Technical Report

On The

Huachocolpa Uno Mine Property, Huancavelica Province, Peru

WGS84 UTM Zone 18: 501,780 m E; 8,556,217 m N
LATITUDE 13°04' S, LONGITUDE 74°59' W

Prepared for:

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SGS Project # 20467-04

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1 SUMMARY

1.1 Introduction

SGS Geological Services Inc. (“SGS”) was contracted by Endeavour Silver Corp. (“Endeavour” or the "Company") to prepare a National Instrument 43-101 ("NI 43-101") Technical Report for the Huachocolpa Uno Mine (“Huachocolpa Uno” or the “Property”) located in the districts of Huachocolpa and Santa Ana, in the province and department of Huancavelica, 490 km southeast of Lima, Peru. Huachocolpa Uno is currently an operating mine.

Endeavour has announce that it has entered into a definitive share purchase agreement (the “Agreement”) to acquire all of the outstanding shares of Compañia Minera Kolpa S.A., (“Kolpa”) and its main asset the Huachocolpa Uno Mine, from subsidiaries of its shareholders Arias Resource Capital Management and Grupo Raffo (collectively, the “Shareholders”) in exchange for total consideration of $145 million comprised of $80 million cash and $65 million payable in Endeavour shares (the “Transaction”). In addition, as part of the Transaction, Endeavour has agreed to pay up to an additional $10 million in contingent payments upon the occurrence of certain events and Endeavour will also assume approximately $20 million in net debt currently held by Kolpa.

The cash consideration will be funded through a combination of a new copper streaming agreement on copper produced from Kolpa (“Copper Stream”) with Versamet Royalties Inc. (“Versamet”), a bought deal financing consisting of subscription receipts for common shares of the Company issuable upon closing of the Transaction (the “Subscription Receipts Financing”) and cash on hand.

Endeavour is headquartered in Vancouver, British Columbia (1130 – 609 Granville Street Vancouver, B.C., Canada, V7Y 1G5) with management offices in Leon, Mexico and Durango, Mexico. The Company’s common shares are listed on the Toronto Stock Exchange (TSX: EDR) and the New York Stock Exchange (NYSE: EXK).

The Company is engaged in silver mining in Mexico and related activities including property acquisition, exploration, development, mineral extraction, processing, refining and reclamation. The Company is also engaged in exploration activities in Chile and Nevada, USA. The Company’s operations are comprised of the Guanaceví and Bolañitos mines located in Durango, Mexico and Guanajuato, Mexico respectively. The Company is developing the Terronera project located in Jalisco State, Mexico (the “Terronera Project”). The Company is advancing several other exploration projects in order to achieve its goal to become a premier senior producer in the silver mining sector.

The current technical report is authored by Allan Armitage, Ph.D., P. Geo., (“Armitage”), Ben Eggers, MAIG, P.Geo. (“Eggers”), and Henri Gouin, P.Eng. (“Gouin”) of SGS, and Dale Mah, P.Geo. (“Mah”) and Donald Gray, SME-RM (“Gray”) of (collectively, the “Authors”). Armitage, Eggers and Gouin are independent Qualified Persons as defined by NI 43-101. Mah and Gray are qualified person as defined by NI 43-101. However, they are not independent of the Company. Mah is Vice President, Corporate Development for Endeavour and Gray is Chief Operating Officer for Endeavour.

The current Technical Report complies with all disclosure requirements set out in the NI 43-101 Standards of Disclosure for Mineral Projects. The current Technical Report will be used by Endeavour in fulfillment of their continuing disclosure requirements under Canadian securities laws, including National Instrument 43-101 – Standards of Disclosure for Mineral Projects. This Technical Report is written in support of the share purchase agreement to acquire all of the outstanding shares of Kolpa and its main asset the Huachocolpa Uno Mine.

1.2 Property Description, Location, Access, and Physiography

The Property is located in Comihuasa, Huachocolpa District, Huancavelica Province, Huancavelica Department of Peru, approximately 490 km southeast of Lima and 74 km south of Huancavelica City. The approximate coordinates of the Mine are 501,780m E and 8,556,217m N, using the UTM_WGS84 datum, or Latitude 13°04' S and Longitude 74°59' W.

The current Property includes 144 mining rights consisting of: 1 beneficiation concession, 4 mining claims and 139 mining concessions. Kolpa wholly owns 100% in the mining rights. All Mining rights are in good standing as of the effective date of this report. The total effective area of the mining concessions is 25,176.85 ha, and the total effective area of the beneficiation concession is 366.23 ha. A total of 63 of the mining rights are part of the Economic Administrative Unit (EAU) "Huachocolpa Uno". The mining rights are in the districts of Huachocolpa and Santa Ana, provinces of Huancavelica and Castrovirreyna, respectively, and department of Huancavelica, Peru.

The current access from Lima is via the asphalted Carretera Central to Huancayo (302 km, 7 hours) and then via an asphalted road to Huancavelica (143 km, 3.5 hours), and finally from Huancavelica to Huachocolpa Uno (74 km, 2.5 hours).

An alternative from Lima is via the highway Panamericana Sur to San Clemente (227 km, 2.5 hours) and then via an asphalted road to Chonta (249 km, 5 hours), and finally from Chonta to Huachocolpa Uno (19 km, 1 hour).

The airport "Alfredo Mendivil Duarte" National Airport) is located nearest to the mine in Ayacucho in the department of Ayacucho, approximately 219 km to the east.

Ayacucho is a department of the Republic of Peru located in the south-central part of the country, in the Andean region, bordering Junín to the north, Cuzco to the northeast, Apurímac to the east, Arequipa to the south, Ica to the west and northwest with Huancavelica. With 14 inhabitants/km², it is the seventh least densely populated department, ahead of Pasco, Moquegua, Amazonas, Ucayali, Loreto and Madre de Dios. The Ayacucho department was founded on April 25, 1822.

With provinces on both sides of the Andes Mountain range (east and west), Ayacucho has an area of 43.8 thousand km², which in terms of extension is similar to that of Denmark or Estonia, and a population in 2007 of 613 thousand inhabitants.

Ayacucho (founded as San Juan de la Frontera de Huamanga on April 25, 1540, and called Huamanga until February 15, 1825) is a Peruvian city, is the capital of the Ayacucho district, of the province of Huamanga and of the department of Ayacucho. It is located on the eastern slope of the Andes Mountain range at an altitude of 2761 m above sea level and is characterized by a temperate and dry climate, with sunshine year-round. It has a total area of 100.37 km² and a total population (2020) of 228,427 inhabitants, with a density of 60 inhabitants/km².

Kolpa's operation includes the following main facilities.

- Approximately, 1,800 tonnes per day (tpd) underground mine
- Operational accesses
- Offices and warehouses
- Accommodations
- Tailings Deposit "D"
- Maintenance workshop
- Power transmission line, high voltage, 60 kV
- Kolpa's 60 kV to 22.9 kV electrical substation.

- Water Treatment Plant (NCD) and Mine Water Treatment Plant
- Caudalosa Drinking Water Treatment Plant
- Comihuasa Drinking Water Treatment Plant
- Huachocolpa Uno processing stockpile platform
- Huachocolpa Uno processing plant with capacity of approximately 1,800 tpd
- Rublo waste dump

Huachocolpa Uno is in the eastern flank of the Western Cordillera of the Andes, or more precisely, in the inter-cordillera zone of the central Andes of Peru at an average elevation of 4,400 masl. The area is characterized by hillsides with steep to extremely steep slopes with frequent rocky outcrops, and colluvial or colluvial-alluvial deposits at the bottom of the slopes. Between the hillsides, there are flat-lying or sloping valley floor surfaces, formed by fluvial-glacial and morainic deposits.

The vegetation is present in lowlands with species such as Stipa, Festuca, Calamagrostis, Astragalus, Dystichia, and Scirpus with poor drainage and permanently wet soil formations (bofedales) with low potential for agricultural use, but generally used for grazing Andean camelids, sheep, and horses.

1.3 History

The first documented mining activity in the Huachocolpa District dates back to the chronicler Marco Jiménez de la Espada, 1586, who mentioned the Huachocolpa mine in Angaraes, with silver mineralization.

In the year 2000, the Raffo Group consolidated full ownership of the "Huachocolpa Uno" mining unit, including the administration and operation.

In 2016, the private equity fund Arias Resource Capital Management (ARCM), became a shareholder of Kolpa with an investment program of more than US$ 100 million. ARCM provided valuable experience and technical and financial skills specialized in capitalization and value creation associated with the responsible and sustainable operation of mining assets.

ARCM is a private equity fund that invests in mining companies globally with a special focus on Latin America. ARCM is a non-public fund registered with the U.S. Securities and Exchange Commission (SEC). Among the investments made by ARCM are: Largo Inc. and Sierra Metals Inc. Such information can be found in Canada's SEDI system.

In December 2016, Compañía Minera Kolpa S.A. acquired from Compañía de Minas Buenaventura S.A.A. fifteen mining concessions of the “Recuperada Mining Unit”, which have geological resources covering an area of 2,674.71 hectares. Through this agreement, Kolpa acquired 100% title to those mining concessions, including the integral and accessory parts, and everything that in fact and by law corresponds or could correspond to them, without any reservation or limitation, and without any additional payment for these and other concepts other than those established in the transfer agreement. (Source: second clause of the transfer contract dated December 29, 2016).

Along with the acquisition of those mining concessions from Compañía de Minas Buenaventura S.A.A. (which resulted in Kolpa’s acquisition of the Patara and Escopeta projects), Kolpa received relevant geological and other technical information, such as samplings of underground and surface channels data, diamond drill hole results, IP/resistivity geophysical study and geological mapping for both projects.

Kolpa has operated the Huachocolpa Mining Unit since 2015 with two production zones differentiated by mining method: Underground mine in the Bienaventurada mine and Yen open pit. Additionally, the operation has two new zones named Chonta/Escopeta that will contribute to production in the following years.

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Between 2012 to 2024, approximately 5.8 million tonnes of mineralization have been processed at the Huachocolpa Processing Plant.

1.3.1 Historical Mineral Resource Estimates

The MREs presented below were prepared for Kolpa and are considered historical in nature with respect to Endeavour. A qualified person has not done sufficient work to classify the historical resource estimates as current mineral resources or reserves and Endeavour is not treating the historical resource estimates presented here as current mineral resources or reserves. There are no current MREs for the Property. The historical estimates were prepared prior to Endeavour's purchase agreement with Kolpa. Additional diamond drilling, underground channel sampling and mining has been conducted on the Property since the last historical MRE was completed. To upgrade historical estimates to current MREs, Endeavour will need to review all drill data and underground channel sampling completed to date, and revised all geological models, resource models and structural models as well as revised economic parameters for resource reporting. As well, Endeavour is planning on completing additional drilling on the Property before estimating new MREs.

The Property was the subject of an internal technical report in 2023 titled Huachocolpa Uno Preliminary Economic Assessment Project, Project Number 0094 which had an effective date of 31 March 2023 and a report date of 7 May 2024. The report was prepared for Kolpa. The technical report included open pit and underground MREs for 9 deposits on the Property, including Bienaventurada, EM Chonta, Tajo Yen, Escondida, Escopeta, Chonta, Teresita, Yen NE and Rublo. The combined MRE included a Measured + Indicated Mineral Resource of 5 Mt at 2.84 oz/t Ag, 3.07% Pb, 3.28% Zn and 0.24% Cu. In addition to the Measured + Indicated Mineral Resources, an Inferred Mineral Resource of 4.2 Mt at 3.16 oz/t Ag, 3.43% Pb, 3.25% Zn and 0.21% Cu is accounted for. The MRE was reported using all material (mineralization and waste) within resource shapes generated in MSO, and using geological criteria, resources were classified by mining method. NSR cut-off values of US$34.20/t for underground methods and US$23.30/t for Yen open cast resources, were used. Mineral resources are estimated using zinc price of US$1.59/lb, lead price of US$1.16/lb, copper price of US$5.36/lb, and silver price of US$31.20/oz. Metallurgical recoveries are based on recovery curves derived from historical processing data.

The MRE was revised in October 2024 (effective August 31, 2024) using an updated DDH and underground channel database (Table 1-1) and the same estimation methodology. The updated MRE included open pit and underground MREs for 11 deposits on the Property, including Bienaventurada, EM Poderosa, Tajo Yen, Escondida, Escopeta, Chonta, Teresita, Yen NE, Rublo, Coricancha and Pepito. Similar to the previous historical MRE, NSR cut-off values of US$34.20/t for underground methods and US$23.30/t for Yen open cast resources, were used.

Table 1-1 Summary of Historical Mineral Resources – Huachocolpa Uno, October 2024 (effective August 31, 2024)

		Grade				Contained Metal			
Category	**Tonnage**	**Ag**	**Pb**	**Zn**	**Cu**	**Ag**	**Pb**	**Zn**	**Cu**
	(Mt)	(oz/t)	(%)	(%)	(%)	(Moz)	(Kt)	(Kt)	(Kt)
Measured	2.8	4.07	3.99	3.83	0.33	11.3	110.8	106.3	9.2
Indicated	3.5	2.92	3.06	3.07	0.24	10.1	105.7	106.1	8.3
Measured & indicated	**6.2**	**3.43**	**3.47**	**3.41**	**0.28**	**21.4**	**216.5**	**212.4**	**17.5**
Inferred	5.0	2.90	3.02	3.37	0.24	14.6	152.3	170.0	12.1

- The MRE was performed using MineSight (MS) and Leapfrog. 3D vein shells were constructed in Leapfrog Geo, using geological sections, assays results (underground channels and DDH's), lithological interpretation, underground mapping, and structural data. To determine the length of composites samples by domain, the statistic mode of the sample length was used. To correct outliers, the technique of dimensioning from Cumulative Probability Plot (CPP) graphs was applied.
- Rotated block models of 1 x 3 x 3m were used for the Bienaventurada, Escopeta, Escondida, Teresita, Rublo, Yen NE and Chonta veins coinciding with the vein direction. For Yen Open Cast, unrotated block model of size 1 x 1 x 1 m was used. The reported grades were estimated using Ordinary Kriging (OK). The block models were validated using industry standard techniques. The resource classification criteria include the distance to the nearest drill hole and the number of samples.
- High-grade assays were capped for Ag, Cu, Pb and Zn to limit the influence of a small number of outliers located in the upper tail of the grade distributions. The raw assays were limited prior to compositing. CPP plots commonly show outliers in the 98^{th} to 99^{th} percentile.
- The Ag, Cu, Pb and Zn grades were estimated using ordinary kriging (OK) in all block models. Inverse distance weighting (IDW) and Nearest neighbour (NN) methodologies were used for estimation comparison and validation. The estimation was performed in four passes, the first one equal to 100% of the variogram range, the second equal to 150% of the variogram range, the third equal to 200% the variogram range, the fourth equal to 1000% variogram range.
- In the block model, most of the veins were assigned the density value by interpolation by the ID method, while in the other veins that did not have a density measurement, the average density of the total data obtained was used (generally 2.90 to 3.00 9g/cm^3).
- The classification of the MRE is consistent with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) standard definitions for mineral resources and reserves dated May 10, 2014 (CIM definitions, 2014).
- For Bienaventurada Measured was estimated within drilling patterns 20m x 10m x 20m and includes channel sampling at 3m x 6m inside the mining developments levels and sublevels. Indicated was estimated within drilling patterns 40m x 20m x 40m and includes channel sampling at 6m x 12m for the mining development levels. Inferred was estimated with drilling patterns greater than 40m x 20m x 40m and maximum search distances at 70m x 46m x 13m in Bienaventurada.
- For Escondida the drilling pattern and the search distances were the same; however, Escondida did not have channel samples, but only drilling information. Chonta, Escopeta and Rublo were mostly explored by development and channel sampling; no drilling data was available. Measured was defined by development drifts inside the deposit, with channel samples collected 2m x 1m x 6m (levels and sublevels). Indicated was defined by development drifts inside the deposit, with channel samples collected 2m x 1m x 12m (levels). Inferred was estimated with the same channels as Indicated resource with extension search distances 91m x 50m x 10m.

1.4 Geology and Mineralization

The Huachocolpa mining district is located on the eastern part of the Cordillera Occidental Mountain range and has a varied geomorphology. Altitudes vary between 4,200 masl and 5,000 masl and are characterized by rugged relief such as mountains, cliffs, and moderate to gentle slopes.

The Andean Cordillera developed as a result of the subduction of the Nazca oceanic plate that produced a compression from east-northeast to west-southwest, which led to a complex sequence of folds and thrusts that stretches along the west coast of Peru. Mountain development initiated in the late Triassic and continues to the present day.
Regionally, the lithological sequences consist of a basement of moderately to strongly folded strata of Paleozoic age, such as pelitic sediments of the Excelsior Group (Devonian) to molasic sedimentation of the Mitu Group (Upper Permian); proceeding to Mesozoic sequences such as marine sedimentary sequences

of the Pucara Group (Triassic-Jurassic) to continental and marine facies deposition of the Goyllarisquizga Group and the Chulec and Pariatambo formations, respectively; and, finally, affecting the early and middle Tertiary sequences which are unconformably overlain by late Tertiary volcanic and sedimentary rocks.

In the Huachocolpa area, the late Tertiary rocks are evidence of an important volcanic and plutonic belt and consist of large volumes of andesite, dacite and rhyodacite type composition that form an interpenetrated complex of domes, plug domes, dikes, flows and composite volcanoes. The intrusive rocks of the belt are represented by bodies such as the Cordillera Blanca batholith in northern Peru. In many locations in the Huachocolpa District the middle and late Miocene and Pliocene volcanic rocks are moderately to strongly propylitized and are cut by a broadly distributed system of Pb-Zn-Ag veins, generally steeply dipping to the east-west, west-northwest or east-northeast. The domes, flows, and breccias also are cut by a distinctive suite of discontinuous and somewhat irregular north-south-trending dacite-rhyodacite dikes and plug domes. In contrast to the rocks that they intrude these dikes and domes are virtually unaltered.

Huachocolpa is sited within the Central Cordillera of Peru along the central part in the recognized Miocene Polymetallic Mineral Belt, including deposits like Yauricocha, Corihuarmi, Marta, Pucajaja, Palkawanka, Julcani, Caudalosa Grande and El Milagro.

The mineralized Huachocolpa Uno deposit is on a sequence of Cenozoic volcanic rocks, belonging to the Huachocolpa Group, locally two units are recognized. At Huachocolpa Uno, Mesozoic sedimentary rocks, Cenozoic igneous rocks, and Tertiary volcano-sedimentary sequences, travertine and Quaternary deposits are identified.

Local structural context predominantly includes sub-vertical structures resulting from compressive stresses relating to the Andean Orogeny. Amongst these we identify the Chonta fault, the Huachocolpa fault, and several other local minor lineaments. Structural controls on mineralization result in well-developed arrays of ENE to NE trending mineralized vein-sets (such as the Bienaventurada vein-set structures). The structural pattern can repeat and extend over other nearby sets of differently oriented structures, resulting in adjoining sequences over-lapping so as to produce a form of `structural pairing. Such structural settings are observed hosting polymetallic mineralization.

During the Tertiary Andean Orogeny Quechua III Stage (4th and final phase), volcanic centers formed, and late minor intrusions occurred, which favored the occurrence of mesothermal to epithermal mineralization, characterized by argillic alteration aureoles.

At Huachocolpa Uno, hydrothermal alteration has been identified adjacent to the mineralized structures from centimeter up to one-meter-wide scale. Argillization, occurs in hypogene and supergene types where hypogene argillization is characterized by the assemblage of feldspars pervasively substituted by clay minerals, especially within the matrix. Silicification, with quartz replacing feldspars, silicification occurs mainly in the Caudalosa 1, Caudalosa 2, Esperanza, Marisol, and Diana vein systems.

Phyllic with a quartz-sericite and potassic alteration assemblage, with variable intensities of strong, moderate, and weak and irregularly distributed throughout the mine area, mainly in association with the Bienaventurada vein. Propylitization, with an epidote-chlorite-pyrite alteration assemblage, mainly observed in the slightly altered areas of the host volcanic rocks.

The above represent the styles of hydrothermal alteration identified in the Bienaventurada and Yen zones, as well as in all the mineralized zones of Huachocolpa Uno.

Regionally, Huachocolpa Uno is localized in the Metallogenic Belt of Central Peru into the Western Polymetallic Sub-province, with more than 150 mining projects with possibilities of discovering Ag-Pb-Zn-Cu-(Au) mineralization. In addition, Huachocolpa Uno is a Polymetallic Epithermal Low Sulfidation deposit, with vetiform style of mineralization occurring as fracture filling by hydrothermal solutions. Geological characteristics (host rock, metallic contents, hydrothermal alterations) are similar to neighboring mineralized deposits such as Recuperada, San Genaro, Caudalosa Grande, El Palomo, Dorita, amongst others.

Likewise, Huachocolpa Uno contains several systems and multiple structures with different styles of mineralization, including Polymetallic Low Sulfidation Epithermal (LS), Precious Au- Ag LS Epithermal and possibilities of Precious Au-Ag High Sulfidation Epithermal (HS) and Au- Ag-(Cu) Skarn.

The Bienaventurada Vein represents a brecciated structure with mineralization occurring in the form of massive bands, patches, veins, blebs and disseminations composed principally of sphalerite, galena and tetrahedrite. The mineralization generally forms a matrix encompassing sub-angular breccia fragments composed of altered host volcanic rock.

The economic mineralization is composed of filler sphalerite, galena, chalcopyrite and gray copper in the form of massive, crustified, irregular bands, nuclei and disseminations. The gangue comprises of milky quartz, hyaline quartz, kaolin, pyrite, realgar, orpiment, barite, calcite, stibnite and gypsum. Clasts and inclusions of silicified and argilized rock are observed within the mineralized zones. Mineragraphic studies and scanning electron microscope determine the presence of minerals such as: marcasite, pyrrhotite, melnikovite, varieties of lead sulfosalts (bournonite, seligmanite, dufrenoysite, jordanite, gratonite), gray copper (thenantite, tetrahedrite, freibergite, argentotennantite), silver sulfosalts, etc. Microtextures that stand out the most are those of replacement followed by filler, simultaneous growth and coliform indicators.

The host rock is a porphyritic andesitic volcanic, with plagioclase phenocrysts, selectively altered to clay, in some sectors with phyllic alteration and weak to moderate argillic alteration observed adjacent to the phyllic zones. According to microscopic studies, it would be a porphyritic volcanic rock that has undergone a process of hydrothermal alteration. They have generally been altered by hot fluids passing through them, with which the polymetallic mineralization is associated. Argillic alteration, followed to a lesser extent by silicification, predominates on the surface.

Inside the mine there are halos of hypogene alteration made up of sericitization, argilization, silicification and mild potassic-adularia that are distributed indistinctly throughout the mine. Propyllitic alteration occurs in the weakly altered host rocks.

A selected sample was taken in TJ 856 of the Bienaventurada Este Techo 1 vein. This vein is an offshoot (or splay) off the Bienaventurada vein. The sample was collected for the study of fluid inclusions to determine the continuity of the mineralization and to help determine the orientation of mineralized shoots below the elevation 4330 masl. The economic mineralization occurs as: galena, sphalerite (mainly of the blonde blende variety), gray coppers and a lesser proportion of chalcopyrite. Gangue minerals are generally milky quartz in massive compact form filling the available structures; and also, in smaller quantities, hyaline quartz crystallized in small geodes.

The Rublo vein is the master vein in all of the Yen mineralized system. Relative to the rest of the veins, it moved dextrally normal, forming sigmoid or tensional veins like for example: Leticia vein, Fortuna vein, Fortuna Norte vein, Tapada and Tapada Norte vein.

Yen's polymetallic mineralogy is similar across its length with variations in concentration. The hydrothermal fill concentrates massive white quartz and druse quartz, with barite and calcite. The observed mineralization textures of sphalerite, galena, argentiferous galena, chalcopyrite, pyrite, realgar, and orpiment, are massive, banded, stockwork and implosion breccia-like.

Mineralization at Huachocolpa Uno shows general geologic, structural and mineralogical characteristics of low sulfidation epithermal deposits.

1.5 Exploration

Kolpa initiated exploration in 2016. Exploration methods have included geological mapping, surface channel sampling, and geophysics in addition to diamond drilling from surface and underground. Surface mapping programs were completed by Kolpa from 2018 to 2021, with surface geochemical sampling programs completed in 2019 to 2023, and a substantial geophysical program (resistivity, IP, magnetics) was completed in 2018. The Huachocolpa Uno Project has significant exploration potential with multiple exploration targets on the Property, classified as Near Mine, Brownfield, and Greenfield targets.

1.6 Drilling

The Huachocolpa Uno Project drilling database utilized for the estimation of historical resources has been limited to drilling completed between 2001 and 2024 by Compañía Minera Caudalosa S.A. and Compañía Minera Kolpa S.A. Effective December 31, 2024, the Huachocolpa Uno database contains results from over 716 drill holes totaling 187,131.71 m. All drill holes included in this dataset correspond to diamond core drilling methods.

Of the total drilling, over 594 holes were completed from underground workings within the Bienaventurada mine totaling 161,602.31 m, and over 112 holes were completed from surface at the Yen Project totaling 25,529.40 m. Compañía Minera Kolpa S.A. has completed over 556 holes for 153,45.65 m for diamond drilling. Only drilling annual meterage totals are available for 2023 and 2024 and exact drill hole counts are not currently available for these years.

In addition to diamond drilling, a total of 39,971 channel samples totaling 52,621 m were collected from 2004 to 2021. Of these, 38,677 channel samples (51,821 m, 96.8%) were collected at the Bienaventurada mine, 688 channel samples (533 m, 1.7%) were collected at the Chonta mine, 606 channel samples (267 m, 1.5%) were collected at the Escopeta project.

1.7 Mineral Processing and Metallurgical Testing

Metallurgical test work is limited for the Property. However, a process plant has been running successfully on the Property for a number of years. A summary of the processing plant performance since 2016 is provided in Table 1-2. The feed rate has increased since 2020. Concentrate production has accordingly increased.

The current process plant is suitable for continuing operations.

Table 1-2 Processing Plant Historical Record Performance

	2016	2017	2018	2019	2020	2021	2022	2023	2024
Tonnes Processed	283,714	283,445	326,005	400,117	455,564	593,545	631,455	661,535	686,503
Head Grade Ag (opt)	3.39	3.80	3.99	3.40	2.26	2.04	2.66	3.06	3.30
Head Grade Pb (%)	4.21	3.34	3.07	3.60	2.92	2.44	2.85	2.90	3.08
Head Grade Zn (%)	3.91	3.74	3.04	2.48	2.87	2.44	2.02	2.12	2.13
Head Grade Cu (%)	0.45	0.33	0.26	0.27	0.27	0.22	0.18	0.18	0.18
Recovery Ag (%)	81.36	81.40	82.92	90.67	89.21	86.58	85.35	89.14	89.88
Recovery Pb (%)	85.95	86.15	90.13	94.53	91.50	89.60	89.98	92.82	93.79
Recovery Zn (%)	84.85	80.96	81.96	81.40	84.84	82.99	82.15	83.91	85.82
Recovery Cu (%)	54.05	52.73	67.98	63.32	56.23	47.04	33.01	44.33	42.54
Produced Ag (oz)	783,664	853,849	1,070,030	1,237,452	863,159	1,049,111	1,431,962	1,805,663	2,037,053
Produced Pb (tonnes)	10,255	8,065	8,998	13,623	12,158	12,971	16,202	17,825	19,820
Produced Zn (tonnes)	9,415	8,394	8,052	7,943	11,011	12,028	10,488	11,746	12,554
Produced Cu (tonnes)	688	492	602	95	690	608	379	522	518
Produced AgEq (oz)	2,812,087	2,536,298	2,827,071	3,153,182	3,206,687	3,532,924	3,916,593	4,599,018	5,066,852

Note : AgEq Calculated using (Pb tonnes x $1,984 + Zn tonnes x $2,755 + Cu tonnes x $9,369)/$26) + Ag oz

1.8 Mineral Resource Estimate

There are no current Mineral Resource Estimates on the Property

1.9 Mineral Reserve Estimate

There are no current Mineral Reserve Estimates on the Property

1.10 Mining Methods

Kolpa has operated the Huachocolpa Uno mining property since 2015, with two distinct production areas: the Bienaventurada underground mine and the Yen open pit. Average production is approximately 1,200 tpd from underground operations and 300 tpd from the open pit.

Mine production at the Bienaventurada underground mine uses a combination of longhole stoping, with stope heights ranging from 8 to 11 m, and conventional cut-and-fill mining with 2 m vertical cuts. Mechanized equipment is used primarily for mucking material from development headings and stopes. Both methods are backfilled with waste rock generated from development and stoping activities, placed using mechanized equipment. Waste rock from development is sufficient to meet backfill requirements; no material is backhauled from the surface. Current underground operations reach depths of up to 500 m. Mineralization is hauled to surface and transported to the processing plant, located approximately 3 km from the portal.

The Yen open pit is mined using conventional mechanized methods with 15 m^3 or 30-tonne dump trucks. The pit is designed with 5 m high benches, a 45° inter-ramp angle, and 6 m-wide one-way ramps. Two access ramps connect the pit to the processing plant for haulage.

The Property is an operating mine, and production is expected to continue. The mining methods in use are appropriate for sustained operations.

1.11 Recovery Methods

Kolpa conducts exploration, exploitation and beneficiation of polymetallic minerals with high contents of lead, silver, zinc and copper, to produce and market concentrates of copper (Cu), lead (Pb) and zinc (Zn).

New and replacement processing equipment procurement is progressing to expand milling capacity from 1,800 tpd to 2,500 tpd

The following sections describe the 1,800 tpd processing flowsheet and the flowsheet for the expansion to 2,500 tpd, including equipment, key consumables and utilities for the concentrator at the Huachocolpa Unit.

The existing concentrator plant beneficiates the polymetallic mineralized material using a conventional selective flotation process to obtain a bulk concentrate that is subsequently separated into lead-copper and zinc concentrates. The concentrator plant performs the following processes:

- Crushing.
- Grinding and classification to the pulp.
- Bulk flotation Cu-Pb-Ag.
- Separation Pb-Cu.
- Flotation Zn.

- Thickening and filtering of the Zn, Pb and Cu concentrates.
- Classification, transport and tailings disposal.

The current process design is suitable for continued operation on the Property.

1.12 Project Infrastructure

The Huachocolpa Uno Mining Unit has sufficiently sized and maintained infrastructure to conduct mining activities responsibly and sustainably as well as socially and environmentally compliant.

1.12.1 Access and Roads

The Huachocolpa Uno Mining Unit is easily accessible from Lima and any other city on the Peruvian coast, also from the center of the country, through paved national public roads. The last stretch of 19 km is on a departmental road, which the Regional Government maintain in good condition, that reaches the Mining Unit entrance; Kolpa has constructed gravel roads and paved roads to access the Mine, Plant, tailing facilities, waste dumps and other facilities.

1.12.2 Power

The electricity is supplied via the national power grid form major producers through long-term contracts. These long-term supply contracts are being extended until December 2025.

To supply power to the Mining Unit, KOLPA acquired a 60-Kv line that transports energy from Huancavelica to the substation that Kolpa constructed and reduces energy from high voltage 60 Kv to medium voltage in 22.9 Kv. The average monthly electricity consumption of the Mining Unit is 5.5 KWH. The Mine consumes approximately 60% and the Concentrator Plant approximately 40%.

Three backup diesel generators with total 1.5 MW capacity of are maintained and available.

The existing power systems are suitable to meet the requirements for the 2,500 tpd expansion.

1.12.3 Water Supply

The project has four water-use licensesthat include consumption purposes (0.6 L/s and 0.55 L/s), mining (1,034 L/s) and industrial (15 L/s) mainly from springs (Bienaventurada 1, 2 Bienaventurada 3, Chipchilla, Poderosa, Rublo) and the Escalera River. In recent years the water for the mining operations is recirculated from the Centralized Pumping System inside the underground mine, where water infilrating into the operating areas is directed to the treatment sumps located at level NV 4230. In these sumps, the suspended solids are removed, and the pH is adjusted; some water is reused for the equipment operation, and for drilling, dust control and concrete and shotcrete supply some water is pumped to the surface t for treatment at mine water treatment plant (NCD Plant) to ensure effluent compliance limits are met.

Water treated at the NCD Plant is used at the Concentrator Plant and any excess is discharged into the river, at the V-01 discharge point, complying with the standards and a permit limit approved by the environmental authorities. Due to the large amount of water reuse, wanter consumption from natural sources is very low and mainly for human consumption.

The plan is to increase the water treatment plant capacity to 120 L/s for the 2,500 tpd expansion.

1.12.4 Waste Dump

The Project currently uses the Rublo Alto waste deposit to deposit waste material not used as backfill in the mine; this waste deposit has a capacity of 575,812 m^3 and the DD-15 waste deposit has a storage capacity of 415,000 m^3. Additionally, permits were applied for the construction and operation of DD-01 with a capacity of 791,340 m^3 and DD-60 with a capacity 337,710 m^3, DD-61 with a capacity 419,466 m^3. The waste dump projects to meet the life-of-mine waste generation.

1.12.5 Mineral Stockpile

The mineral extracted from the Mine is transported to the stockpile area located in Comihuasa, for classification and blending prior to delivery to the concentrator plant. The stockpile location has an area of 10,000 m^2 and an approximate storage capacity of 30,000 tonnes.

1.12.6 Tailing Storage Facilities

The tailing storage facilities planned for the LOM are designated as "D" and "C". The tailing deposit "D" built in 2018 has been designed in five stages for a total life of 12 years at current production levels.

Engineering studies have been undertaken for each TSF project. The Stage IV study was completed in January 2022.

The tailing deposit "C" had a storage capacity for six (06) months with the current production levels. Deposit “C” has environmental permits and controls and serves as a contingency for the operation. The deposited tailings are thickened and cycloned.

Design concepts have been prepared for future expansions to phases VI, VII and VIII. The need for these expansions will include plans for using tailing to prepare backfill for the underground mine once the paste fill plant is constructed.

1.12.7 Buildings

The buildings and facilities for the Huachocolpa Uno Mining Unit are built along the Escalera River ravine, in two well-defined areas:

- In the area called Caudalosa, where the Bienaventurada mine is located, the facilities include warehouses, explosives magazines, workshops, offices, dining rooms, and camps. The Caudalosa camp will be expanded to accommodate a maximum 1,200 workers for the 2,500 tpd expansion.
- In the area called Comihuasa, facilities include the concentrator plant, tailings "D" and "C", mineral stockpile, Kolpa electrical substation, fuel station, water treatment plant, tailing thickener, drinking water treatment plant, workshops, medical center, chemical laboratory, metallurgical laboratory, offices and camps. The camp will be expanded to accommodate 500 workers for the 2,500 tpd expansion.

Current site infrastructure is suitable for continuing operations.

1.13 Market Studies and Contracts

Endeavour has reviewed market studies for commodities and price outlook. The long-term markets for lead, zinc, copper, and silver are influenced by demand growth in industries like construction, electronics, renewable energy, and electric vehicles (EVs), as well as supply constraints, geopolitical factors, and environmental regulations. The outlook for lead is likely to remain relatively stable, while zinc could see moderate increases due to supply constraints. Copper demand is expected to grow due to structural supply deficits and silver prices are likely to trend upwards in the long term due to industrial demand, and its role as a hedge against inflation. The Authors have reviewed the studies and analysis. It is the Authors's opinion that the results support the long-range pricing assumptions and other marketing premises used in this technical report.

Zinc prices are currently in the range of US$ 1.30–1.47/lb, having reached a 2022 high of US$ 2/lb in April 2022.

Smelter treatment charges (TCs) have experienced a volatile market over the last 16 months, with zinc supplies in deficit, leading to lower smelter Spot treatment charges (and in some limited cases, negative TCs). As of the last quarter of 2024, zinc supply appears to be in a deficit situation for the near term and stabilizing in the longer term.

Existing sales agreements are expected to continue in the near term and may require updating upon expiry.

Lead prices are currently in the range of US$ 0.90 – 1.10/lb.

As stated above, although lead is not in the same supply deficit as zinc, treatment charges have experienced volatility to lower prices over the last 16 months, but existing sales agreements are expected to continue in the near term.

Transport and shipping costs are the same as those for the zinc concentrates. No lead smelter is currently operational in Peru, so it is presumed that the concentrates referred to in this study will be shipped to Asia. Copper prices over the last 18 months range from US$ 4.00 – 5.05/lb.

Copper prices have shown a strong performance in international markets. The copper market is exhibiting a long-term supply deficit, and the same volatility exists in smelter charges as for zinc and lead.

The metal prices used for the mining inventory estimation are from projections considered reasonable by Kolpa. Table 19-1 presents the metal prices used in the economic analysis derived from JP Morgan data.

Kolpa has a number of contracts in place with international commodity traders.

Treatment and refining charges for lead-silver-gold concentrates as well as zinc concentrates have been estimated in accordance with Kolpa's current agreement with international traders.

The main assumptions are:

- Transportation Cost is $48/tonne of concentrate.
- Treatment Cost for the Concentrate of Zinc assumed for the LOM is $150 per tonne
- Treatment Cost for the Concentrate of Lead assumed for the LOM is $101 per tonne
- Refining Cost for the Silver in the Lead Concentrate assumed for the LOM is $32 per tonne
- Treatment Cost for the Concentrate of Copper is assumed for the LOM is $108 per tonne.
- Refining Cost for the Silver in the Copper Concentrate assumed for the LOM is $101 per tonne.
- Refining Cost for the Copper in the Copper Concentrate assumed for the LOM is $55 per tonne.

A summary of the payability factors, treatment/refining charges (TC/RC) and penalties for Zn concentrate,

Regarding concentrate quality, it is noted that the metal contents have generally been constant for the lead, copper and zinc.

1.14 Environmental, Permitting and Social Considerations

Kolpa conducts its mining and production activities within the EAU, in full compliance with Peruvian environmental and metallurgical regulations. The company prioritizes health and safety, environmental protection, cultural heritage preservation, and sustainable development.

