the construction of a principal and a secondary draining systems (Figure 17).

6.9.3.2- QT

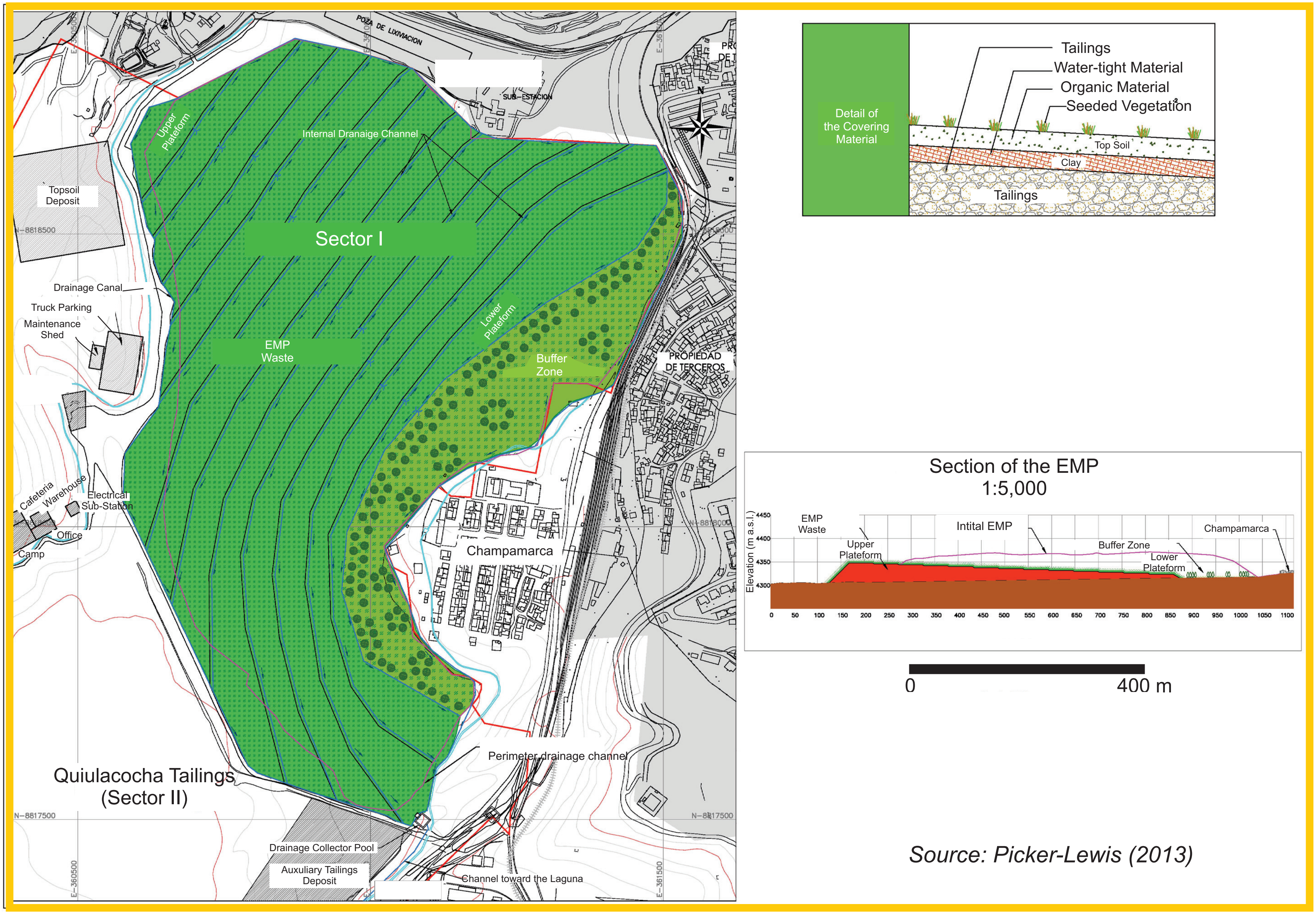


Figure 17. Proposed plan for the EMP closure, Sector I, CDPR.

In Sector II, between the floating dyke and the EMP, the layout of the discarded material from the EMP should not modify the current topography (especially for the thickness of the EMP).This is a fundamental aspect of the Closure Plan that will influence the social perception and control the visual impact. The Closure Plan must include a reinforcement of the floating dyke to prevent any of its movement toward Sector III. The main dyke must be rehabilitated or reconstructed to make it impermeable and capable to retain and store higher levels of water. The internal waste pile must be flooded with sufficient water to avoid the generation of acid water. The lake must be constantly supplied by water flowing from the left side channel. Barriers must be constructed at the entry points of the left side channel to prevent filling by sediments. “Green areas” such as walk paths and promenades should be built on ground located on the left side margin of the QT. Finally, a post-closure program monitoring air and water should be implemented (Figures 18, 19).

ITEM 7 GEOLOGY AND MINERALIZATION

7.1- Geology of the Cerro de Pasco District

The Cerro de Pasco district lies on the Andean plateau, at an elevation of 4,300 m. ASL. It is located in the flat-slab segment of the Peruvian Andes, corresponding to the Nazca ridge subduction since the mid-Miocene (Rosenbaum et al., 2005) which causes the gap of the present-day volcanism.

The oldest rocks exposed in the Cerro de Pasco district are metamorphosed shale, phyllite, and quartzite, which belong to the Devonian Excelsior Group (Jenks, 1951). They are unconformably overlain by the Permo-Triassic Mitu Group red beds consisting of sandstones and conglomerates derived from continental erosion of mainly volcanic sequences. They contain milky quartz pebbles and Excelsior Group-derived argillaceous material. In the eastern part of the district, the Mitu Group is covered by a thick (up to 3,000 m) Upper Triassic-Lower Jurassic carbonate sequence belonging to the Pucará Group (Rosas et al., 2007; Jenks, 1951). This sequence is mainly composed of dolomites, dolo-arenites, cherty dolomites, bituminous dolomites, and fossiliferous massive dolomites. To the west of a longitudinal fault, the Pucará Group is only 300

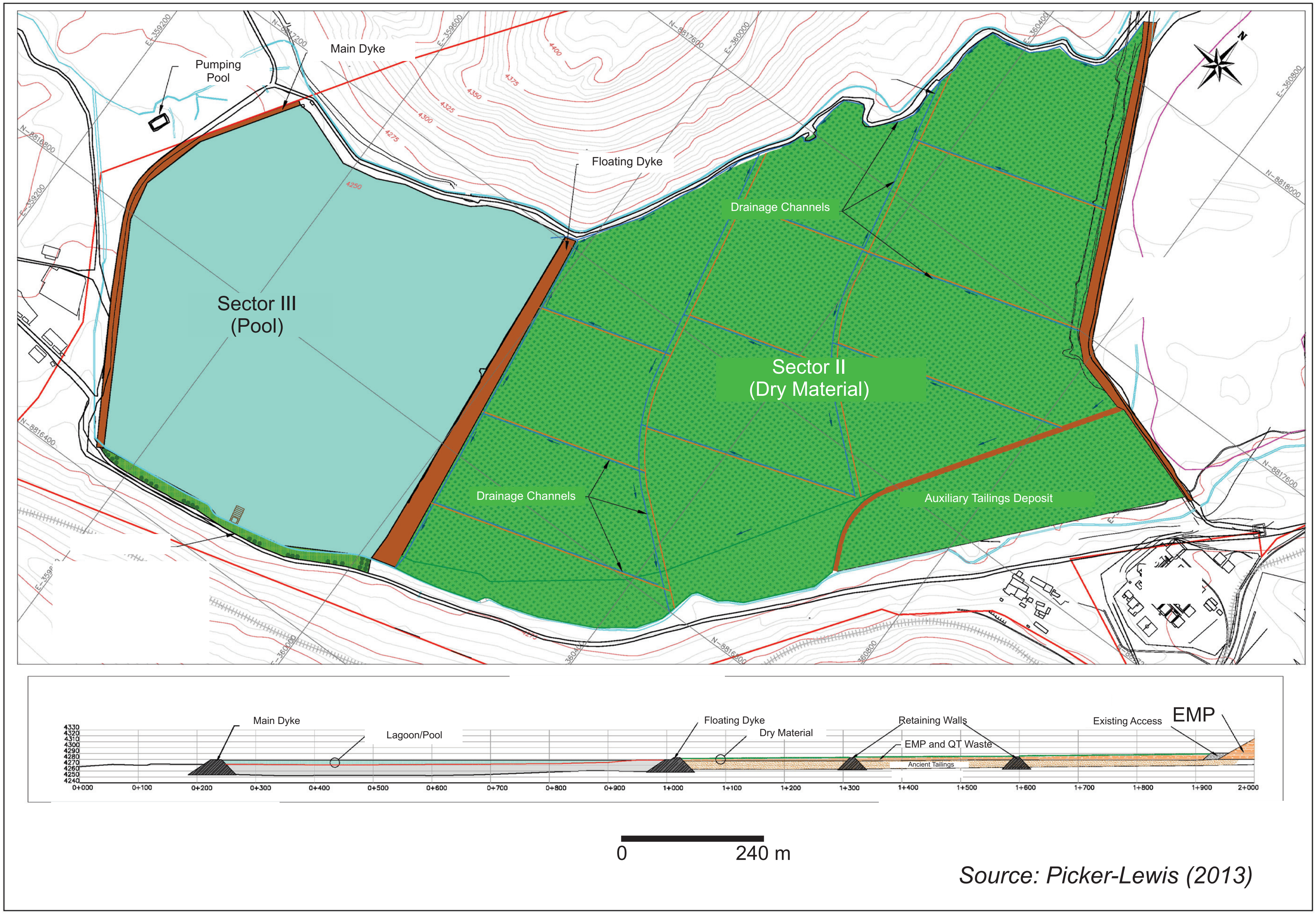


Figure 18. Proposed closure plan of the QT, sectors II and III, CDPR.

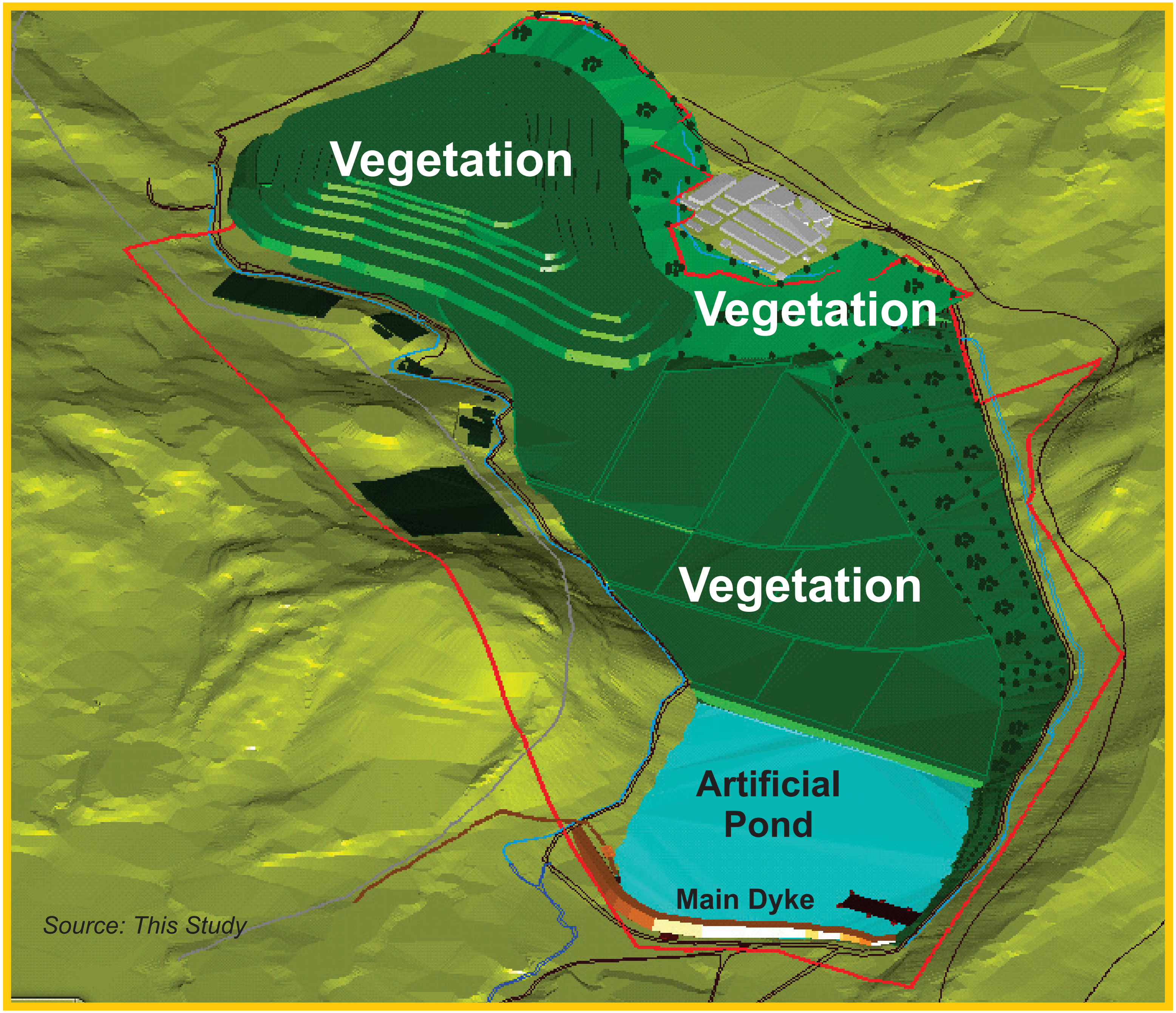


Figure 19. View of the EMP and QT area after closure.

m thick and consists of thin-bedded, light-colored limestones (Angeles, 1999; Jenks, 1951). Following multiple early Miocene deformation episodes, the region was affected by intense magmatic activity during the mid-Miocene, forming large diatreme-dome complexes in the Cerro de Pasco and Colquijirca districts, the latter located 10 km to the south of Cerro de Pasco (Figure 20). At Yanamate, located 4 km to the southeast of Cerro de Pasco, a smaller diatreme-dome complex occurs.

From the Eocene to lower Miocene, multiple folding episodes with a northeast-southwest axial direction brought the Excelsior, Pucará, and the Mitu Group rocks to shallower levels. In the Middle Miocene, magmatic activity affected the region (Baumgartner, 2007; Bendezú, 2007; Bendezú et al, 2003; Silberman and Noble, 1977).

7.2- Geology of the Cerro de Pasco Area

At Cerro de Pasco, the magmatic center was emplaced directly west of a major high-angle, N 15° W-striking reverse fault ("the Longitudinal Fault"), mainly intruding weakly metamorphosed shales of the Middle Paleozoic Excelsior Group, the oldest lithological unit in the area, and polymictic conglomerates and sandstones of the Middle-Late Triassic Mitu Group (Spikings et al., 2016). East of the Longitudinal Fault there is a thick sequence (about 1,000 m) of massive carbonate rocks, mainly limestones with locally sandy intercalations, black bituminous limestones, and beds with chert nodules belonging to the Late Triassic Chambará Formation. The latter is part of the Pucará Group that overlies the Excelsior and Mitu groups (Rosas et al., 2007; Angeles, 1999). The sedimentary sequence was folded prior to the Mid-Miocene magmatism, thus creating the main structural feature in the area, the Cerro anticline with a north-south axis and plunging to the north (Baumgartner et al., 2008; Angeles, 1999).

The magmatic core of the Cerro de Pasco district consists of a large diatreme-dome complex, 2.5 km in diameter, which was formed by a succession of phreatomagmatic and magmatic events (Baumgartner et al., 2009; Rogers, 1983). An early phase of explosive activity produced a diatreme-breccia known locally as the Rumiallana agglomerate, which is the most common lithology in the magmatic complex and has been dated at 15.36 ± 0.03 Ma and was followed by

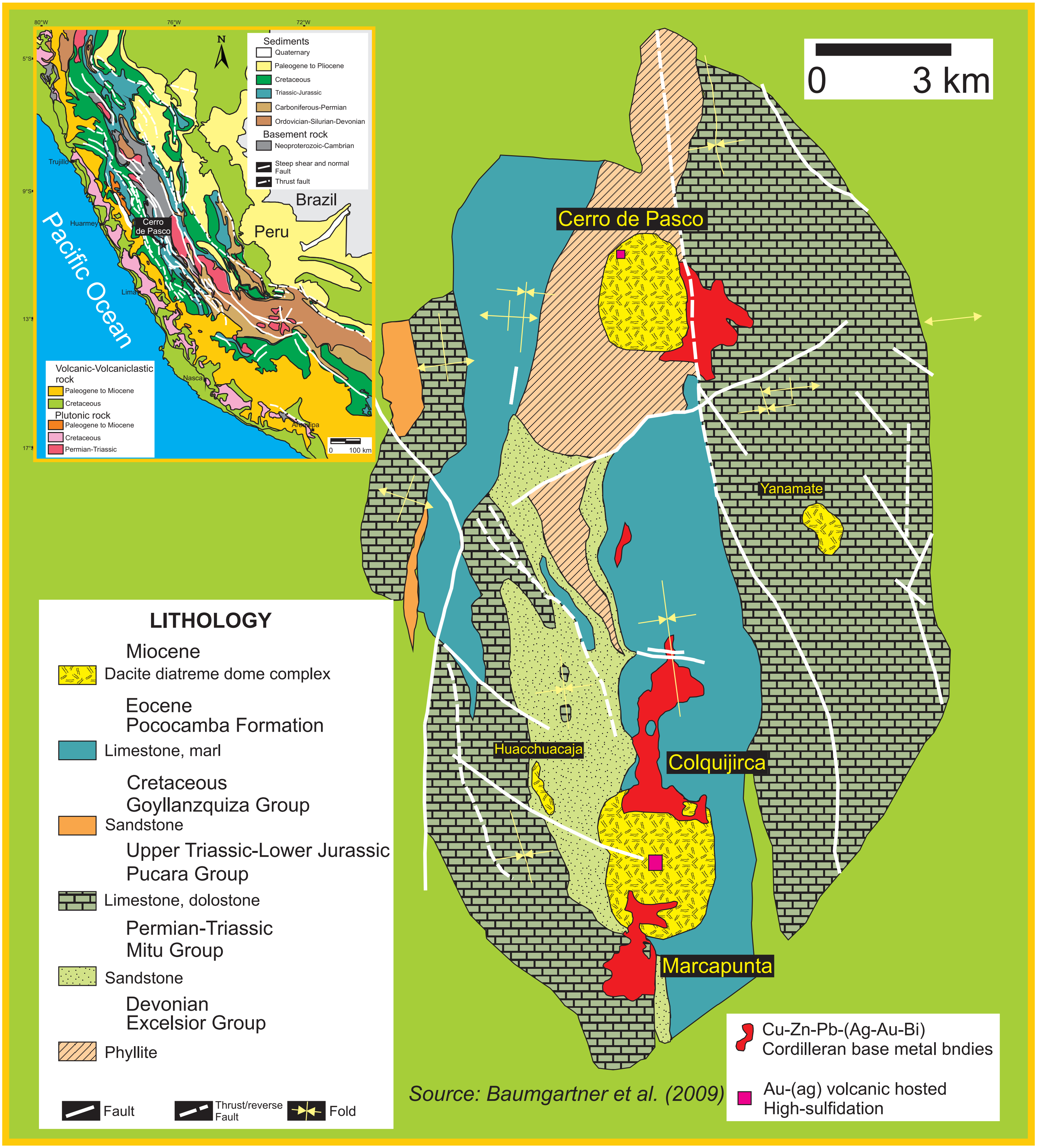


Figure 20. Regional geology of the Cerro de Pasco District.