Mining in Huachocolpa Uno dates back to colonial times. In the mid-20th century, with support from the Mining Bank of Peru, the Huachocolpa Mineral Concentrator Plant S.A. (Comihuasa) was established, driven by contributions from small mining companies, including Caudalosa.

Today, Kolpa extracts polymetallic minerals from the Bienaventurada vein using underground mining methods such as Cut and Fill and Sublevel Stoping. The process includes exploration, drilling, blasting, hauling, and transportation from the Bienaventurada mine to the Comihuasa concentrator plant.

At the concentrator plant, the mill feed undergoes selective flotation through crushing, grinding, flotation, thickening, and filtering to produce lead, zinc, and copper concentrates with silver content. These concentrates are then transported in covered vehicles for commercialization.

Kolpa recognizes the importance of building transparent and trusting relationships with the local communities in its area of influence. The company is committed to fostering strategic alliances between Kolpa, the State, and local communities to promote sustainable development.

As part of this commitment, Kolpa prioritizes:

- Maintaining open dialogue and mutual respect with local communities.
- Fulfilling social commitments and continuously supporting community development programs.
- Delivering both short- and long-term benefits to the communities in its area of influence.

Focus on the Huachocolpa Community

Kolpa's mining operations take place in the Huachocolpa district, where surface lands are owned by the local community ("comunidad campesina"). This community consists of nine annexes and is governed by a central leadership body.

Given this structure, Kolpa's social programs are primarily focused on supporting the Huachocolpa community, including the successful implementation of several development initiatives.

1.15 Recommendations

The Huachocolpa Uno Mine property contains significant historical open pit and underground mineral resources that are associated with well-defined mineralized trends and geological models. The mine is currently in production and has been operated privately under fully consolidated ownership since 2000. Between 2012 to 2024, approximately 5.8 million tonnes of mineralization have been processed at the Huachocolpa Processing Plant.

Additional work is recommended to upgrade historical mineral resources to current NI 43-101 compliant mineral resources, and to optimize the operation and improve margins:

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Between 2012 to 2024, approximately 5.8 million tonnes of mineralization have been processed at the Huachocolpa Processing Plant.

Additional work is recommended to upgrade historical mineral resources to current NI 43-101 compliant mineral resources, and to optimize the operation and improve margins:

1.15.1 Mineral Resource Estimate

- Review the current drill hole and underground channel sampling data and QA/QC data completed to date, revise geologic models, mineral resource models and structural models, and estimate mineral resources using the updated data, models and updated metal prices, recoveries and economic parameters, such as current mining and processing costs and G&A costs.

1.15.2 Mining

- Complete infill drilling plans to convert Inferred resources to Indicated or Measured and possibly add new areas to the mining inventory.
- Evaluate increasing the Sub-level stoping percentage of total mine production. Trial mining had been undertaken in Bienaventurada to demonstrate the viability of increasing the sublevel designed height to 14 meters, which increases productivity while reducing operating costs. This concept can be applied to other veins as well.
- Complete a paste backfill study including tailing characterization and strength test work, paste plant design, reticulation system design, and capital and operating cost estimates.
- Complete a life of mine (LOM) plan that includes updated cut-off values, potential mineralized material sorting benefits, paste backfill, and incorporates geotechnical parameters developed in the ground control management plan for estimating mineral reserves.
- Complete an updated ground control management plan that defines level spacing and stope dimensions, development offsets, and ground support standards.

1.15.3 Metallurgy and Processing

- Complete a technical and economic evaluation of the mineralized material sorting concept to upgrade mill head grade.
- Perform multi-element analyses for different vein system to fully understand the mineralization.
- Conduct metallurgical testing for the different vein and mineral sources to improve recovery and understand how other metals such as gold could be recovered and improve the NSR and lower cut-off values.
- Conduct a comprehensive risk-based review of the tailing facility and plans to convert from a conventional subaerial deposition to a filtered tailing deposition.
- Update the existing tailing facility design and operating parameters to mitigate risks identified, ensure stability and maximize tailing storage volume using the current facility.

Table 1-3 summarized the estimated cost for the recommended future work on Huachocolpa.

Table 1-3 Huachocolpa Uno Mine 2025-2026 Work Plan Budget

2025-2026		
Item	**Unit**	**Cost**
Data compilation and review, geology and resource modeling, resource estimation, NI 43-101 Technical Report	1	\$80,000 - \$100,000
Infill Diamond Drilling	26,000m - 30,000m	\$2,800,000 - \$3,300,000
Infill Drilling Assays	7,000 - 8,000	\$315,000 - \$360,000

Geological Compilation and Resource Estimation	1	$250,000 - $300,000
Paste Backfill Study	1	$300,000 - $500,000
LOM Plan	1	$200,000 - $300,000
Ground Control Management Plan	1	$300,000 - $350,000
Mineralized Material Sorting Economic Analysis	1	$80,000 - $120,000
Multi-Element Analyses	1	$100,000 - $150,000
Metallurgical Testing	1	$200,000 - $400,000
Tailing Facility Risk Review	1	$120,000 - $150,000
Tailing Facility Design	1	$600,000 - $800,000
Total:		**$5,345,000 - $6,830,000**

2 INTRODUCTION

SGS Geological Services Inc. (“SGS”) was contracted by Endeavour Silver Corp. (“Endeavour” or the "Company") to prepare a National Instrument 43-101 ("NI 43-101") Technical Report for the Huachocolpa Uno Mine (“Huachocolpa Uno” or the “Property”) located in the districts of Huachocolpa and Santa Ana, in the province and department of Huancavelica, 490 km southeast of Lima, Peru. Huachocolpa is currently an operating mine.

Endeavour has announce that it has entered into a definitive share purchase agreement (the “Agreement”) to acquire all of the outstanding shares of Compañia Minera Kolpa S.A., (“Kolpa”) and its main asset the Huachocolpa Uno Mine, from subsidiaries of its shareholders Arias Resource Capital Management and Grupo Raffo (collectively, the “Shareholders”) in exchange for total consideration of $145 million comprised of $80 million cash and $65 million payable in Endeavour shares (the “Transaction”). In addition, as part of the Transaction, Endeavour has agreed to pay up to an additional $10 million in contingent payments upon the occurrence of certain events and Endeavour will also assume approximately $20 million in net debt currently held by Kolpa.

Endeavour is headquartered in Vancouver, British Columbia (1130 – 609 Granville Street Vancouver, B.C., Canada, V7Y 1G5) with management offices in Leon, Mexico and Durango, Mexico. The Company’s common shares are listed on the Toronto Stock Exchange (TSX: EDR) and the New York Stock Exchange (NYSE: EXK).

The Company is engaged in silver mining in Mexico and related activities including property acquisition, exploration, development, mineral extraction, processing, refining and reclamation. The Company is also engaged in exploration activities in Chile and Nevada, USA. The Company’s operations are comprised of the Guanaceví and Bolañitos mines located in Durango, Mexico and Guanajuato, Mexico respectively. The Company is developing the Terronera project located in Jalisco State, Mexico (the “Terronera Project”). The Company is advancing several other exploration projects in order to achieve its goal to become a premier senior producer in the silver mining sector.

The current technical report is authored by Allan Armitage, Ph.D., P. Geo., (“Armitage”), Ben Eggers, MAIG, P.Geo. (“Eggers”), and Henri Gouin, P.Eng. (“Gouin”) of SGS, and Dale Mah, P.Geo. (“Mah”) and Donald Gray, SME-RM (“Gray”) of (collectively, the “Authors”). Armitage, Eggers and Gouin are independent Qualified Persons as defined by NI 43-101. Mah and Gray are qualified person as defined by NI 43-101. However, they are not independent of the Company. Mah is Vice President, Corporate Development for Endeavour and Gray is Chief Operating Officer for Endeavour.

The current Technical Report complies with all disclosure requirements set out in the NI 43-101 Standards of Disclosure for Mineral Projects. The current Technical Report will be used by Endeavour in fulfillment of their continuing disclosure requirements under Canadian securities laws, including National Instrument 43-101 – Standards of Disclosure for Mineral Projects. This Technical Report is written in support of the share purchase agreement to acquire all of the outstanding shares of Kolpa and its main asset the Huachocolpa Uno Mine.

2.1 Sources of Information

In preparing the current technical report, the Authors utilized a digital database, provided to the Authors by Endeavour, internal technical reports and recent PowerPoint presentations provided by Endeavour, along with site visits and personal inspections to verify the current conditions on the Property. All background information regarding the Property has been sourced from a previous internal technical report (Laymen and Mc Iver, 2024) and revised or updated as required. As of the effective date of this report, Endeavour has yet to complete exploration on the Property and there are no current mineral resources or reserves on the Property.

- *The Property was the subject of a technical report in 2023 titled "Huachocolpa Uno Preliminary Economic Assessment Project, Project Number 0094", Effective Date 31 March 2023, Report Date 07 May 2024, prepared for Compañia Minera Kolpa.*

The Authors have carefully reviewed all digital data and Property information and assumes that all information and technical documents reviewed and listed in the "References" are accurate and complete in all material aspects. Information regarding the Property accessibility, climate, local resources, infrastructure, and physiography, exploration history, historical mineral resource estimates, regional property geology, deposit type, recent exploration and drilling, metallurgical test work, and sample preparation, analyses, and security for previous drill programs, mining methods, recovery methods, capital and operating costs etc. (Sections 5-13 and 16-22) have been sourced from a recent internal technical report and updated where required. The Authors believe the information used to prepare the current Technical Report is valid and appropriate considering the status of the Property and the purpose of the Technical Report.

Historical Mineral Resource figures contained in this report, including any underlying assumptions, parameters and classifications, are quoted "as is" from the source.

The Author believes the information used to prepare the current Technical Report is valid and appropriate considering the status of the Property and the purpose of the Technical Report. By virtue of the Author's technical review of the Project, the Authors affirm that the work program and recommendations presented herein are in accordance with current NI 43-101 requirements (2014).

2.2 Qualified Persons

The Qualified Persons for the report are listed in Table 2-1. By virtue of their education, experience and professional association membership, they are considered Qualified Persons as defined by NI 43-101.

Table 2-1 Qualified Person's and Report Responsibility

Qualified Person	Professional Designation	Position	Employer	Independent of Endeavour Silver Corp.	Report Section
Allan Armitage	P.Geo.	Technical Manager and Senior Resource Geologist	SGS Canada Inc. – Geological services	Yes	1.1-1.8, 1.15, 2 -8, 13, 14, 23, 24, 25.1, 25.3, 25.4, 26.1
Ben Eggers	P.Geo.	Senior Geologist	SGS Canada Inc. – Geological services	Yes	1.5, 1.6, 9, 10, 11, 12.1, 12.2, 12.4, 25.2, 27
Henri Gouin	P.Eng.	Mining Engineer	SGS Canada Inc. – Geological services	Yes	1.9, 1.10, 15, 16, 25.5, 26.2
Dale Mah	P. Geo.	Vice President, Corporate Development	Endeavour Silver Corp.	No	1.13, 1.14, 2.3.1, 12.3.1, 19, 20, 25.8, 25.9
Donald Gray	SME-RM	Chief Operating Officer	Endeavour Silver Corp.	No	1.11, 1.12, 2.3.2, 12.3.2, 17, 18, 25.6, 25.7, 26.3

2.3 Site Visits and Scope of Personal Inspection

2.3.1 Site Inspection by Dale Mah, P.Geo.

The Kolpa Project was visited by Dale Mah on October 9, 2024, and January 12, 2025, for the purpose of:

- Inspection of selected drill sites and outcrops to review the drill and local geology

- Reviewing current core sampling, QA/QC and core security procedures
- Inspection of drill core, drill logs, and assay certificates to validate sampling, confirm the presence of mineralization in drill core and underground workings.
- Inspection of the project site to access accessibility, topography, available infrastructure and proximity to towns and roads,
- The visit also included a general tour of the property to assess road conditions, surface water, power supply, process plant, tailings storage and mine portals

2.3.2 Site Inspection by Donald Gray, SME-RM.

The Kolpa Project property was visited by Donald Gray on January 12 and 13, 2025 for the purpose of:

- Inspection of the project site to assess accessibility, topography, available infrastructure and proximity to towns and roads,
- Review of underground mining methods, mine planning, mine stope design model with Kolpa technical staff
- Inspection of underground mine workings, surface mining activity, geotechnical conditions, process plant and tailings storage facility
- Review of the processing plant, infrastructure, tailings storage and active mine portals and workings.

2.4 Units and Abbreviations

Units used in the report are metric units unless otherwise noted. Monetary units are in United States dollars (US$) unless otherwise stated.

Table 2-2 List of Abbreviations

$	Dollar sign	m^2	Square metres
%	Percent sign	m^3	Cubic meters
°	Degree	masl	Metres above sea level
°C	Degree Celsius	mm	millimetre
°F	Degree Fahrenheit	mm^2	square millimetre
µm	micron	mm^3	cubic millimetre
AA	Atomic absorption	Moz	Million troy ounces
Ag	Silver	MRE	Mineral Resource Estimate
AgEq	Silver equivalent	Mt	Million tonnes
Au	Gold	NAD 83	North American Datum of 1983
Az	Azimuth	mTW	metres true width
CAD$	Canadian dollar	NI	National Instrument
CAF	Cut and fill mining	NN	Nearest Neighbor
cm	centimetre	NQ	Drill core size (4.8 cm in diameter)
cm^2	square centimetre	NSR	Net smelter return
cm^3	cubic centimetre	oz	Ounce
Cu	Copper	OK	Ordinary kriging
DDH	Diamond drill hole	Pb	Lead

ft	Feet	ppb	Parts per billion
ft^2	Square feet	ppm	Parts per million
ft^3	Cubic feet	QA	Quality Assurance
g	Grams	QC	Quality Control
GEMS	Geovia GEMS 6.8.3 Desktop	QP	Qualified Person
g/t or gpt	Grams per Tonne	RC	Reverse circulation drilling
GPS	Global Positioning System	RQD	Rock quality designation
Ha	Hectares	SD	Standard Deviation
HQ	Drill core size (6.3 cm in diameter)	SG	Specific Gravity
ICP	Induced coupled plasma	SLS	Sub-level stoping
ID^2	Inverse distance weighting to the power of two	t.oz	Troy ounce (31.1035 grams)
ID^3	Inverse distance weighting to the power of three	Ton	Short Ton
kg	Kilograms	Zn	Zinc
km	Kilometres	Tonnes or T	Metric tonnes
km^2	Square kilometre	TPM	Total Platinum Minerals
kt	Kilo tonnes	US$	US Dollar
m	Metres	µm	Micron
		UTM	Universal Transverse Mercator

3 RELIANCE ON OTHER EXPERTS

3.1 Property Ownership, Property Agreements, Mineral Tenure, Surface Rights and Royalties

Final verification of information concerning the Property status and ownership, which are presented in Section 4 below, have been provided to Armitage by Dale Mah for Endeavour, by way of E-mail on March 17, 2025. Armitage only reviewed the land tenure in a preliminary fashion and has not independently verified the legal status or ownership of the Property or any underlying agreements or obligations attached to ownership of the Property. However, Armitage has no reason to doubt that the title situation is other than what is presented in this technical report (Section 4). Armitage is not qualified to express any legal opinion with respect to Property titles or current ownership.

The Authors have relied upon previous internal technical reports, written for Kolpa, and annual corporate presentations by Kolpa regarding the Property with respect to Sections 16, 17, 18, 19 and 20. Huachocolpa Uno is currently an operating mine. However, there are no current resources or reserves for the Property with respect to Endeavour.

4 PROPERTY DESCRIPTION AND LOCATION

The Property is located in Comihuasa, Huachocolpa District, Huancavelica Province, Huancavelica Department of Peru, approximately 490 km southeast of Lima and 74 km south of Huancavelica City (Figure 4-1). The approximate coordinates of the Mine are 501,780m E and 8,556,217m N, using the UTM_WGS84 datum, or Latitude 13°04' S and Longitude 74°59' W.

Figure 4-1 Huachocolpa Uno Mining Unit Location in Peru

Source: KOLPA S.A Mining Company 2023

The current Property includes 144 mining rights consisting of: 1 beneficiation concession, 4 mining claims and 139 mining concessions (Figure 4-2) (Table 4-1). Kolpa wholly owns 100% in the mining rights. All Mining rights are in good standing as of the effective date of this report. The total effective area of the mining concessions is 25,176.85 ha, and the total effective area of the beneficiation concession is 366.23 ha. A total of 63 (No. 1-63, Table 4-1) of the mining rights are part of the Economic Administrative Unit (EAU) “Huachocolpa Uno”. The mining rights are in the districts of Huachocolpa and Santa Ana, provinces of Huancavelica and Castrovirreyna, respectively, and department of Huancavelica, Peru.

The EAU Huachocolpa Uno originally consisted of 69 mining concessions. On September 17, 2024, through Resolution 003763-2024-INGEMMET/PE/PM, the accumulation named “RUBLO” of seven (7) mining concessions (RUBLO, RUBLO PRIMERO, ULTIMA HORA N° 1, ULTIMA HORA N° 1-E, ULTIMA HORA N° 1-F, ULTIMA HORA N° 4, and ULTIMA HORA N° 404) was approved. This resulted in the EAU Huachocolpa Uno currently comprising 63 mining concessions.

Figure 4-2 Land Tenure of Compañia Minera Kolpa S.A.

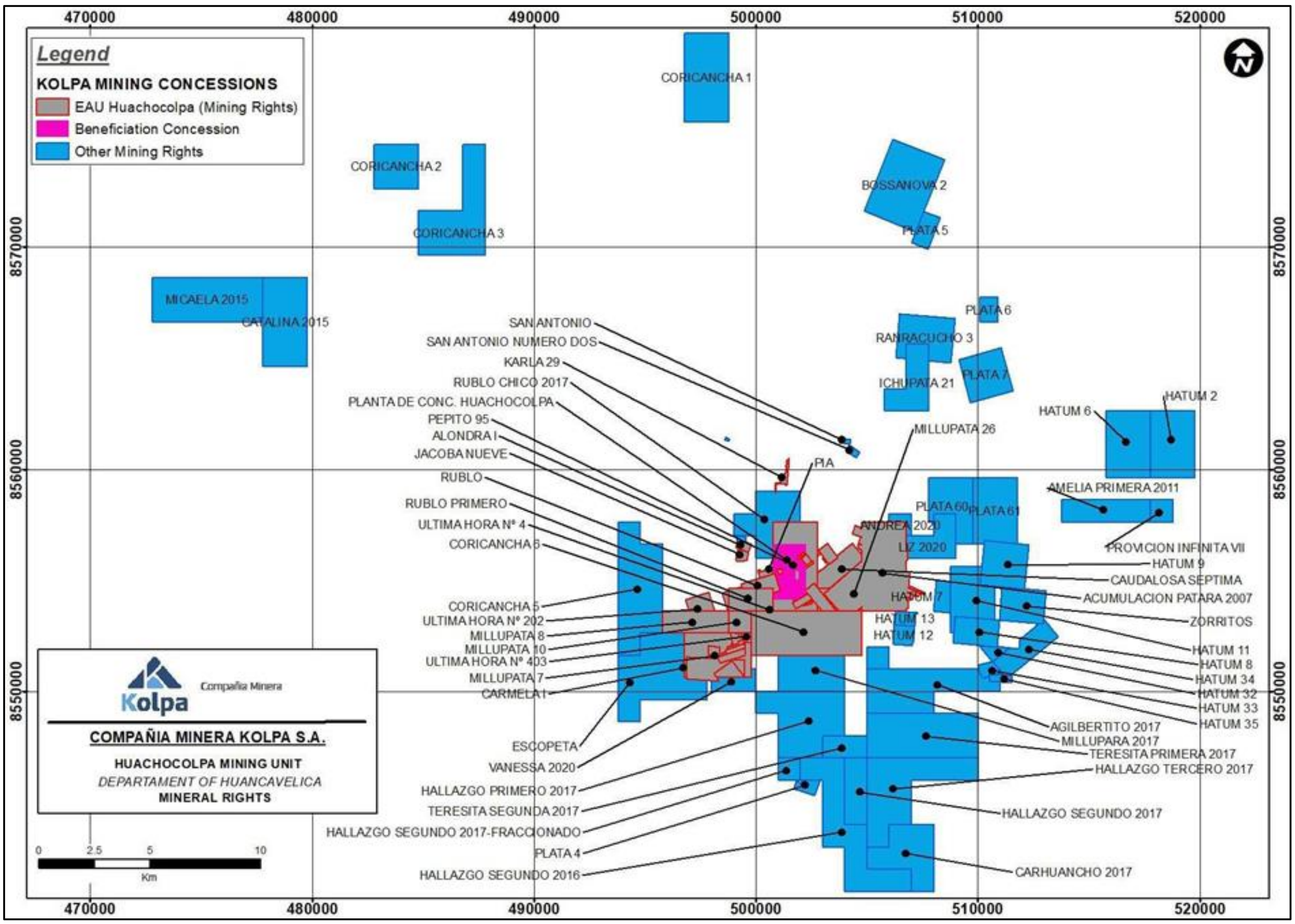


Table 4-1 List of Mining Rights

N°	Mining Right Name	Code	Type of Mining Right	Title Holder	Effective Area (ha)
1	ACUMULACION PATARA 2007	010000507L	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1,089.87
2	ALONDRA I	10199509	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	20.6025
3	BANQUERO	06007254X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	5.9877
4	BANQUERO DOS	06007256X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	4.9897
5	BANQUERO UNO	06007255X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	8.9815
6	CARMELA I	06007417X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	176.303
7	CAUDALOSA	06000100Y01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	5.9866
8	CAUDALOSA 10	06004560X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	0.813
9	CAUDALOSA 11	06004561X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.5199
10	CAUDALOSA ALTA	06000875X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	39.9109
11	CAUDALOSA CHICA DE HUACHOCOLPA N° 6	06006139X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.9028
12	CAUDALOSA OCTAVA	06004117X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	104.784
13	CAUDALOSA SEPTIMA	06004118X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	219.833
14	CORICANCHA 6	10046710	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	767.434
15	DEMASIA CAUDALOSA CHICA	06001106X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	2.9931
16	DEMASIA RUBLO	06008394X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	90.728
17	ELSITA 1RA	06000874X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	11.9732
18	ESPERANZA	010003725	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	3.9911
19	GAMA	06004320X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.3241
20	GLADYS PRIMERA	10091303	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	25.1991
21	GLADYS SEGUNDA	10595007	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	8.796
22	JACOBA NUEVE	10001412	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	23.291
23	KARLA 29	10043710	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	19.5801
24	MILLUPATA 10	10254196	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	10.7872
25	MILLUPATA 25	10528911	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.9518
26	MILLUPATA 26	10276312	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.7555
27	MILLUPATA 7	10172196	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	273.182
28	MILLUPATA 8	10210596	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	237.204
29	MIRAFLORES	06000876X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	9.9777
30	OTUNGO N° 1	06006505X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	3.9918
31	OTUNGO N° 2	06006506X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	7.9837
32	OTUNGO N° 3	06006507X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.9958
33	OTUNGO N° 4	06006508X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.9959
34	PEPITO 95	10424295	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	361.022
35	PESETA PRIMERA	06007257X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	0.998
36	PIA	10130809	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	22.28
37	RUBLO A	06007146X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	5.9875
38	RUBLO B	06007147X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	23.9508
39	RUBLO C	06007148X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.996
40	RUBLO D	06007149X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	0.9981
41	SANTA URSULA	06008295X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	19.9542
42	TORO MACHAY	06000552X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.9957
43	ULTIMA HORA N° 1-A	06007150X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	3.9918
44	ULTIMA HORA N° 1-G	06007156X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	5.9875
45	ULTIMA HORA N° 202	06007058X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	131.7293
46	ULTIMA HORA N° 403	06007061X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	43.0571
47	ULTIMA HORA N° 405	06007063X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	37.0986
48	ULTIMA HORA N° 406	06007064X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	17.9628
49	ULTIMA HORA N° 407	06007065X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.9959
50	ULTIMA HORA N° 408	06007066X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	2.9939
51	ULTIMA HORA N° 410	06007068X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.0556
52	ULTIMA HORA N° 410-A	0607068AX01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.0248
53	ULTIMA HORA N° 411	06007069X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	0.8153
54	ULTIMA HORA N° 412	06007070X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	3.9918
55	ULTIMA HORA N° 413	06007071X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.9959
56	ULTIMA HORA N° 414	06007072X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.9959

N°	Mining Right Name	Code	Type of Mining Right	Title Holder	Effective Area (ha)
57	ULTIMA HORA N° 416	06007074X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	0.0163
58	ULTIMA HORA N° 416-1A	0607074AX01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	14.8726
59	ULTIMA HORA N° 417	06007075X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	5.8644
60	ULTIMA HORA N° 418	06007076X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	3.901
61	ULTIMA HORA N° 419	06007077X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	2.2666
62	ULTIMA HORA N° 420	06007078X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1.9958
63	ACUMULACION RUBLO	010000723L	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	482.9957
64	AGILBERTITO 2017	10102317	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	660.16
65	AMELIA PRIMERA 2011	10308411	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	400
66	ANDREA 2020	10001620	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	21.6654
67	BOSSANOVA 2	10043610	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	875.1254
68	CARHUANCHO 2017	10102517	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	600
69	CATALINA 2015	10089216	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	800
70	CORICANCHA 5	10046810	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1,000
71	ESCOPETA	10246512	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	990.736
72	GOLONDRINAS	10632908	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	11.1468
73	HALLAZGO PRIMERO 2017	10101917	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	771.714
74	HALLAZGO SEGUNDO 2016	10326616	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	958.989
75	HALLAZGO SEGUNDO 2017	10102117	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	300
76	HALLAZGO SEGUNDO 2017-FRACCIONADO	010102117A	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	50.995
77	HALLAZGO TERCERO 2017	10101717	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1,000
78	HATUM 11	10044610	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	374.669
79	HATUM 12	10044510	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	82.6786
80	HATUM 13	10044410	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	55.3997
81	HATUM 2	10045110	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	600
82	HATUM 32	10044310	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	47.8697
83	HATUM 33	10044210	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	47.7007
84	HATUM 34	10044110	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	285.7332
85	HATUM 35	10044010	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	29.9385
86	HATUM 6	10045010	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	600
87	HATUM 7	10044910	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	139.7135
88	HATUM 8	10044810	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	239.5078
89	HATUM 9	10044710	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	399.1802
90	HUASCAR 2022	10159722	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	207.04
91	ICHUPATA 21	10043910	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	330.915
92	LAURITA 01 2021	10231321	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	322.774
93	LIZ 2020	10001520	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	181.994
94	MARIA GRACIA 2021	10154421	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	277.654
95	MICAELA 2015	10089316	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	1,000
96	MILLUPARA 2017	10102417	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	374.053
97	MILLUPARA 2017-FRACCIONADO	010102417A	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	10.8968
98	NUEVA ESPERANZA I 2021	10154321	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	100
99	OTORONGO UNO 2013	590000113	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	2
100	PLATA 4	10046610	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	67.9493
101	PLATA 5	10046510	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	120.0107
102	PLATA 6	10046410	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	87.8194
103	PLATA 60	10158911	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	424.241
104	PLATA 61	10159011	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	586.261
105	PLATA 7	10046310	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	399.1787
106	PROVICION INFINITA VII	10203010	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	100
107	RANRACUCHO 3	10043810	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	498.9766
108	RUBLO CHICO 2017	10102017	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	248.034
109	SAN ANTONIO	06000253X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	9.9781
110	SAN ANTONIO NÚMERO DOS	06003529X01	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	17.9632
111	TERESITA PRIMERA 2017	10101817	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	741.964
112	TERESITA SEGUNDA 2017	10102217	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	161.247
113	VANESSA 2020	10001720	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	109.683
114	ZORRITOS	10222914	CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	299.3839

N°	Mining Right Name	Code	Type of Mining Right	Title Holder	Effective Area (ha)
115	ULTIMO MINUTO NUEVE 2015	10347415	CONCESSION	CONCESIONES LEON S.A.C.	193.5
116	MORADITO UNO 2015	10347515	CONCESSION	CONCESIONES LEON S.A.C.	187.162
117	PROLONGACION INES	10083824	MINING CLAIM	COMPAÑÍA MINERA KOLPA S.A.	100
118	SHANNA 2025	10003625	MINING CLAIM	COMPAÑÍA MINERA KOLPA S.A.	100
119	LUCIA 2025	10003825	MINING CLAIM	COMPAÑÍA MINERA KOLPA S.A.	400
120	GABRIELA 2025	10003725	MINING CLAIM	COMPAÑÍA MINERA KOLPA S.A.	100
121	PLANTA DE CONCENTRACIÓN HUACHOCOLPA	P0100754	PROCESSING/BENEFIT CONCESSION	COMPAÑÍA MINERA KOLPA S.A.	366.23
122	EMMITA CUARTA	06001452X01	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	9.1551
123	ELSITA	06000824X01	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	7.9819
124	HALCONES	010518706	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	57.1214
125	YOSI	010338106	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	54.3776
126	PEPE MACHO	010183206	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	56.9743
127	PEPITO	06000522Y01	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	7.9822
128	SAN JOSE	06000540Y01	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	69.8489
129	EMMITA Y CLARITA	06000558X01	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	19.9554
130	EMMITA TERCERA	06001451X01	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	14.969
131	ENMITA QUINTA	06002925X01	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	3.9104
132	COQUITO	06000416Y01	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	49.8913
133	GRULLAS	010518606	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	55.8855
134	CARLITA	010183306	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	133.3067
135	JOSE LUIS TERCERO	010183706	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	2.7941
136	CARMELA PRIMERA	010183806	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	6.5977
137	TIGRILLOS	010316507	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	498.9744
138	TATITO	010338206	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	4.9898
139	EMMITA SEGUNDA	06001137X01	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	23.9505
140	LA TRANCA	06000878X01	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	23.9479
141	SEGUNDO VICTOR RAUL	010338306	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	7.6656
142	GUSTAVO ADOLFO	010183606	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	1.2391
143	ALBATROS 2007	010518806	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	156.341
144	LEOPARDOS	010316607	CONCESSION	SOCIEDAD MINERA CHONTA S.A.C.	410.9817

Note: Effective area excludes areas of overlap

4.1 Endeavour Agreement with Kolpa

Endeavour has announced that it has entered into a definitive share purchase agreement (the "Agreement") to acquire all of the outstanding shares of Compañia Minera Kolpa S.A., ("Kolpa") and its main asset the Huachocolpa Uno Mine, from subsidiaries of its shareholders Arias Resource Capital Management and Grupo Raffo (collectively, the "Shareholders") in exchange for total consideration of $145 million comprised of $80 million cash and $65 million payable in Endeavour shares (the "Transaction"). In addition, as part of the Transaction, Endeavour has agreed to pay up to an additional $10 million in contingent payments upon the occurrence of certain events and Endeavour will also assume approximately $20 million in net debt currently held by Kolpa.

The cash consideration will be funded through a combination of a new copper streaming agreement on copper produced from Kolpa ("**Copper Stream**") with Versamet Royalties Inc. ("**Versamet**"), a bought deal financing consisting of subscription receipts for common shares of the Company issuable upon closing of the Transaction (the "**Subscription Receipts Financing**") and cash on hand.

4.2 Type of Mineral Tenure

4.2.1 Introduction

Mineral rights (Item 4.2.2, 4.2.3 and 4.2.4), royalties (Item 4.5) and surface rights (Item 4.6) are to be read together.

The principal statutes regulating mining in Perú are:

- General Mining Law approved by supreme decree nº 014-92-em (Updated to: August 2022).
- Regulation of Mining Procedures D.S. N° 020-2020-EM (Edited in: March 2023)
- Canon Law N° 27506 (Published on: July 09, 2001).
- Mining Activity Inspection Law No. 27474 (Published on May 24, 2001).
- General Environmental Law N° 28611 (Published on October 13, 2005).
- Occupational Health and Safety Regulations in Mining D.S. N° 023-2017-EM (Updated to: August 18, 2017).
- Mining Safety and Hygiene Regulation DS_046_2001_DM (Update to: July 25, 2001).
- Environmental Liabilities Law N° 28271 (Update to: July 2, 2004).
- Mine Closure Law and Regulations N° 28090 (Update to: 2023).

Other legislation that effects mining operations include the following:

- Regulation of Canon Law DS N° 005-2002-EF (Published on: January 14, 2002).
- Supreme Decree that modifies the Environmental Protection and Management Regulations for Mining Exploitation, Beneficiation, General Labor, Transport and Storage Activities DS N° 026-2021 (Published on November 15, 2021).
- Regulations for the Inspection of Mining Activities (Published on September 5, 2001).
- Supreme Decree that approves the Regulation of Mining Procedures DS-020-2020-EM (Published on August 8, 2020).
- Supreme Decree No. 007-2021-EM Special measure related to the environmental management instruments of the Mining Sector (Published on April 1, 2021).

4.2.2 Mining Rights and Mining Claims

The term “mineral rights” refers to mining concessions and mining claims. Other rights under the General Mining Law, such as beneficiation concessions, mineral transportation concessions, and general labor concessions are not considered under said term.

According to Peruvian General Mining Law (the “Law”):

1. Mining concessions grant their holder the right to explore, develop, and exploit metallic or non-metallic minerals located within their internal boundaries.
2. A mining claim is an application to obtain a mining concession. Exploration, development, and exploitation rights are obtained once title to concession has been granted, except in those areas that overlap with pre-existing, or priority claims or concessions applied for before December 15, 1991. Upon completion of the title procedure, resolutions awarding title must be recorded with the Public Registry to create enforceability against third parties and the Peruvian State.
3. Mining rights are real estate properties different and separate from surface land rights. They are freely transferable.
4. A mining concession by itself does not authorize to carry out exploration or exploitation activities, but rather the titleholder must first:

a. Obtain approval from the Ministry of Culture with regards to the applicable archaeological declarations, authorizations, or certificates.

b. Obtain the environmental certification issued by the competent environmental authority, subject to the rules of public participation.

c. Obtain permission for the use of land (i.e., obtain surface land rights) by agreement with the owner of the land or the completion of the administrative easement procedure, in accordance with the applicable regulation.

d. Obtain the applicable governmental licenses, permits, and authorizations, according to the nature and location of the activities to be undertaken.

e. Complete prior consultation proceeding with Indigenous Peoples, if applicable, should there be any communities affected by potential exploitation of the mining concessions, as per International Labor Organization (ILO) Convention 169.

5. Mining concessions titleholders must comply with the payment of an annual fee equal to US$ 3.00 per hectare per year, on or before June 30 of each year.

6. Titleholders of mining concessions must meet a Minimum Annual Production Target or spend the equivalent amount in exploration or investments before a statutory deadline. When such deadline is not met, a penalty must be paid as described below:

a. Mining concessions must meet a statutory Minimum Annual Production Target of 1 Tax Unit (UIT) per hectare per year for metallic concessions, within a statutory term of ten years since the concession is granted. The applicable penalty is 2% of the Minimum Annual Production Target per hectare per year as of the 11th year until the 15th year. Starting in the 16th year and until the 20th year, the applicable penalty is 5% of the Minimum Annual Production Target per year and starting in the 21st year and until the 30th year the applicable penalty is 10% of the Minimum Annual Production Target per year. After the 30th year, if the Minimum Annual Production Target is not met, the mining concession will lapse automatically.

7. Mining concessions may not be revoked if the titleholder complies with the Good Standing Obligations; however, mining concessions will lapse automatically if any of the following events take place:

   (i) The annual fee is not paid for two years. The applicable penalty for not meeting minimum production levels is not paid for two consecutive years.

   (ii) A concession expires if it does not reach the minimum production in the year 30 and cannot justify the non-compliance up to five additional years due to reasons of force majeure described in the current legislation.

8. Agreements involving mining concessions (such as an option to acquire, a mining lease or the transfer of a mining concession) must be formalized through a deed issued by a public notary and must be recorded with the Public Registry to create enforceability against third parties and the Peruvian State.

4.2.3 Land Tenure

Mineral rights in Peru include mining concessions and mineral claims. The mining concession grants its holder the right to explore and exploit the mineral resources granted, which are found within a solid of indefinite depth, limited by vertical planes corresponding to the sides of a square, rectangle or closed polygon, whose vertices defined using the Universal Transverse Mercator (UTM) coordinates.

Kolpa has title to, and registered, one hundred and nineteen (119) metallic mining concessions located in the department of Huancavelica within Peruvian territory totaling 28,537 hectares, with 69 mining concessions (5,921.6 hectares) comprising the UEA “Huachocolpa Uno” (code N° 01-00053-72-U); while the other 50 mining concessions (22,615.3 hectares) are located outside of the UEA "Huachocolpa Uno" area.

Kolpa operates medium-scale underground mining activities, including exploration, exploitation, and beneficiation of lead (Pb), zinc (Zn), copper (Cu) and silver (Ag) minerals to produce and commercialize primarilhy Zn, Pb-Ag concentrates along with lesser amounts of Cu-Ag concentrates.

By means of Presidential Resolution No. 2841-2019-INGEMMET/PE/PM dated August 27, 2019, the Geological, Mining and Metallurgical Institute (INGEMMET) granted Kolpa 100% title to the UEA "Huachocolpa Uno" consisting of 69 (now 63) mining concessions covering 5,921.6 hectares, located in the districts of Huachocolpa and Santa Ana, provinces of Huancavelica and Castrovirreyna, respectively; and department of Huancavelica.

Pursuant to information provided by INGEMMET, there is no archaeological sites overlapping with the UEA "Huachocolpa Uno". Exploration and/or mining activities conducted in areas overlapping the archaeological sites are permitted under the following Certificate of Non- Existence of Archaeological Remains ("CIRA" for its acronym in Spanish):

- CIRA N° 2008-0466: Componets that are part of the Exceptional Environmental Impact Study (including expansion of the new tailings deposit and annexed works, pipeline network and effluent collection, NCD treatment plant, road bypass, easement of 50 m., Escalera River diversion tunnel entrance, road bypass overlay and tailings deposit).