emplacement at 15.40 ± 0.07 Ma of dacitic to rhyodacitic lava-dome complexes along the western margin of the diatreme (Baumgartner et al., 2009) (Figure 21).

East-west–trending quartz-monzonite porphyry dykes cut the diatreme breccias and the magmatic domes. These dykes do not propagate into the Excelsior shales west of the diatreme-dome complex; to the east they crosscut locally the carbonate sequence. Two of these dykes have been dated at 15.35 ± 0.05 and 15.16 ± 0.04 Ma (Baumgartner et al., 2009). The end of the phreatomagmatic and magmatic activity at Cerro de Pasco is marked by the emplacement of numerous, 20 cm to 3 m-wide, E-W–trending, milled-matrix fluidized breccia dykes, occurring in various parts of the diatreme-dome complex (Figure 21).

Following this event, epithermal base metal mineralization took place, mainly in carbonate rocks along the eastern margin of the magmatic complex (Baumgartner et al., 2008; Einaudi, 1977). A striking feature of the Cerro de Pasco mineralization is the occurrence of an NS-trending, 1.5 km-long, 250 m-wide, and more than 550 m-deep, funnel-shaped massive pyrite-quartz body that replaced mainly carbonate rocks from the Pucará Group, as well as, subordinately, the diatreme dome complex itself (Baumgartner et al., 2008; Baumgartner, 2007). At least five main pipe-like, up to 150 m-wide, massive pyrrhotite-dominated bodies have been recognized. They grade outward into massive Fe-rich sphalerite (up to 80% in volume) and galena.

7.3- Pb-Zn-Ag-Cu Mineralization at the Cerro the Pasco Mine

Epithermal base metal mineralization at Cerro de Pasco occurred principally in carbonate rocks along the eastern margin of the magmatic complex (Baumgartner et al., 2008; Einaudi, 1977). An important structure related to the Cerro de Pasco mineralization is a NS-trending, funnel-shaped massive pyrite-quartz body that replaced mainly carbonate rocks from the Pucará Group, and in less measure, the diatreme dome complex (Baumgartner, 2007; Einaudi, 1977; Ward, 1961). Five main pipe-like massive pyrrhotite-dominated bodies reaching up to 150 m in width have been identified. They are hosted by the pyrite-quartz body and the Pucará carbonate rocks and locally crosscut the diatreme breccia. The pipe-like pyrrhotite bodies are characterized by low sulfidation state assemblages (pyrrhotite + Fe-rich sphalerite + arsenopyrite, as well as pyrite +

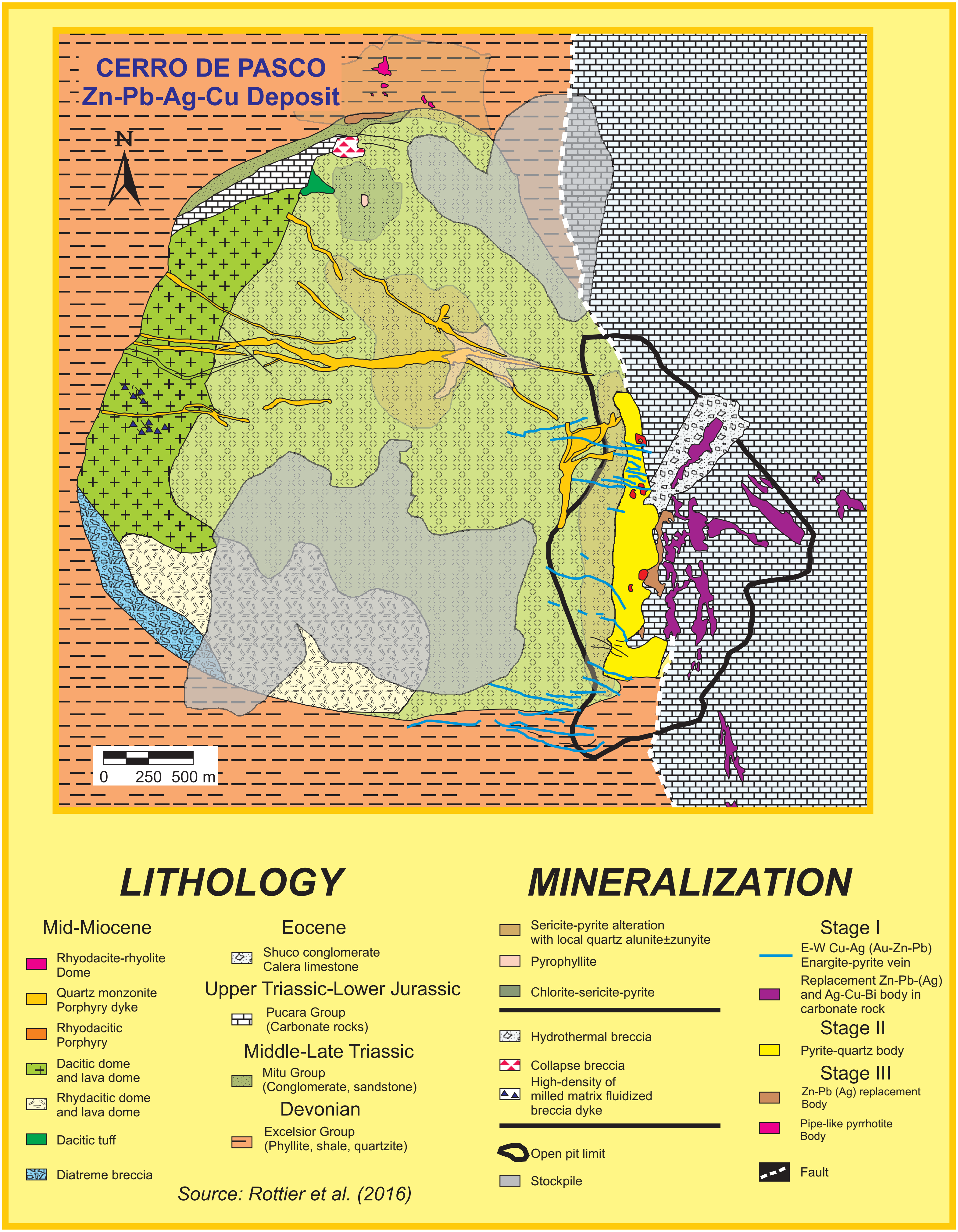


Figure 21. Geology of the Cerro de Pasco Mine area.

Fe-rich sphalerite). The pipes core zone, only observed at deep levels, is composed of the assemblage pyrrhotite-quartz-wolframite. The intermediate-level assemblage consists of pyrrhotite-sphalerite-chalcopyrite-stannite (Einaudi, 1977). The outer zone, which is present over the entire vertical extent of the pyrrhotite bodies and which includes the Zn-Pb ore, consists of the association pyrrhotite + Fe-rich sphalerite + arsenopyrite with minor marcasite, tennantite, chalcopyrite, chlorite, muscovite, siderite, and calcite. According to Baumgartner et al. (2008, 2009), high-sulfidation mineralization took place prior to the formation of the pyrite-quartz body. The mineralization consists of EW-trending Cu-Ag-(Au-Zn-Pb) enargite pyrite veins hosted by the diatreme breccia and includes at least eight zoned Zn-Pb-(Ag) and Ag-Cu-Bi replacement orebodies in the eastern part of the deposit. These orebodies replaced carbonates and overprinted Fe-rich sphalerite and galena rims from the pyrrhotite pipes. The replacement bodies follow sub vertical faults trending N35° E, N120° E, and N170° E and locally favorable Pucará beds, mainly dolo-arenite layers.

7.4- The Quiulacocha Tailings

The material for Quiulacocha and the Ocroyoc tailings impoundments derives from the polymetallic Zn-Pb-(Ag-Bi-Cu) deposit at Cerro de Pasco. The Quiulacocha tailing is located 1.5 km S-SW of the mine (Figure 22). During the first part of the 20th century, copper mineralization associated with enargite was mined with the flotation plant for the Cu-ore located in the south-western (SW) part of the Quiulacocha tailings impoundment (Figure 23). At the time, the tailings were directly deposited in the depression left by the natural Quiulacocha lake which is today located below the AMD pond on the surface of the impoundment. The deposition of tailings at Quiulacocha ceased in 1992 after 50 years of operation. The Quiulacocha tailings cover a surface of 114 ha and contain 79 Mt tailings @ ~ 50 wt. % pyrite. The tailings are partially overlain by the EMP.

From 1947 onward, the exploitation of Pb-Zn was preferred when a new flotation plant was commissioned near the open pit forcing the discharge and deposition point to the northeastern part of the tailings closer to the flotation plant. Therefore, today, the Cu-tailings reside in the SW

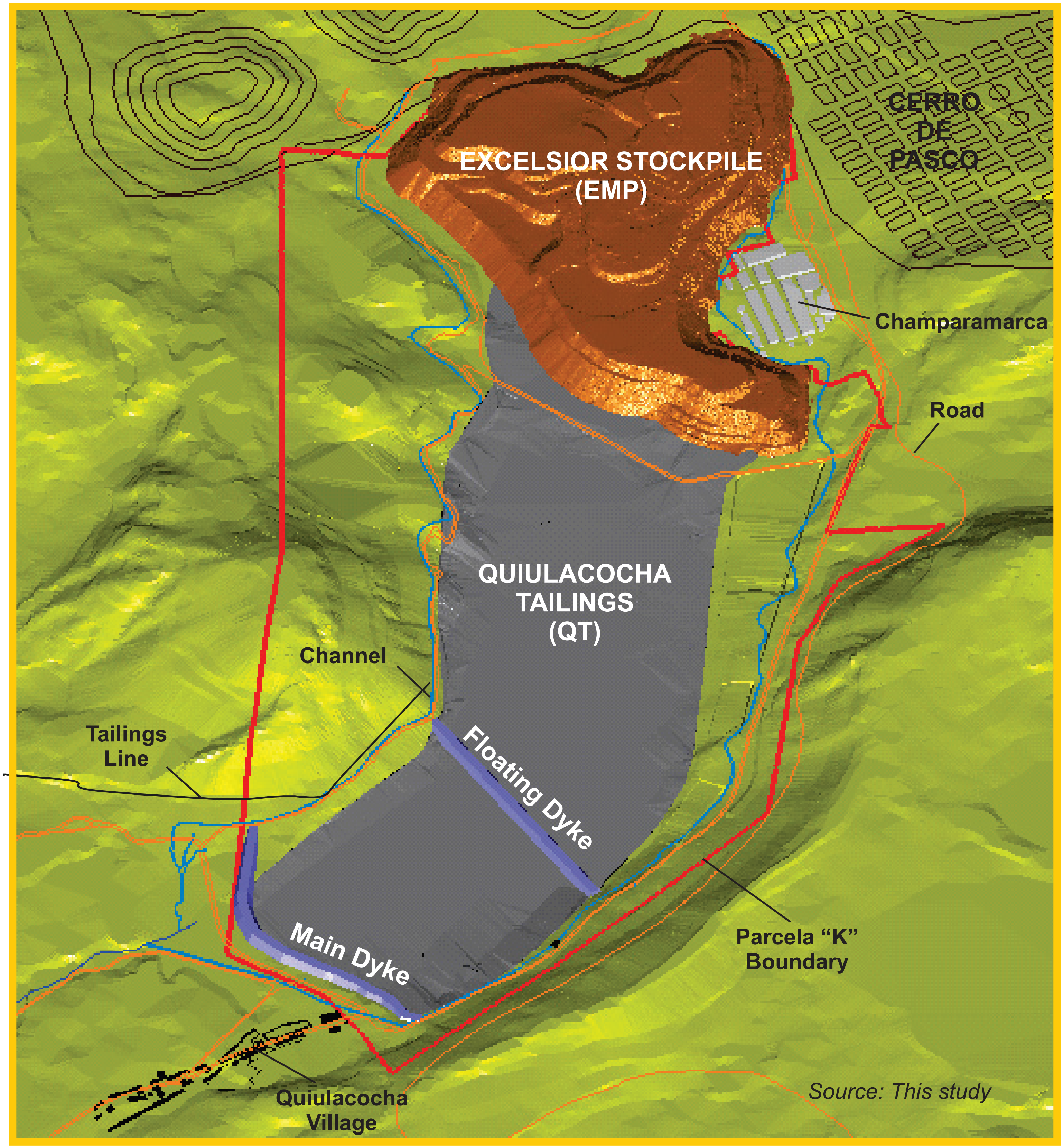


Figure 22. Localization and definition of the Excelsior Stockpile (EMP) and Quiulacocha Tailings (QT) accompanied by the principal geographic features and infrastructures.

Figure 23. View of the Sector II of the Quiulacocha Tailings (QT).

part of Quiulacocha, in the former natural lake of Quiulacocha and underlie the Zn-Pb tailings in the central part of Quiulacocha, which were separated by a floating dyke.

Acid Mine Drainage (AMD) seeping from the base of the Excelsior stockpile was collected and conducted into a channel on the surface of the Quiulacocha tailings towards the AMD pond on the SW part of the tailings impoundment. Field observations made by Wade et al. (2006) suggest that a significant amount of the AMD from the Excelsior stockpile infiltrate the Quiulacocha tailings.

Two different types of tailings were distinguished (Wade et al., 2006): a) Cu-rich sulphide tailings, and b) Zn-Pb-rich sulphidic tailings. The Cu-sulfide tailings are characterized by a mineralogy composed of pyrite, enargite, chalcopyrite, sphalerite and galena**.** Quartz forms the dominant gangue mineral and is associated with aluminosilicates such as dickite/kaolinite and alunite. Primary carbonates (i. e. dolomite and siderite) are very scarce. The acid conditions prevailing in the SW part of the tailings (near the AMD pond; pH ~2.3), the oxidation of sulfide minerals such as enargite and chalcopyrite lead to the liberation of Cu, which is mobile in acidic conditions. Cu was then leached out towards the primary zone, characterized by a low pH and reducing condition, where it precipitated as secondary sulfides such as covellite. The Zn-Pb-rich sulfidic tailings are characterized by a mineralogy defined by pyrite, sphalerite, galena and pyrrhotite. Carbonates such as dolomite and siderite formed the principal gangue with silicates, mainly quartz, also present. The tailings deposition process generated a grain size fractionation from coarser close to the EMP (former deposition site) to finer with increasing distance from the deposition site. Sulfide oxidation and the subsequent AMD formation lead to the dissolution of primary carbonates and silicates, resulting in the formation of secondary gypsum and possibly siderite**.**

The Quiulacocha tailings have developed an oxidation zone with a thickness ranging from several mm to a maximum 25 cm (pH =1.9 to 4.8). Zones with a very thin oxidation layer showed pore space cementation by secondary minerals forming a hard and compact layer called the “cemented zone”. The mineralogy of the oxidation zone is characterized by residues of pyrite, quartz and secondary phases such as jarosite, gypsum, siderite, and Fe-hydroxides, mainly goethite. The oxidation of sulfide minerals generated acid solutions that mobilized the base metals (Fe, Cu, Zn, Pb). The reaction of the acid waters with the gangue minerals caused their dissolution and subsequent liberation of cations such as K^{+}, Na^{+} and Ca^{+2}. These cations played a key role in the formation of secondary phases such as jarosite, gypsum, and siderite.

High pH values and base metal content immediately below the tailings surface indicate infiltration of acid Fe-rich waters originating from the Excelsior stockpile towards the underlying Quiulacocha tailings. This AMD infiltration which was produced by sulfide oxidation in the EMP may accelerate the oxidation processes in the tailings, explaining the formation of an acid Fe-Zn-Pb plume.

7.5- The Excelsior Mineral Pile (EMP)

The Excelsior stockpile was filled from 1943 until 2000 initially as a deposit for rocks with non-economic Cu and later for non-economic Zn and Pb concentrations. The stockpile occupies an area of 94 ha and is located in the SW corner of the open pit mine at the bottom of a valley that consists of Devonian phyllites and shales. It contains 26,400,000 m^3 of fragmentary rocks and in part partly overlies the downstream Quiulacocha tailings with ca. 60 ha covered and 114 ha not covered.

The EMP is made of rock fragments presenting an average size of 10 cm, which can reach up to 2.5 m in diameter. Smuda et al. (2007) estimated the fraction of grains < 2 mm to 10 vol. %. The stockpile consists of three terraces constructed by the release of fractured rocks at the slopes of the different terraces representing a mix of different rock types. Smuda et al. (2007) therefore observed cross-bedding and an arrangement of big boulders at the base and fine-grained material at the top. Stockpiling was initiated in the northern part with rocks from the Cu-ore and progressed with the later dumping of rocks from the Zn–Pb ore progressively to the south and from the 1st terrace to the 3rd terrace, respectively. The surfaces of the terraces were covered with a 10 to 30 cm thick layer of pyrite-rich waste rocks to prevent heavy mine equipment from getting stuck. The maximum height of the stockpile is 55 m with the slope inclination dipping between 33° and 36°.