- CIRA N° 326-2016-DDC-HVA-MC: Expansion II of the Huachocolpa Processing Plant from 800 tpd to 960 tpd, the New Tailings Deposit "D", the channeling of the Escalera River and the Stockpile Platform and,

- CIRA N° 049-2019-DDC-HVA-MC: Modification of the Exceptional Environmental Impact Study for the Expansion of the Huachocolpa Processing Plant Processing to 800 tpd and Related Works for the New Tailings Deposit "D", Channeling of the Escalera River, Stockpile Platform and Increase of the Capacity of the Huachocolpa Processing Plant Processing from 800 to 960 tpd.

4.2.4 Beneficiation Concession

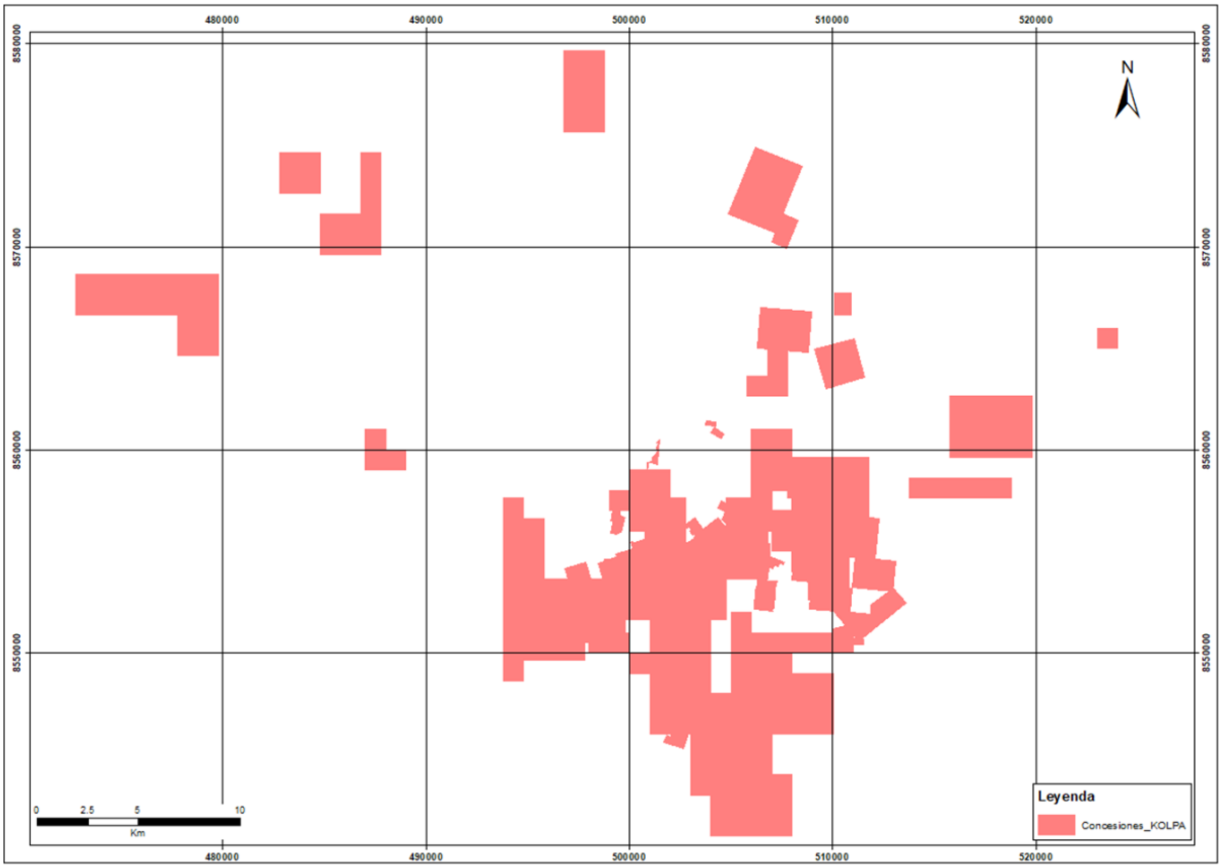
According to the Peruvian General Mining Law (the "Law"):

1. The beneficiation concession grants the right to use physical, chemical, and physical-chemical processes to concentrate minerals or purify, smelt, or refine metals.
2. As from the year in which the beneficiation concession was requested, the holder shall be obliged to pay the Mining Concession Fee in an annual amount according to its installed capacity, as follows:
    - 350 tpd or less: 0.0014 of one UIT per tpd.
    - From more than 350 tpd to 1,000 tpd: 1.00 UIT
    - From 1,000 tpd to 5,000 tpd: 1.5 UIT
    - For every 5,000 tpd in excess: 2.00 UIT

"TPD" refers to the tonnes per day installed treatment capacity. In the case of expansions, the payment that accompanies the application is based on the increase in capacity.

4.3 Location of Property Boundaries

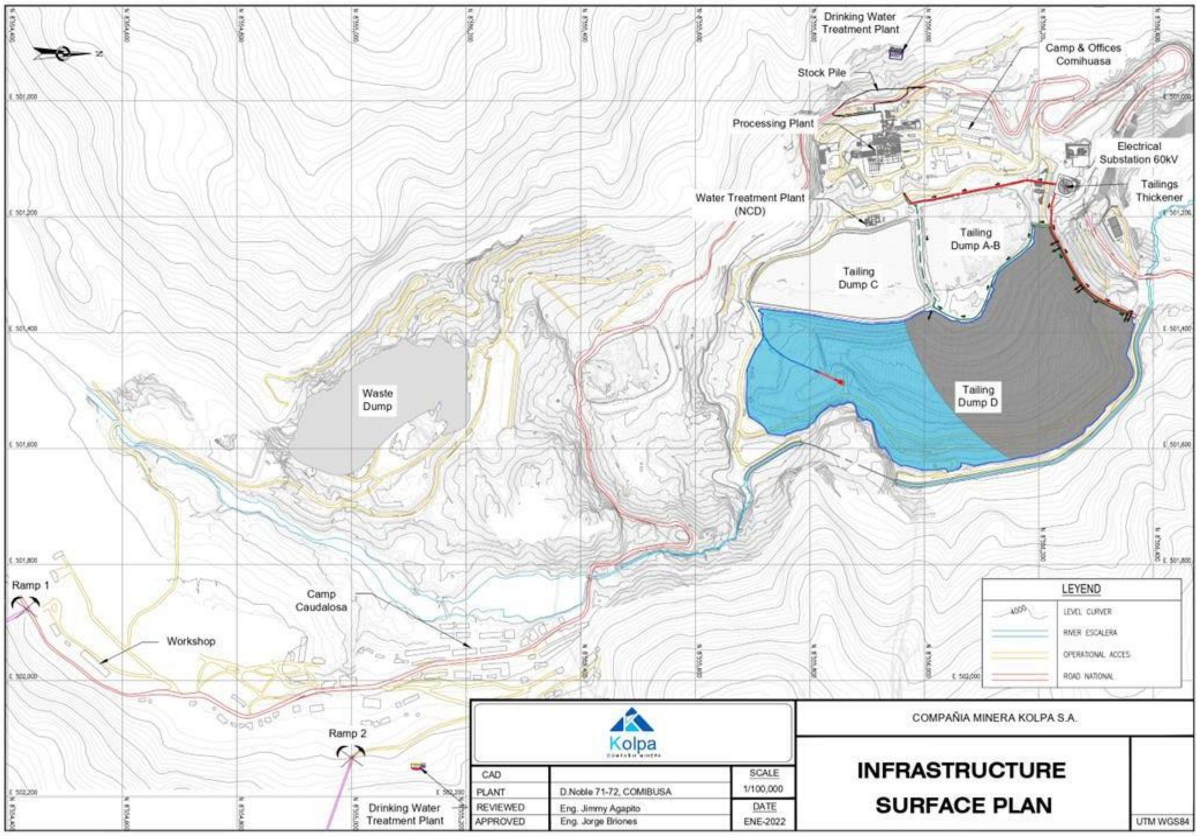
Figure 4-3 Property Boundaries



Source: Kolpa 2023, Internal Reports

4.4 Location of Specific Items

Figure 4-4 Primary Infrastructure



Source: Kolpa 2023, Internal Reports

4.5 Royalties, Back-In Rights, Payments, Agreements, Encumbrances

4.5.1 Annual Fees and Penalties

As shown in Table 4-2, all annual fees applicable to the mining concessions, mining claims, and beneficiation concession associated with the Mine have been paid in full up to and including year-end 2024. The penalties shown for these concessions represent the annual amounts payable if the Minimum Annual Production Target is not met. All concessions are in good standing.

Table 4-2 Annual Fee Per Mineral Concession and Beneficiation Concession

N°	Mining Right Name	Code	Type of Mining Right	Good Standing Fees 2025 (USD)	Penalties (USD) (Year 2025)	STATUS
1	ACUMULACION PATARA 2007	010000507L	CONCESSION	$3,269.60	280,640.44	In good standing
2	ALONDRA I	10199509	CONCESSION	$61.81	5,305.14	In good standing
3	BANQUERO	06007254X01	CONCESSION	$17.96	1,541.83	In good standing
4	BANQUERO DOS	06007256X01	CONCESSION	$14.97	1,284.85	In good standing
5	BANQUERO UNO	06007255X01	CONCESSION	$26.94	2,312.74	In good standing
6	CARMELA I	06007417X01	CONCESSION	$528.91	45,398.02	In good standing

N°	Mining Right Name	Code	Type of Mining Right	Good Standing Fees 2025 (USD)	Penalties (USD) (Year 2025)	STATUS
7	CAUDALOSA	06000100Y01	CONCESSION	$17.96	1,541.55	In good standing
8	CAUDALOSA 10	06004560X01	CONCESSION	$2.44	209.35	In good standing
9	CAUDALOSA 11	06004561X01	CONCESSION	$4.56	391.37	In good standing
10	CAUDALOSA ALTA	06000875X01	CONCESSION	$119.73	10,277.06	In good standing
11	CAUDALOSA CHICA DE HUACHOCOLPA N° 6	06006139X01	CONCESSION	$5.71	489.97	In good standing
12	CAUDALOSA OCTAVA	06004117X01	CONCESSION	$314.35	26,981.88	In good standing
13	CAUDALOSA SEPTIMA	06004118X01	CONCESSION	$659.50	56,607.00	In good standing
14	CORICANCHA 6	10046710	CONCESSION	$2,302.30	197,614.26	In good standing
15	DEMASIA CAUDALOSA CHICA	06001106X01	CONCESSION	$8.98	770.72	In good standing
16	DEMASIA RUBLO	06008394X01	CONCESSION	$272.18	23,362.46	In good standing
17	ELSITA 1RA	06000874X01	CONCESSION	$35.92	3,083.10	In good standing
18	ESPERANZA		CONCESSION	$11.97	1,027.71	In good standing
19	GAMA		CONCESSION	$3.97	340.96	In good standing
20	GLADYS PRIMERA	10091303	CONCESSION	$75.60	6,488.77	In good standing
21	GLADYS SEGUNDA	10595007	CONCESSION	$26.39	2,264.97	In good standing
22	JACOBA NUEVE	10001412	CONCESSION	$69.87	5,997.43	In good standing
23	KARLA 29	10043710	CONCESSION	$58.74	5,041.88	In good standing
24	MILLUPATA 10	10254196	CONCESSION	$32.36	2,777.70	In good standing
25	MILLUPATA 25	10528911	CONCESSION	$5.86	502.59	In good standing
26	MILLUPATA 26	10276312	CONCESSION	$5.27	452.04	In good standing
27	MILLUPATA 7	10172196	CONCESSION	$819.55	70,344.37	In good standing
28	MILLUPATA 8	10210596	CONCESSION	$711.61	61,080.03	In good standing
29	MIRAFLORES	06000876X01	CONCESSION	$29.93	2,569.26	In good standing
30	OTUNGO N° 1	06006505X01	CONCESSION	$11.98	1,027.89	In good standing
31	OTUNGO N° 2	06006506X01	CONCESSION	$23.95	2,055.80	In good standing
32	OTUNGO N° 3	06006507X01	CONCESSION	$5.99	513.92	In good standing
33	OTUNGO N° 4	06006508X01	CONCESSION	$5.99	513.94	In good standing
34	PEPITO 95	10424295	CONCESSION	$1,083.07	92,963.17	In good standing
35	PESETA PRIMERA	06007257X01	CONCESSION	$2.99	256.99	In good standing
36	PIA	10130809	CONCESSION	$66.84	5,737.10	In good standing
37	RUBLO A	06007146X01	CONCESSION	$17.96	1,541.78	In good standing
38	RUBLO B	06007147X01	CONCESSION	$71.85	6,167.33	In good standing
39	RUBLO C	06007148X01	CONCESSION	$5.99	513.97	In good standing
40	RUBLO D	06007149X01	CONCESSION	$2.99	257.01	In good standing
41	SANTA URSULA	06008295X01	CONCESSION	$59.86	5,138.21	In good standing
42	TORO MACHAY	06000552X01	CONCESSION	$5.99	513.89	In good standing
43	ULTIMA HORA N° 1-A	06007150X01	CONCESSION	$11.98	1,027.89	In good standing
44	ULTIMA HORA N° 1-G	06007156X01	CONCESSION	$17.96	1,541.78	In good standing
45	ULTIMA HORA N° 202	06007058X01	CONCESSION	$395.19	33,920.29	In good standing
46	ULTIMA HORA N° 403	06007061X01	CONCESSION	$129.17	11,087.20	In good standing

N°	Mining Right Name	Code	Type of Mining Right	Good Standing Fees 2025 (USD)	Penalties (USD) (Year 2025)	STATUS
47	ULTIMA HORA N° 405	06007063X01	CONCESSION	$111.30	9,552.89	In good standing
48	ULTIMA HORA N° 406	06007064X01	CONCESSION	$53.89	4,625.42	In good standing
49	ULTIMA HORA N° 407	06007065X01	CONCESSION	$5.99	513.94	In good standing
50	ULTIMA HORA N° 408	06007066X01	CONCESSION	$8.98	770.93	In good standing
51	ULTIMA HORA N° 410	06007068X01	CONCESSION	$3.17	271.82	In good standing
52	ULTIMA HORA N° 410-A	0607068AX01	CONCESSION	$3.07	263.89	In good standing
53	ULTIMA HORA N° 411	06007069X01	CONCESSION	$2.45	209.94	In good standing
54	ULTIMA HORA N° 412	06007070X01	CONCESSION	$11.98	1,027.89	In good standing
55	ULTIMA HORA N° 413	06007071X01	CONCESSION	$5.99	513.94	In good standing
56	ULTIMA HORA N° 414	06007072X01	CONCESSION	$5.99	513.94	In good standing
57	ULTIMA HORA N° 416	06007074X01	CONCESSION	$0.05	4.2	In good standing
58	ULTIMA HORA N° 416-1A	0607074AX01	CONCESSION	$44.62	3,829.69	In good standing
59	ULTIMA HORA N° 417	06007075X01	CONCESSION	$17.59	1,510.08	In good standing
60	ULTIMA HORA N° 418	06007076X01	CONCESSION	$11.70	1,004.51	In good standing
61	ULTIMA HORA N° 419	06007077X01	CONCESSION	$6.80	583.65	In good standing
62	ULTIMA HORA N° 420	06007078X01	CONCESSION	$5.99	513.92	In good standing
63	ACUMULACION RUBLO	010000723L	CONCESSION	1,448.99 (2025)	-	In good standing
64	AGILBERTITO 2017	10102317	CONCESSION	$1,980.48	-	In good standing
65	AMELIA PRIMERA 2011	10308411	CONCESSION	$1,200.00	41,200.00	In good standing
66	ANDREA 2020	10001620	CONCESSION	$65.00	-	In good standing
67	BOSSANOVA 2	10043610	CONCESSION	$2,625.38	90,137.92	In good standing
68	CARHUANCHO 2017	10102517	CONCESSION	$1,800.00	-	In good standing
69	CATALINA 2015	10089216	CONCESSION	$2,400.00	-	In good standing
70	CORICANCHA 5	10046810	CONCESSION	$3,000.00	103,000.00	In good standing
71	ESCOPETA	10246512	CONCESSION	$2,972.21	102,045.81	In good standing
72	GOLONDRINAS	10632908	CONCESSION	$33.44	-	In good standing
73	HALLAZGO PRIMERO 2017	10101917	CONCESSION	$2,315.14	-	In good standing
74	HALLAZGO SEGUNDO 2016	10326616	CONCESSION	$2,957.97	-	In good standing
75	HALLAZGO SEGUNDO 2017	10102117	CONCESSION	$900.00	-	In good standing
76	HALLAZGO SEGUNDO 2017-FRACCIONADO	010102117A	CONCESSION	$152.99	-	In good standing
77	HALLAZGO TERCERO 2017	10101717	CONCESSION	$3,000.00	-	In good standing
78	HATUM 11	10044610	CONCESSION	$1,124.01	38,590.91	In good standing
79	HATUM 12	10044510	CONCESSION	$248.04	8,515.90	In good standing
80	HATUM 13	10044410	CONCESSION	$166.20	5,706.17	In good standing
81	HATUM 2	10045110	CONCESSION	$1,800.00	61,800.00	In good standing
82	HATUM 32	10044310	CONCESSION	$143.61	4,930.58	In good standing
83	HATUM 33	10044210	CONCESSION	$143.10	4,913.17	In good standing
84	HATUM 34	10044110	CONCESSION	$857.20	29,430.52	In good standing
85	HATUM 35	10044010	CONCESSION	$89.82	3,083.67	In good standing
86	HATUM 6	10045010	CONCESSION	$1,800.00	61,800.00	In good standing

N°	Mining Right Name	Code	Type of Mining Right	Good Standing Fees 2025 (USD)	Penalties (USD) (Year 2025)	STATUS
87	HATUM 7	10044910	CONCESSION	$419.14	14,390.49	In good standing
88	HATUM 8	10044810	CONCESSION	$718.52	24,669.30	In good standing
89	HATUM 9	10044710	CONCESSION	$1,197.54	41,115.56	In good standing
90	HUASCAR 2022	10159722	CONCESSION	$621.12	-	In good standing
91	ICHUPATA 21	10043910	CONCESSION	$992.75	34,084.25	In good standing
92	LAURITA 01 2021	10231321	CONCESSION	$968.32	-	In good standing
93	LIZ 2020	10001520	CONCESSION	$545.98	-	In good standing
94	MARIA GRACIA 2021	10154421	CONCESSION	$832.96	-	In good standing
95	MICAELA 2015	10089316	CONCESSION	$3,000.00	-	In good standing
96	MILLUPARA 2017	10102417	CONCESSION	$1,122.16	-	In good standing
97	MILLUPARA 2017-FRACCIONADO	010102417A	CONCESSION	$32.69	-	In good standing
98	NUEVA ESPERANZA I 2021	10154321	CONCESSION	$300.00	-	In good standing
99	OTORONGO UNO 2013	590000113	CONCESSION	$6.00	206	In good standing
100	PLATA 4	10046610	CONCESSION	$203.85	6,998.78	In good standing
101	PLATA 5	10046510	CONCESSION	$360.03	12,361.10	In good standing
102	PLATA 6	10046410	CONCESSION	$263.46	9,045.40	In good standing
103	PLATA 60	10158911	CONCESSION	$1,272.72	43,696.82	In good standing
104	PLATA 61	10159011	CONCESSION	$1,758.78	60,384.88	In good standing
105	PLATA 7	10046310	CONCESSION	$1,197.54	41,115.41	In good standing
106	PROVICION INFINITA VII	10203010	CONCESSION	$300.00	10,300.00	In good standing
107	RANRACUCHO 3	10043810	CONCESSION	$1,496.93	51,394.59	In good standing
108	RUBLO CHICO 2017	10102017	CONCESSION	$744.10	-	In good standing
109	SAN ANTONIO	06000253X01	CONCESSION	$29.93	2,569.36	In good standing
110	SAN ANTONIO NÚMERO DOS	06003529X01	CONCESSION	$53.89	4,625.52	In good standing
111	TERESITA PRIMERA 2017	10101817	CONCESSION	$2,225.89	-	In good standing
112	TERESITA SEGUNDA 2017	10102217	CONCESSION	$483.74	-	In good standing
113	VANESSA 2020	10001720	CONCESSION	$329.05	-	In good standing
114	ZORRITOS	10222914	CONCESSION	$898.15	-	In good standing
115	ULTIMO MINUTO NUEVE 2015	10347415	CONCESSION	$580.50	-	In good standing
116	MORADITO UNO 2015	10347515	CONCESSION	$561.49	-	In good standing
117	PROLONGACION INES	10083824	MINING CLAIM	$300.00	-	In good standing
118	SHANNA 2025	10003625	MINING CLAIM	-	-	In good standing
119	LUCIA 2025	10003825	MINING CLAIM	-	-	In good standing
120	GABRIELA 2025	10003725	MINING CLAIM	-	-	In good standing
121	PLANTA DE CONCENTRACIÓN HUACHOCOLPA	P0100754	PROCESSING/BENEFIT CONCESSION	-	-	In good standing

4.5.2 Loads and Taxes

According to information from the Public Registry of Mining Rights, Table 4-3 includes the mining concessions that are encumbered with a real right of mortgage in order to obtain the precautionary measure in the Contentious-Administrative Action against the Resolution of the Environmental Audit Court No. 011-2015-OEFA/TFA-SEP1 dated October 7, 2015, as well as the fine associated with the Sanctioning Administrative Proceeding processed under file No. 033-09-MA/E.

Table 4-3 Mining Concessions with a Mortgage

N°	Concession Code	Concession Name	Electronic entry
1	010044910	Hatum 7	11163086
2	010044810	Hatum 8	11163082
3	010044710	Hatum 9	11163081
4	010044610	Hatum 11	11163083
5	010044510	Hatum 12	11163084
6	010044410	Hatum 13	11163085
7	010044310	Hatum 32	11163078
8	010044210	Hatum 33	11163079
9	010044110	Hatum 34	11163080
10	010044010	Hatum 35	11163075

4.5.3 Material Government Consents

The material Governmental Consents, which include requirements for the operation in compliance with applicable Peruvian laws and regulations, are shown in Table 4-4. These material Governmental Consents correspond to approvals including those permits, licenses, and authorizations issued by the competent governmental authorities, which entitle Kolpa to construct facilities and/or perform the activities for a mining operation. These components/activities may include: (i) mining activities and related facilities; (ii) beneficiation plant and related activities; (iii) water supply; (iv) effluent discharge and related facilities; (v) use of explosives; and (vi) power supply.

Table 4-4 Main Government Consents

N°	Government Consent	Resolution	Approval Date
Environmental			
1	Environmental Adjustment and Management Program (PAMA for its acronym in Spanish)	R.D. N° 286-97-EM/DGM	15/08/1997
2	Environmental Impact Declaration (DIA for its acronym in Spanish) for Direct Fuel Consumer with Dispenser	R.D.R. N° 020-2006/GOB.REG-HVCA/GRDE-DREM	03/07/2006
3	Exceptional Environmental Impact Assessment (EIAex) for the Expansion of the Huachocolpa Processing Plant to 800 tpd and related Works	R.D. N° 345-2012-MEM/AAM	24/10/2012
4	First Environmental Technical Report for the "Optimization and Technological Improvement for the Management and Use of Tailings in Mine Operation"	R.D. N° 372-2014-MEM-DGAAM	21/07/2014
5	Second Environmental Technical Report of the EIAex for setting up the tailings thickener and increasing the tailings dam “C” (Stage IV)	R.D. N° 060-2016-MEM-DGAAM/DNAM/B	26/02/2016

N°	Government Consent	Resolution	Approval Date
6	First Amendment of the EIAex for the construction of a new tailings dam "D", channeling of the Escalera river, mineral stockpile platform and increase the processing plant capacity from 800 tpd to 960 tpd	R.D. N° 193-2017-MEM/DGAAM	18/07/2017
After the approval of the First Amendment of the EIAex and the Ministerial Resolution N° 120-2014- MEM/DM came into effect			
7	First Environmental Technical Report for the Technological Improvement of the Rublo tank for the permanent storage of sludge in geotubes of the Huachocolpa Uno Mining Unit	R.D. N° 329-2017-SENACE/DCA	31/10/2017
8	Second Environmental Technical Report for increasing the tailings dam "C" (Stage V), relocating and changing the tailings thickener of the Huachocolpa Uno Mining Unit	R.D. N° 034-2017-SENACE-JEF/DEAR	15/12/2017
9	Third Environmental Technical Report for increasing the Processing Plant Processing Plant capacity from 960 tpd to 1,200 tpd, modifying the Rublo - Zona Alta deposit, among other components	R.D. N° 033-2019-SENACE-PE/DEAR	13/02/2019
10	Fifth Environmental Technical Report for the modification of components of the Huachocolpa Uno Mining Unit: optimization of the metallurgical process used in the Huachocolpa Processing Plant to increase its capacity to 1,440 tpd, relocation of the mineral stockpile platform, among other components	R.D. N° 00109-2020-SENACE-PE/DEAR	25/09/2020
11	Sixth Environmental Technical Report for increasing the "Rublo – Zona Alta" mine waste dump	R.D. N° 085-2021-SENACE-PE-DEAR	04/06/2021
12	Seventh Environmental Technical Report of the Huachocolpa Uno Mining Unit for increasing the processing plant capacity to 1,622 tpd, modifying the construction design of tailings dam "D" (for Stages II, III and IV), increasing the tailings dam "D" (Stage V), and including the tailings cycloning disposal system	R.D. N° 155-2021-SENACE-PE-DEAR	02/12/2021
Mine Closure Plan			
1	Mine Closure Plan for Huachocolpa Uno Mining Unit	R.D. N° 403-2009-MEM-AAM	10/12/2009
2	Update of the Mine Closure Plan for Huachocolpa Uno Mining Unit	R.D. N° 010-2014-MEM-AAM	08/01/2014
3	First Amendment of the Mine Closure Plan for Huachocolpa Uno Mining Unit	R.D. N° 345-2016-MEM-DGAAM	05/12/2016
4	Second Amendment of the Mine Closure Plan for Huachocolpa Uno Mining Unit	R.D. N° 082-2020-MEM-DGAAM	23/07/2020
5	Third Amendment of the Mine Closure Plan of Huachocolpa Uno Mining Unit	R.D. N° 199-2021/MINEM-DGAAM	15/10/2021
	Authorization for effluent discharge		
1	Industrial and Domestic Discharge	R.D. N° 087-2021-ANA-DCERH	20/05/2021
	Licenses for water use		
1	Industrial Surface Water Use License	R.D. N° 490-2015-ANA-AAAXMANTARO	30/07/2015
2	Surface Water Use Population License	R.D. N° 489-2015-ANA-AAAXMANTARO	30/07/2015
3	Surface Water Use Mining License	R.D. N° 488-2015-ANA-AAAXMANTARO	30/07/2015

N°	Government Consent	Resolution	Approval Date
4	Surface Water Use Population License	R.D. N° 487-2015-ANA-AAAXMANTARO	30/07/2015
Beneficiation Plant and Tailing Storage Facilities			
1	Authorization for the construction of the new tailings dam “C”	R.D. N° 223-2013-MEM-DGM/V	22/05/2013
2	Authorization for the operation of the new tailings dam “C”	R.D. N° 323-2013-MEM/DGM	19/12/2013
3	Authorization for the construction of Stages II and III of the tailings dam “C”	R.D. N° 0468-2014-MEM-DGM/V	03/10/2014
4	Authorization for the construction of an optimization and technological improvement system for the management and use of tailings from the Concentration Plant	R.D. N° 0471-2014-MEM-DGM/V	07/10/2014
5	Authorization to operate Stage II of tailings dam “C”	R.D. N° 056-2015-MEM-DGM/V	05/02/2015
6	Authorization to operate Stage III of tailings dam “C”	R.D. N° 0562-2015-MEM-DGM/V	18/11/2015
7	Authorization for construction and operation of tailings dam “C” to level 4365 masl., tailings thickening system, auxiliary facilities and modification of tailings dam construction method - central line (Stage IV)	R.D. N° 0142-2016-MEM-DGM/V	13/04/2016
8	Authorization for operation of cyclone tailings storage yard, cyclone nest and auxiliary facilities	R.D. N° 0506-2017-MEM-DGM/V	02/06/2017
9	Authorization for construction of new tailings dam “D” (Stages I, II, III and IV)	R.D. N° 002-2018-MEM/DGM/V	09/01/2018
10	Authorization to increase tailings dam “C”	R.D. N° 0020-2018-MEM/DGM/V	17/01/2018
11	Authorization to operate the Processing Plant up to 960 tpd	R.D. N° 0372-2018-MEM/DGM/V	27/04/2018
12	Authorization to operate tailings dam “D” (Phase 1 of Stage I)	R.D. N° 0325-2019-MINEM-DGM/V	03/07/2019
13	Authorization to operate the Processing Plant Processing Plant Processing Plant up to 1,200 tpd	R.D. N° 0340-2019-MINEM-DGM/V	15/07/2019
14	Authorization to operate tailings dam “D” (Phase 2 of Stage I)	R.D. N° 0106-2020-MINEM-DGM/V	26/02/2020
15	Authorization to operate the Processing Plant Processing Plant Processing Plant up to 1,440 tpd	R.D. N° 0037-2021-MINEM-DGM/V	28/01/2021
Power Transmission Lines			
1	Approval of the Pre-operational Study of the transmission facilities for the connection to the SEIN of the new KOLPA 60 kV substation to the 60 kV Ingenio - Caudalosa transmission line	COES/D/DP-1530-2019	24/08/2019
2	Approval of the Operation Study of the "KOLPA 60/22kV Electrical Substation" Project	COES/D/DP-1823-2019	05/12/2019
3	Authorization for the connection for the commissioning tests of the "KOLPA 60/22kV Electrical Substation" Project	COES/D/DP-1842-2019	11/12/2019
	Use of Explosives		
1	Authorization for the acquisition and use of explosives and related materials	R.G. N° 00111-2022-SUCAMEC/G	EPP 11/01/2022
2	Authorization for Storage of Explosives and Related Materials with respect to Accessories	R.G. N° 03316-2021-SUCAMEC/G	EPP 11/11/2021
3	Authorization for the Storage of Explosives and Related Materials with respect to ANFO	R.G. N° 03317-2021-SUCAMEC/G	EPP 11/11/2021

N°	Government Consent	Resolution	Approval Date
4	Authorization for the Storage of Explosives and Related Materials with respect to Explosives	R.G. N° 03318-2021-SUCAMEC/G	EPP 11/11/2021

4.6 Surface Rights

As provided in the Law and related civil legislation, surface land rights are real estate properties independent and different from mining concessions.

The Law allows the holder of a mining concession to either reach an agreement with the landowner before starting relevant mining activities (i.e., exploration, exploitation, etc.) or complete the corresponding easement administrative procedure, in accordance with the applicable regulation.

Surface property is acquired through:

- The transfer of ownership by agreement of the parties (derivative title), or
- Acquisitive prescription of domain (original title).

Temporary rights to use and/or enjoy derived powers from a surface property right may be obtained through Usufruct (a legal right to temporarily use and derive revenue or benefit) and easements.

As indicated by Kolpa, Huachocolpa is located within the following surface rights as shown in Figure 4-3.

In the case of land use rights associated with Huachocolpa Uno, Kolpa has entered an agreement with the Peasant Community of Huachocolpa, which is the owner of the surface area required for executing Kolpa's mining activities, located in the district of Huachocolpa, province and department of Huancavelica, registered in registry file No. 40005632 of the Real Property Registry of the Registry Office of Huancavelica.

By means of the "Mining Easement, Usufruct, Surface and Right of Way Agreement" dated June 22, 2016 gives Kolpa the right to use specific pieces of land owned by the Peasant Community of Huachocolpa to conduct, among others, mining activities over an area of 678.40 hectares under the term of ten (10) years, ending on June 20, 2026. The Agreement includes 29 surface polygons and 18 provisional accesses.

Given the easement contract signed in 2016, KOLPA is not expected to require any more parcels of land or easements for its current operation until after June 2026.

4.7 Environmental Liabilities

General environmental considerations are discussed in Chapter 20 with respect to mineralized material treatment, tailings, general mine infrastructure, remediation, closure costs, and recovery assurances.

4.8 Permits

Chapter 20 discloses the environmental permits and the legislation pertinent to Kolpa.

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

5.1 Accessibility

The current access from Lima is via the asphalted Carretera Central to Huancayo (302 km, 7 hours) and then via an asphalted road to Huancavelica (143 km, 3.5 hours), and finally from Huancavelica to Huachocolpa Uno (74 km, 2.5 hours).

An alternative from Lima is via the highway Panamericana Sur to San Clemente (227 km, 2.5 hours) and then via an asphalted road to Chonta (249 km, 5 hours), and finally from Chonta to Huachocolpa Uno (19 km, 1 hour).

5.2 Climate

Huachocolpa Uno is characterized by a dry climate with only moderate humidity in summer, ranging between 69.4 % during the summer to 73 % during the rainy season. Annual temperatures in the project area vary between 0.9°C and 13.6 °C (Kolpa Meteorological Station, 2022).

The annual precipitation is up to 724.32 mm (Kolpa Meteorological Station, 2022) from December and March during the rainy season, and for the rest of the year precipitation is minimal. Both the mine and the processing plant can operate without interruption throughout the year.

5.3 Local Resources

The airport "Alfredo Mendivil Duarte" National Airport) is located nearest to the mine in Ayacucho in the department of Ayacucho, approximately 219 km to the east.

Ayacucho is a department of the Republic of Peru located in the south-central part of the country, in the Andean region, bordering Junín to the north, Cuzco to the northeast, Apurímac to the east, Arequipa to the south, Ica to the west and northwest with Huancavelica. With 14 inhabitants/km², it is the seventh least densely populated department, ahead of Pasco, Moquegua, Amazonas, Ucayali, Loreto and Madre de Dios. The Ayacucho department was founded on April 25, 1822.

With provinces on both sides of the Andes Mountain range (east and west), Ayacucho has an area of 43.8 thousand km², which in terms of extension is similar to that of Denmark or Estonia, and a population in 2007 of 613 thousand inhabitants.

Ayacucho (founded as San Juan de la Frontera de Huamanga on April 25, 1540, and called Huamanga until February 15, 1825) is a Peruvian city, is the capital of the Ayacucho district, of the province of Huamanga and of the department of Ayacucho. It is located on the eastern slope of the Andes Mountain range at an altitude of 2761 m above sea level and is characterized by a temperate and dry climate, with sunshine year-round. It has a total area of 100.37 km² and a total population (2020) of 228,427 inhabitants, with a density of 60 inhabitants/km².

5.4 Infrastructure

Kolpa's operation includes the following main facilities.

- Approximately, 1,800 tonnes per day (tpd) underground mine and process plant
- Operational accesses
- Offices and warehouses

- Accommodations
- Tailings Deposit “D”
- Maintenance workshop

5.4.1 Power

- Power transmission line, high voltage, 60 kV
- Kolpa’s 60 kV to 22.9 kV electrical substation.

Figure 5-1 Power supply station

5.4.2 Water

- Water Treatment Plant (NCD) and Mine Water Treatment Plant
- Caudalosa Drinking Water Treatment Plant
- Comihuasa Drinking Water Treatment Plant

Figure 5-2 Water supply system

5.4.3 Resource storage areas

- Huachocolpa Uno processing stockpile platform

Figure 5-3 Stockpiles

5.4.4 Processing plant sites

- Huachocolpa Uno processing plant has a capacity of approximately 1,800 tpd.

Figure 5-4 Mineral processing plant

5.4.5 Waste disposal areas

- Rublo waste dump

Figure 5-5 Waste dump area

5.5 Physiography

Huachocolpa Uno is in the eastern flank of the Western Cordillera of the Andes, or more precisely, in the inter-cordillera zone of the central Andes of Peru at an average elevation of 4,400 masl. The area is characterized by hillsides with steep to extremely steep slopes with frequent rocky outcrops, and colluvial or colluvial-alluvial deposits at the bottom of the slopes. Between the hillsides, there are flat-lying or sloping valley floor surfaces, formed by fluvial-glacial and morainic deposits.

5.6 Vegetation and Wildlife

The vegetation is present in lowlands with species such as Stipa, Festuca, Calamagrostis, Astragalus, Dystichia, and Scirpus with poor drainage and permanently wet soil formations (bofedales) with low potential for agricultural use, but generally used for grazing Andean camelids, sheep, and horses.

6 HISTORY

6.1 Prior Ownership and Ownership Changes

The first documented mining activity in the Huachocolpa District dates back to the chronicler Marco Jiménez de la Espada, 1586, who mentioned Huachocolpa Uno in Angaraes, with silver ores (Laymen and Mc Iver, 2024).

In the year 2000, the Raffo Group consolidated full ownership of the "Huachocolpa Uno" mining unit, including the administration and operation.

In 2016, the private equity fund Arias Resource Capital Management (ARCM), became a shareholder of Kolpa with an investment program of more than US$ 100 million. ARCM provided valuable experience and technical and financial skills specialized in capitalization and value creation associated with the responsible and sustainable operation of mining assets.

ARCM is a private equity fund that invests in mining companies globally with a special focus on Latin America. ARCM is a non-public fund registered with the U.S. Securities and Exchange Commission (SEC). Among the investments made by ARCM are: Largo Inc. and Sierra Metals Inc. Such information can be found in Canada's SEDI system.

In December 2016, Compañía Minera Kolpa S.A. acquired from Compañía de Minas Buenaventura S.A.A. fifteen mining concessions of the “Recuperada Mining Unit”, which have geological resources covering an area of 2,674.71 hectares. Through this agreement, Kolpa acquired 100% title to those mining concessions, including the integral and accessory parts, and everything that in fact and by law corresponds or could correspond to them, without any reservation or limitation, and without any additional payment for these and other concepts other than those established in the transfer agreement. (Source: second clause of the transfer contract dated December 29, 2016).

Along with the acquisition of those mining concessions from Compañía de Minas Buenaventura S.A.A. (which resulted in Kolpa’s acquisition of the Patara and Escopeta projects), Kolpa received relevant geological and other technical information, such as samplings of underground and surface channels data, diamond drill hole results, IP/resistivity geophysical study and geological mapping for both projects.