7.5.1- Rock Assemblages and Mineralogy of the Excelsior Stockpile

Smuda et al. (2007) recognized three different assemblages from the EMP: 1) Sulphide-rich rocks from the quartz–pyrite ore body accompanied by Fe-oxide-rich oxidation products near the surface, 2) Sericitized monzonites/volcanic rocks and 3), Carbonate (dolomitic) rocks from the host rock formation. The main rock assemblage at the EMP is derived from the quartz–pyrite body. Quartz and pyrite are major phases dominating the mineral assemblage. The ore minerals consist of sphalerite, tennantite, cerussite, galena, enargite and coronadite identified as minor and trace phases. Anglesite is a primary and possibly secondary trace mineral. Some of the quartz–pyrite stockpile comes from the oxidized top of the quartz–pyrite body and contains quartz and hematite/goethite as major phases accompanied by jarosite, hematite, limonite including some Ag. Volcanic rocks (quartz monzonite/agglomerate) in contact with the orebodies could have contained up to 15 vol. % of disseminated pyrite which is masked by the sericitic alteration during the sulfide deposition. Volcanic rocks are strongly altered throughout the EMP. Boulders of volcanic rocks of up to 1 m in diameter had already completely decomposed into white, loose material with grain sizes of several mm and a strongly acidic paste. Microscopic and XRD studies indicated the main primary mineral fractions are quartz (20 vol. %) and altered relicts of albite ($NaAlSi3O8$) (5 vol. %). Clusters of secondary minerals (microcrystalline Fe-hydroxides, muscovite, kaolinite and gypsum) constituted the major fraction (>70 vol. %). Only relicts of pyrite remained, contributing < 1 vol. % of the total volcanic rock mineral assemblage.

Carbonate host rocks constitute < 5 wt. % of the stockpile. The dolomitic carbonates are commonly recrystallized displaying a yellowish-brown coloration. Quartz, dolomite and siderite form the major mineral phases. The assemblage also contains ankerite, hematite, pyrite, sphalerite and galena. Zinc carbonates and sulfates are suspected.

7.6- Mineralization in the QT and EMP

Mineralization types within the QT and EMP reflect that of the Cerro de Pasco open pit and underground mine as they represent residues after processing (tailing) or waste (stockpile) with metal concentrations deemed too low to warrant beneficiation. The EMP and QT rocks and sludge underwent strong weathering and attack by acid waters which produced secondary minerals such as anglesite, gypsum, jarosite, hematite, limonite and goethite. The QT sludge contains galena (Pb, Ag), tetrahedrite (Cu), tennantite (Cu) enargite (Cu), chalcopyrite (Cu), sphalerite (Zn) and bismuthinite (Bi) forming exploitable minerals. Ag grains also occurs as < 20 μm grains mixed with pyrite, chalcopyrite, enargite, sphalerite, galena and bismuthine. The mineralization is contained within 79 Mt of Quiulacocha tailings @ ~ 50 wt. % pyrite covering a surface of 114 ha and contain. The EMP reveals three different assemblages: 1) sulfide-rich rocks from the quartz–pyrite ore body accompanied by Fe-oxide-rich oxidation products near the surface, 2) sericitized monzonites/volcanic rocks and 3), carbonate (dolomitic) rocks from the host rock formation. Metal-bearing minerals consist of sphalerite, tennantite, cerussite, enargite, galena (Ag-rich) and sphalerite. The EMP mineralization is contained within 26,400,000 m^3 of fragmentary rocks. As a rule of thumb, material of the QT and EMP considered fit for exploitation must contain concentrations of Pb (wt. %) +Zn (wt. %) > 2.5 corresponding to Ag values ranging between 50 and 100 ppm.

ITEM 8 TYPE OF DEPOSIT

The Pb-Zn-Au mineralized rocks and sludge forming the EMP and QT were all deposited as "waste" material upon processing the open pit and underground material of the Cerro de Pasco Mine.

ITEM 9 EXPLORATION

No exploration was undertaken during the course of this study

ITEM 10 DRILLING

No drilling campaign was conducted during the course of this study.

ITEM 11 SAMPLE PREPARATION, ANALYSES AND SECURITY

Not applicable

ITEM 12 DATA VERIFICATION

Not applicable.

ITEM 13 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing and metallurgical testing was conducted during the course of this study.

ITEM 14 MINERAL RESOURCES AND MINERAL RESERVE ESTIMATE

There are no mineral resource and mineral estimate produced during the course of this study.

ITEM 23 ADJACENT PROPERTIES

There are no significant properties adjacent to the concessions.

ITEM 24 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data and information.

ITEM 25 DISCUSSIONS AND CONCLUSIONS

The Excelsior project, which proposes to exploit the Excelsior Mining Pile (EMP) and Quiulacocha Tailings (QT), can advance toward a successful outcome if the following problems are resolved.

There were at least three attempts to establish Mineral Resources on the EMP and two on the QT which all carry deficiencies rendering them non-compliant with the current NI43-101 and CIMM norms. CDPR and Volcan Compañia Minera SAA., being Peruvian-based companies, none of the reports containing Mineral Resources estimates were filed with any Exchange, Peruvian or North American, and remained internal documents. Nonetheless, the author believes four of the Mineral Resource Estimates followed most of the general guidelines established by the CIMM and would need moderate updating to bring them in conformity with the currently accepted norms of North American Exchanges.

Deficiencies concerning the historical Mineral Resources Estimates performed on the EMP concern notably the determination of the "dry" specific gravity of different rock assemblages defining the zones and sub-zone and poor quality of QA/QC. Since, the EMP consists essentially of piles of porous rubble of different composition, "wet and dry" specific gravities must be determined on site by collecting specific samples from each zones and not just estimated. The author did not find any references to detailed procedures on the specific gravity values used in the 2012 CDPR Mineral Resources estimates and is of the opinion they are just estimates. This parameter is crucial to obtain the best value of the mineralized tonnage.

The other deficiency is the lack of /or poor quality of QA/QC procedures. There are no available certificate of analyses pertaining to assay data from 2004 to 2012. The QA/QC consists of 100 duplicate samples for pit and RC drill samples (over 3,000 samples), with no reference to standards or blanks.

The Mineral Resource Estimates provided for the QT also present deficiencies in the QA/QC procedures with the absence of certificate of analyses and inclusions of standards and blank. Finally, there is an overall lack of detail concerning the calculation of the Mineral Resources. To the exception of Wheler (2009), several plots and diagrams commonly presented are missing or were not generated. For instance there is an absence of Q-Q plots, frequency histograms, cumulative probability diagrams, density histograms, variograms, 3D block diagrams with the traces of drill holes, pits and mineralized zones, cut-off grades vs. total ounces or tons of an element, swath plots and measured vs. estimate assay values (validation). Finally, in two instances the Leapfrog software which is not optimal to establish Mineral Resource Estimates was used.

One of the major obstacle to overcome in the planning of the exploitation of the EMP is the small scale heterogeneity in term of composition (lithology) and grade. Granted, there was planning and organization in the ore extraction in the Raul Rojas pit since the beginning of large scale above and underground operations. Different zones in the EMP can be tied to the exploitation of particular orebodies (see Figure 3) and to the shift from Cu-Ag exploitation to Zn-Pb-Ag. Nonetheless, we can observed heterogeneities in the EMP at a small scale (10 m or less) (see Figure 24), probably associated with the dumping of individual 100 t buckets of waste material. There is a high probability of waste material in a specific layer coming from different ore zones. This could be attributed to several factors from pit slope stability through weather conditions, shift in the price of commodities, change in cut-off grades, pollution and other environmental factors. These EMP heterogeneities will certainly render any Mineral Resources estimates difficult to establish due to problems of continuity, which could be mitigated by completing a tighter grid of RC drill holes, while digging surface pits at regular intervals on the different exposed zones throughout the EMP. Pit samples were restricted to the northern part of the EMP from Zone B.

The exploitation of the EMP would certainly beneficiate from using of a 3D X-Ray Transmission (XRT) Sensor Sorter System (ex: a Steiner KSS-LX-T) to separate the crushed EMP material by lithology and types of mineralization. Crushed material is first submitted to a color-line camera module in combination with triangulation detection to sort the material by its color. Then the material is passed through a dual energy X-Ray Transmission module. A computer determines the difference between incidental and transmitted radiation and the resulting difference in intensity (adsorption) provides the chemical composition of the ore material passing through the sorter. The thickness dependence of the absorption is being eliminated and the classification of objects is based on their density. This type of apparatus, currently in use be by Volcan Compañia Minera SAA., accommodates particle size from 5 to 200 mm and would be very useful in sorting heterogeneous mineralized rock particles.

Another major hurdle to the successful outcome of the Excelsior project is the creation of long term relations with Cerro de Pasco, Champamarca and Quiulacocha community leaders. The

Figure 24. Detailed view of the EMP which consists of various material including altered volcanic rocks, limestones, Pb-Zn mineralized rocks, pyrite-rich rocks, and strongly oxidized rocks.

exploitation and closure of the QT and EMP involve a strong environmental component which will affect significantly the way of life and well-being of these communities. It is of the utmost importance that CDPR employs competent personnel *in situ* to establish ties, listen to the demands and complaints of the affected population and to inform on a regular basis about the evolution of the project.

The Excelsior project consists of the the El Metalurgista Concession and Parcela “K” surface land, the latter including the previous concession. Both are situated 310 km by road northeast of the capital city of Lima, at close proximity to the city of Cerro de Pasco and Cerro de Pasco mine, east-central Peru. El Metalurgista occupies an area of 95.74 ha and was optioned by Genius from Mr. Manuel Lizandro Rodríguez-Mariátegui, whereas the Parcela “K” surface land covers an area 293.5ha and is the process to be acquired by Genius.

Best historical Mineral Resources Estimates for the EMP generated “Indicated Resources”[^], with a Pb cut-off of 0.8 wt. %, of 13.74 Mt @ 0.09 wt. % Cu, 0.74 wt. % Zn and 64.6 g/t Ag with Pb+Zn wt. %=2.38; whereas the “Inferred Mineral Resources”[^] totaled 29.15 Mt @ 0.09 wt. % Cu, 0.76 wt. % Zn and 66.9 g/t Ag with Pb+Zn=2.30 wt. %. The combined “Inferred and Indicated Mineral Resources”[+] generated 42.89 Mt @ 0.09 wt. % Cu, 0.73 wt. % Pb , 1.59 wt. % Zn and 66.1 g/t Ag (76.4 M Oz) with Pb+Zn= 2.33 wt. %. For the North and South Quiulacocha Tailings, the best estimate generated a total “Indicated Mineral Resources”[^] of 2.94 Mt @ 43.1 g/t Ag, 418 ppm Cu, 0.79 wt. % Pb and 1.43 wt. % Zn. These estimates need to be updated into 43-101 compliant Mineral Resources Estimates.

[^] *The estimates presented above are treated as historic information and have not been verified or relied upon for economic evaluation by the Issuer or the writer. These are considered historical Mineral Resources and do not refer to any category of sections 1.2 and 1.3 of the NI-43-101 Instrument such as Mineral Resources or Mineral Reserves as stated in the 2010 CIM Definition Standards on Mineral Resources and Mineral Reserves. The explanation lies in the inability by the author to verify the data acquired by the various historical drilling campaigns and other sampling works. The author has read the documents pertaining to the description of the different methods used in the historical evaluation of the Mineral Resources. The Issuer has not done sufficient work yet to classify the historical estimates as current Mineral Resources or Mineral Reserves. Therefore, the Issuer is in the opinion that the above quoted resources for the EMP cannot be relied upon.*

The Cerro de Pasco mine lies in the Miocene metallogenic belt of central and northern Peru. The Cerro de Pasco district lies on the Andean Puna, at an elevation of 4,300 m. ASL and exposes Devonian metasediments of the Excelsior Group, conglomeratic and sandstone red beds of the Permo-Triassic Mitu Group, Upper Triassic-Lower Jurassic carbonates (Pucará Group). The magmatic core of the Cerro de Pasco area consists of a large Miocene diatreme-dome complex, 2.5 km in diameter, which was formed by a succession of phreatomagmatic and magmatic events. Epithermal base metal mineralization took place, mainly in carbonate rocks along the eastern margin of the magmatic complex. The Cerro de Pasco deposit is distinct by the occurrence of an N-S-trending, 1.5 km-long, 250 m-wide, and more than 550 m-deep, funnel-shaped massive pyrite-quartz body that replaced mainly carbonate rocks from the Pucará Group, as well as, subordinately, the diatreme dome complex. At least five main pipe-like, up to 150 m-wide, massive pyrrhotite-dominated bodies have been recognized. They grade outward into massive Fe-rich sphalerite (up to 80% in volume) and galena. High-sulfidation mineralization took place prior to the formation of the pyrite-quartz body. The mineralization consists of E-W–trending Cu-Ag-(Au-Zn-Pb) enargite pyrite veins hosted by the diatreme breccia and includes at least eight zoned Zn-Pb-(Ag) and Ag-Cu-Bi replacement orebodies in the eastern part of the deposit.

The material for the Quiulacocha Tailings (QT) derives from the exploitation and processing of the polymetallic Zn-Pb-(Ag-Bi-Cu) deposit at Cerro de Pasco. Two different types of tailings were distinguished: a) Cu-rich sulphide tailings, and b) Zn-Pb-rich sulphidic tailings. The Cu-sulfide tailings are represented by the minerals pyrite, enargite, chalcopyrite, sphalerite and galena. The Zn-Pb-rich sulfidic tailings are characterized by a mineralogy defined by pyrite, sphalerite, galena and pyrrhotite. The Quiulacocha Tailings have developed an oxidation zone with a thickness ranging from several mm to a maximum 25 cm (pH =1.9 to 4.8). The mineralogy of the oxidation zone is formed by residues of pyrite, quartz and secondary phases such as jarosite, gypsum, siderite, and Fe-hydroxides, mainly goethite.

The Excelsior Mineral Pile (EMP) occupies an area of 94 ha and is located in the SW corner of the open pit mine at the bottom of a valley that consists of Devonian phyllites and shales. It contains 26,400,000 m^3 of fragmentary rocks and in part partly overlies the downstream Quiulacocha tailings. The EMP is mainly constituted of three different assemblages: 1) sulfide-rich rocks from the Cerro de Pasco pit quartz–pyrite ore body accompanied by Fe-oxide-rich oxidation products near the surface, 2) sericitized monzonites/volcanic rocks and 3), carbonate (dolomitic) rocks from the host rock formation. Metal-bearing minerals consist of sphalerite, tennantite, cerussite, enargite, galena (Ag-rich) and sphalerite.

Recovery metallurgical testing were carried out by CDPR at a pilot plant in San Expedito (a small concentrator now decommissioned) to develop three scenarios for the project implementation. In an optimistic scenario a 50 wt. %, Pb concentrate is produced with an 80 % recovery. A maximum zinc concentrate of 55 wt. % is obtained with a recovery of 85%, whereas a 62.64% recovery rate is attained for silver. CDPR new circuit was also designed to produce a copper concentrate through a separation stage of the bulk concentrate. The projected lead circuit will produce a bulk concentrate based on the optimistic scenario. The circuit will accommodate two rougher stages, one scavenger stage and a flotation circuit for the tailings first cleaner and scavenger concentrate generating a lead flotation of 0.14 wt. % Pb. In the second rougher stage, the lead oxides will be recovered and will be subject to a sulphidation process. The circuit will incorporate four cleaning stages. A bulk concentrate of 4.33 wt. % Cu and 43.03 wt. % Pb will be obtained in the fourth stage. The Zn circuit will include two rougher stages and one scavenger stage. In the second rougher stage, the zinc oxides will be recovered and will be subject to a sulphidation process. The circuit will also contain four cleaning stages. In the fourth stage, the achieved zinc concentrate is 55.00 wt. % Zn and will be processed in two flotation cells.

CDPR presented, based on Centromin historical results, expected metallurgical results including Cu, Pb, Zn and Ag grades and recoveries with a 3,000 tpd feed from mining the QT. Estimated final grades of 50 wt. % (Pb), 55 wt. % (Zn) and 2800 ppm (Ag), corresponding to recoveries of 85.7%, 85.1% and 55.1% respectively were obtained. Data for a proposed flotation circuit (rougher+scavenger+cleaner) were put forward.

Mining of the EMP should be highly mechanized and selective with the cut and loading done by hydraulic shovel and transport carried out by trucks and dump trucks. The removal and managing of the remaining rubble will be assigned to tractors, front loaders and graders. The mining operations will start in the SW sector, adjacent to the industrial area to be terminated in the sector adjacent to the Champamarca Urban Community, leaving for the last exploitation stage a berm of rubble (currently covered by a geo-mat). This berm will serve as a buffer zone separating the mining operations from the community.

Exploitation of the QT is restricted by several hurdles that need to be overcome, such as: space for dumping the ancillary tailings allowing waste storage until creating new areas inside the QT, creating areas to systematically store the waste material, a limited amount of industrial water for the re-pulping operations and the high sulphide content and permanent lixiviation of the QT can potentially produce acid waters. The proposed exploitation of the QT entails the construction of an "Ancillary Tailings Deposit" allowing waste dumping during the early exploitation periods, until the creation of internal spaces within the QT through the construction of rock fills retaining walls. Re-pulping of the QTP sludge will proceed by using pressurized water to transport the material toward the processing plant where the pulp will be reconditioned before entering the plant. Spraying pressurized water is done so that the pulp migrates gravitationally from the work front towards the pool containing the pump which will aspire the pulp to a 30% to 60% solid. This stage will transform the QT material into pulp of optimal physical characteristics ready for processing by differential flotation. The pulp transported to the processing plant will be send to collector tanks equipped with mechanical stirrers. The pulp pumped from these tanks will be sorted through a system of hydro-cyclones, with the overflow sent to a thickening tank and then to a differential flotation procedure while the hydro-cyclones underflow will be recycled to be grinded.

Mining the QT and EMP will require a Processing Plant and an Acid Water Treatment Plant. The processing plant should treat the mineralized material provided by the QT and EMP in a 30/70 proportion. The plant will receive the overflow pulp from the re-pulping hydro-cyclones containing 30% to 60% solid material. The pulp will proceed to a differential flotation system where it will produce initial bulk concentrates and final concentrates. A Zn, Pb, Ag initial bulk concentrate is generated from the EMP with an Ag–rich tailings from the QT will be undergo a cyanidation stage. The water acid treatment plan will process high concentrations of dissolved sulphates in a two stage treatment; the first one to eliminate the sulphates and a second stage to precipitate the left-over sulphates with the remainder of the metallic elements. The solid material produced during the first stage is separated via Flotation by Dissolved Air (FAD). During the second stage, muds produced are recirculated with High Density Muds (HDS). After mixing the mud with lime, this solution will be directed to a first reactor filling it with the acid water and then in a second reactor injected with air or ozone. The reactor tanks feed a sedimentation pond where solid/liquid separation is carried out.