6.2 Property Exploration and Development History

Since mid-20th century, small miners mined in the Huachocolpa District, including several underground mines: "Caudalosa Chica", "Emmita", "Coquito", "Rublo", "Recuperada", "Teresita", among others.

In 1946, Banco Minero del Perú built the Huachocolpa Uno Processing Plant, with a 200 tonne per day capacity to support small mining producers in the area.

In 1989, the Raffo Group. in partnership with Compañía de Minas Buenaventura S.A.A., began consolidating mining activities in the Huachocolpa district.

Between 1995 to 2000, they executed an important exploration investment program, which led to the discovery and start-up of the Bienaventurada Vein.

In 2000, the Raffo Group invested additional capital to increase the production capacity to 800 tpd, increase mineral resources, as well as improve and modernize production processes, and acquire new mining concessions and properties throughout the area of influence.

6.3 Historical Mineral Resource Estimates

The section describes Mineral Resource Estimates (MREs) prepared for Kolpa in 2023 and 2024. However, the MRE's prepared for Kolpa are considered historical in nature with respect to Endeavour. A qualified person has not done sufficient work to classify the historical resource estimates as current mineral resources or reserves and Endeavour is not treating the historical resource estimates presented here as current mineral resources or reserves. There are no current MREs for the Property. The historical estimates were prepared prior to Endeavour's purchase agreement with Kolpa. Additional diamond drilling, underground channel sampling and mining has been conducted on the Property since the last historical MRE was completed. To upgrade historical estimates to current MREs, Endeavour will need to review all drill data and underground channel sampling completed to date, and revised all geological models, resource models and structural models as well as revised economic parameters for resource reporting. As well, Endeavour is planning on completing additional drilling on the Property before estimating new MREs.

6.3.1 Historical Estimates

The Property was the subject of an internal technical report in 2023 titled Huachocolpa Uno Preliminary Economic Assessment Project, Project Number 0094 which had an effective date of 31 March 2023 and a report date of 7 May 2024 (Laymen and Mc Iver, 2024). The report was prepared for Kolpa. The technical report included open pit and underground MREs for 9 deposits on the Property, including Bienaventurada, EM Chonta, Tajo Yen, Escondida, Escopeta, Chonta, Teresita, Yen NE and Rublo. The combined MRE included a Measured + Indicated Mineral Resource of 5 Mt at 2.84 oz/t Ag, 3.07% Pb, 3.28% Zn and 0.24% Cu. In addition to the Measured + Indicated Mineral Resources, an Inferred Mineral Resource of 4.2 Mt at 3.16 oz/t Ag, 3.43% Pb, 3.25% Zn and 0.21% Cu is accounted for (Table 6-1).

Table 6-1 Summary Historical Mineral Resources – Huachocolpa Uno, May 2024 (Laymen and Mc Iver, 2024)

Category	Mass Mton	Ag oz/t	% Pb	% Zn	% Cu	NSR (US$/t)	Total NSR (US$M)
Measured	2.2	3.43	3.53	3.68	0.29	188	408
Indicated	2.8	2.38	2.72	2.98	0.21	142	403
Mea+Ind	**5.0**	**2.84**	**3.07**	**3.28**	**0.24**	**162**	**811**
Inferred	4.2	3.16	3.43	3.25	0.21	172	728

The MRE was performed using MineSight (MS) and Leapfrog. 3D vein shells were constructed in Leapfrog Geo, using geological sections, assays results (underground channels and DDH's), lithological interpretation, underground mapping, and structural data. To determine the length of composites samples by domain, the statistic mode of the sample length was used. To correct outliers, the technique of dimensioning from Cumulative Probability Plot (CPP) graphs was applied.

Rotated block models of 1 x 3 x 3m were used for the Bienaventurada, Escopeta, Escondida, Teresita, Rublo, Yen NE and Chonta veins coinciding with the vein direction. For Yen Open Cast, unrotated block model of size 1 x 1 x 1 m was used. The reported grades were estimated using Ordinary Kriging (OK). The block models were validated using industry standard techniques. The resource classification criteria include the distance to the nearest drill hole and the number of samples.

High-grade assays were capped for Ag, Cu, Pb and Zn to limit the influence of a small number of outliers located in the upper tail of the grade distributions. The raw assays were limited prior to compositing. CPP plots commonly show outliers in the 98th to 99th percentile.

The Ag, Cu, Pb and Zn grades were estimated using ordinary kriging (OK) in all block models. Inverse distance weighting (IDW) and Nearest neighbour (NN) methodologies were used for estimation comparison and validation. The estimation was performed in four passes, the first one equal to 100% of the variogram range, the second equal to 150% of the variogram range, the third equal to 200% the variogram range, the fourth equal to 1000% variogram range.

In the block model, most of the veins were assigned the density value by interpolation by the ID method, while in the other veins that did not have a density measurement, the average density of the total data obtained was used (generally 2.90 to 3.00 9g/cm^3).

The MRE was reported using all material (mineralization and waste) within resource shapes generated in MSO, and using geological criteria, resources were classified by mining method. NSR cut-off values of US$34.20/t for underground methods and US$23.30/t for Yen open cast resources, were used. Mineral resources are estimated using: zinc price of US$1.59/lb, lead price of US$1.16/lb, copper price of US$5.36/lb, and silver price of US$31.20/oz. Metallurgical recoveries are based on recovery curves derived from historical processing data (see Section 13).

The classification of the MRE is consistent with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) standard definitions for mineral resources and reserves dated May 10, 2014 (CIM definitions, 2014).

For Bienaventurada Measured was estimated within drilling patterns 20m x 10m x 20m and includes channel sampling at 3m x 6m inside the mining developments levels and sublevels. Indicated was estimated within drilling patterns 40m x 20m x 40m and includes channel sampling at 6m x 12m for the mining development levels. Inferred was estimated with drilling patterns greater than 40m x 20m x 40m and maximum search distances at 70m x 46m x 13m in Bienaventurada.

For Escondida the drilling pattern and the search distances were the same; however, Escondida did not have channel samples, but only drilling information. Chonta, Escopeta and Rublo were mostly explored by development and channel sampling; no drilling data was available. Measured was defined by development drifts inside the deposit, with channel samples collected 2m x 1m x 6m (levels and sublevels). Indicated was defined by development drifts inside the deposit, with channel samples collected 2m x 1m x 12m (levels). Inferred was estimated with the same channels as Indicated resource with extension search distances 91m x 50m x 10m.

The May 2024 MRE was revised in October 2024 (effective August 31, 2024) using an updated DDH and underground channel database (Table 6-2) and the same estimation methodology. The updated MRE as presented in an internal corporate presentation prepared in January 2025. The updated MRE included open pit and underground MREs for 11 deposits on the Property, including Bienaventurada, EM Poderosa, Tajo Yen, Escondida, Escopeta, Chonta, Teresita, Yen NE, Rublo, Coricancha and Pepito. Similarly, NSR cut-off values of US$34.20/t for underground methods and US$23.30/t for Yen open cast resources, were used.

Table 6-2 Summary of Mineral Resources – Huachocolpa Uno, October 2024 (effective August 31, 2024 – Kolpa Internal Corporate Presentation, January 2025)

		Grade				Contained Metal			
Category	**Tonnage**	**Ag**	**Pb**	**Zn**	**Cu**	**Ag**	**Pb**	**Zn**	**Cu**
	(Mt)	(oz/t)	(%)	(%)	(%)	(Moz)	(Kt)	(Kt)	(Kt)
Measured	2.8	4.07	3.99	3.83	0.33	11.3	110.8	106.3	9.2
Indicated	3.5	2.92	3.06	3.07	0.24	10.1	105.7	106.1	8.3
Measured & indicated	**6.2**	**3.43**	**3.47**	**3.41**	**0.28**	**21.4**	**216.5**	**212.4**	**17.5**
Inferred	5.0	2.90	3.02	3.37	0.24	14.6	152.3	170.0	12.1

6.4 Production History

Between 2012 to 2024, approximately 5.8 million tonnes of mineralization have been produced from the mine.

The Process Plant can currenty mill approximately 1,800 tpd for the reported commodities.

Table 6-3 Recent Production History – Huachocolpa Uno Mine (Laymen and Mc Iver, 2024)

Year	Mine Production (tonnes)	Ag (oz/t)	Cu (%)	Pb (%)	Zn (%)
2012	325,143	2.6	0.38	4.27	3.7
2013	356,090	2.62	0.44	4.98	4.42
2014	393,415	2.14	0.43	3.79	3.99
2015	318,439	2.48	0.44	4.06	4.35
2016	283,962	3.83	0.42	4.22	3.97
2017	337,768	4.37	0.34	3.52	3.8
2018	353,035	4.01	0.29	3.41	3.29
2019	401,657	3.57	0.3	3.58	2.6
2020	461,721	2.11	0.28	2.83	2.95
2021	597,953	2.13	0.24	2.59	2.55
2022	632,139	2.73	0.19	2.97	2.16
2023	672,341	3	0.19	2.95	2.21
2024	690,363	3.34	0.21	3.17	2.28
Total	**5,824,026**	**2.94**	**0.29**	**3.41**	**3.03**

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Huachocolpa mining district is located on the eastern part of the Cordillera Occidental Mountain range and has a varied geomorphology. Altitudes vary between 4,200 masl and 5,000 masl and are characterized by rugged relief such as mountains, cliffs, and moderate to gentle slopes (Laymen and McIver, 2024).

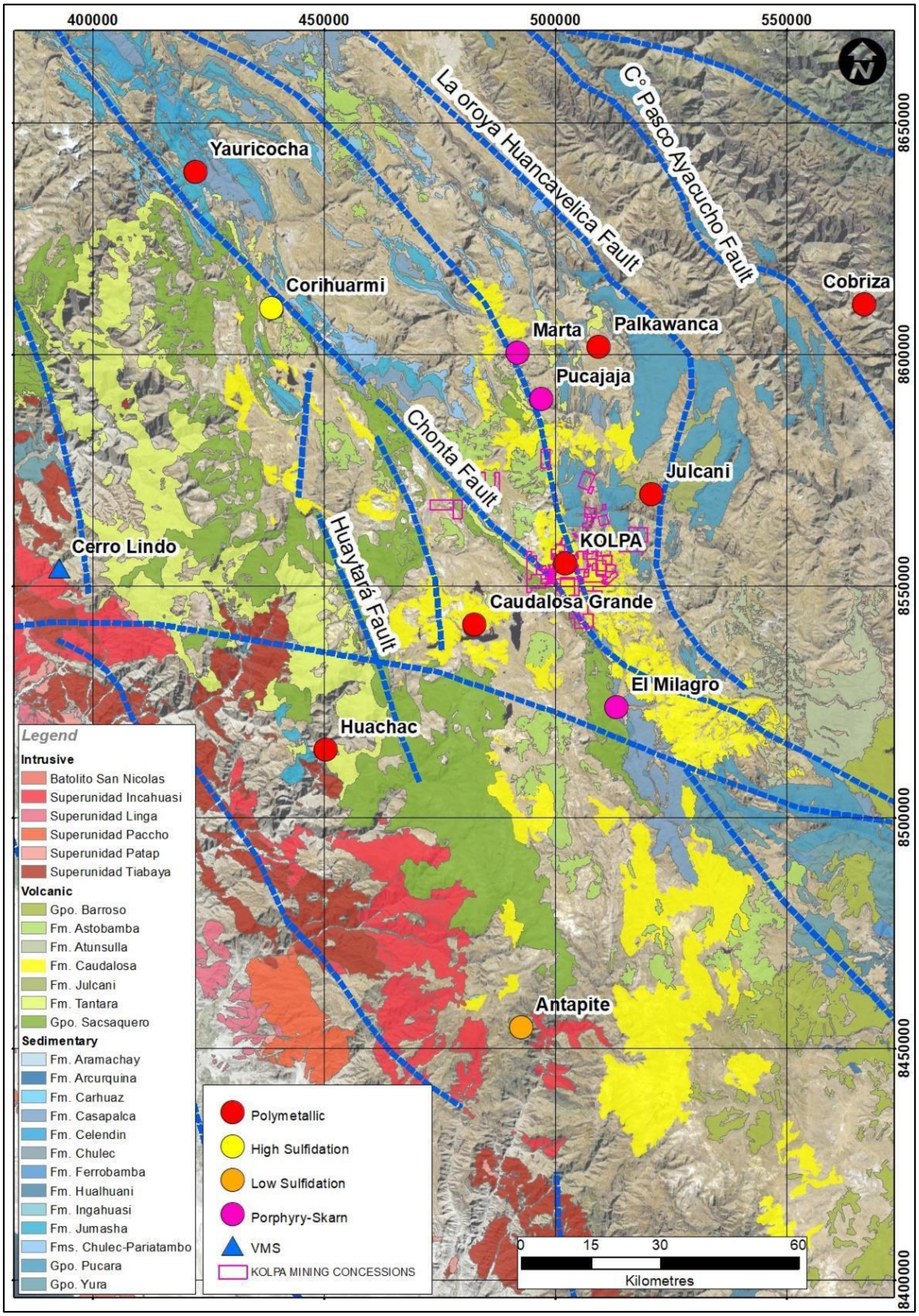
The Andean Cordillera developed as a result of the subduction of the Nazca oceanic plate that produced a compression from east-northeast to west-southwest, which led to a complex sequence of folds and thrusts that stretches along the west coast of Peru. Mountain development initiated in the late Triassic and continues to the present day.

Regionally, the lithological sequences consist of a basement of moderately to strongly folded strata of Paleozoic age, such as pelitic sediments of the Excelsior Group (Devonian) to molasic sedimentation of the Mitu Group (Upper Permian); proceeding to Mesozoic sequences such as marine sedimentary sequences of the Pucara Group (Triassic-Jurassic) to continental and marine facies deposition of the Goyllarisquizga Group and the Chulec and Pariatambo formations, respectively; and, finally, affecting the early and middle Tertiary sequences which are unconformably overlain by late Tertiary volcanic and sedimentary rocks.

In the Huachocolpa area, the late Tertiary rocks are evidence of an important volcanic and plutonic belt and consist of large volumes of andesite, dacite and rhyodacite type composition that form an interpenetrated complex of domes, plug domes, dikes, flows and composite volcanoes. The intrusive rocks of the belt are represented by bodies such as the Cordillera Blanca batholith in northern Peru. In many locations in the Huachocolpa District the middle and late Miocene and Pliocene volcanic rocks are moderately to strongly propylitized and are cut by a broadly distributed system of Pb-Zn-Ag veins, generally steeply dipping to the east-west, west-northwest or east-northeast. The domes, flows, and breccias also are cut by a distinctive suite of discontinuous and somewhat irregular north-south-trending dacite-rhyodacite dikes and plug domes. In contrast to the rocks that they intrude these dikes and domes are virtually unaltered.

Huachocolpa Uno is sited within the Central Cordillera of Peru along the central part in the recognized Miocene Polymetallic Mineral Belt, including deposits like Yauricocha, Corihuarmi, Marta, Pucajaja, Palkawanka, Julcani, Caudalosa Grande and El Milagro (Figure 7-1).

Figure 7-1 Regional Geological Map and Principal Mines located in the Miocene Polymetallic Mineral Belt (Laymen and Mc Iver, 2024)



7.2 Local Geology

The mineralized Huachocolpa Uno deposit is on a sequence of Cenozoic volcanic rocks, belonging to the Huachocolpa Group, locally two units are recognized (Laymen and Mc Iver, 2024) (Figure 7-2).

At Huachocolpa Uno, Mesozoic sedimentary rocks, Cenozoic igneous rocks, and Tertiary volcano-sedimentary sequences, travertine and Quaternary deposits are identified (see stratigraphic column, Figure 7-2).

Figure 7-2 Local Geology Map - Huachocolpa Uno Mine (Laymen and Mc Iver, 2024)

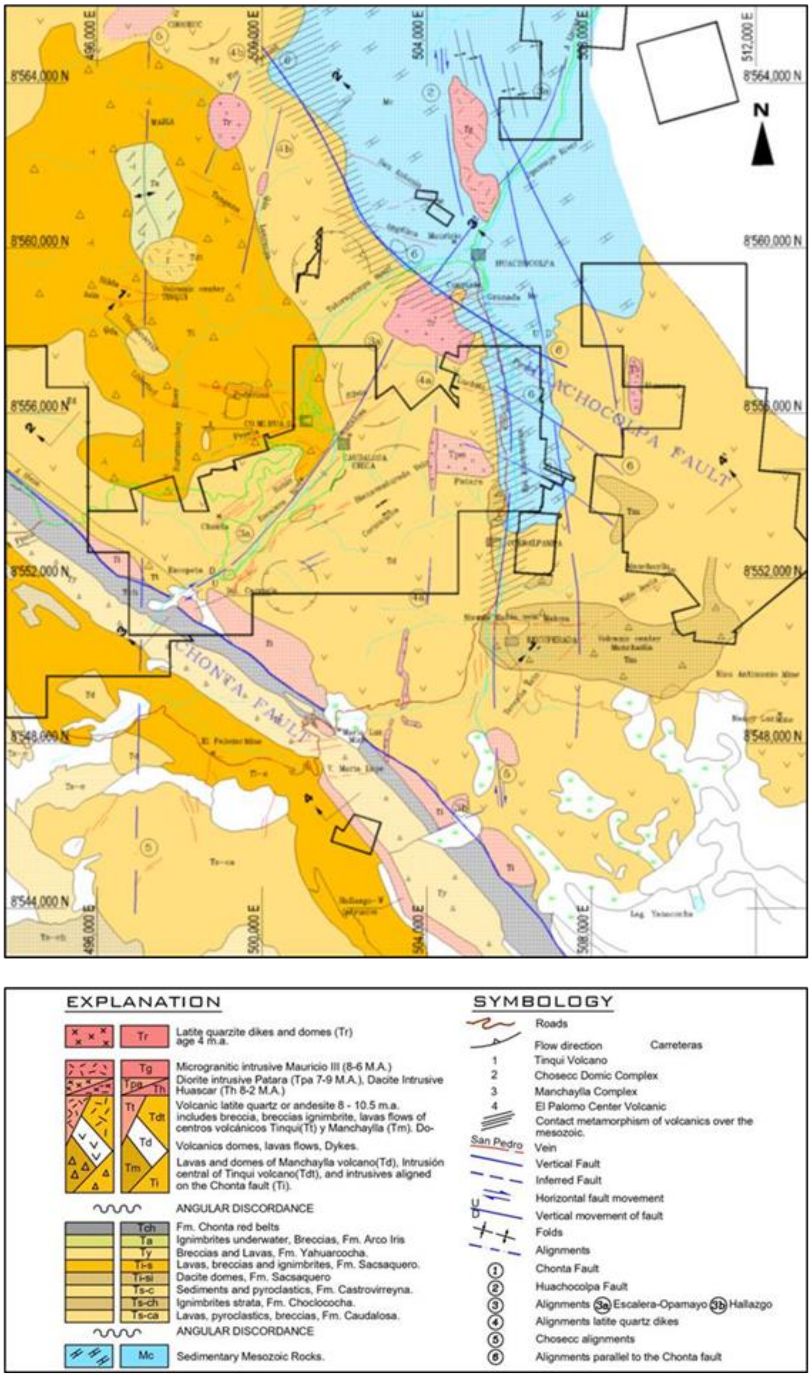
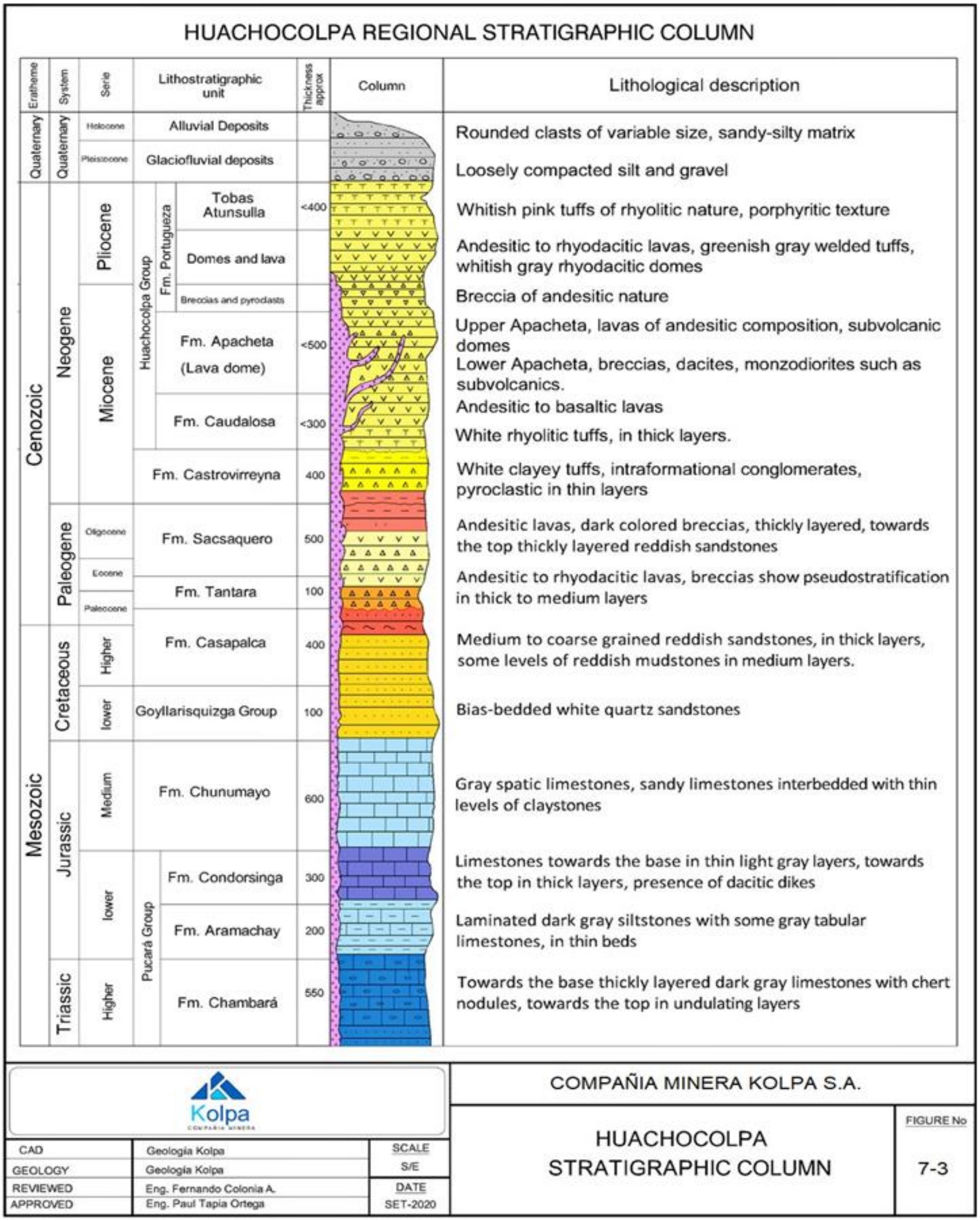


Figure 7-3 Local Stratigraphic Column. The mineralization is hosted in the Andesitic sequence of Huacholpa Group (Laymen and Mc Iver, 2024)



7.2.1 Apacheta formation

Also called “Lava Domes Formation”, studied by “D”. Noble 1973, these rocks have erupted from three volcanic centers: the Tinqui, Manchaylla and Chosecc centers. Likewise, a large number of volcanic domes, dikes and spills that erupted from a large number of small volcanic raises corresponding to the Tinqui volcanics (Tm-vt), radiometric dating performed by “D”. Noble indicates an age of 10.1 to 10.4 Ma, and a thickness of 300 m. It is a simple volcano, the largest one in the district of Huachocolpa, which consists of eroded remnants of a volcanic stratum, breccias, tuff-breccias and lava flows of latitic composition.

7.2.2 Manchaylla volcanic complex

This volcanic complex is formed by two types of latites:

(i) biotite-hornblende latite; and,

(ii) dark latite with pyroxene and/or hornblende phenocrysts.

Radiometric dating according to “D”. Noble indicates an age of 9.7 Ma, and a thickness of 180 m.

The Manchaylla Volcanic Complex is divided into three lithological units, namely from the base to the top:

(i) volcanic breccias

(ii) lava flows (with gentle dips), and

(iii) tuffaceous breccias.

7.2.3 Intrusive rocks

These lithological units are accompanied by intrusions and subvolcanic dikes that cut through the previous lithological units.

Intrusive rocks are not very abundant in the whole Huachocolpa district and are described according to their decreasing age with their associations with domic complexes, these intrusives are partially covered by volcanic flows.

El Palomo Domic Complex

Composed of dioritic stocks, to this complex belongs the rhyolitic intrusive María Luz, radiometric dating assigns an age of 13.40 Ma.

Lava Domes Formation

The rocks of the Tinqui and Manchaylla volcanic centers are intruded and covered by an intricate and confusing formation of small domes, dikes, lava flows composed of hornblende latite and quartz latite.

Figure 7-1 is the result of the compilation of regional geological mapping based on the work done by “D”. Noble (1962, internal report for Cía. Minas Buenaventura), and W. Morche (1996, Geology of the Huachocolpa Quadrangle - INGEMMET).

Regionally, Mesozoic sedimentary rocks, Cenozoic igneous rocks, volcano-sedimentary rocks, travertines and Quaternary deposits outcrop (see stratigraphic column, Figure 7-3).

7.2.4 Pucara group (J/Tr-p)

Consisting of calc-sandy sequences of calcareous, calcarenites, calcilutites, having an approximate thickness of ± 1,050 m in the zone, it constitutes the basal of the units present in the area.

7.2.5 Chunumayo Formation (Jm-ch)

It consists of an intercalation of micritic limestone varieties, fine-grained, and gray colored with an approximate thickness of 600 m. This sequence is identified near the community of Huachocolpa on both margins of the Opamayo River.

7.2.6 Goyllarisquizga Group (Ki-g)

It consists of a sequence of continental origin, mostly clayey shales, limestone, and quartz detritus with an approximately 50 m thickness.

7.2.7 Casapalca Formation (Kp-c)

Locally called "Chonta Formation", it is made up by sandstones in thin strata of medium to thick grain and interbedded with siltstones in thick layers together with thin horizons of lodolites, up to 100 m in thickness. In Huachocolpa, it has been identified near the top of the Atoccmarca creek.

7.2.8 Tantará Formation (Ti-t)

Overlying the Casapalca Formation, it is formed primarily by breccias, lavas, tuffs, lapillis of lattitic, dacitic, andesitic to basaltic composition, up to several hundred meters thick, with an age of 40 - 41 Ma.

7.2.9 Sacsaquero Formation (Ti-s)

Volcano-sedimentary sequences composed mainly of andesitic lavas and breccias with local alternation of continental sediments and tuffs, with an age of 40 Ma.

7.2.10 Castrovirreyna Formation (Ts-c)

Formed by ignimbritic tuffs with age between 21 to 22 Ma, apparently associated to the El Palomo domic complex (13.75 Ma), outcrops to the west of the Sacsaquero Volcanic in a slight angular unconformity.

7.2.11 Huachocolpa Group (Ts/m-gh)

Formed by the Caudalosa, Apacheta, Chahuarma and Portuguesa Formations, which are mainly sub-horizontal volcano-sedimentary sequences consisting of pyroclastic flows, ignimbrites, with settling ages ranging from 10 to 8 Ma.

In the Huachocolpa district, the Apacheta Formation overlies discordantly the limestones of the Pucará Group, being emplaced by the mixed volcano complexes and volcanic domes related to the Tinqui, Manchaylla and Chosecc volcanic centers. Radiometric studies estimated ages of 10 Ma and 8 Ma, respectively.

7.2.12 Patara Intrusive (T-pa)

Located East of Huachocolpa uno mine in the place named Patara, it has a medium-grained monzodiorite composition, porphyritic, and intrudes the Lava Domes unit (Apacheta Formation). According to "D". Nobel (1977), the Patara Intrusive is a hypabyssal phase dome with radiometric ages of 7.9 Ma +/- 0.30 Ma.

7.2.13 Mauricio III Intrusive (T-ma)

Located north of Huachocolpa intruding the limestones of the Pucará Group, having rhyodacitic to rhyolitic composition with massive aspect, light gray color, porphyritic texture formed by plagioclase, quartz and biotites, within a fine-grained matrix of recrystallized volcanic glass. The Mauricio Intrusive was determined to have radiometric ages of 8 - 6 Ma.

7.2.14 Divisoria Intrusive

Located on the east flank of the Chonta Fault with NW-SE strike, presenting proto intrusive domes, autobreccias of andesitic and trachyandesitic composition.

7.2.15 Huamanripayoc Intrusive

Located in different sectors of Huachocolpa, as dykes and minor intrusions, with quartz-latite composition, with radiometric ages of 3.7 and 4.6 Ma.

7.2.16 Alluvial Deposits (Q-al)

Located in the Escalera, Opamayo, Apacheta and Carhuancho riverbeds; formed by pebbles, gravels and clays from the rocks that outcrop in the district.

7.2.17 Fluvioglacial Deposits (Q-fg)

Lateral and frontal moraines formed by angular, subrounded polymictic clasts and pebbles in a clayey matrix

7.3 Structural Geology

7.3.1 Introduction

In the Huachocolpa district, only three of the four phases of the tectonic processes associated with the Tertiary Andean Orogeny have been identified (Laymen and Mc Iver, 2024).

1) Inca Phase (First Phase): affecting the Arco Iris, Capas Rojas, Yahuarcocha and Sacsaquero Volcanic formations, and occured between 40 to 21.5 Ma (Upper Eocene-Lower Oligocene).
2) Quechua Phase I (Second Phase): has not been identified in the study area.
3) Quechua II Phase (Third Phase): related to dextral movements and fracturing, it occured between 14 to 10.5 Ma (Middle Miocene). The NW-SE trending Chonta fault, which extends longitudinally for more than 200 km, would have occurred at this stage.
4) Quechua Phase III (Fourth Phase): related to the formation of the lava domes in the district, occurring between 8 to 4.5 Ma (Upper Miocene-Lower Pliocene) and is coeval with the Huachocolpa Uno mineralization.

7.3.2 Local Structural Geology

Local structural context predominantly includes sub-vertical structures resulting from compressive stresses relating to the Andean Orogeny. Amongst these we identify the Chonta fault, the Huachocolpa fault, and several other local minor lineaments. Structural controls on mineralization result in well-developed arrays of ENE to NE trending mineralized vein-sets (such as the Bienaventurada vein-set structures). The structural pattern can repeat and extend over other nearby sets of differently oriented structures, resulting in adjoining sequences over-lapping so as to produce a form of `structural pairing´. Such structural settings are observed hosting polymetallic mineralization, resembling those shown in Figure 7-4.

7.3.3 Chonta Fault

The Chonta Fault is a NW-SE bearing regional structure (fault trace >200 km), located to the SW of the Huachocolpa district, and interpreted as a vertical to subvertical reverse fault, with a reported sinistral component of movement.

7.3.4 Huachocolpa Fault

Similarly aligned to the Chonta fault, the Huachocolpa Fault also has a predominantly NW-SE trend and is located towards the East of the Chonta Fault in association with the geological contact between the Pucara Group and the Sacsaquero volcanic units, near the town of Huachocolpa.

7.3.5 Tensional Fractures

These are formed as a consequence of the Tertiary Andean tectonism and occur within the area between the Huachocolpa and Chonta faults., The resulting sets of tensional fractures have produced fault-like zones along a principal WNW-ESE orientation. The fracture sets have subvertical dips (>60°), variably ranging between N and S. The sets which dip towards the S are interpreted to represent the latest event and are more favorable to host potentially economic mineralization. Amongst others, this is the case for the Bienaventurada, Rublo, Caudalosa 1, Caudalosa 2, and Silvia veins.

7.4 Property Geology

7.4.1 Bienaventurada Vein

The Bienaventurada Vein forms a part of the Bienaventurada mine, the most important structure of the Huachocolpa Uno deposit, with preferential bearing 060° NE-SW and dipping predominantly 60° - 75°S (Figure 7-4).

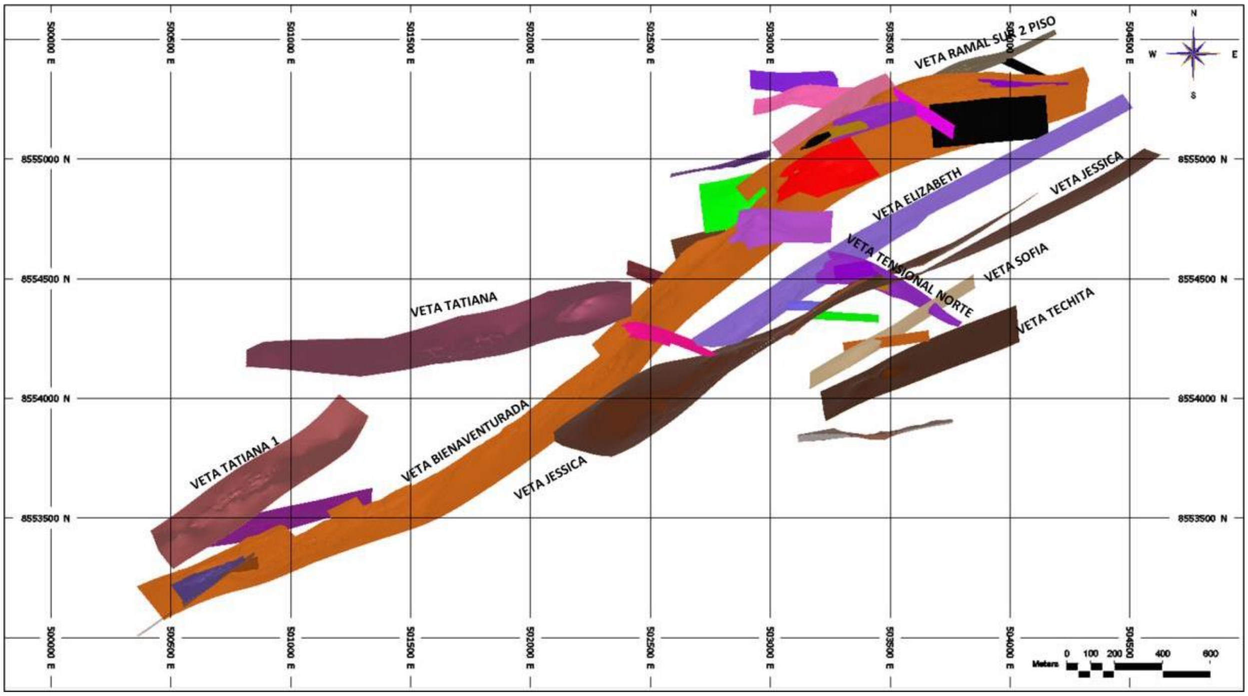
The Bienaventurada vein represents a fracture-filling structure classified as a Polymetallic Epithermal Low Sulphidation style of mineralization with a longitudinal extension over 4.3 km long, while at depth it has been identified from 4,650 masl (by underground workings) to 4,030 masl (by drilling).

The economic mineralization occurs in irregular mineralization-shoots, mainly in the Bienaventurada vein, where principal mineralization-shoots towards the central sector reach lengths of between 300 to 500 m, and up to 230 m long towards the west sector. Economically mineralized mineralization-shoots plunge at approximately 30°W, have a Ag-Pb-Zn-(Cu) metallic content, and variable vein thickness ranging from 0.5 m wide towards the closing limits of the structures, out to widths of up to 6.0 m within the inner, central zones. The estimated average width is of about 1.7 m. Vein mineralogy is comprised of:

- Mineralization: sphalerite, galena, argentiferous galena, and in smaller proportions, chalcopyrite and gray coppers of the freibergite - tetrahedrite variety.
- Gangue minerals: quartz, pyrite, realgar, and in smaller proportions, rhodochrosite, rhodonite, barite, stibnite and gypsum.

KOLPA internal reports mention that the most promising areas for the occurrence of the split and tension type structures associated with the Bienaventurada vein, are towards the hanging wall. This is especially so in the central and eastern portions of the Bienaventurada Vein

Figure 7-4 Bienaventurada Vein Assemblage (Laymen and Mc Iver, 2024)



7.4.2 Yen vein

The Yen vein is the second most important structure of the Huachocolpa Uno deposit, with polymetallic mineralization that includes a relict massive sulfide fill from the Rublo Vein. Additionally, parallel splays, tension veins, blebs and disseminations trend towards the roof and floor of the mineralized system. These occurrences form a structure with a tabular geometry that exceeds 350 m in strike length.

The Yen mineralization occur along an average direction of N 75° to 90° E. The western sector of the structure corresponds to a local change of strike towards the East with dips varying between 78° and 87° towards the S. On the other end of the Yen mineralization, the dip also inclines sub- vertically, but now between 70 ° and 78° towards the N (Figure 7-5).

A representative intersection through the Yen mineralization is: DDH-YEN-05-19: From 59.30 m to 64.75 m / 5.45m @ 2.54 Oz/t Ag, 0.9% Cu, 5.47% Pb and 3.36% Zn.

- 59.30 m to 60.30 m: massive vein with 8% sf, 20% gn and 10% cpy. found cutting an early phase of quartz (VETA RUBLO).
- 60.30 m to 61.20 m: intrusive with phyllic alteration cut by quartz veinlets, with base metals are at trace levels.
- 61.20 m to 63.20 m: veins with grades of 4% sf, 1% gn and 0.5% cpy.
- 63.20 m to 63.95 m: intrusive with dissemination of base metals at trace levels.
- 63.95 m to 64.75 m: Banded and patchy quartz veins with grades of 4% sf, 8% gn and 3.5% cpy.

The polymetallic mineralogy of the Yen Body is similar throughout its length with variations in concentration. The hydrothermal fill concentrates massive to drusic white quartz, sometimes porous with subordinate barite and calcite. Intersecting mineralization as space-filling or disseminated, the range of sulphides is presented as: sphalerite, galena, silver galena, chalcopyrite, pyrite, realgar, and orpiment; Together, both the gangue and mineralization form textures such as: massive fill, banding, pore fill, stockwork, and implosion breccias.