CDPR put forward an Environmental Management Plan that consists of several different programs, including: a) Residue management program, b) Ancillary tailings deposits, c) Modification of the Main Dyke, d) Air quality control program, e) Superficial waters quality control program, f) Effluent monitoring Program and g), noise control program

During closure, the waste material processed from the EMP must be moved to different locations to that of the exploited material and must be enclosed in a neutral material containing limestone. After compacting, the waste material will be covered by a layer of impermeable material, a draining layer, a top soil layer and a cover of vegetation. This must be conducted with the construction of a principal and a secondary draining systems.

There are certain risks and uncertainties that could be expected to affect the reliability or confidence in the project's potential economic viability. One is the prevailing conditions of the commodities market, especially for Pb and Zn, which in general manifests a downward price trend since 2014. These factors will have a major incidence in deciding whether or not to raise capital to further develop the property. Another risk factor is the ability of the company to establish strong ties with the local Peruvian communities and to explain the consequences of the environmental and social impacts of the project in order to gain their acceptance. Mining a stockpile composed of a compositionally heterogeneous rock material and metal concentrations can be hazardous and relies strongly on an appropriate extraction technique and metallurgical processing. Finally, the conciliation with the predicted mineral ressources calculation of the EMP and QT may be difficult to attain..

ITEM 26 RECOMMENDATIONS

The first recommendation of the author is to update the historical Mineral Resource Estimates performed on the QT and EMP to render them compliant with the NI43-101 and CIMM norms. This endeavor would by considerably simplified by the acquisition of the certificates of analyses for all data used in the calculations which would include assays for blanks, standards and duplicates. A sound QA/QC procedure could then be built. It is also imperative to determine in the laboratory the wet and dry densities/specific gravity of various types of EMP rocks and not use estimates. Nonetheless, for the EMP Resource Estimate, re-sampling of the 2009 RC drill holes (if retrievable) and pits, and sinking of twin holes will be necessary. The upgrading to Indicated or Measured Mineral Resources may also require additional RC drill holes to tighten the spacing which currently sits at 30 to 50 m. Note the QT Mineral Resource Estimates concerns about 225,000 m^2 of tailings area; less than half of the total surface. Genius might consider an auger drilling program to expand the QT resources.

Qualified persons (QP) satisfying the requirements of the NI43-101 norm should be hired to give their approval and provide recommendations concerning the previous work stated in reports dealing with metallurgy, mining methods, infrastructures, mine closure and environmental issues.

This represents Phase I of the recommended work which the author estimates the cost at $CAD257, 950 before tax.

The author suggests sending bulk samples collected from the different identified zones at the surface of the EMP or extracted from the RC drill hole material to the Steinert Latinoamericana laboratory in Brazil for testing using a 3D X-Ray Transmission (XRT) Sensor Sorter System. If the results are conclusive, Genius may consider bulk testing of the EMP mineralization at Volcan Compañia Minera S.A.A. Cerro de Pasco installations where new sorters were commissioned. A minimum processing of 10,000 t is envisaged.

This Technical Report was built upon the assumption Genius would carry out the construction of mining facilities including a processing plant and an acid water treatment plant. However, an estimated 40 Mt of mineralized material could be processed at nearby concentrators Paragsha/San Expedito which are currently under care maintenance. The facilities are currently unused, so Genius should investigate the possibility of establishing a tolling agreement with Volcan Compañia Minera S.A.A. or to possibly buyout of all unused Cerro de Pasco assets and facilities after careful inspection.

Another recommendation relates to the conciliation of the metallurgical testing and recovery method performed by CDPR in 2012 with the proposed recovery method and infrastructures build-up detailed in the CICA Ingenieros report. The recommended circuits for beneficiating the Cu-Pb-Zn-Ag mineralization for both the EMP and QT seem to differ significantly or address different stages of processing (ex: cyanidation). Integration of the proposed circuits is required and can be addressed by mining engineers and metallurgists.

Once a sound Mineral Resources Estimates are produced, a Pre-Feasibility Study (PFS) should be completed. The study would handle the details of the economic analysis, market studies and contracts, capital and operating costs of the Excelsior project. The PFS is expected to cost $CAD290, 000 before tax.

26.1- Budget Breakdown

Genius properties Ltd. (EMP) (Phase I)	
DRILLING EMP (Twin RC holes)	
600 m X $100m	$60,000
Mobilisation-demobilisation	$2,000
Drill moving, water set-up	$1,000
Permits	$1,000
Analyses: 600 samples X $45/sample	$27,000
Supervision and logging: 1 geologist : $500/day X 20 days	$10,000
2 technicians: $125/day X 20 days	$5,000
Survey instrument, sample bags, etc..	$5,000
Shipping	$15,000
PIT RE-SAMPLING EMP	
1 geologist :$500/day X 10 days	$5,000
1 technician: $125/day X 10 days	$1,250
Analyses: 50 samples X 45/sample	$2,250
Equipment: Back hoe, saw, water hoses, sample bags etc..	$3,000
DENSITY MEASUREMENT EMP MATERIAL	
100 samples x $20/sample	$2,000
EVALUATION AND RECOMMENDATIONS ON METALLURGY	
MINING METHOD, INFRASTRUCTURE, MINE CLOSURE AND	
ENVIRONMENTAL ISSUES	$50,000
GOLOGICAL REPORT	
Mineral Resources estimate report (EMP): 43-101 Technical Report	$25,000
LODGING AND MEALS	$10,000
EQUIPMENT	
Truck location, ATV	$5,000
Maps, stationary, etc..	$5,000
Subtotal	$234,500
Contingency (10%)	$23,450
Total before taxes	$257,950
GST (5%)	$12,898
Grand Total	$270,848

26.1- Budget Breakdown (Ctnd.)

Genius properties Ltd. (EMP) (Phase II)	
BULK SAMPLE TESTING SORTER (EMP MATERIAL)	
Steiner Transmission (XRT) Sensor Sorter System	$40,000
10,000 t TESTING SORTER (EMP MATERIAL)	
Volcan Compania Minera S.A.A. Sensor Sorter System	$100,000
PRE-FAISABILITY STUDY (PFS); 43-101 TECHNICAL REPORT	$150,000
Total before taxes	$290,000
GST (5%)	$14,500
Grand Total	$304,500

ITEM 27 REFERENCES

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Appendix 1. UTM coordinates of the El Metalurgista Concession using the PSAD56 and WGS84 datum.

Vertex	PSAD 56		WGS84	
	Easting	**Norting**	**Easting**	**Northing**
1	361206	8819560	360981	8819194
2	361575	8819404	361349	8819038
3	360641	8817198	360415	8816831
4	360273	8817349	360047	8816983

Zone 18 S

Appendix 2

RODRIGO,
ELIAS
& MEDRANO
ABOGADOS

Av. San Felipe 758.
Lima 11. Perú.
Tel: [511] 619-1900
Fax [511] 619-1919
www.estudiorodrigo.com

6 June 2017

Messrs.
GENIUS PROPERTIES LTD.
Canada.-

Dear Sirs,

Mr. Steven Allen Zadka, chairman of the board of CERRO DE PASCO RESOURCES S.A. (the "Company"), has requested us to provide a legal opinion regarding "EL METALURGISTA" concession (the "Concession").

As instructed by Mr. Zadka, the following matters will be covered in this legal opinion: (i) a description of the Concession; (ii) an identification of the current holder of the Concession; (iii) the period of validity of the Concession and the conditions for its renewal; (iv) the possibility pursuant to Peruvian legislation to transfer mining titles and conditions of such transfer; and, (v) any other significant and relevant provisions of the mining legislation.

Kindly note that, for the purposes hereof, we have relied exclusively on the following documents:

- The computerized system made available to the public by the Mining and Metallurgic Geology Institute ("INGEMMET").[1][2]
- The 2017 Official Mining Ledger prepared and published by INGEMMET.[3]
- The Peruvian Public Registry file of the Concession (available on-line).
- The private and public deed of the "Transfer Option and Mining Assignment Agreement" executed in connection to the Concession by the Company and Mr. Victor Ramón Justo Eduardo Freundt Orihuela dated 14 February 2017 and 23 February 2017, respectively (the "Agreement").

After reviewing the abovementioned documents, we are of the opinion that:

[1] INGEMMET is the Peruvian governmental agency in charge of granting mining concession titles and collecting validity fees and penalties.

[2] The procedure followed for obtaining the Concession's title is evidenced in this system, as well as the status of payment of the validity fees and the penalties for not reaching the minimum production levels set forth by law, when applicable.

[3] The Official Mining Ledger is prepared each year by INGEMMET and includes all valid mining properties as of December 31 of the previous year (in this case, 2016).

1. Description of the Concession

1.1. Location: The Concession is located in the Simon Bolivar district, Pasco province and Pasco region.

1.2. Area: 96 ha.

1.3. Title: The Concession has achieved the granting of a concession title that is firm and definitive. Such title was granted through Directorial Resolution No. 223-89-EM-DGM/DCM (attached hereto as Annex 1). It is important to mention that the Concession was granted under Legislative Decree No. 109, the former Peruvian Mining Law, under which the "*Concesiones de Desmontes, Relaves y Escoriales*" were, among other concessions, considered as Mining Concessions.

Legislative Decree No. 109 was partially repealed and amended by Legislative Decree No. 708 (Law on the Promotion of Investments in Mining) on November 1991. Among the main changes made to Legislative Decree No. 109 was the removal of the concept of "*Concesiones de Desmontes, Relaves y Escoriales*" of Peruvian mining regulations.