Table 7-1 presents the size characteristics of the main mineralized structures of the Huachocolpa Uno mine.

Figure 7-5 Plan View of the Yen Pit Vein Assemblage (Laymen and Mc Iver, 2024)

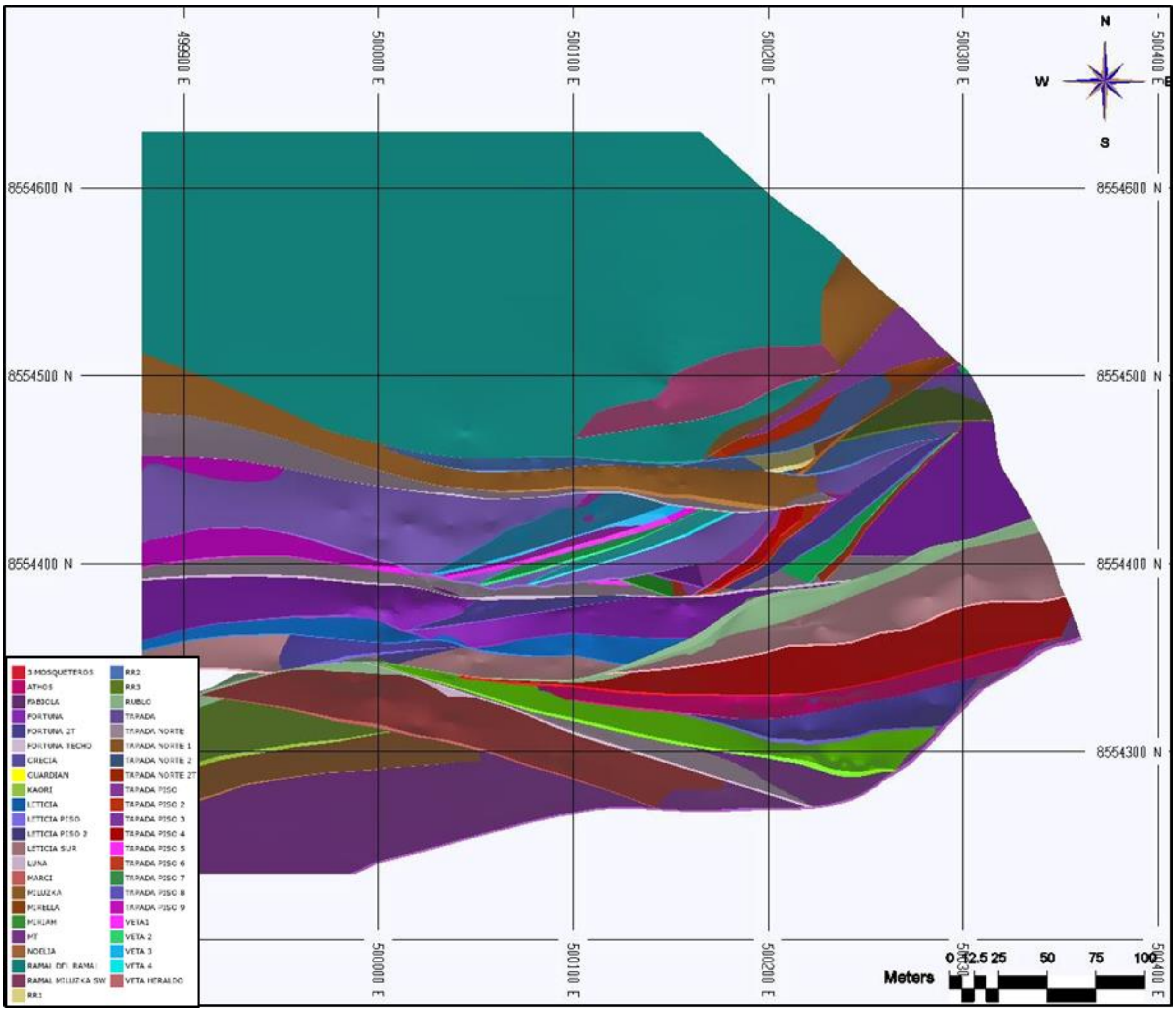


Table 7-1 Main Structures at Huachocolpa Uno Mine (Laymen and Mc Iver, 2024)

Mine / Project	Deposit Type	Structure	Commodity	Length (m)	Height (m)	Avg.Width (m)	Depth (m)	Elev. (m)
Rublo	Polymetallic Epithermal LS	Rublo	Ag-Pb-Zn-(Cu)	1600	250	1.34	4450	4700
		Rublo Rn1		240	85	0.4	4622	4710
		Rublo		500	230	0.82	4555	4790
Chonta	Polymetallic Epithermal LS	Rublo Norte	Ag-Pb-Zn-(Cu)	179	42	0.73	4592	4592

Mine / Project	Deposit Type	Structure	Commodity	Length (m)	Height (m)	Avg.Width (m)	Depth (m)	Elev. (m)
		San Jeronimo		42	27	0.4	4590	4590
		Bienaventurada		4100	350	1.72	3993	4637
		Split Norte		340	145	1.11	4480	4588
		Ramal Sur 2 Piso		760	140	1.2	4337	4525
Bienaventurada	Polymetallic Epithermal LS	Este Techo	Ag-Pb-Zn-(Cu)	190	90	1.2	4385	4538
		Lola		185	150	0.4	4190	4320
		Dora		90	60	0.87	4219	4224
		Mariateresa		210	100	1.07	4340	4340
		Marisabel		280	100	1.56	4340	4387
		Tatiana		790	250	0.4	4334	4575
		Marisol		260	150	0.4	4435	4545
		Diana		30	27	0.4	4482	4482
		Cecy		35	35	0.89	4555	4555
		Jessica		840	220	1.03	4223	4560
		Bienaventurada Sur 4		286	280	0.62	4230	4485
		Bienaventurada Sur 3		175	190	1.36	4336	4485
		Bienaventurada Sur 1		750	280	1.29	4297	4625
		Ramal Bienaventurada		105	50	0.4	4245	4245
		Bienaventurada Oeste Piso		190	70	1.69	4135	4216
		Tatiana 1		550	230	0.84	4201	4375
		Ramal Techo 10		275	150	0.92	4226	4390
		Elizabeth		500	260	1.04	4330	4563
		Tensional		175	60	0.4	4477	4493
		Este Techo 1		260	185	0.66	4345	4528
		Este Techo 2		150	130	0.88	4435	4520
		Sofia		160	80	0.55	4338	4340
		Gladys		700	200	0.14	4163	4349
		Silvia		1120	200	0.7	4340	4545
Caudalosa Chica	Polymetallic Epithermal LS	Silvia Norte	Ag-Pb-Zn-(Cu)	80	150	0.74	4340	4470
Galena	Polymetallic Epithermal LS	Galena Norte	Ag-Pb-Zn-(Cu)	252	110	0.73	4505	4505
		Techita		850	340	0.5	4164	4898
Gladys Corridor	Polymetallic Epithermal LS	Stephani	Ag-Pb-Zn	650	450	0.57	4126	4569
		Sofia		380	550	1.3	4098	4675
		Fabiola		450	151	0.95	4505	4640
		Fortuna		440	130	1.55	4529	4673
		Fortuna Techo		380	59	1.98	4628	4695
		Liticia Piso		200	110	1.85	4490	4674
		Leticia		430	255	1.26	4491	4678
Tajo Yen	Polymetallic Epithermal LS	Tapada Norte 1	Ag-Pb-Zn	230	270	1.25	4490	4714
		Tapada		300	180	2.07	4545	4696

Mine / Project	Deposit Type	Structure	Commodity	Length (m)	Height (m)	Avg.Width (m)	Depth (m)	Elev. (m)
		Tapada Norte		260	262	1.05	4490	4713
		Tapada Piso		50	260	1.47	4490	4705
		Rublo		450	180	1.91	4490	4670
		Lucia		550	60	0.40	4721	4801
Escopeta	Epithermal LS	Mary Iv	Au-Ag	40	40	0.15	4762	4800
		Raquel		100	40	0.75	4801	4751
		Sofia		100	70	0.70	4726	4796
	Polymetallic	San Pedro Sur		118	100	0.85	4500	4600
San Pedro	Epithermal LS	San Pedro	Ag-Pb-Zn	500	169	1.26	4541	4695
		Ramal San Pedro		42	105	0.40	4541	4641
Escondida	Skarn	Escondida	Ag-Pb-(Cu)	260	200	0.91	4711	4894

7.5 Alteration

During the Tertiary Andean Orogeny Quechua III Stage (4^{th} and final phase), volcanic centers formed, and late minor intrusions occurred, which favored the occurrence of mesothermal to epithermal mineralization, characterized by argillic alteration aureoles.

At Huachocolpa Uno, hydrothermal alteration has been identified adjacent to the mineralized structures from centimeter up to one-meter-wide scale. Argillization, occurs in hypogene and supergene types where hypogene argillization is characterized by the assemblage of feldspars pervasively substituted by clay minerals, especially within the matrix. Silicification, with quartz replacing feldspars, silicification occurs mainly in the Caudalosa 1, Caudalosa 2, Esperanza, Marisol, and Diana vein systems.

Phyllic with a quartz-sericite and potassic alteration assemblage, with variable intensities of strong, moderate, and weak and irregularly distributed throughout the mine area, mainly in association with the Bienaventurada vein. Propylitization, with an epidote-chlorite-pyrite alteration assemblage, mainly observed in the slightly altered areas of the host volcanic rocks.

The above represent the styles of hydrothermal alteration identified in the Bienaventurada and Yen zones, as well as in all the mineralized zones of Huachocolpa Uno.

7.6 Mineralization

7.6.1 Introduction

Regionally, Huachocolpa Uno is localized in the Metallogenic Belt of Central Peru into the Western Polymetallic Sub-province, with more than 150 mining projects with possibilities of discovering Ag-Pb-Zn-Cu-(Au) mineralization. In addition, Huachocolpa Uno is a Polymetallic Epithermal Low Sulfidation deposit, with vetiform style of mineralization occurring as fracture filling by hydrothermal solutions. Geological characteristics (host rock, metallic contents, hydrothermal alterations) are similar to neighboring mineralized deposits such as Recuperada, San Genaro, Caudalosa Grande, El Palomo, Dorita, amongst others (Laymen and Mc Iver, 2024).

Likewise, Huachocolpa Uno contains several systems and multiple structures with different styles of mineralization, including Polymetallic Low Sulfidation Epithermal (LS), Precious Au- Ag LS Epithermal and possibilities of Precious Au-Ag High Sulfidation Epithermal (HS) and Au- Ag-(Cu) Skarn.

7.6.2 Mineralization zone Bienaventurada

The Bienaventurada Vein represents a brecciated structure with mineralization occurring in the form of massive bands, patches, veins, blebs and disseminations composed principally of sphalerite, galena and tetrahedrite. The mineralization generally forms a matrix encompassing sub-angular breccia fragments composed of altered host volcanic rock.

The economic mineralization is composed of filler sphalerite, galena, chalcopyrite and gray copper in the form of massive, crustified, irregular bands, nuclei and disseminations. The gangue comprises of milky quartz, hyaline quartz, kaolin, pyrite, realgar, orpiment, barite, calcite, stibnite and gypsum. Clasts and inclusions of silicified and argilized rock are observed within the mineralized zones. Mineragraphic studies and scanning electron microscope determine the presence of minerals such as: marcasite, pyrrhotite, melnikovite, varieties of lead sulfosalts (bournonite, seligmanite, dufrenoysite, jordanite, gratonite), gray copper (thenantite, tetrahedrite, freibergite, argentotennantite), silver sulfosalts, etc. Microtextures that stand out the most are those of replacement followed by filler, simultaneous growth and coliform indicators (Figure 7-7).

The host rock is a porphyritic andesitic volcanic, with plagioclase phenocrysts, selectively altered to clay, in some sectors with phyllic alteration and weak to moderate argillic alteration observed adjacent to the phyllic zones. According to microscopic studies, it would be a porphyritic volcanic rock that has undergone a process of hydrothermal alteration. They have generally been altered by hot fluids passing through them, with which the polymetallic mineralization is associated. Argillic alteration, followed to a lesser extent by silicification, predominates on the surface.

Inside the mine there are halos of hypogene alteration made up of sericitization, argilization, silicification and mild potassic-adularia that are distributed indistinctly throughout the mine. Propyllitic alteration occurs in the more weakly altered host rocks.

A selected sample was taken in TJ 856 of the Bienaventurada Este Techo 1 vein. This vein is an offshoot (or splay) off the Bienaventurada vein. The sample was collected for the study of fluid inclusions to determine the continuity of the mineralization and to help determine the orientation of mineralized mineralized-shoots below the elevation 4330 masl. The economic mineralization occurs as: galena, sphalerite (mainly of the blonde blende variety), gray coppers and a lesser proportion of chalcopyrite. Gangue minerals are generally milky quartz in massive compact form filling the available structures; and also, in smaller quantities, hyaline quartz crystallized in small geodes. The detailed microscopic description is shown in Table 7-2.

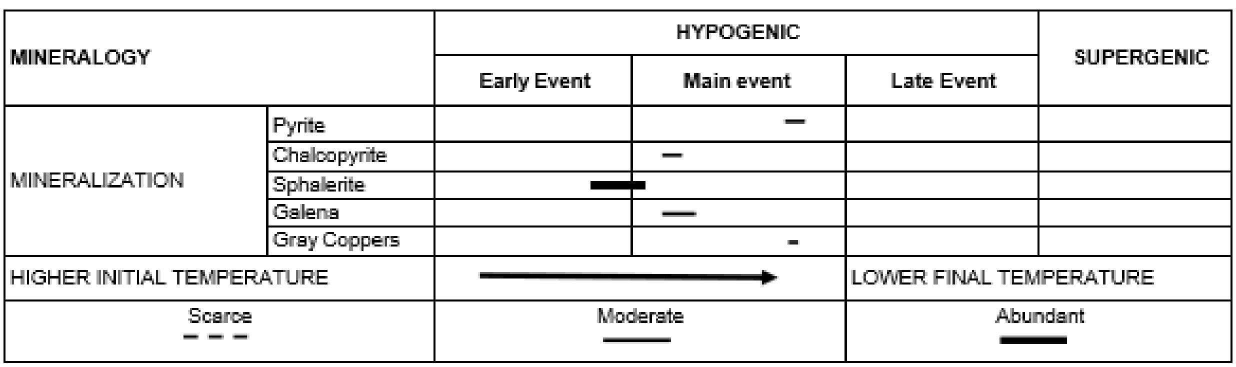
Table 7-2 Microscopic Description of Sample Tj 856 Vein Bienaventurada Este Techo1 (Laymen and Mc Iver, 2024)

Mineral	Microscopic Description	Size (mm)	%
Pyrite	Massive anhedral and cubic subhedral crystals are also associated with gray coppers, forming a concentric intergrowth.	0.01 a 1.4	2
Chalcopyrite	Massive crystals which replace the sphalerite by veinlets.	0.05 a 4.8	22
Sphalerite	Subhedral crystals, to massive anhedral, rarely with disseminations of chalcopyrite.	0.1 a 5	60
Galena	Subhedral to anhedral crystals are found weakly replacing the sphalerite.	0.1 a 3.6	6
Gray coppers	Anhedral crystals, occur as partial crowns in chalcopyrite.	0.02 a 0.8	0.5

Source: Fluid and mineragraphic inclusion studies for fourteen (14) rock samples, Minemetallurgy S A.C., 2022

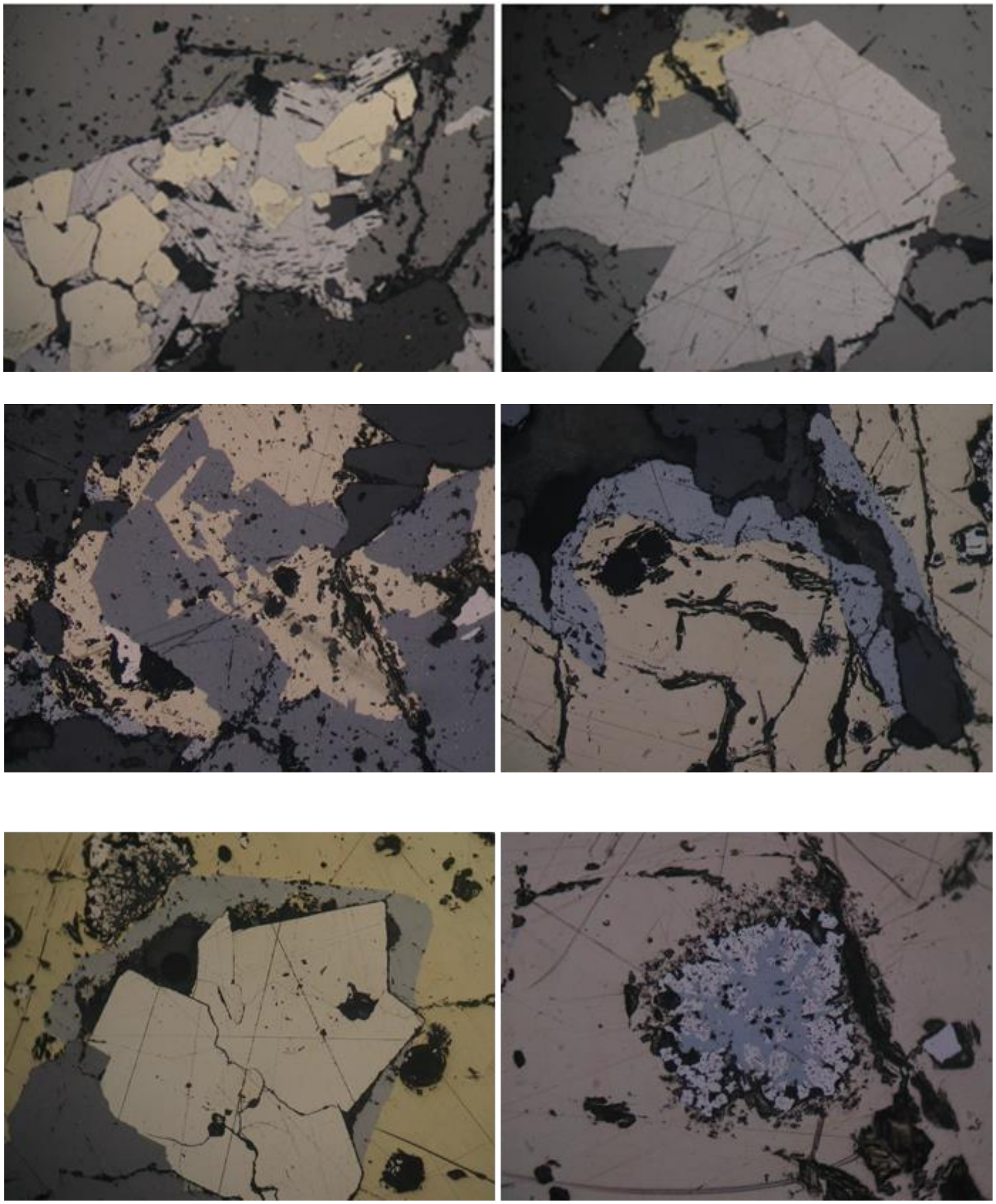
From the TJ 856 sample, the results obtained from the precipitation of the main mineralization minerals such as: sphalerite, chalcopyrite, galena, gray copper and pyrite, show us the precipitation zoning of the minerals, from higher to lower temperature, are (shown in Figure 7-6):

Figure 7-6 Mineralization zoning of Sample Tj 856 Vein Benaventurada Este Techo 1 (Laymen and Mc Iver, 2024)



Source: Fluid and mineragraphic inclusion studies for fourteen (14) rock samples, Minemetallurgy S A.C., 2022

Figure 7-7 Photomicrographs of Bienaventurada Vein Mineralization (Laymen and Mc Iver, 2024)



Photomicrographs 01 to 06.- 01) Galena (gn) associated with pyrite (py) replacing sphalerite (ef); 02) Galena (gn) replacing sphalerite (ef); 03) Chalcopyrite (cp) replacing sphalerite (ef), it also has gray copper crowns (CGRs); 04) Chalcopyrite (cp) with partial crowns of gray coppers (CGRs) and 05) and 06) Intergrowth between gray coppers (CGRs) and pyrite (py) nucleating in a cavity in chalcopyrite (cp). LR: Reflected Light.

Source: Fluid and mineragraphic inclusion studies for fourteen (14) rock samples, Minemetallurgy S A.C., 2022

7.6.3 Mineralization zone Yen

The Rublo vein is the master vein in all of the Yen mineralized system. Relative to the rest of the veins, it moved dextrally normal, forming sigmoid or tensional veins like for example: Leticia vein, Fortuna vein, Fortuna Norte vein, Tapada and Tapada Norte vein.

Yen's polymetallic mineralogy is similar across its length with variations in concentration. The hydrothermal fill concentrates massive white quartz and druse quartz, with barite and calcite. The observed mineralization textures of sphalerite, galena, argentiferous galena, chalcopyrite, pyrite, realgar, and orpiment, are massive, banded, stockwork and implosion breccia-like.

7.6.4 Paragenesis

Based on microthermometry studies of fluid inclusions, it is postulated that the mineralization in the Bienaventurada Vein was formed in a sequence of two paragenetic stages:

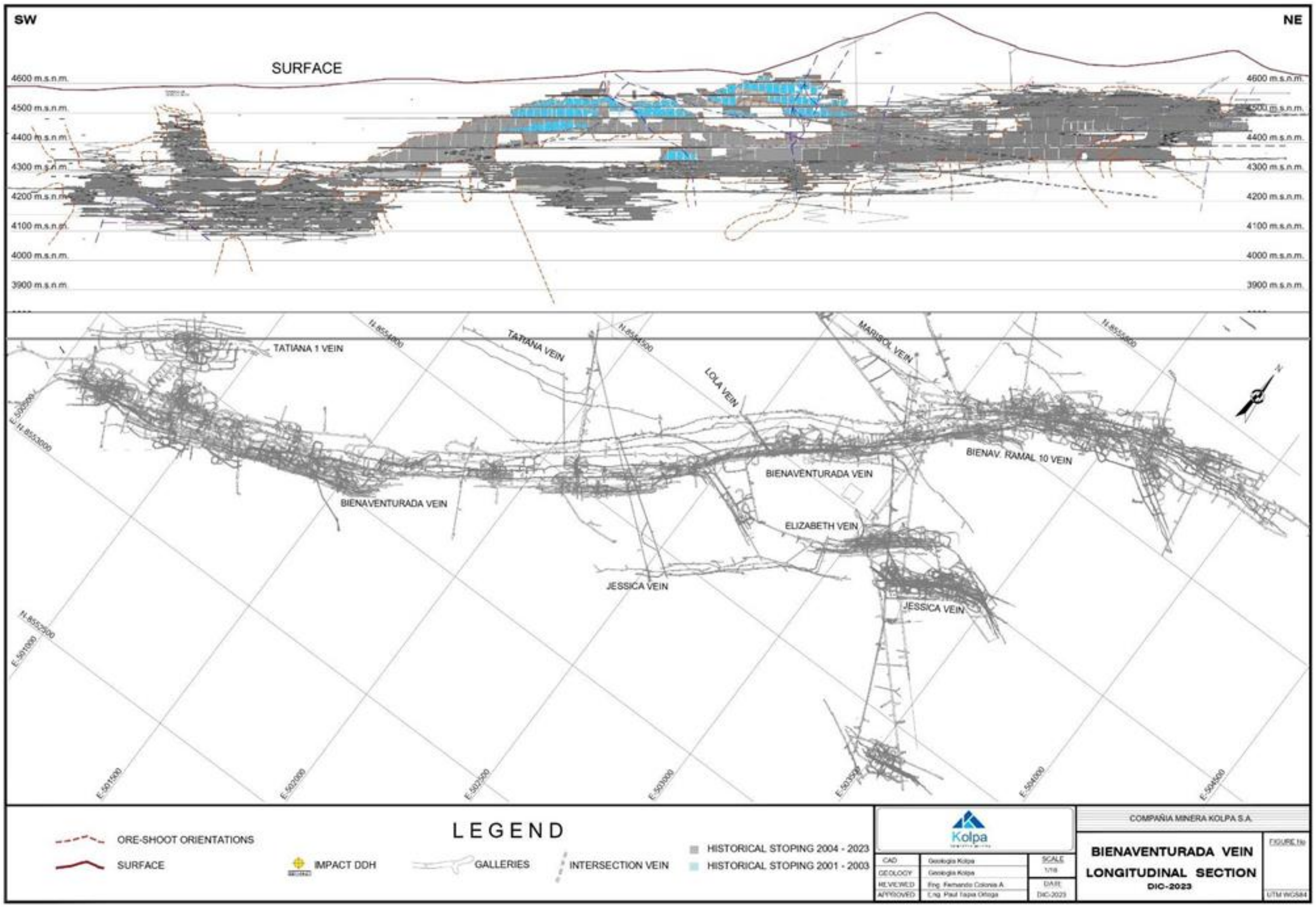
First Stage, pyrite was the first mineral deposited, followed by sphalerite, chalcopyrite, gray copper (freibergite, tennantite), galena, bournonite, seligmanite, gratonite and barite; somewhat later realgar and oropiment. Second Stage is mainly composed of pyrite, argento- tennantite, freibergite, dufrenoysite, stibnite and jordanite. Minerals of both sequences are presented in filling and replacement textures. Finally, there is a sequence of supergene minerals consisting of melnikovite, anglesite, gypsum, hematite and limonite.

In Bienaventurada vein, there is a vertical and horizontal zoning, with highest grades of Ag-Zn in the Western sector. In the central zones, highest values occur in both the upper as well as lower parts of the mineralized structure. In the Eastern sector, with economical grade values for Zn-Cu-Pb, the highest Ag grades are towards the top of the structure.

In general, Huachocolpa Uno is a mineral deposit with economic grades of Pb, Zn, Ag and Cu.

In Figure 7-8, a schematic longitudinal section displaying the distribution of historical stoping and thus providing a summary depiction of the distribution of known economic mineralization at Bienaventurada vein, is shown.

Figure 7-8 Schematic Longitudinal Section representation of Bienaventurada Vein (Laymen and Mc Iver, 2024)



8 DEPOSIT TYPES

Mineralization at Huachocolpa shows general geologic, structural and mineralogical characteristics of low sulfidation epithermal deposits (Laymen and Donald Mc Iver, 2023) (Table 8-1).

Table 8-1 General Features of Deposits of the Huachocolpa Uno Mine (Laymen and Mc Iver, 2024)

TYPE	GENERAL FEATURES
LITHOLOGIES	Andesites, dacites, rhyolitic domes, quartz latites, trachyandesites, porphyritic lavas, ignimbrites
ROCK TEXTURES	Lava flows, breccias
AGE	Cenozoic
MINERALOGY	Sphalerite, galena, argentiferous galena, chalcopyrite, chalcopyrite, freibergite - tetrahedrite, quartz, pyrite, realgar, to a lesser proportion rhodochrosite, rhodonite, barite, stibnite and gypsum
MINERALIZATION	Massive, banded, medium to coarse grained, fine disseminated, stockworks
ZONING	Silver-zinc in the western sector, silver-zinc in the central zone, silver-zinc in the top part, zinc, lead and copper in the east
ALTERATION	Argillitization, silicification, phyllic, potassic, propylitization
MINERALIZATON CONTROL	Structural, fracture filling
GEOCHEMICAL SIGNATURE	Zn, Pb, Ag, Cu in massive aggregates, in irregularly arranged bands
TECTONIC SETTING	Proximity to volcanic center, volcanic depression with volcanic contribution, proximity to two regional faults and volcanic centers, probable intrusive at depth

8.1 Epithermal Systems

Epithermal deposits form at depths of 1.0 to 1.5 km in volcanic-hydrothermal and geothermal environments. They define a spectrum with two end members, low and high sulfidation (Hedenquist et al., 2000). Figure 8-1 shows the genetic model for epithermal deposits proposed by Hedenquist et al., (2000). Low and Intermediate sulfidation deposits form part of the epithermal spectrum. Their genesis is complex due to the participation of fluids with meteoric and magmatic origin during their formation and the fluid evolution during water-rock interactions. According to several authors, the fluids that formed the Mexican epithermal deposits represent a mixture of fluids with diverse origins varying from meteoric to magmatic (Simmons et al., 1988; Benton, 1991; Norman et al., 1997; Simmons, 1991; Albinson et al., 2001; Camprubí et al., 2006; Camprubí and Albinson, 2007).

Epithermal deposits typically consist of fissure veins and disseminations with gold, silver, and base metals concentrations. Most low sulfidation epithermal deposits form as open-space filling of faults and fractures resulting in vein deposits. Some gold deposits occur as replacements or disseminations in permeable host rocks, particularly the high-sulfidation types. Epithermal deposits are more common in extensional settings in volcanic island and continent margin arcs. Due to its relatively shallow deposition level within the Earth's crust, most epithermal deposits are preserved in Tertiary or younger volcanic rocks. Mineral deposition in the epithermal environment occurs due to complex fluid boiling and mixing processes that involve cooling, decompression, and degassing.

Historically, epithermal gold and silver deposits are an important part of the world's precious metal budget. Approximately 6% and 16% of the world's gold and silver have been produced from epithermal deposits. These deposits are significant in Mexico. Mineable epithermal vein deposits range from 50,000 to more than 2,000,000 tonnes in size, with typical grades ranging from 1 to 20 g/t Au and 10 to 1,000 g/t Ag. Locally exceptional, or "bonanza" grades above 20 g/t Au can be important contributors to many gold deposits. Lead and zinc are also important contributors to epithermal deposits' low- and intermediate-sulphidation classes. Veins that host mineralization are about several kilometres long; however, economic mineralization is present in plunging mineralized shoots with dimensions of tens of metres to hundreds of metres or more. Single veins commonly host multiple mineralized shoots. The wide range of tonnage and grade characteristics make these deposits attractive targets for small and large mining companies.

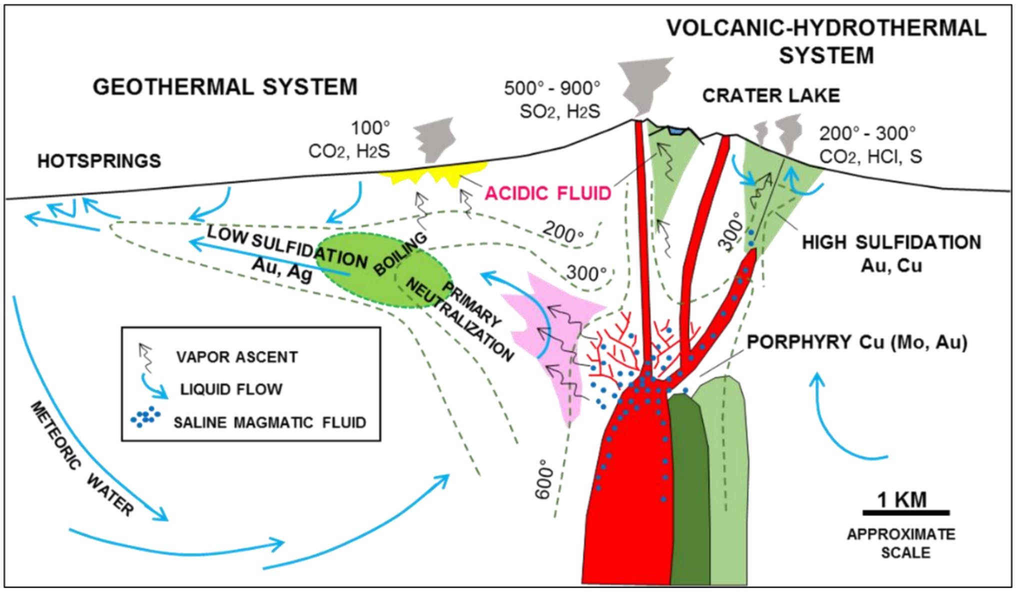
Quartz veins are typical hosts for low and intermediate sulphidation mineralization, and these veins have characteristic alteration assemblages that indicate temperatures of deposition between 100°C and 300°C. These alteration assemblages include quartz, carbonates, adularia white phyllosilicates, and barite in the veins; illite, adularia, smectite, mixed-layer clays, and chlorite proximal to the vein walls; and distal chlorite, calcite, epidote, and pyrite more peripherally. Also, unmineralized but related, steam-heated argillic alteration and silica sinters may be present above, or above and laterally from, the veins.

Vein textures are also important guides for targeting low-and intermediate-sulphidation mineralization. Quartz commonly occurs with cockade and comb textures, as breccias; as microcrystalline, chalcedonic, and colloform banded quartz; and as bladed or lattice quartz. Bladed or lattice quartz forms by replacing bladed calcite formed from a boiling fluid and is a diagnostic indication of the level of boiling in a vein.

Mineralization includes pyrite, electrum, gold, silver, argentite, acanthite, silver sulphosalts, sphalerite, galena, chalcopyrite, and/or selenide minerals. In alkalic host rocks, tellurides, vanadium mica (roscoelite), and fluorite may be abundant, with lesser molybdenite. These mineralized systems have strong geochemical signatures in rocks, soils, and sediments and Au, Ag, Zn, Pb, Cu, As, Sb, Ba, F, Mn, Te, Hg, and Se may be used to vector to mineralization.

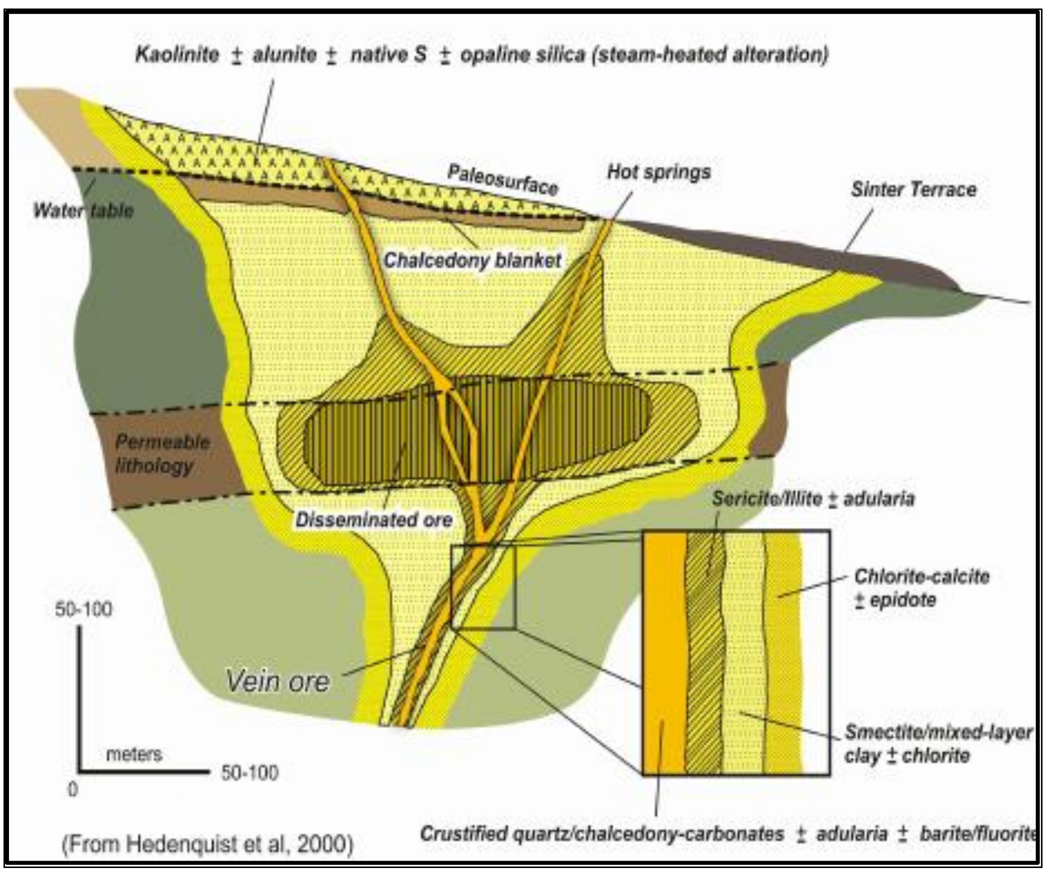
Figure 8-2 shows the associated alteration components of epithermal systems and mineralization.

Figure 8-1 Genetic Model for Epithermal Deposits



Source: after Hedenquist et. al., 2000

Figure 8-2 Schematic of Alteration and Mineralization in Low Sulphidation Precious Metal Deposits



Source: after Hedenquist et al., 2000

9 EXPLORATION

9.1 Introduction

Kolpa initiated exploration in 2016. Exploration methods have included geological mapping, surface channel sampling and geophysics in addition to diamond drilling from surface and underground (Laymen and Mc Iver, 2024). Diamond drilling and channel sampling is detailed in Section 10.

The Huachocolpa Uno Project has significant exploration potential with multiple exploration targets on the Property, classified as Near Mine, Brownfield, and Greenfield targets on Figure 9-1. Exploration target locations are shown in Figure 9-2.

Figure 9-1 Exploration Targets (Laymen and Mc Iver, 2024)

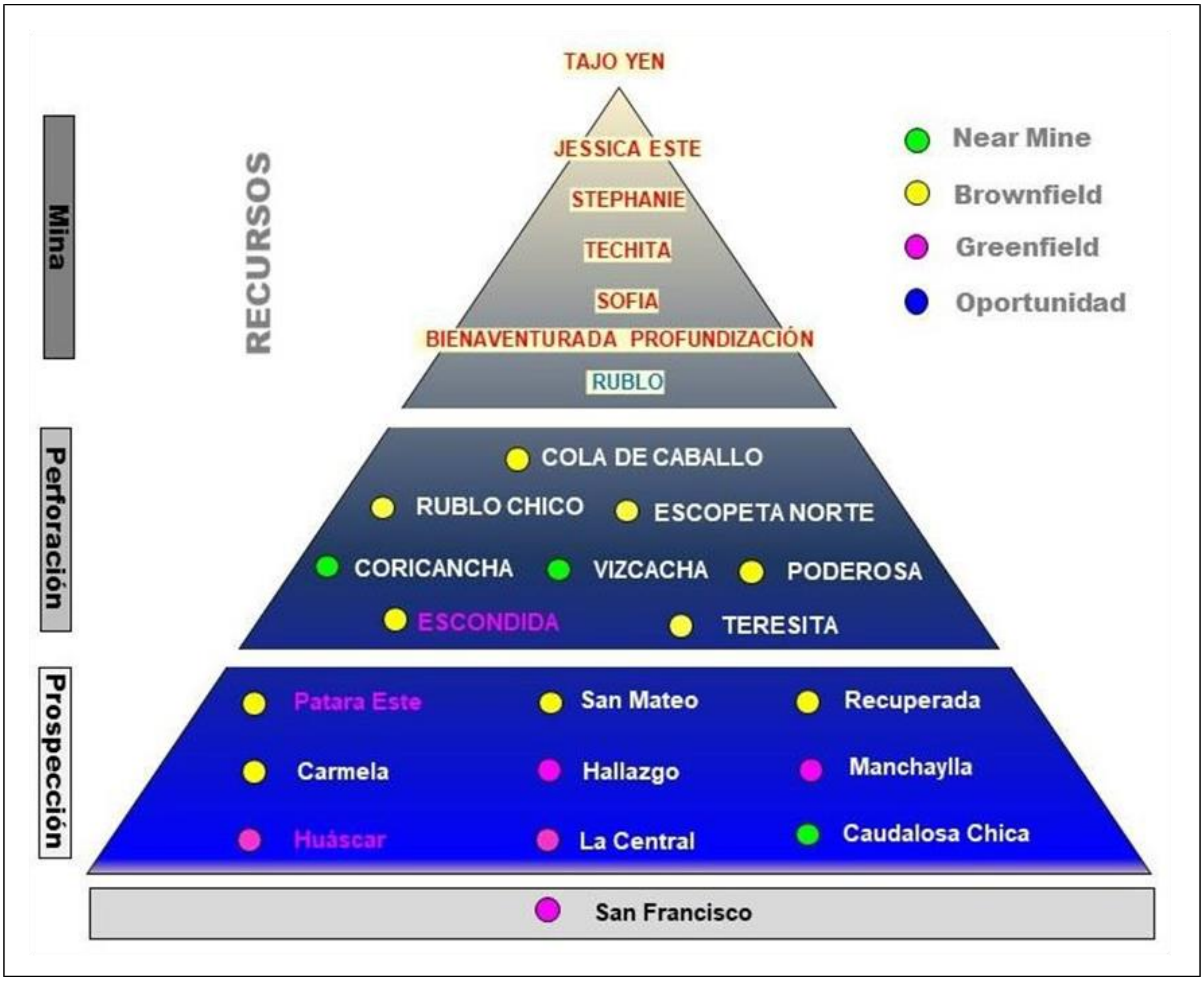
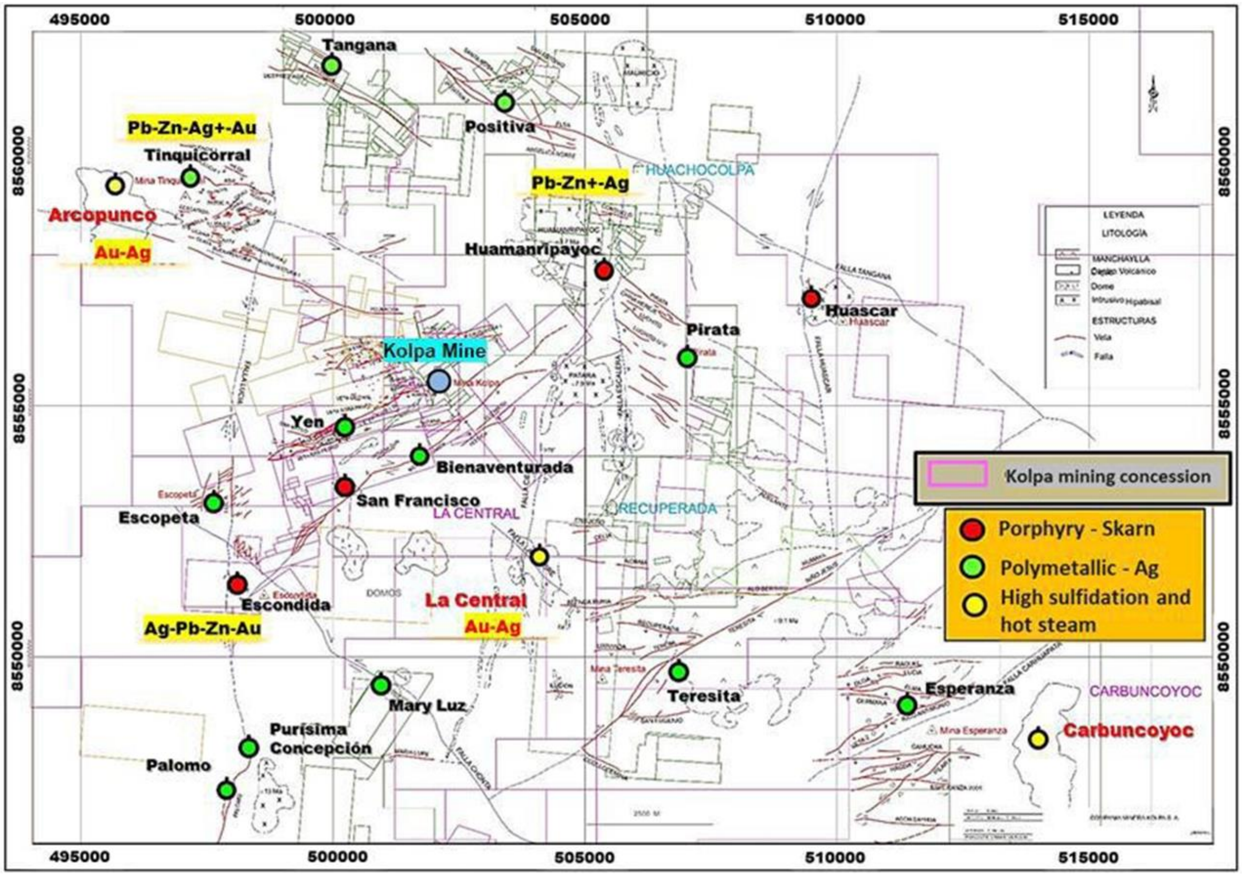


Figure 9-2 District Map of Kolpa Exploration Projects (Laymen and Mc Iver, 2024)



Map includes the structural lineaments, veins, types of mineralization and some underground mining works

9.2 Geological mapping

In 1995, Buenaventura Ingenieros S.A. (BISA) executed exploration in the southeast sector of Caudalosa Chica, performing surface geological mapping of structures with hydrothermal alteration, rock chip sampling on the SE projection of the Bienaventurada vein, occasionally CO_2 and H_2S gas emanations were recognized.

At the end of 2000, exploration was partially stopped and only the Bienaventurada vein and proximal structures were explored. In 2016, exploration resumed at the Bienaventurada mine using diamond drilling.

From 2012 to 2014, Compañía de Minas Buenaventura explored the Patara and Escopeta sectors with greater intensity, through geological mapping at 1:2,000 scale, IP geophysical studies and magnetometry carried out by the company Arce Geophysics. Geochemical sampling and diamond drilling was completed in both sectors.

In 2018, Kolpa carried out a geological mapping program in the Bienaventurada vein area at a scale of 1:2,000 that extended towards the eastern sector, near the Regional Chonta fault. The program included lithological, alteration and structural mapping. A diamond drilling program was proposed in the Cola de Caballo sector and the eastern part of the Bienaventurada vein. Geophysical IP and 3D Magnetometry studies have been carried out in the Patara and Escopeta sectors by GeoMad E.I.R.L. in order to delimit the exploration areas and validate the information obtained by Compañía de Minas Buenaventura.

In 2019, Kolpa executed a surface exploration program in the surroundings of the operation of the Bienaventurada Mine and Rublo Mine, which was called Yen Project, which included detailed geological mapping, rock chip sampling and a diamond drilling campaign of 95 drill holes, with a total of 10,356 m drilled in the surroundings of the Rublo Vein. The contractor company Esondi S.A. executed the drilling activities on this area.

Towards the sector of Escalera Creek and Cola de Caballo, geological mapping of the SW extension of the Bienaventurada vein was carried out. The geological evaluation of the mining potential of the Escondida and Gladys Corridor projects continued.

In 2020 geological mapping and surface sampling continued in the Gladys corridor to establish drilling targets.

In 2021 preliminary geological mapping and sampling was completed in the Fabiola and Kenya sectors.

9.3 Geochemistry

In 2012 and 2013, Compañía de Minas Buenaventura conducted surface geochemistry in the Patara (1,226 channel samples) and Escopeta (1,083 channel samples from 98 veins) sectors.

As of August 31, 2021, Kolpa has no information on surface geochemical sampling campaigns on the Bienaventurada Vein, as this vein has few mineralized outcrops.

In 2013, 1,226 surface samples were taken in the Patara zone, and 1,083 surface samples were taken in the Escopeta Project area.

During 2019 and 2020, Kolpa's exploration team collected 150 channel samples in two trenches at the Yen Project.

In 2021 surface sampling consisted of 97 samples from the northeast Yen sector, 8 samples from outcrop of the Kenia vein, 63 samples from the Gladys corridor, and 72 samples from San Mateo.

In 2022 surface sampling consisted of 56 trench samples from the San Mateo project, 16 samples from the Gladys corridor, and 22 surface samples from the San Francisco project.

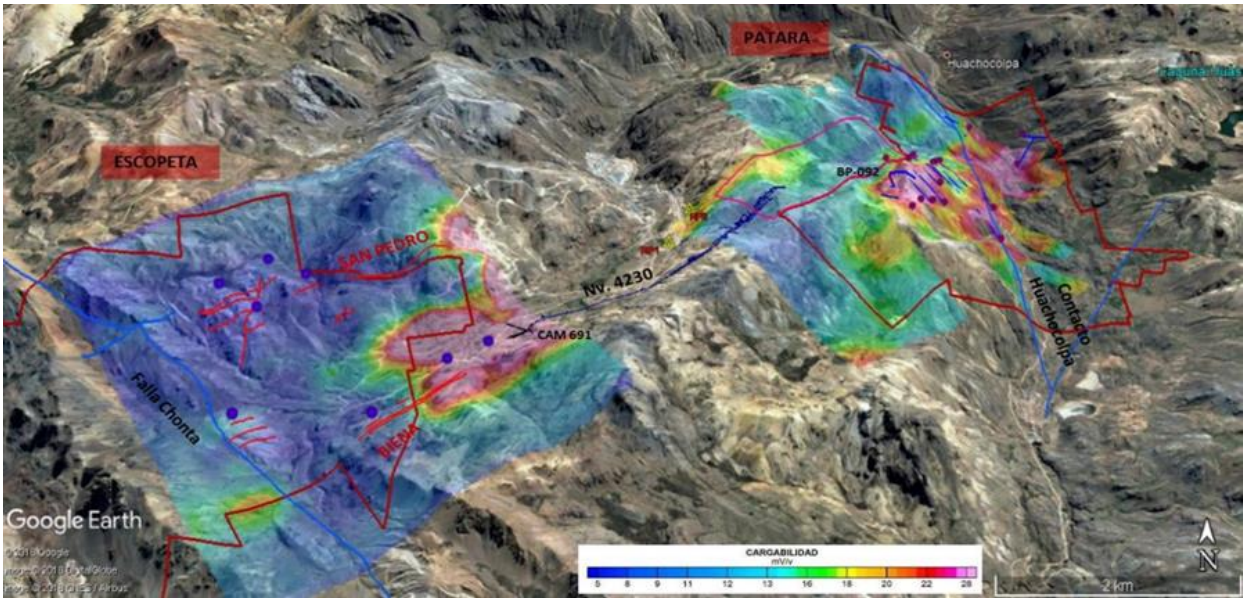
In 2023, as of March 31st, 116 surface samples were collected from the Susy, Inés and Halcones veins at the Rublo Chico project.

9.4 Geophysics

In 2018, IP and 3D magnetometry geophysical surveys were completed using lateral offset pole-dipole methodology performed by Geomad E.I.R.L. Lines were approximately 3 km long and spaced at 200 m, with stations spaced every 50 meters.

In the Escopeta sector, 22 lines were completed for a total of 74.375 line km and in the Patara sector, 28 lines were completed for a total of 69.95 line km; with a combined total of 144.325 line km. The results were encouraging with geophysical anomalies identified from resistivity, IP, magnetic susceptibility, and geology, supporting mineralization targets. Chargeability Map Escopeta and Patara Projects shown in Figure 9-3.

Figure 9-3 Chargeability Map Escopeta and Patara Projects (Laymen and Mc Iver, 2024)



9.4.1 Patara sector

Between 100 m to 500 m depth, four anomalous zones were identified associated with a potential transition between porphyry type deposits and epithermal or polymetallic veins in volcanic rocks, and skarn emplaced in limestones. Another anomaly in the Coricancha area (now Gladys Corridor) is interpreted as related to vetiform structures geologically similar to the Bienaventurada Vein, which could be up to 300 m deep with polymetallic and silver mineralization (Figure 9-4).

9.4.1.1 Zone N°1: Porphyry Related Veins

Mineralization hosted within the Patara intrusive, identified as a monzodioritic intrusive, with the presence of ferromagnesian mineral species in its matrix and disseminated pyrite, with strong argillic and siliceous alteration. This zone is characterized by high values of chargeability and resistivity, which may be related to a porphyry type system with porphyry related veins near the surface. The geophysical interpretation is linked to high magnetic susceptibility values possibly due to the high pyrite content. This intrusive is interpreted at 500 meters depth.

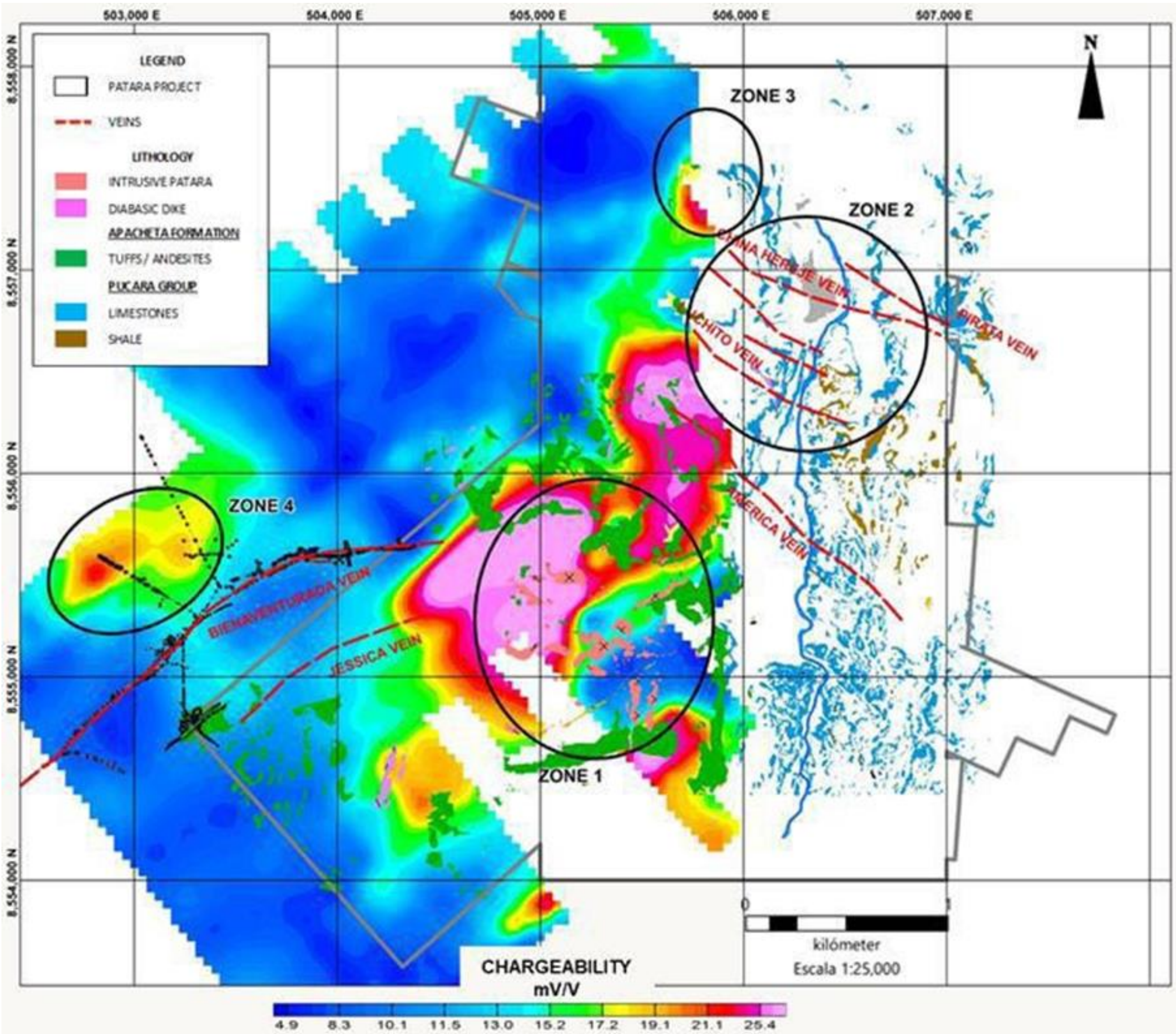
9.4.1.2 Zone N°2: Carbonate Structures

This zone is hosted in limestones and fine-grained shales of the Condorsinga Formation with an incipient degree of marbleization and a high calcite content in its composition. This zone is located within the Recovered Mine, consisting of polymetallic veins hosted in limestones of the Condorsinga Formation.

In this zone there are no high magnetic values, since the structures are related to calcium carbonates. The surface veins are recognized as siliceous structures with high pyrite content in their composition.

This zone presents chargeability values higher than 25 mV/V and average resistivity values between 250 to 500 Ohm·m deepening up to 300 meters depth. Luchito I, Luchito IV, and Luchito V veins belong to this zone, which have NW-SE Andean trend similar to the great regional lineament of the Chonta Fault. It is presumed that tectonic reactivation events may have produced syntectonic veins in these limestones.

Figure 9-4 Patara Project - Chargeability Map and Exploration Targets (Laymen and Mc Iver, 2024)



9.4.1.3 Zone N°3: Pb-Zn Skarn

Located north of the Patara sector near the concession boundary and is characterized by high magnetic values that go down to 300 m depth.

This zone hosts the China Hereje and Pirata veins; and is situated at the contact of the andesites of the Apacheta Formation and the limestones of the Condorsinga Formation, which the potential to host polymetallic mineralization. It is possible that at greater depths a contact metasomatism has been generated between the andesitic volcanics that provide silica and the limestones that provide calcium carbonates, and that could generate the formation of skarns associated with polymetallic structures, forming a metasomatic replacement deposit of the Pb-Zn skarn type. These geophysical anomalies go down to 300 m, with a favorable lithology of host limestones and the projection of the aforementioned veins could constitute polymetallic structures of economic interest, as is the case of the Huamanripayoc Project located within this study zone.

9.4.1.4 Zone N°4: Low Sulphidation (LS) Epithermal Deposits

This geophysical anomaly is located in the Gladys corridor (formerly “Coricancha”), in andesites of the Apacheta Formation. The andesites display strong argillic alteration at surface. The high magnetic values detected are associated with mineralized structures similar to the values reported for the Bienaventurada Vein and proximal structures that contain elevated pyrite.

These geophysical anomalies have chargeability values greater than 20 mV/V and resistivity values of 50 Ohm/m, which are interpreted as characteristic of a low sulfidation epithermal type deposit. In the Bienaventurada Mine it is possible to observe veins forming sigmoid loops or branches, forming "rosary" type structures, which are ideal for mineralization in this zone.

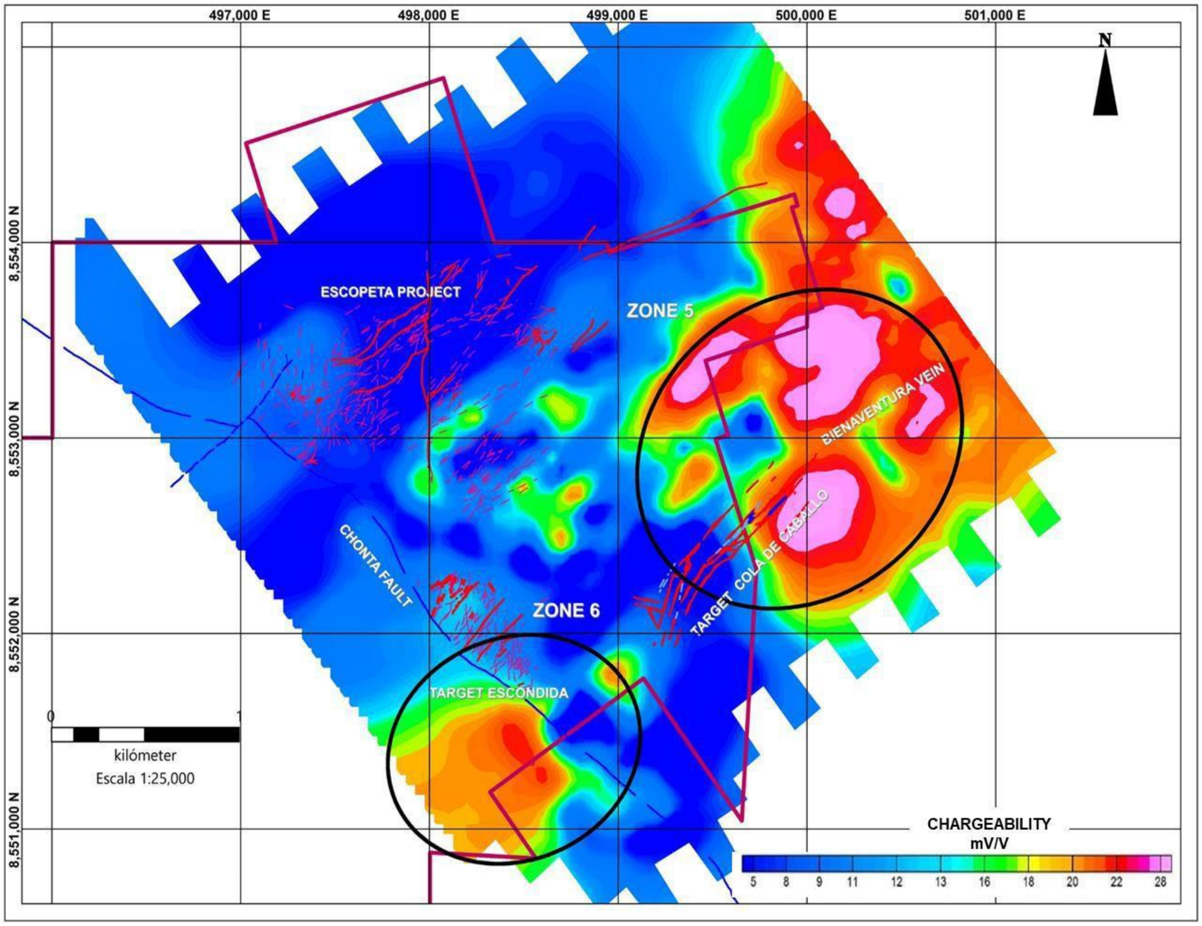
9.4.2 Escopeta sector

Two geophysical anomalies were interpreted in this sector, see Figure 9-4.

9.4.2.1 Zona N°5: Low Sulphidation (LS) Epithermal Deposits

This geophysical anomaly is located at the SW end of the Bienaventurada Vein and the Cola de Caballo target. The lithology is composed of andesite lavas, crystal tuffs and lithics of the Apacheta Formation, strongly argillic altered at surface, related to high magnetic values, chargeability greater than 25 mV/V and resistivities of 56 Ohm/m, see Figure 9-5.

Figure 9-5 Escopeta Sector Chargeability Map and Exploration Targets (Laymen and Mc Iver, 2024)



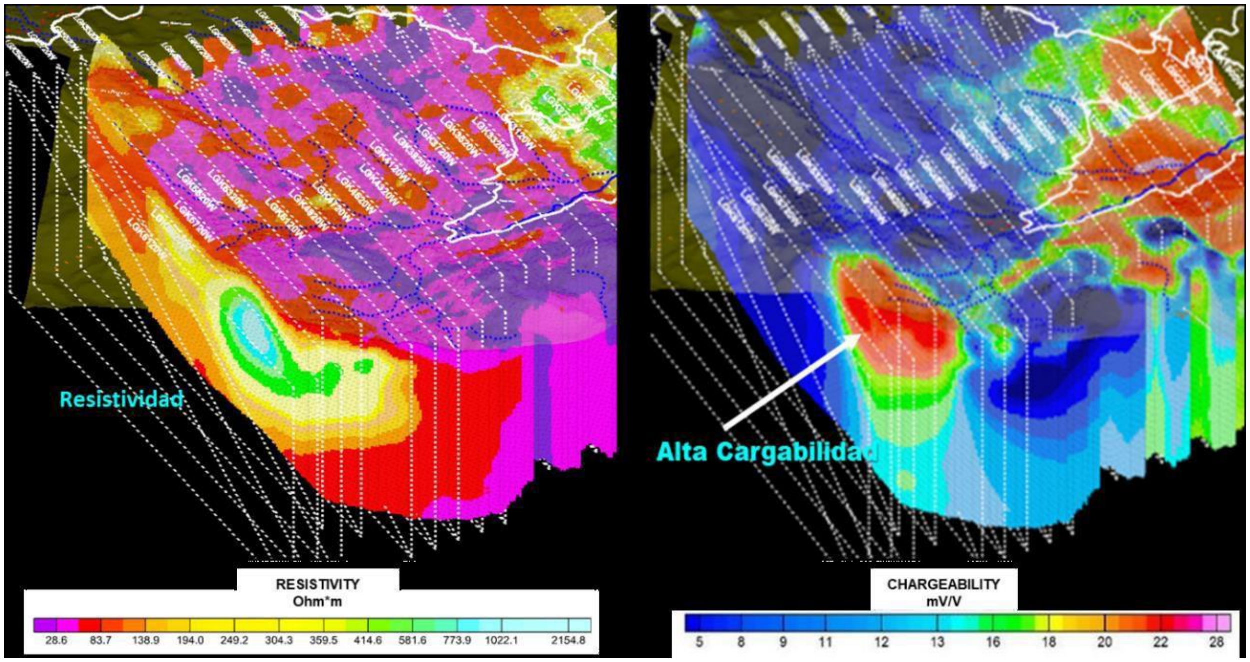
9.4.2.2 Zone N° 6: Skarn Type Deposit

This geophysical anomaly is located in the Escondida Project area, near the Chonta Fault. In this sector a resistive body has been contoured, possibly an intrusive, which would appear to be bell-shaped. The dome, as an apophysis, outcrops above 4,700 masl, 300 m below it increases its size covering an area of 800 m². On the south flank of the resistive body, an anomaly with a chargeability >18 mV/V has been detected running southeast on the western flank of the anticline, additionally, covering the intersection zone between the IP anomalies there is a positive magnetic susceptibility trace (MST) that coincides with the presence of magnetite with minor specularite and pyrrhotite, see Figure 9-6.

The three geophysical anomalies overlap and are genetically related to the footprint of contact metasomatism as well as mineralized structures (Ag-Pb-Au) hosted in clastic-calcareous sedimentary rocks over the southwest flank of the Chipchilla Anticline.

Three cross sections summarize the potential of the Escondida Project, corresponding to geology, surface geochemistry and geophysical prospecting results. An intrusive body (resistivity > 400 Ohm/m) is presumed to be responsible for hornfelsification and decalcification of the sedimentary layers and the introduction of mineralizing solutions to form veins and replacement bodies, giving rise to distal (Ag-Pb-Mn-Au-As-Sb) and proximal (Cu-Zn-Fe-Au-Pb) skarn-type mineralization.

Figure 9-6 Escondida Project Chargeability Map (Laymen and Mc Iver, 2024)



9.5 Exploration Targets

9.5.1 Gladys Corridor (formerly, "Coricancha Corridor")

The Gladys Corridor is located 800 m southeast of the Bienaventurada Vein, and interpreted as a corridor 5 km long by 1.5 km wide. Diamond drilling and mining work has begun to delineate the Sofía, Techita and Stephanie veins.

Diamond drilling to the southeast of the Jessica vein, has intersected a group of mineralized veins interpreted to represent a third mineralization corridor parallel to the Bienaventurada Vein (Figure 9-7 and Figure 9-8).

Figure 9-7 Interpreted Gladys Corridor (Laymen and Mc Iver, 2024)

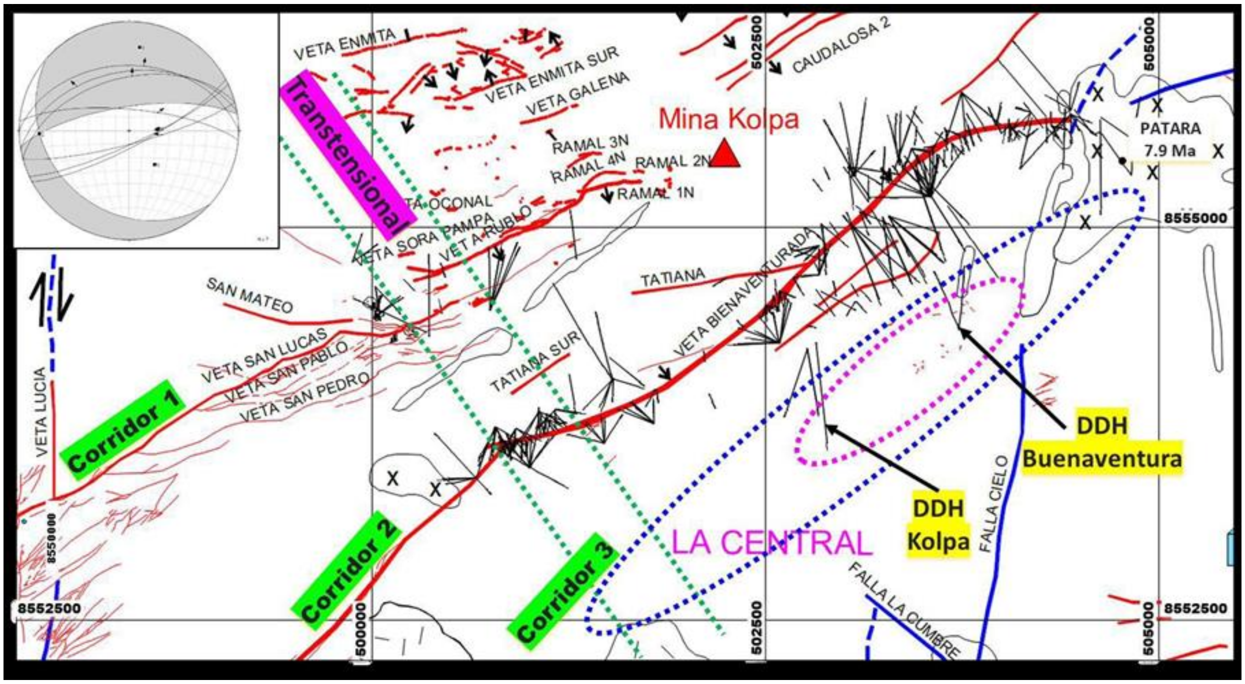
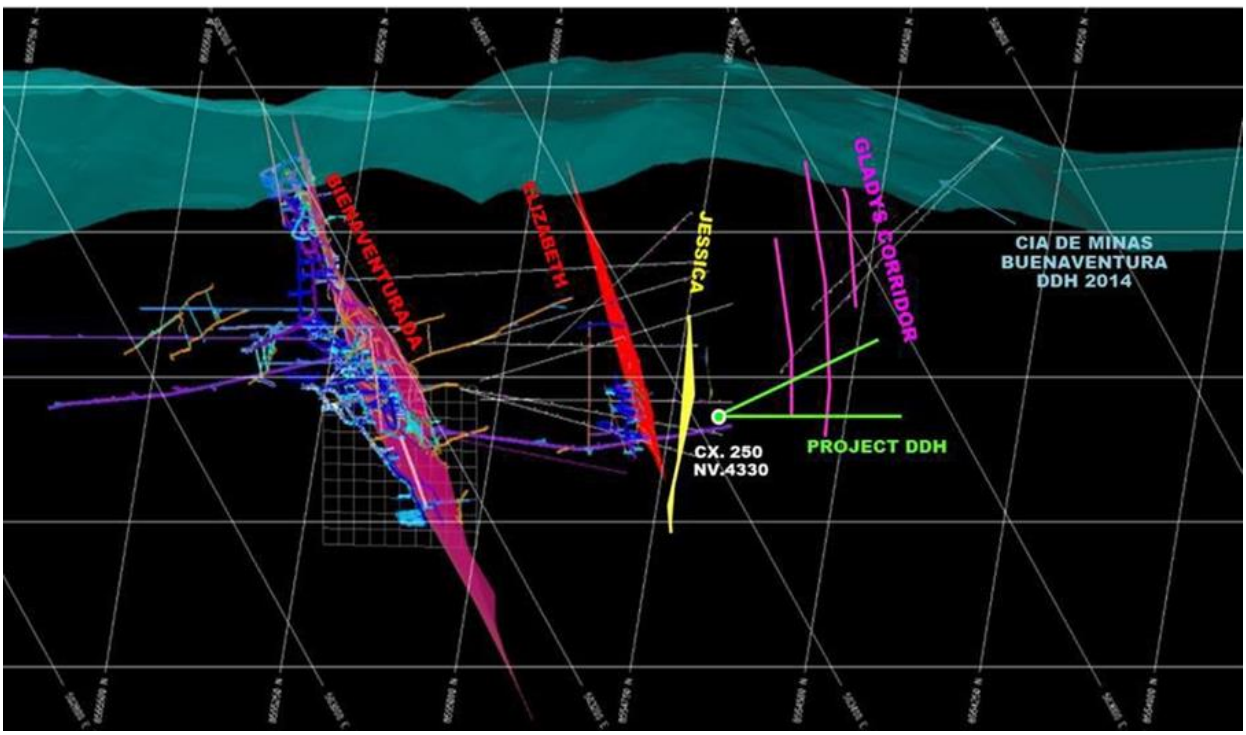


Figure 9-8 Cross Section of the Bienaventurada Vein System showing the Interpreted Gladys Corridor (Laymen and Mc Iver, 2024)



9.5.2 Coricancha-Vizcacha Corridor

Recent geological mapping and surface sampling work 500 m southeast of the Gladys corridor confirmed the presence of outcropping structures with an azimuth and dip similar to the Rublo and Bienaventurada veins, interpreted as another corridor parallel to the main structures

9.5.3 Escopeta Project

This area was mapped by Compañía de Minas Buenaventura from 2011 to 2014. During the 2013 exploration campaign, exploration targets were identified where veins, veinlets, and argillic-siliceous crests, with anomalies in Ag, Pb, Zn (Au) outcrop.

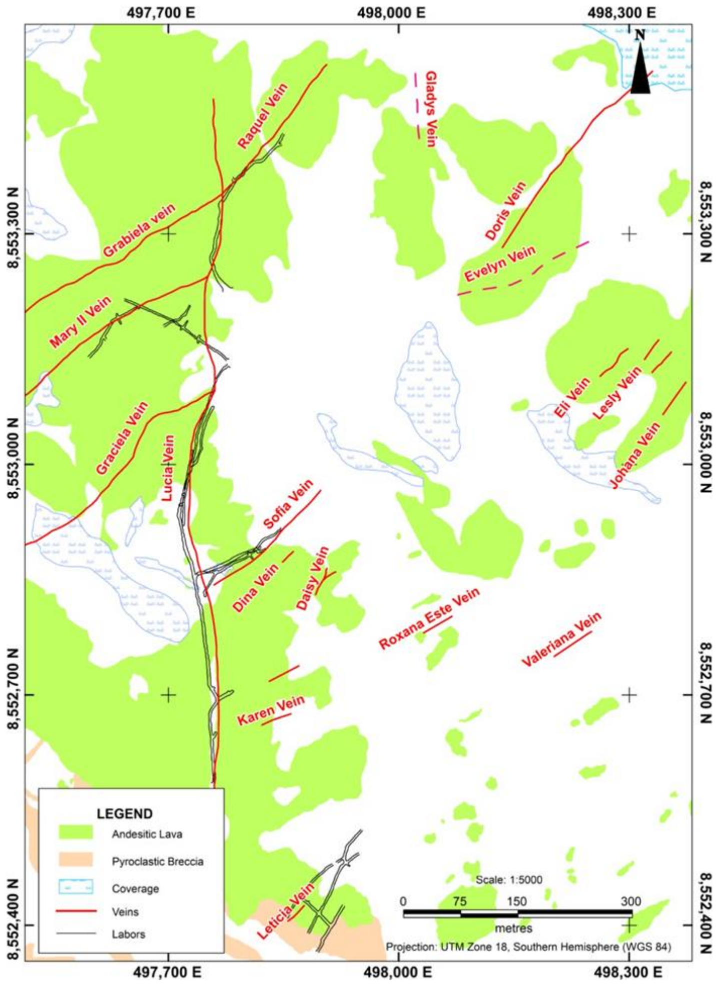
Based on this information, Kolpa has carried out mapping and sampling and the old mine workings have been reopened. These works were designed to confirm the presence of mineralized structures.

SE of the Escopeta Project outcrops the SW extension of the Bienaventurada Vein accompanied by sub-parallel structures, known as the “Cola de Caballo” Sector. These veins have better structural continuity than the veins of the central and NE zones. The average width can reach 1.80 m.

The results of the sampling in the Cola de Caballo sector above elevation 4,600 m report Hg, As and Sb anomalies, which suggest economic potential of these veins at lower levels, possibly below 4,500 m Level.