However, under Peruvian law -unless specifically established otherwise- the rights granted under the provisions of a repealed law remain valid as long as the title under which they were granted remains valid. Further note that, given that "*Concesiones de Desmontes, Relaves y Escoriales*" are no longer regulated in the Peruvian Mining Law, all the rights and obligations that apply to mining concessions' titleholders are also applicable to the Concession.

Thus, any reference in this document to a "mining concession's titleholder's rights or obligations" should be understood also as a reference to the rights and obligations of the holder of the Concession.

The Concession's title allows its holder to carry out exploitation activities within its area, subject to obtaining other complementary required permits and authorizations as mandated by Law (and further explained in section 5 herein). The Concession was granted for the exploitation of the metallic substances.

Note that under Peruvian mining regulations, a mining concession (and, thus, the Concession) is independent from the surface land on which it is located.[4] Therefore, among other requirements, prior to the beginning of any mining activity, the Company shall reach an agreement with the owner on the surface land where the Concession is located (which, pursuant to the information we have been provided with, has not yet been fulfilled).

1.4. Good standing: The Concession is in good standing (this has been confirmed with the information obtained from INGEMMET).

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[4] A mining concession is a solid of indefinite depth, limited by vertical plains corresponding to the sides of a square, rectangle or close polygonal, whose vertexes are set in Universal Transversal Mercator (UTM) coordinates.

1.5. Recording with the Public Registry: As per the information obtained from the Public Registry, the Concession is recorded in file No. 20002396 of the Mining Rights' Registry of Huancayo.

1.6. Registered encumbrances: As per the information obtained from the Public Registry, the Concession is free and clear of recorded encumbrances (including securities on movable goods)[5].

1.7. Overlapping: Pursuant to the information obtained from INGEMMET, the Concession overlaps with:

1.7.1. The Cerro de Pasco urban area.

1.7.2. The Cerro de Pasco Non-Admission of Claims Area (*Area de No Admisión de Petitorios*). This Non-Admission of Claims Area does not affect the rights and obligations arising from the Concession (which title was granted before said area was established), but impedes any individual or entity from submitting a mining claim within such area.

1.7.3. The "PARAGSHA-OCROYOC" beneficiation concession.[6]The operations currently being developed in said beneficiation concession cannot be affected by the holder of the Concession.

Depending on the characteristic of the Project to be developed, this overlapping may have an impact that is beyond the scope of this report to asses.

1.8. Mining environmental liabilities: We have confirmed that there are mining environmental liabilities located within the area of the Concession. Depending on the characteristic of the Project to be developed, these environmental liabilities may have an impact that is beyond the scope of this report to asses.

2. Current holder of the Concession

According to the information obtained from the Public Registry, the registered titleholder of the Concession is Victor Ramón Justo Eduardo Freundt Orihuela. The Company is currently not recorded as the mining assignee of the Concession. Note, nonetheless, that the Agreement has already been submitted for registration.

Pursuant to Peruvian law, in order for any acts or agreements related to mining properties (such as the Agreement) to have enforceability before the State and third parties, they must be recorded with the Public Registry. The Agreement has been formalized in a public deed, but has not been recorded yet. Thus, until its

5 A specific Public Registry for the recording of the so-called *"securities on movable assets"* exists in Peru. Such securities have come to substitute, among other securities, the formerly called "mining pledges".

6 Which titleholders is EMPRESA ADMINISTRADORA CERRO S.A.C.

registration, the Agreement (though valid and enforceable by and against the Company) shall not be formally enforceable before the State and third parties.

It is, therefore, of the outmost importance to complete the registration proceeding of the Agreement (which, as explained, is currently ongoing and should be finalized within the next few weeks).

3. Validity term of the Concession

Strictly speaking, under Peruvian mining regulations, mining concessions do not have a validity period (provided that all legal obligations –such as payment of validity fees and production penalties– are complied with). Thus, there are no conditions for their renewal.

However, it should be noted that under the new minimum production regime (which will be in force on 2019) a mining concession (which includes the Concession) could be cancelled after 30 years, counted, in principle, as from the issuance of the mining concession title, if minimum production is not reached within such term. Please refer to section 5 herein for a further explanation on this new regime.

In the case of the Concession (because it was obtained before 31 December 2008), the abovementioned 30 year term shall be counted as from 2008 (as set forth in Article 2 of Supreme Decree 011-2017-EM).

In addition, holders of mining concessions must comply with several obligations established in Peruvian law (these obligations are also applicable to the Concession). Most of these obligations are applicable when exploration, construction or mining is performed. Nevertheless, there are two (2) main obligations under Peruvian law that shall be fulfilled by all the holders of concessions, which non-compliance shall result in the extinction of the respective concession.

Although these obligations will be further explained in section 5 below, given their significance and the scope of our review we have reviewed their fulfillment for the purposes of this section:

3.1. Validity fees:[7] Save for those corresponding to 2017, validity fees have been paid for all the years elapsed as from the Concession's filing.

3.2. Production penalties:[8] Save for those corresponding to 2016 and 2017, all penalties for not reaching the minimum production levels set forth by Peruvian law have been paid with respect to the Concession.

Non-compliance with paying the validity fees and/or production penalties for two (2) consecutive years shall result in the extinction of the respective concession.[9]

7 US$ 287.22, for the Concession.

8 US$ 1,914.78, for the Concession.

9 Payment must be done before 30 June of each year.

CARLOS GUTIERREZ GUARDIA
Jefe de la División Legal

REPUBLICA DEL PERU

189 / ciento ochentinueve

Resolución Directoral N° 283-89-EM-DGM/DCM.

Lima, 03 JUL. 1989

VISTO : El Expediente No. 515439, del derecho minero "EL META LURGISTA", por explotación, formulado el 9 de marzo 1972 por don Víctor Freundt Orihuela, con 120 hectáreas de extensión de un terreno mineralizado que contiene relaves de plomo, plata, cobre, zinc y otros minerales, ubicado en el paraje Quiulacocha, Shuco, Champamarca y otros, distrito Simon Bolivar, provincia y departamento Pasco, Jurisdicción de la Jefatura Regional de Minería de Cerro de Pasco; amparado por Auto Jefatural su fecha 11 de junio 1985 de fs. 121, fue delimitado el 25 de julio 1985 con sólo 96 hectáreas a que quedó reducido el pedimento a solicitud del interesado, según acta de fs. - 161-162 e informe pericial de fs. 163 a 176, operación pericial aprobada por Resolución Jefatural su fecha 9 de mayo 1988 de fs. 177.

CONSIDERANDO :

Que, la tramitación del presente derecho minero se ha efectuado con sujeción al procedimiento ordinario que para el efecto establece la Ley General de Minería - Decreto Legislativo 109 y su Reglamento; y, no existiendo oposición alguna sobre el precitado interés minero.

Que, estando al informe de la División Técnica de fs. 187, - opinión de la División Legal; y, de conformidad con el Inc. 1) Art. 187 de la Ley General de Minería.

SE RESUELVE :

1.- Aprobar el título de la concesión de relaves por explotación "EL METALURGISTA" con NOVENTISEIS (96) HECTAREAS de extensión de la Jefatura Regional de Minería de Cerro de Pasco; y, otorgar a favor de don Víctor Freundt Orihuela, con la obligación de pagar el Canon Territorial a partir del primero de enero de mil novecientos noventa.

2.- Transcribir la presente Resolución, consentida que sea, - al Registro Público de Minería para su inscripción; luego, remitir el expediente al Padrón Minero para su empadronamiento; y hecho, al Archivo Central para los fines de Ley.

3.- Publicar la libre denunciabilidad de las veinticuatro - (24) hectáreas resultantes de la reducción.

Regístrese y comuníquese,

Transcrito :
- Registro Público de Minería
- Víctor Freundt Orihuela
  Comandante O'Donovan 115
  LIMA 18.-

SRS/cmo.

Dr. TOMAS HUGO MEZA PONTE
Director de Concesiones Mineras

OFICINA DE TRAMITE DOCUMENTARIO
NOTIFICACION PERSONAL

Recibí Conforme: RD. 243-89-EM. DGM-DGM.

Interesado: Victor Freundt O.

Documento Identidad L.E. 07818136

Firma: [signature]

Fecha y hora: 03-07-89

Firma del Notificador: [signature]

La Dirección de Trámite Documentario
del Ministerio de Energía y Minas

CERTIFICA: 0 3 JUL. 1989

Que la Resolución de la DGM. de ....
recaída en la tramitación del Expediente:
El METALUR GISTA
Cerro de Pasco
de la JRM ....
no ha sido recurrida, quedando en consecuencia Consentida y Ejecutoriada en todos sus efectos.

Lima, 25 JUL. 1989

[signature]

Dr. RAUL ... ECHARRI SOTA
Director de la Oficina de Trámite Documentario

PADRON MINERO
CONCESIONES DE EXPLOTACION
Empadronada en la fecha bajo el No. 4443
Lima, 24 AGO. 1989

[signature]
Jefe Sección Padrón Minero

CATASTRO MINERO
CONCESION El Metalurgista
REGISTRADA EL 23. VIII. 89
RESPONSABLE Topog. Jorge Quispe.

CATASTRO MINERO
CONCESION
REGISTRADA EL
RESPONSABLE