Figure 9-9 shows the lithological plan of the Escopeta Project showing the numerous veins present in the area.

Figure 9-9 Lithological Map and Associated Veins - Escopeta Project (Laymen and Mc Iver, 2024)

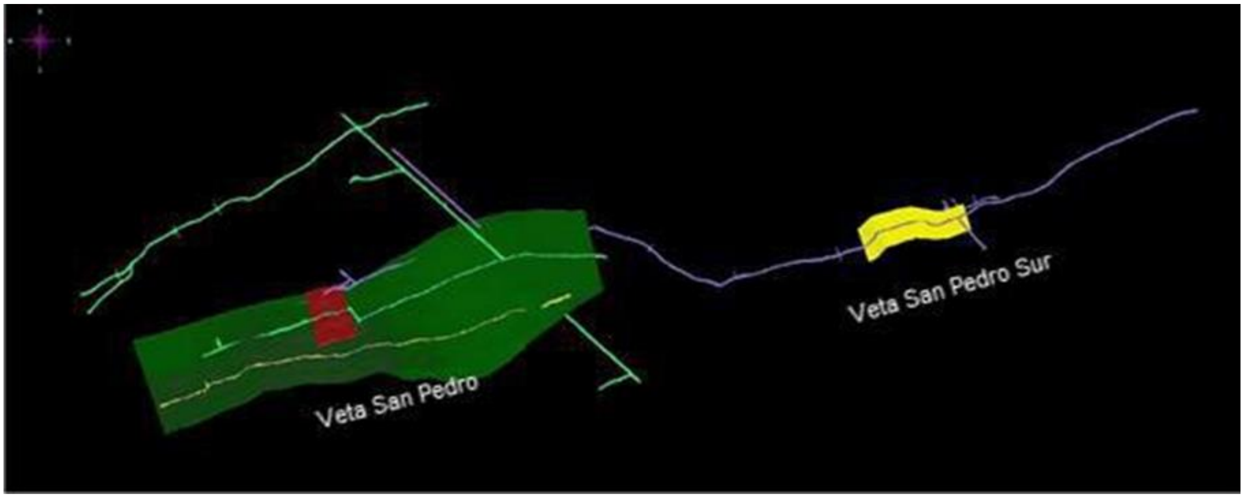


9.5.4 Chonta Project (San Pedro Mine)

This project is developed in the old San Pedro mine, which is a branch of the Rublo vein. On surface, outcrops of this vein have been recognized with widths that vary from 0.30 m to 1.00 m, as quartz crests and disseminated pyrite, galena, sphalerite, realgar, orpiment, and iron oxides are observed. The host rock is argillic-altered andesitic and sericitized lavas (Figure 9-10).

Historical underground development traced the San Pedro vein within the west sector on levels 4745 and 4710, over 560 m and 800 m length, respectively. In August 1998, exploration began on levels 4645 and 4590 in the east sector. Development work was carried out at 4645 Level until December 2000 and at 4590 Level until 2007. During 2009 and 2010, development work was carried out, but operations stopped in June 2010. The upper levels, 4710 and 4745 (Old Chonta) are mostly inaccessible.

Figure 9-10 Geological Model of the San Pedro Vein (Chonta Mine), 3D Schematic picture (Laymen and Mc Iver, 2024)



9.5.5 Teresita Project

The Teresita vein has strikes 045° to 060° and has been mapped over 2 km (Figure 9-11). Outcrops indicate typical dips ranging from 78° to 87° SE with a thickness between 0.30 m and 1.80 m.

Compañía de Minas Buenaventura developed the central portion of the vein system on the Clavo 1 and Clavo 2 veins (Figure 9-12).

The Clavo extension vein is approximately 360 m long by 760 m high (4,460 to 3,700 m elevation). The first 420 m were fully mined out using up to 10 levels from 4,460 m to 4,040 m elevation, whereas the deeper 340 m of the vein are partially mined. Mining was performed with conventional underground techniques with an access through a central shaft.

In 2009 production activities at the Teresita vein were suspended below the 4,000 m elevation.

Figure 9-11 Plan View of Veta Teresita and Branches (Laymen and Mc Iver, 2024)

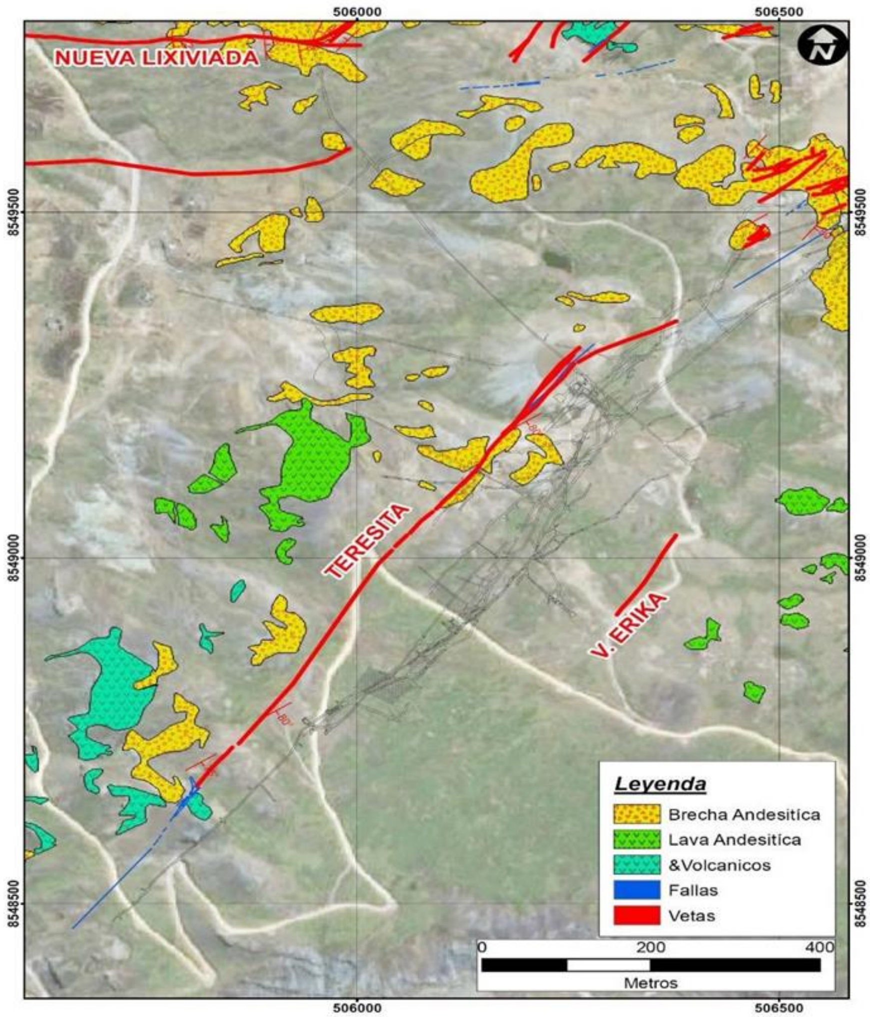
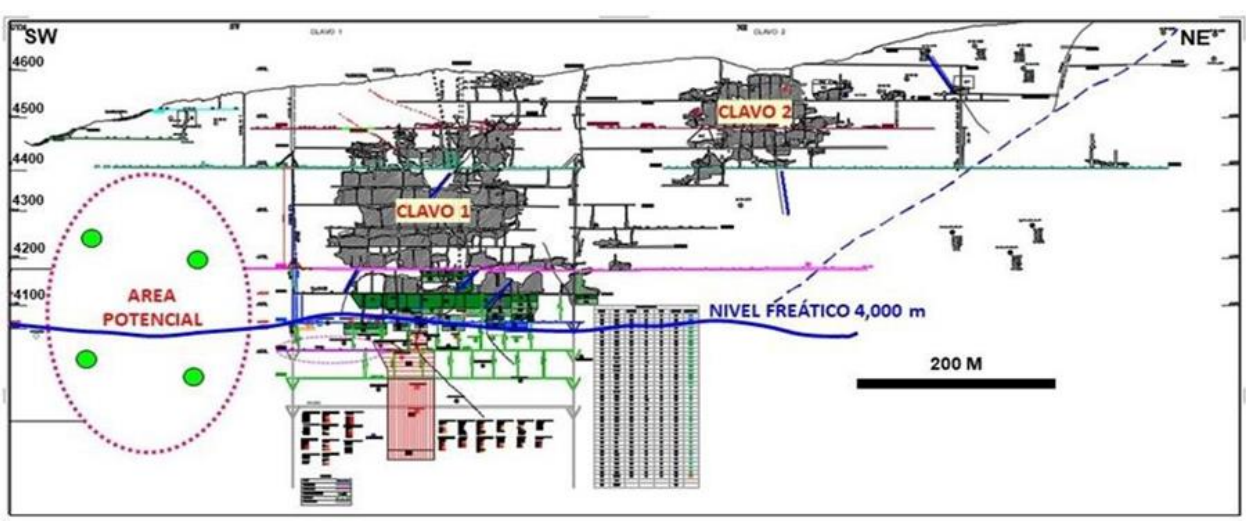


Figure 9-12 Longitudinal Section View of the Teresita Vein Development and Exploration Targets (Laymen and Mc Iver, 2024)



9.5.6 Escondida Project

The Escondida project is located 6 km southwest from the current Kolpa mining operation. It is comprised of Pb-Zn-Ag ± Cu and Au veins and disseminated mineralization in a distal skarn environment at an intrusive contact with sedimentary and volcanic rocks.

Figure 9-13 shows a generalized cross section of the geology and mineralization targets of the Escondida Project. Figure 9-14 shows the geological and geophysical interpretation for the Escondida Project.

Figure 9-13 Geological Section of Escondida Project (Laymen and Mc Iver, 2024)

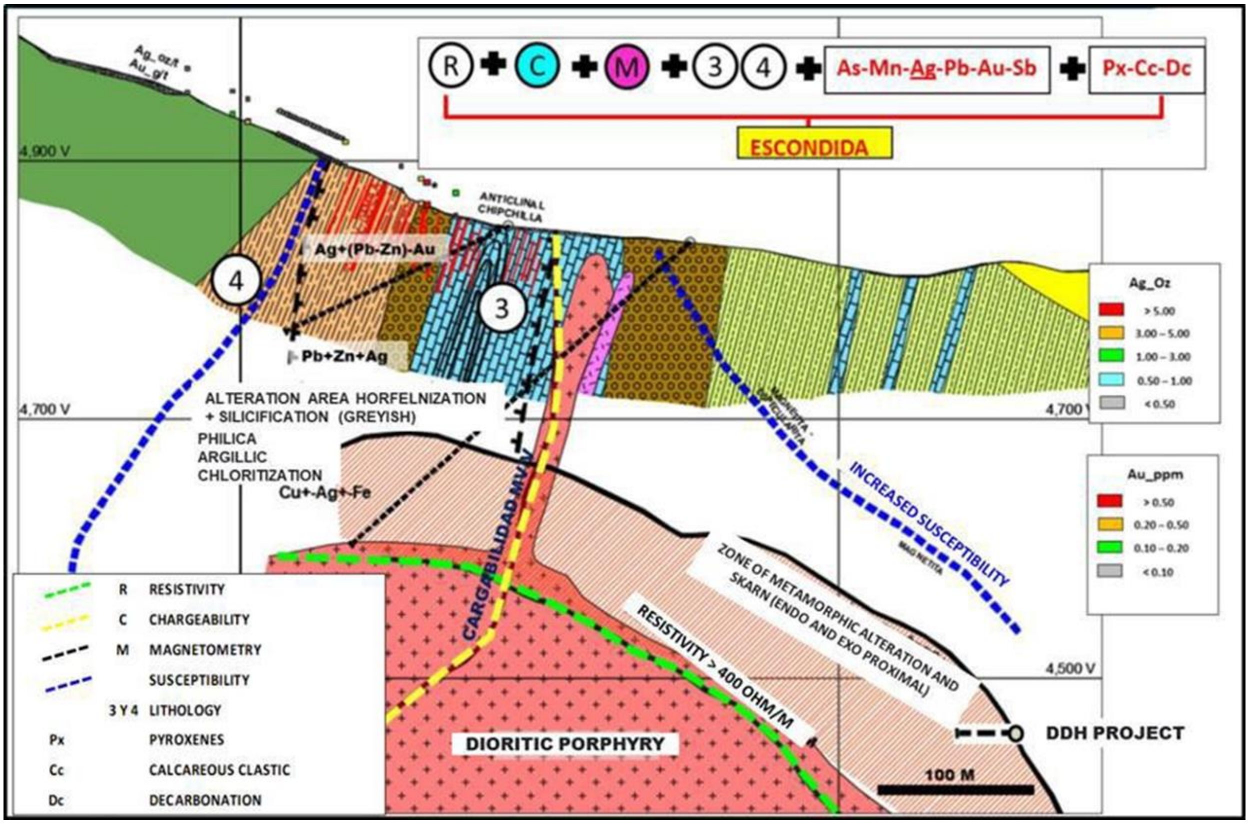
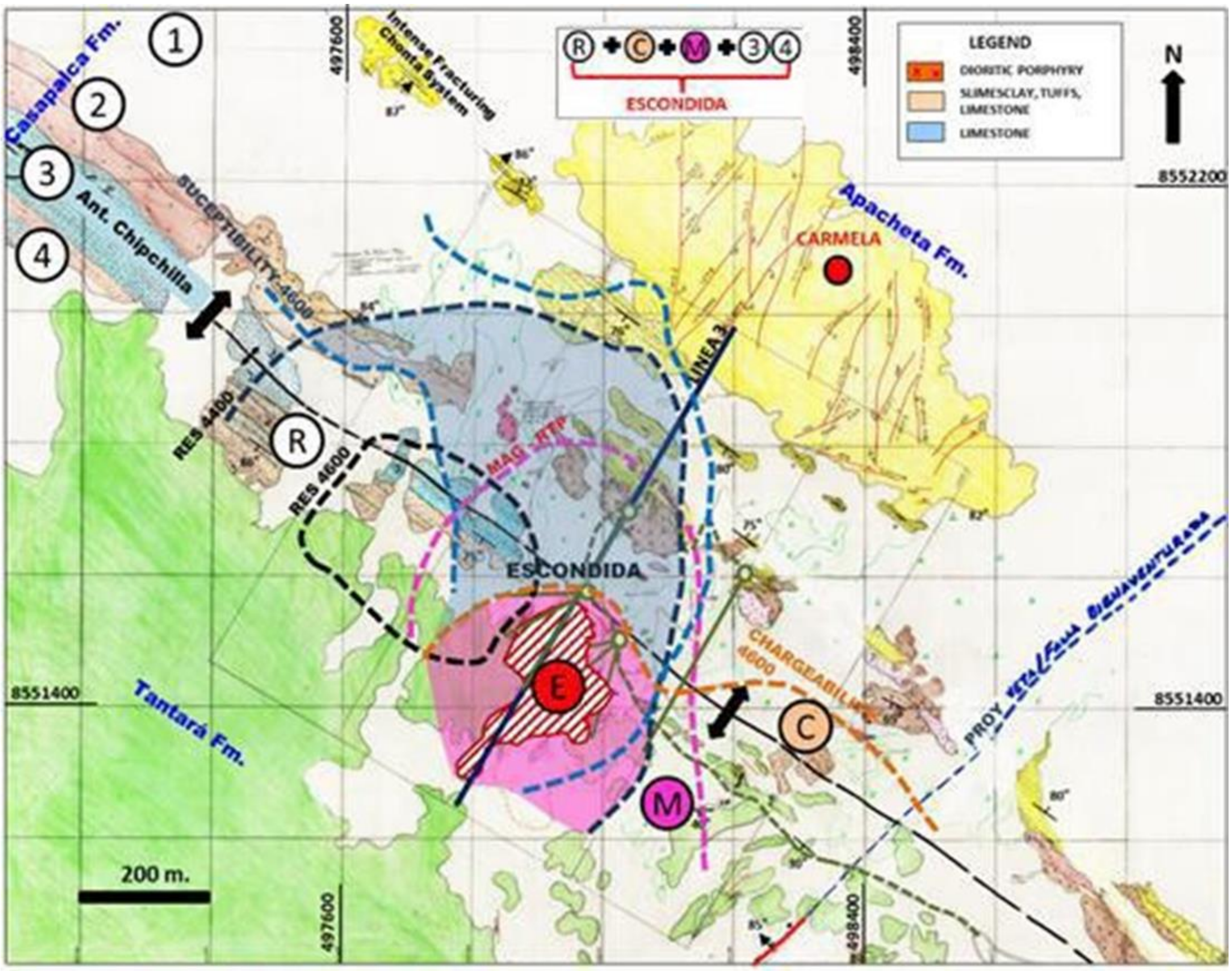


Figure 9-14 Geological and Geophysical Interpretation - Escondida Project (Laymen and Mc Iver, 2024)



10 DRILLING

10.1 Summary

The Huachocolpa Uno Project drilling database utilized for the estimation of historical resources has been limited to drilling completed between 2001 and 2024 by Compañía Minera Caudalosa S.A. and Compañía Minera Kolpa S.A. Effective December 31, 2024, the Huachocolpa database contains results from over 716 drill holes totaling 187,131.71 m (Table 10-1) (Laymen and Mc Iver, 2024 and CIA Minera Kolpa, 2025a). All drill holes included in this dataset correspond to diamond core drilling methods.

Of the total drilling, over 594 holes were completed from underground workings within the Bienaventurada mine totaling 161,602.31 m, and over 112 holes were completed from surface at the Yen Project totaling 25,529.40 m.

Compañía Minera Kolpa S.A. has completed over 556 holes for 153,45.65 m for diamond drilling. Only drilling annual meterage totals are available for 2023 and 2024 and exact drill hole counts are not currently available for these years.

Figure 10-1 shows the distribution and locations of the Huachocolpa Uno drill holes included in the internal March 31, 2023 historical resource estimate completed for Kolpa.

Table 10-1 Huachocolpa Uno Drilling Summary as of December 31, 2024

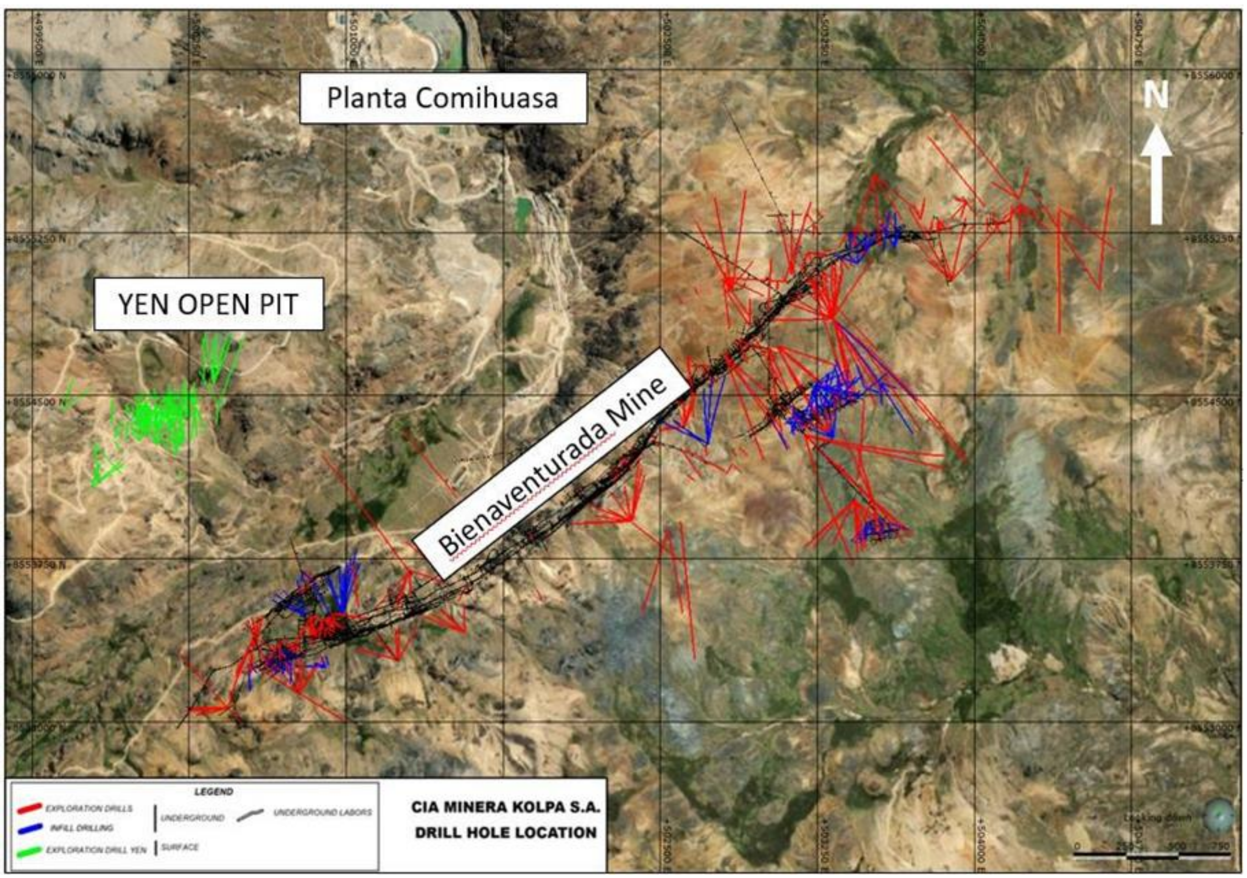
Company Holder	Year	Number of Drillholes	Total Meters (m)	Type	Site
			Bienaventurada Mine		
	2001	29	3,811.67	DDH	UNDERGROUND
	2002	7	2,444.50	DDH	UNDERGROUND
	2003	6	1,905.45	DDH	UNDERGROUND
	2004	7	2,195.26	DDH	UNDERGROUND
	2005	11	2,903.15	DDH	UNDERGROUND
	2006	10	2520.3	PACK SACK	UNDERGROUND
Cía. Minera Caudalosa S.A.	2007	11	1,620.77	PACK SACK	UNDERGROUND
	2008	8	1,161.06	PACK SACK	UNDERGROUND
	2009	3	964.15	DDH	UNDERGROUND
	2010	5	1,051.60	DDH	UNDERGROUND
	2011	37	3,181.75	DDH	UNDERGROUND
	2012	10	1,968.20	DDH	UNDERGROUND
	2013	2	706.50	DDH	UNDERGROUND
	2014	12	6,493.25	DDH	UNDERGROUND
	2015	2	758.45	DDH	UNDERGROUND
	Total	**160**	**33,686.06**		
	2016	23	5,514.40	DDH	UNDERGROUND
	2017	25	4,895.85	DDH	UNDERGROUND
	2018	84	9,835.15	DDH INFILL	UNDERGROUND
Cía. Minera Kolpa S.A.	2019	87	9,650.85	DDH INFILL	UNDERGROUND
	2020	37	4,113.40	DDH INFILL	UNDERGROUND
	2021	44	16,017.45	DDH INFILL	UNDERGROUND
	2022	134	20,655.15	DDH INFILL	UNDERGROUND
	2023	N/A	22,923.00	DDH INFILL	UNDERGROUND
	2024	N/A	34,311.00	DDH INFILL	UNDERGROUND
	Total	**434***	**127,916.25**		

Company Holder	Year	Number of Drillholes	Total Meters (m)	Type	Site
			Yen Project		
Cía. Minera Kolpa S.A.	2019	26	3,576.05	DDH INFILL	SURFACE
	2020	69	6,782.85	DDH INFILL	SURFACE
	2021	3	694.45	DDH INFILL	SURFACE
	2022	24	4,177.05	DDH INFILL	SURFACE
	2023	N/A	6,642.00	DDH INFILL	SURFACE
	2024	N/A	3,657.00	DDH INFILL	SURFACE
	Total	**122***	**25,529.40**		
Total		**716***	**187,131.71**		

*Notes: * Drill hole counts for 2023 and 2024 unavailable.*

Source: Laymen and Mc Iver, 2024 and CIA Minera Kolpa, 2025a.

Figure 10-1 Drill Hole Locations at Huachocolpa Uno to March 31, 2023 (Laymen and Mc Iver, 2024)



In addition to diamond drilling, a total of 39,971 channel samples totaling 52,621 m were collected from 2004 to 2021. Of these, 38,677 channel samples (51,821 m, 96.8%) were collected at the Bienaventurada mine, 688 channel samples (533 m, 1.7%) were collected at the Chonta mine, 606 channel samples (267 m, 1.5%) were collected at the Escopeta project (Table 10-2).

Figure 10-2 shows a schematic cross-section across the Huachocolpa Uno mineralized structures showing the related geological interpretation of the main structures, while Figure 10-3 shows a 3D compilation of all underground channel sampling in Huachocolpa Uno.

Table 10-2 Bienaventurada Channel Sampling Summary as of March 31, 2023

Mine/ Project	Number of Channels	Total Meters (m)
Bienaventurada	44,565	57,398.60
Chonta	413	269.02
Escopeta	606	266.96
Escondida	238	536.05
Teresita	527	531.96
Total channels	**46,349**	**59,002.59**

Source: Laymen and Mc Iver, 2024

Figure 10-2 Schematic cross-section across the Huachocolpa mineralized structures showing the related geological interpretations (Laymen and Mc Iver, 2024)

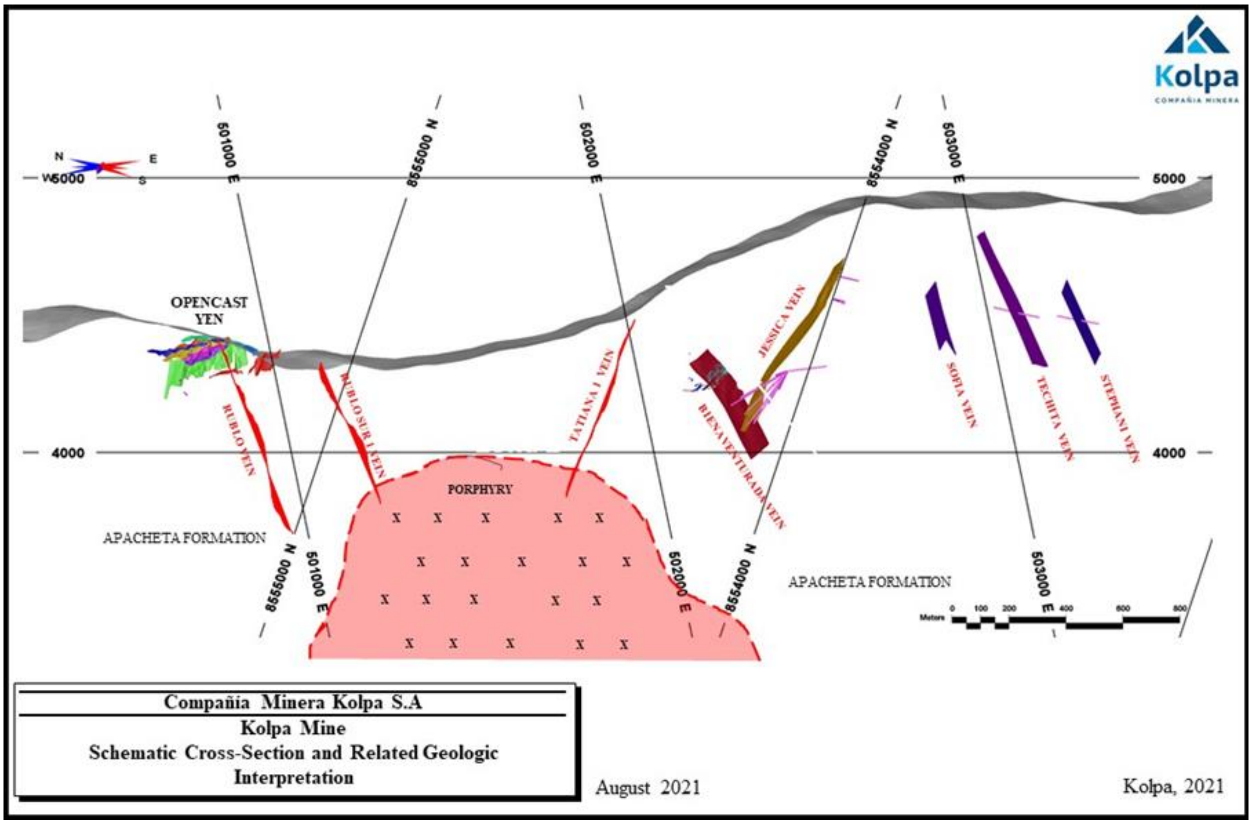
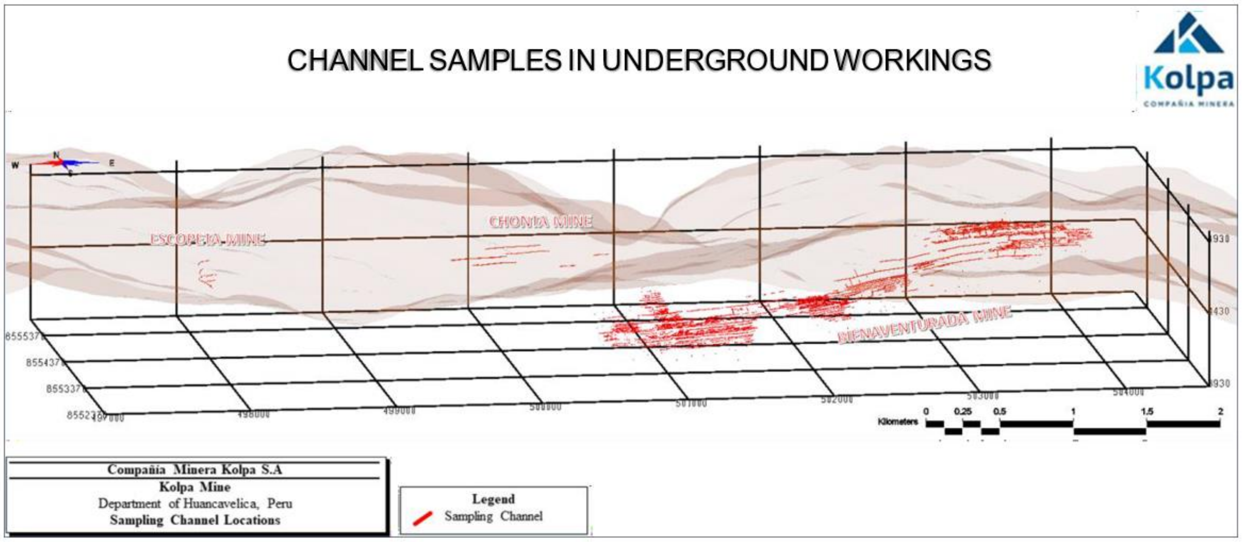


Figure 10-3 A 3D compilation displaying the location of underground channel sampling on the Huachocolpa Uno mining unit (Laymen and Mc Iver, 2024)



10.2 Drilling procedures

Drilling procedures are coordinated and supervised by company geologists and approved by the Geology and Exploration Managers. The drilling procedures are as follows:

- Diamond drilling programs are proposed by geologists.
- The coordinates and azimuth of the diamond drill holes are given to the mine surveyors to accurately mark the drill point on the ground and are then certified by the surveyor and approved by the responsible geologist.
- Drill hole IDs are generated using a specific format, which contains the following reference codes: DDH, year and sequential number.
- All drill hole data generated are linked to the corresponding drill collar reference ID.
- Basic information from drilled holes must be entered into the database the day after the drill hole is started and then archived until the end of the drill hole.
- Drill hole Survey data are gathered by the drilling contractor.
- The drill hole deviation measurements are taken down-the-hole after the completion of the drilling and the equipment used is the Flexit survey tool. Survey data are stored on the equipment hard disk and then reported with their respective measurement certificate.
- Survey data is collected every 10 m, starting from the collar to the bottom of the hole.
- The original survey data is delivered to the supervising geologist, signed by the drilling supervisor and the drilling contractor's drilling supervisor.
- The survey data are validated by the responsible geologist and entered into a CSV file, then imported into the database and geological modeling software.
- After completion of the drill hole, diamond core logging and sampling is conducted by a team of geologists.
- The logging of the diamond cores is done using a set of geological, lithological, mineralogical and alteration codes.

- The core logs are entered into the geological modeling software.
- Photographs of the diamond cores are taken for each drill hole and stored in jpg and/or png formats with high image resolution.
- Marking out of diamond cores for sampling for geochemical analysis is completed at the same time as the logging of the cores.
- Logging and sampling is completed within 48 hours after completion of the drilling of the hole.
- The diamond drilling data is exported to the MineSight software where all log information is processed and continuously updated after validation by the database administrator for subsequent use in geological modeling.
- The diamond drilling data is stored in a structured database, and then backed up on a central server located at Kolpa's offices in Lima.
- Data available in the drill hole database includes drill hole location coordinates (collar), drill hole deviation measurements (survey), sampling, geochemical assays, and geological characteristics (lithology, alteration, mineralization) as well as structural and geotechnical data.

10.3 Drill Rigs

Drilling procedures are coordinated and supervised by company geologists and approved by the Geology and Exploration Managers. The drilling procedures are as follows:

At Huachocolpa, there are two main categories of drilling: exploration and resource definition diamond drilling (infill drilling). Drilling is performed by the contractor companies.

10.3.1 Exploration Diamond Drilling

The Exploration drilling program is planned by the exploration team and its main objective is to discover new resources. It consists of underground (mine) drilling (initial and infill) and surface drilling. Machines like the Explorer 1500 are used for underground drilling Surface exploration-drilling uses the Explorer 1500 and LM 75 Boart Long year drill rig models. Exploration underground drilling and surface drilling are carried out with large drill rigs with a depth drilling capacity of up to 600 m using a combination of HQ (63.5 mm diameter) and NQ (47.6 mm diameter) core sizes.

10.3.2 Resource Definition Diamond Drilling

Resource definition drilling is the responsibility of the mine geological team and has the objective to upgrade known the classification of resources at Huachocolpa Uno. This drilling consists of:

- Categorization, new areas where no information is available.
- Recategorization, focused on the upgrading and definition of bodies where there is little drilling information.
- Infill, focused on providing additional resource upgrading information for short to long term planning to ensure the reliability of production programs.

B100-Superdrill, are small diamond drilling rigs with depth ranges up to 120 m. Infill drilling generally uses BQ (36.5 mm diameter) core size and recategorization drilling uses HQ or NQ core size.

10.3.3 Core Recovery

Core recovery and rock quality designation (RQD) are measured and recorded for each hole on geotechnical log formats. Core drill runs are 1.60 m for HQ and NQ sizes and 1.50 m for BQ size. The measurements are checked by the geologists and the database manager and then imported into the database. Table 10-3 shows drill core recoveries by HQ, NQ and BQ from exploration diamond drilling (Laymen and Mc Iver, 2024).

Table 10-3 Drilled Core Recovery Summary - Exploration DDH by Core Diameter Size

DDH	HQ Core Size (2016-2023)	NQ Core Size (2020-2023)	BQ Core Size (2019)
Drilled Meters	56,140.60	17,771.70	1,460.00
Recovered Meters	54,646.20	17,028.63	1,339.96
Recovery Percentage	97%	96%	92%

Source: Laymen and Mc Iver, 2024

10.3.4 Drill hole spacing

Exploration drilling is generally completed over a 100 m by 100 m grid, whereas infill drilling is designed to cover a 30 m by 30 m grid.

10.4 Drill core sampling

The sampling of the drilling cores executed by KOLPA is carried out according to the protocols documented in “PETS-GEO-019 CORE SAMPLING”.

There is no available documentation of Compañía Minera Caudalosa S.A. sampling procedures.

10.4.1 Drill core sampling at Kolpa

The sample is obtained from each drill hole intercept with a mineralized structure or vein of potential economic interest, accompanied by 0.5 m long samples on either side of the mineralized intersection (at the hanging-wall and the footwall of each structure); other types of structures are also sampled, including mineralized faults, quartz-filled structures without mineralization that serve as markers of structures, amongst other important structures.

The database includes a minimum and maximum sampling length of respectively, 0.1 m to 1.0 m. In addition, if not mineralized, host- or wall-rock is not sampled except when directly adjoining a potentially economically mineralized structure, or for the collection of specific gravity measurements and petrology & mineralogy analyses.

Drill core sampling is performed under the guidance of the Geologist and is accomplished after geotechnical and geological logging. Photographs are taken of all drill core. Once sample length and cutting line have been defined by the supervising geologist, the core is cut longitudinally into two equal parts using a diamond electric saw. If the core is broken, the sampler separates and takes 50% of the fragmented material for the sample. All fragments are placed in a pre-coded polyethylene bag and transported to the laboratory. The other half or 50% sample is placed in its corresponding place in the core boxes and stored in the core house.

Exploration drill core sampling follows written protocols, honoring the main mineralized contacts.

Table 10-4 shows the summary of diamond drill holes with their drilled lengths and number of samples obtained as of March 31, 2023.

Table 10-4 Drilled Core Sampling Summary - Exploration DDH by Mine / Project as of March 31, 2023

MINE / PROJECT	Drillholes	Total (m)	Samples	Length (m)
Bienaventurada	571	101,026.44	*9,730*	5,484.22
Yen	134	17,018.25	*6,083*	6,313.65
Escondida	5	1,042.85	*549*	636.00
Teresita	37	4,029.52	*312*	256.59
Rublo	10	4,493.15	*315*	322.95
Total Drilling	**757**	**127,610.21**	***16,989***	**13,013.41**

Source: Laymen and Mc Iver, 2024

10.5 Underground channel sampling

Since 2001, channel samples were collected during two periods. From 2001 to 2016, 21,051 samples were collected by Cía. Minera Caudalosa S.A., and from 2016 to March 2023, 617 samples were collected by Cía. de Minas Buenaventura S.A.A. and 46,888 samples were collected by Cía. Minera Kolpa S.A. This data has been incorporated into Kolpa's database and used in historical estimates of mineral resources. Table 10-5 and Table 10-6 summarize the channel distribution at each period by each company.

Sampling of the channels is carried out according to the protocol document "PETS-GEO-012 SAMPLING IN HORIZONTAL AND INCLINED WORKS".

The sampling method consists of collecting samples in rectangular channels pre-marked in the site transversely to the dipping of the tabular structures or elongated bodies at regular distances.

The location and marking of channels in drifts, sublevels, ramps, and by-passes must be linked to nearby topographic points. The distance interval between channels is about 3.0 m. The sampler handles the equipment (rotary hammer) and/or the chisel while the assistant will receive the sample directly into the ring holding the polyethylene bag (it is strictly forbidden to split and crush the sample). Channel samples have a length of 0.1 to 1.0 m, a width of 0.1 m and an average depth of 3 cm, and the sample weight ranges from 4 to 5 kg. The criterion for channel sampling is to start from the footwall side of the vein structure to the hanging wall considering 0.5 m outward from the structure (footwall and hanging wall). The measurement of the sample length, azimuth and inclination of the channel must be recorded, which will later be verified by the surveyors. Table 10-7 shows the summary of mine channel sampling at Bienaventurada mine.

Table 10-5 Underground Mine Channel Sampling Summary from 2001-2016

Mine/ Project	Number of Channels	Number of Samples	Sampled Length (m)	Company
Bienaventurada	19,663	20,185	23,005	Cía. Minera Caudalosa S.A.
Chonta	413	500	269.02	Cía. Minera Caudalosa S.A.
Escopeta	606	617	266.96	Cía. de Minas Buenaventura S.A.
Teresita	527	527	531.96	Cía. de Minas Buenaventura S.A.
Total, Channels	**21,209**	**21,829**	**24,073**	

Source: Laymen and Mc Iver, 2024

Table 10-6 Underground Mine Channel Sampling Summary from 2016-2023

Mine/ Project	Number of Channels	Number of Samples	Sampled Length (m)	Company
Bienaventurada	24,902	46,887	34,393.68	Cía. Minera Kolpa S.A.
Escondida	238	238	536.05	Cía. Minera Kolpa S.A.
Total, Channels	25,140	47,125	34,929.73	

Source: Laymen and Mc Iver, 2024

Table 10-7 Underground Mine Channel Sampling Summary by Mine / Project as of March 31, 2023

Mine/ Project	Number of Channels	Number of Samples	Sampled Length (m)
Bienaventurada	44565	67,072	57,398.60
Chonta	413	500	269.02
Escopeta	606	617	266.96
Escondida	238	238	536.05
Teresita	527	527	531.96
Total, Channels	**46,349**	**68,954**	**59,003**

Source: Laymen and Mc Iver, 2024

10.6 Surface Blast Hole Sampling

The sampling of the blast holes in the Yen vein is carried out through the protocol document “PETS-GEO-009 SAMPLING OF BLASTHOLES”

In the Yen open pit mining area, blast hole sampling is applied, and two sampling methods at utilized depending on the prevailing weather conditions.

10.6.1 Dry climate sampling

This type of sampling requires collecting those fragments cut from the drill blast hole, avoiding loose material from the bench floor. The polyethylene bag is attached to the cyclone for sample collection prior to any over drilling.

After that, the splitting is done using a riffle splitter until obtaining 2.5 kg of sample which is deposited in a microporous bag, and the excess material returned to the drilling point as a drilling log cone. The samples are brought to the established collection point and then transported to the sample reception area in the Laboratory.

10.6.2 Rainy Climate Sampling

This type of sampling requires collecting those fragments cut from the drill blast hole, avoiding loose material from the bench floor. The polyethylene bag is attached to the cyclone for sample collection prior to any over drilling.

In rainy conditions, the riffle splitter is not used due to the fact that the sample obtained would contain water both in the detritus and in the dust, which would not allow for an adequately representative splitting due to the excessive humidity. Therefore, the chips cone is sampled by the channel method with the help of a sampling spoon to obtain up to 2.5 kg of sample.

10.6.3 Drill and channel sampling results

The results of the diamond drill sampling assays, along with the channel sampling assays, have been incorporated into the drilling database for use in historical resource estimates, and have been included in the generation of the 3D geological model for Huachocolpa Uno.

The drilling database is used by modeling geologists who work in collaboration with the mine/production and exploration geologists to prepare the 3D geological model, which is continuously updated as new information is acquired and added to the database. The 3D geological models are built in Leapfrog software, using mainly geochemical assay results, particularly for Ag, Cu, Pb and Zn, as well as underground geological level plans and interpreted cross sections.

11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Introduction

Endeavour has yet to complete exploration on the Property. The historical MREs completed for the Property were prepared prior to Endeavour's purchase agreement with Kolpa. The following description of the sample preparation, analyses and security by previous operators for the Property has been sourced from the internal technical report (Laymen and Mc Iver, 2024) supporting a historical resource estimate with an effective date of March 31st, 2023. Additional diamond drilling, underground channel sampling and mining has been conducted on the Property since the last historical MRE was completed.

Most diamond drilling and channel samples collected from the Kolpa Huachocolpa Uno mine during the period 2001 to 2023, have been submitted for sample preparation and analytical analysis at Kolpa's mine-site laboratory. Prior to 2021, no quality assurance and quality control programs had been implemented at Kolpa. In mid-2021 the Kolpa Huachocolpa Uno mine implemented a comprehensive QA/QC program beginning with the insertion of QC samples into diamond drilling sampling programs. This QA/QC program was expanded to include channel sampling programs beginning in 2022. Kolpa´s QA/QC programs include the insertion of CRM´s, duplicates, and blanks to evaluate sample preparation and analytical precision, accuracy, and the potential for contamination during the sample preparation and analytical analysis processes.

Beginning in 2021, Kolpa began sending selected historical diamond drilling pulp samples for verification analyses in an independent, commercial analytical laboratory, Certimin Peru. The Certimin Lima laboratory is independent from Kolpa and has accreditation under ISO 9001 and NTP-ISO/IEC 17025. Certmin Peru is independent of Endeavour, the QPs, and SGS Geological Services.

11.2 Overview

Prior to 2001, almost all sampling of the mineralized vein-sets on the Kolpa Huachocolpa Uno Mine, were from channel or grab samples. Most recent sampling is from underground workings and only minor sampling is conducted on surface outcrops. Various mine operators over the years have been responsible for the historical pre-2001 sampling programs on the Kolpa mining operations. From 2001 to 2016, Cía. Minera Caudalosa S.A. (Caudalosa) under control of the Raffa Family, was responsible for all sampling. From 2016 until 2024, sampling programs have been conducted under the supervision and guidance of the Kolpa Huachocolpa Uno Mine. For the 2023 and 2024 historical MREs, only sampling results from work conducted from 2001 onwards has been included in the resource database .

Between 2001 and 2016 sporadic drilling was conducted as required by the mining operation. Since 2001 all drilling has utilized diamond drilling methods (Table 11-1). Drilling can be divided into two periods: i) a period of Bap Drilling from 2001 to 2005 and ii) since 2005 when Caudalosa purchased one Diamec 206-2 and one Kyping diamond drill rig. With these two machines, Caudalosa continued sporadic drilling of dimaond core from 2006 up until the end of 2015. Drilling completed by Caudalosa from 2001 to 2015 totaled 123 underground holes for 29,656.54 m of drilling.

From 2016 to March 31st, 2023 (Table 11-1), a further 500 underground drillholes for a total of 80,935.42 m of drilling were completed. During this period an additional 134 surface drillholes totalling 17,018.25 m were completed at the Yen Project.

In total, from 2001 to March 31st, 2023, the Kolpa Huachocolpa Uno mine completed a total of 757 drillholes for 127,610.21 m with 16,989 samples collected representing 13,010.36 m of diamond core (Table 11-1).

Table 11-1 Summary of Huachocolpa Uno DDH Drilling & Sampling by Company (2001 – March 31st 2023)

Company	Year(s)	N°. of DDH´s	Total Length (m)	N°. of Samples	Metres Sampled	Site	Laboratory where Analyzed
C.M. Caudalosa S.A.	2001 - 2015	123	29,656.54	1,030.00	704.02	Underground	Kolpa
C.M. Kolpa S.A.	2016 - 2023	500	80,935.42	9,876.00	5,993.74	Underground	Kolpa
C.M. Kolpa S.A. (Yen Project)	2019 - 2023	134	17,018.25	6,083.00	6,312.60	Surface Infill	Kolpa
DDH Drilling & Sampling Totals:		757	127,610.21	16,989.00	13,010.36		

Since 2016 the Kolpa core sampling methodology has been adapted to obtain a representative sample not only of the targeted polymetallic mineralized vein or structure, but also from the immediate footwall and hanging wall rocks adjacent to and hosting the mineralized structure.

Historically, prior to the benefits of underground diamond drilling being recognized, channel sampling focusing only on potentially economic mineralization, had tended to be the preferred approach to evaluation of the Kolpa polymetallic mineralized structures. During the period 2001 to 2015, Caudalosa sampled 18,435 channels for a total of 18,956 samples representing 22.1 line-km´s of sampling (Table 11-2). During the period from 2016 to March 31st, 2023, channel sampling increased to 28,189 channels sampled for a total of 50,304 samples representing 37.1 line-km´s of sampling.

Table 11-2 Summary of Huachocolpa Uno CHN Sampling by Company (2001 - March 31st, 2023)

Company	Year(s)	N°. of CHN´s	Total Length (m)	N°. of Samples	Metres Sampled	Site	Laboratory where Analyzed
C.M. Caudalosa S.A.*	2001 - 2015	18435	22,129.17	18,956.00	22,129.17	Underground	Kolpa
C.M. Kolpa S.A.	2016 - 2023	28189	37,136.79	50,304.00	37,136.79	Underground	Kolpa
CHN Sampling Totals:		46,624	59,265.96	69,260.00	59,265.96		

** Additional 2001-2015 CHN sampling was conducted on the, at the time, Cía. de Minas Buenaventura S.A veins, Escopeta & Teresita, for an additional 1,133 CHN´s representing another 799 m of sampling.*

The Kolpa resource database (2001 to 2024) comprises analytical results from surface and underground diamond drill core sampling (DDH) and channel sampling (CHN), mostly obtained from within the underground workings. Since 2001 sample preparation and analytical analyses were completed at the mine-site analytical laboratory attached to the Kolpa plant.

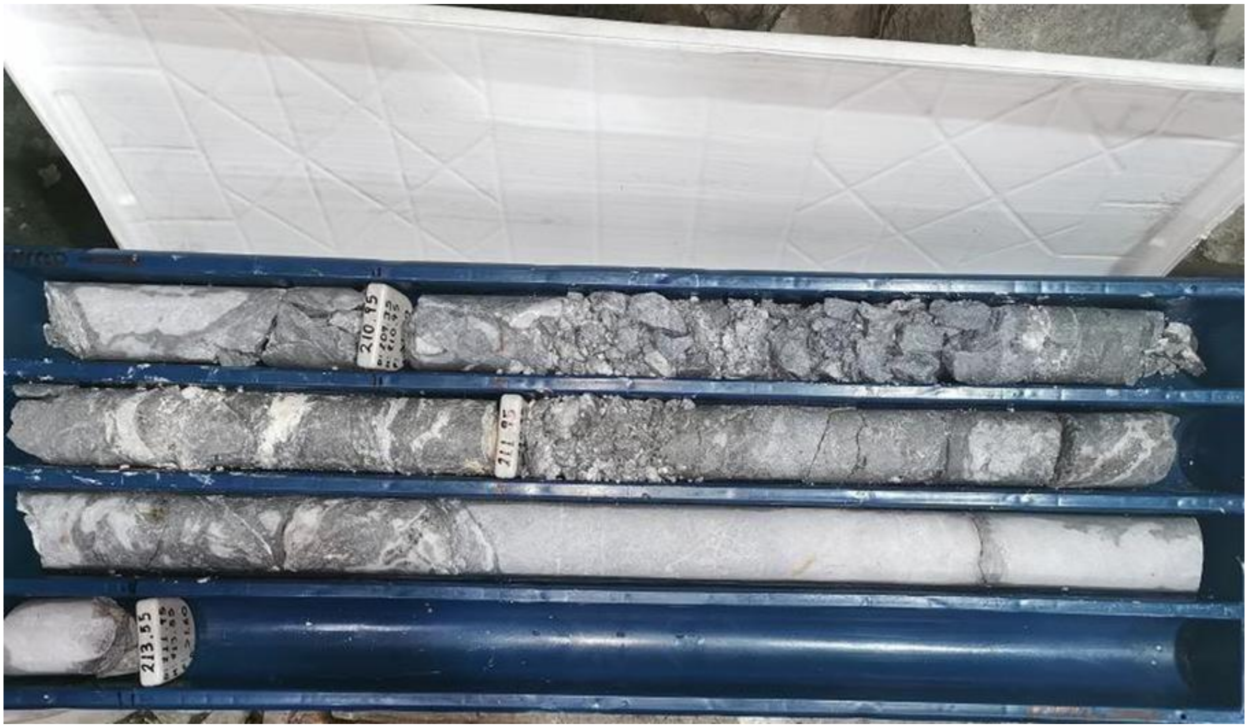
11.3 Diamond drill sampling

Sampling of the DDH core is carried out in accordance with the Kolpa Huachocolpa Uno internal protocol document "PETS-GEO-019 CORE SAMPLING". The following summary describes the sampling methodologies and treatment of core since 2016. No core sampling protocol is available for the period from 2001 to 2015.

11.3.1 Summary of Kolpa Diamond Drill Core Handling, Sample Selection Criteria, Sampling Methodology & Sample Security (2016-2023)

During drilling campaigns, drill core samples are transported by Kolpa staff on a daily basis from either the surface drilling rig platform or underground drill chamber, to the Kolpa core shed facility. The core is packed in strong, appropriately designed plastic core boxes, marked with the drill hole number, from-to meters drilled and box number. Each box is carefully sealed with a plastic lid (Figure 11-1), before being placed in a 4x4 truck and securely tied down for transport to the central warehouse.

Figure 11-1 Plastic core-holder box with strong lid and depth marker blocks



The samples are accompanied by the respective chain of custody documents, duly filled out and signed, according to the Kolpa in-house procedure "PETS-GEO-021: TRANSFER OF PERSONNEL AND SAMPLES WITH LIGHT EQUIPMENT" (Figure 11-2).

Once the core boxes have been delivered to the Kolpa core shed for geological logging and sampling activities, the cores are first reviewed for correct alignment, correctly placed depth markers and for verifying the order which the core segments have been placed inside the boxes. Where necessary, as per the Kolpa in-house protocol: "PETS GEO-017 MEASUREMENT OF RECOVERY AND RQD", the core segments are rearranged to align and match any faults, fractures or other structural deformation features, prior to determining core recovery and rock quality designations (RQD - Figure 11-3).

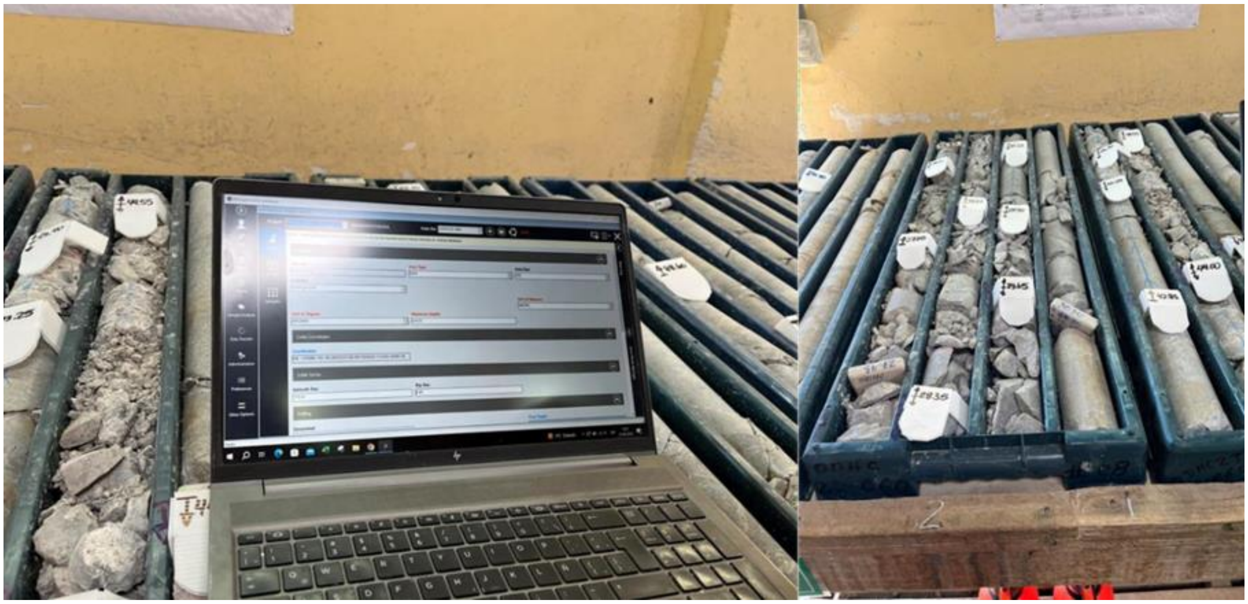
Figure 11-2 Transport and processing of diamond drill core-boxes

Figure 11-3 Correctly aligned core for measurement of core recovery and RQD

The logging geologist, on the basis of geological observations [lithology, hydrothermal alteration, mineralogy and identification of mineralized structures, etc.], identifies DDH core to be analytically analysed for its mineral content (Figure 11-4). This activity is conducted in accordance with internal Kolpa procedures, “PETS-GEO-005: DETAILED GEOLOGICAL LOGGING” and “PETS-GEO-006: LOGGING QUALITY CONTROL”. In zones of potential economic interest, the geologist determines which core intersections are to be sampled as well as the length of each sample and prepares the relevant drill core sampling form. Depending on the nature and importance of the mineralization being intersected, sample lengths can range from 0.10 m to 2.50 m in length. Prior to delivery of the samples to the analytical laboratory, the geologist will specify the insertion of QAQC control samples, including various combinations of certified reference material (of either low, moderate or high grade), fine & coarse blank samples, twin samples and fine & coarse duplicate samples.

A unique sample number is assigned to each designated sample interval and inserted quality control (QC) sample. The range (from and to) of each sample and appropriate descriptive geological comments, are entered into the drill log. The sample range and sample number are also tagged on the core box.

Figure 11-4 Kolpa marking up and detailed geological logging of diamond drill core



Once the geologist completes the logging, the process of identifying core for sampling, and the appropriate tagging and data recording into the database has been undertaken, then the drill core boxes are delivered to the geo-technician and a photographic record of all core boxes belonging to each hole is made prior to splitting and sampling of the drill core (Figure 11-5).

Drill core is photographed wet according to the Kolpa protocol “PETS GEO-016: PHOTOGRAPHIC RECORD OF DRILL HOLE CORES”.

Figure 11-5 Kolpa photography of whole diamond drill core stored in core boxes

Upon completion of taking the first photographic record of the core, the geo-technician then delivers the core boxes for sampling, to the technician responsible for splitting and sampling of the mineralized intersections as previously identified by the responsible geologist.

In accordance with the internal Kolpa protocol “PETS GEO-019: CORE SPLITTING & SAMPLING”, the drill core is symmetrically split with a diamond saw by cutting along ´core- splitting lines´ as defined and marked-out by the logging geologist (Figure 11-6). After the symmetrical splitting of the core, taking great care to avoid any form of contamination between samples, the right-hand half of the split core is collected for sampling and packaged in duplicated sample bags of resistant and transparent plastic. Together with a coded sample number ticket, the core sample is placed into the sample bag and the bag is sealed. The sealed and labelled sample is then coded and weighed in preparation for delivery to the analytical laboratory.

Figure 11-6 Kolpa symmetrical splitting of mineralized core in preparation for sampling and analytical analysis

The left-hand half of the cut core is returned to its correct space in the core box, placed with the split surface facing upwards in the tray, then securely transported back to the photography area for the taking of a second photograph, this time of the split and sampled wet core (Figure 11-7).

Figure 11-7 Kolpa second photographic record, this time of logged, split and sampled wet core

Upon completion of taking the photographic record of the sampled core, the geo-technician then delivers the sampled and photographed core boxes, accompanied by the chain of custody forms, to the nearby Kolpa warehouse for secure storage of the drill-core.

The individually packed core samples, each weighing 3-7 kilograms depending on core recovery, are packed together with several other samples into larger hessian or canvas sacks, forming sample batches in preparation to be shipped to the relevant analytical laboratory. It is at this stage, prior to shipping, that the appropriately numbered or coded Kolpa QAQC control samples are inserted into the sample run. Technicians under the supervision of a geologist prepare a detailed batch checklist as part of a delivery report to track the movement of the sample materials. The delivery report accompanies all samples delivered to the laboratory and the checklist will identify the number of sample batches, samples and QC samples which have been inserted, with the sample-type and sack numbers registered.

The delivery report is part of maintaining the chain of custody from the moment of recovery of core from the drill hole, until delivery from the analytical laboratory of the final analytical assay results for the core samples. The delivery report (or more correctly termed laboratory requisition sheet) also serves to regulate and supervise the insertion of internal control samples. Depending on the magnitude of the drill program, Kolpa staff typically ship samples to the laboratory delivery point once a week or upon completion of a drilling program. For delivery to the laboratory to be accepted, in compliance with the chain of custody protocols and upon departure from the geology warehouse, the delivery report checklist must be signed by the responsible geologist, the on-duty security guard, and the driver of the vehicle. When this process is complete, the batches are shipped to the relevant analytical laboratory, generally the Kolpa mine-site laboratory. Upon arrival of the samples at the laboratory, the on-duty laboratory supervisor verifies that all samples specified on the laboratory requisition sheet are the same as those delivered, then signs for their receipt from the driver.

The transfer and delivery of all Kolpa DDH & CHN samples to the internal Kolpa laboratory for analytical analysis, has thus been executed in compliance with the detailed Kolpa procedures for geology delivery and laboratory receipt of the samples, as well as the protocols which relate to the established internal Kolpa chain of custody procedure for analytical samples, “PETS-GEO-020: CHAIN OF CUSTODY OF SYSTEMATIC SAMPLES (DDH & CHN), FROM THE MINE”.

Upon reception in the laboratory (Figure 11-8), the sample batch is registered in the internal Laboratory Information Management System ´LIMS´ and assigned a work order number known as the internal batch. Each time a sample advances through the laboratory process, the system monitors the activity providing an indication of at what stage the sample is in the preparation and/or analytical process.

Figure 11-8 Receipt of samples and capture into the LIMS system at the Kolpa mine-site analytical laboratory

11.4 Channel sampling

The sampling of channel (CHN) samples is carried out in accordance with the Kolpa Huachocolpa Uno internal protocol, “PETS-GEO-012 SAMPLING IN HORIZONTAL AND INCLINED WORKINGS”. The following summary describes the channel sampling methodologies, established in 2016, as employed at Huachocolpa Uno (no channel sampling protocol is available for the period 2001 to 2015).

11.4.1 Summary of Kolpa Channel Sample Handling, Sample Selection Criteria, Sampling Methodology & Sample Security (2016-2023)

1. Channel sampling is performed by sample-technicians under the guidance and supervision of the shift geologist.
2. After ensuring that the working area has been made safe and is secure, the sampling assistant will first remove any loose rock fragments from the locality to be sampled, washing all loose material away from the CHN sample site.
3. Sample positions are selected by the geologist and typically located around 1 metre above the floor, along both sides of underground development walls if the width of the mineralized structure so requires, or on faces every two to three meters of advance in drifts along structures

where potentially economic mineralization of interest is intersected. The senior sampler then traces the limits of the site to be sampled with red spray-paint.

4. Given that the mineralized polymetallic structures at Kolpa are generally sub-vertical, the CHN sample, usually located at the working-face of a drive or drift along the structure (Figure 11-9), will be collected in sub-horizontal fashion across the face of the structure, with the sample width measured along an orientation perpendicular to the strike of the vein.

Figure 11-9 Marked-out sub-horizontal channel sample on a sub-vertically oriented polymetallic vein

5. As structures are mostly comparatively narrow, one sample is generally taken across the full width of the mineralized structure. However, as the decision concerning collection of the sample is dominated by the combination of width as well as the nature of the geological distribution of the mineralization, there is no fixed rule on how many samples are to be taken across each structure. All relevant data such as locality, dip, strike, geological nature of the structure and its mineralization, host lithology, length (or width) and weight of the sample, etc., is logged into a CHN sample logging form or booklet.

6. The senior sampler and his assistant then proceed to collect the channelled sample with the use of a tungsten-tipped electric ´hammer-action´ chisel. The CHN sample is collected directly into a strong plastic bag (Figure 11-10). In the case that fragments are collected which are considered to be too large and which may bias the sample, the senior sampler will place the fragment over a clean, impermeable sheet, and homogenize the size of the sample fragments before, careful to avoid any form of sample contamination or bias, will place the fragments into the sample bag.

Figure 11-10 Collection of a channel sample from the mineralized structure directly into a plastic sample bag

7. Each sample is coded and then, including a sample-ticket inserted into each CHN sample bag for easy identification purposes, it is double-wrapped (Figure 11-11). Once collection of the sample from the rock-face is completed, it is sealed with a security seal before, in compliance with the chain of custody protocol, it is stored together with other samples in a canvas backpack to be taken to the sample storage shed. Here it will be packed together with several other samples into larger sample batches, before being transported and delivered to the analytical laboratory.

Figure 11-11 Measuring limits of a sub-horizontal channel sample; coded sample tags and sealing of sample bag

8. The locality of all CHN samples are surveyed using a total station survey instrument.

9. All underground CHN sampling data are stored in the MRE Access db as pseudo drill holes together with all DDH sampling information, to be utilized in the 3D modelling of the Mineral Resource and applied in the preparation and estimation of the MRE.

The actions taken to ensure a secure transfer and delivery of all CHN sample batches to the internal Kolpa laboratory for analytical analysis, are exactly the same as the procedures described for all Kolpa DDH samples. These activities are executed in compliance with the Kolpa procedures for geology ´delivery´ and laboratory ´receipt´ of the samples, as well as the protocols which relate to the insertion of QAQC control samples and the established internal Kolpa chain of custody procedure for analytical samples, "PETS-GEO-020: CHAIN OF CUSTODY OF SYSTEMATIC SAMPLES (DDH & CHN), FROM THE MINE".

Upon acceptance after reception in the laboratory, the CHN sample batch is also registered in the LIMS and assigned a work order number known as the internal batch number.

11.5 Bulk density determinations

11.5.1 Introduction

The bulk density (BD) sample database is integral to determining mineral resource tonnages. To facilitate mineral resource estimation, the BD is required for each of the mineralized structures to be considered for inclusion in Huachocolpa Uno MREs.

The BD of a material is defined as its mass per unit volume (g/cm^3). The most straightforward way to determine BD of an irregularly shaped object, like a chunky irregular-shaped channel rock sample or a semi-regular piece of cylindrical drill core, is by application of the water displacement methodology which is based on Archimedes' principle. This method involves weighing the sample while it is immersed in water, providing a convenient and accurate method for determining the volume (equivalent to the difference between the sample mass in air and in water), of said sample. To then obtain the density one should divide the volume of the sample by the mass of the sample in air (which is easily determined by weighing the dry sample).

The Kolpa Geology Department is responsible for determining the BD of DDH drill core and CHN rock samples. These measurements are performed regularly and are representative of all samples sent to the Kolpa analytical laboratory. It is important that samples to be measured should be competent and where possible, not absorb water. Porous samples are waterproofed with substances such as paraffin wax or beeswax (which melt at approximately 60° C), before immersing in water for weighing.

11.5.2 Methodology for the determination of bulk density

The determination of bulk density is carried out in accordance with the Kolpa Huachocolpa Uno internal procedure "EST-SGK-GE-010 DETERMINATION OF BULK DENSITY BY THE IMMERSION METHOD – CORE AND CHANNEL SAMPLES" (Figure 11-12). The following summary describes the water displacement BD determination methodology, as established and employed at Huachocolpa Uno, since 2016 (no BD determination protocol is available for the period from 2001 to 2015)

Figure 11-12 Determination of bulk density (diamond drill core example) by the water immersion method

Density determinations on DDH & CHN samples are performed after logging of the sample but prior to splitting of core samples for chemical analyses. The procedure for the determination of bulk density is as follows:

a. For the preparation of the DDH core BD sample, the quality control geologist will mark the core sections where the density is to be determined and record the information for subsequent capture into the database. These markings indicate from where the DDH core BD sample should be cut out of the core (the BD sample is returned to the core-tray after BD determination and before core-splitting for sampling). Naturally, the DDH (& CHN) sample intervals selected for the analytical chemical analysis, also form the basis for selection of the BD determination sample.

b. DDH core samples greater than approximately 10 cm (Figure 11-13) and representative of the targeted intersection are selected. If the DDH core is quite fractured (broken) and a 10 cm piece is not available, a semi-regular piece of at least 5 cm in length as a minimum is selected. Similarly-sized samples from CHN sampling are selected for BD determination.

Figure 11-13 Carefully and clearly labelled 10 cm long HQ-diameter drill core bulk density samples

c. Always try to select samples representative of the mineralized zone and separately representative of the footwall and hanging-wall host-rocks, trying to ensure in all mineralized intersections that the sample is representative of the mineralization and any fracturing or porosity of the rock. On DDH core the ´From´ and ´To´ measurements of the interval selected for the BD tests should be measured and entered into the database. This approach also applies to similar BD measurements taken for CHN samples.

d. The Quality Control Geologist will make a brief geological description of the samples selected for the BD analyses, filling in a relevant Excel format, and the sampling technician will take photographs of the correctly labelled samples.

e. The sampling technician or assistant will proceed to determine the relevant sample weights as described below, making sure to store the data in the Excel form for later capture into the database.

f. Preceding the weighing of the sample, with the objective to remove any trapped moisture from the interior of the sample and ensure that a true dry bulk density is achieved, the sample is first dried at 130 °C for a period of 4 hours. After drying and prior to analysing for the BD, allow the samples to cool to room temperature for about 30 minutes.

g. To determine the dry weight of the sample, weigh it on the digital electronic scale with precision to the gram and record this dry weight in the database. The dry weight can be recorded as Wdry.

h. Next prepare for the weighing of the submerged sample while it is suspended, immersed in water. Melt paraffin-wax in a pot on an electric cooker or oven-plate until it is in a liquid state. Immerse the BD sample in the heated paraffin wax to coat the sample, ensuring it is completely coated. In case necessary, the process can be repeated until up to three layers of paraffin coat the sample.

i. Once the wax has dried, weigh the sample again and record the weight as Wwax.

j. Set up the scale to be bottom-loading and place the apparatus over a water-filled tub. The water should be around room temperature and the level in the tub should be deep enough to fully cover the sample to be suspended inside the water within a form of basket.

k. Attach the sample basket to the bottom of the scale.

l. Place the sample into the basket, allowing the scale to come to a complete rest before taking the measurement, and (discounting the weight of the basket), record the weight as the suspended weight (Wsub) of the BD sample. Remove the BD sample.

m. Calculate the volume (V1) of the waxed BD sample as the difference between the original dry weight (Wdry), and the suspended weight (Wsub) (V1 = Wdry – Wsub).

n. Calculate the volume (V2) of only the wax which is coating the BD sample, as the difference between the weight of the waxed BD sample (Wwax) and the original dry weight (Wdry), divided by the density of paraffin wax (0.9 g.cm-3). [V2 = (Wwax – Wdry)/0.9 g.cm-3].

o. Calculate the volume of the dry BD sample (Vdry), as the difference between the volumes (V1) of the waxed BD sample and (V2) of only the wax coating (Vdry = V1 – V2).

p. Finally calculate the bulk density by dividing the dry weight (Wdry), by the volume of the dry BD sample (Vdry), i.e.: BD = Wdry / Vdry).

q. Summary of the order of acquiring required readings to conduct the BD Calculation:

   Wdry = Weight of the air-dry sample.
   Wwax =Weight of the dry sample covered with paraffin wax.
   Wsub = Weight of the paraffin wax-coated dry sample immersed in water.
   V1 = Volume of the waxed BD sample (V1 = Wdry – Wsub).
   V2 = Volume of ONLY the wax coating the sample [V2 = (Wwax – Wdry) / Dwax].
   Dwax = Density of paraffin wax (0.9 g.cm-3).
   Vdry = Volume of the dry BD sample (Vdry = V1 – V2).
   BD = Wdry / Vdry.

r. Upon completion of the process, the sample technician or sampling assistant will proceed to dewax the DDH BD sample, placing the paraffin covered sample in the electric cooker or pot over an oven-plate for around 4 minutes. DDH BD samples are returned to the Exploration Geology or Infill Drilling staff and replaced in their original position in the logging tray. Accumulated batches of CHN BD samples should be periodically delivered to the primary crusher at the beneficiation plant.

Average bulk density values, the result of 2,323 BD determinations as of March 31st, 2023, have been assigned to each individual mineralized structure. Table 11-3 presents the tabulated dry bulk density values currently used for the Huachocolpa Uno mineralized structures.

Table 11-3 Tabulated bulk density values for mineralized vein-sets & immediate H/W´s and F/W´s for selected structures (as applied in the 2023 Historical MRE)

Mineralized Structure	Vein Bulk Density (BD)	N°. Of Samples	Hangingwall BD	N°. Of Samples	Footwall BD	N°. of Samples
RAMAL 328	3.15	2	2.55	2	2.60	2
TECHITA	3.10	6	2.61	3	2.51	3
SOFÍA	3.12	6	2.53	4	2.63	4
STEPHANI	3.10	32	2.61	8	2.62	5
BIENAVENTURADA ESTE TECHO 3	3.11	20	2.52	7	2.62	7
BIENAVENTURADA ESTE TECHO 4	3.08	37	2.49	8	2.60	7
RAMAL OESTE TECHO 1	3.05	52	2.67	8	2.57	9
RAMAL OESTE TECHO 3	2.94	2	2.58	2	2.48	2
RAMAL OESTE TECHO 2	3.11	13	2.62	7	2.63	6
TENSIONAL 526	3.09	4	2.60	2	2.61	2
BIENAVENTURADA	3.07	356	2.49	25	2.59	15
LOLA	3.15	7	2.26	1	2.13	1
SPLIT NORTE	3.09	6	2.15	1	2.46	1
ESTE TECHO	3.00	13	2.15	1	2.46	1
RAMAL TECHO 010	2.99	14	2.38	1	2.15	1
ELIZABETH	3.03	13	2.54	5	2.55	7
BIENAVENTURADA ESTE TECHO 2	2.96	2	2.15	1	2.46	1
JESSICA	3.11	125	2.67	14	2.49	12
RAMAL JESSICA	3.12	34	2.36	3	2.94	3
TENSIONAL 2 JESSICA	3.16	11	2.55	1	2.42	1
RAMAL 711	3.22	1	2.55	1	2.42	1
TATIANA 1	3.03	105	2.54	5	2.56	5
ROCIO	3.02	3	2.53	1	2.63	1
TENSIONAL NORTE	3.09	4	2.53	1	2.63	1
TENSIONAL ESTE TECHO	2.94	3	2.56	3	2.55	3
FABIOLA	2.73	1	2.38	2	2.39	2
FORTUNA	2.78	12	2.46	6	2.44	5
FORTUNA_TECH	2.70	3	2.42	3	2.34	2
GRECIA	2.67	1	2.36	1	2.35	1
LETICIA	2.72	5	2.41	3	2.29	2
LETICIA_PISO	2.69	1	2.33	1	2.33	1
LETICIA_PISO_1	2.71	2	2.37	1	2.37	1
LETICIA_SUR	2.58	2	2.35	1	2.34	1
MILUZKA	2.65	5	2.45	3	2.44	3

Mineralized Structure	Vein Bulk Density (BD)	N°. Of Samples	Hangingwall BD	N°. Of Samples	Footwall BD	N°. of Samples
MIRELLA	2.92	6	2.22	5	2.27	6
MIRIAM	2.65	3	2.27	3	2.21	2
RAMAL_DEL_RA	2.65	14	2.34	5	2.33	7
RAMAL_MILUZKA SW	2.66	3	2.31	2	2.33	2
RR1	2.75	5	2.33	3	2.33	3
RR2	2.51	8	2.31	3	2.32	3
RR3	2.61	3	2.37	3	2.36	3
RUBLO	3.19	2	2.55	2	2.53	2
TAPADA	2.89	33	2.27	30	2.33	29
TAPADA_NORTE	2.90	17	2.35	12	2.36	13
TAPADA_NORTE_1	2.89	26	2.32	17	2.34	20
TAPADA_NORTE_2	2.72	9	2.30	5	2.32	4
TAPADA_PISO	2.63	6	2.37	5	2.28	5
TAPADA_PISO_2	2.63	20	2.41	14	2.44	14
TAPADA_PISO_4	2.58	10	2.41	7	2.43	7
VETA_1	2.69	4	2.32	3	2.33	3
VETA_2	2.67	3	2.36	3	2.39	3
VETA_3	2.67	4	2.38	4	2.37	4
VETA_4	2.59	7	2.37	5	2.35	6
VETA_HERALDO	2.90	1	2.39	1	2.39	1
FORTUNA 2T	2.72	1	2.35	1	2.35	1
MT	2.71	1	2.39	1	2.39	1
TAPADA NORTE 2T	2.68	9	2.57	5	2.56	5
TAPADA PISO 5	2.68	2	2.42	2	2.56	2
TAPADA PISO 6	2.59	1	2.41	1	2.40	1
TAPADA PISO 7	2.70	4	2.62	4	2.60	4
TAPADA PISO 8	2.75	17	2.37	10	2.40	10
TAPADA PISO 9	2.85	8	2.35	8	2.40	8
LOWGRASDE	2.84	908	2.45	89	2.48	98
MILUSKA	2.78	4	2.39	4	2.38	4
RAMAL PISO KENIA	2.63	2	2.36	2	2.39	2
KATHERINE	2.65	2	2.38	1	2.37	1
RAMAL PISO MIRELLA	2.90	4	2.37	3	2.35	3
MIRELLA	2.85	6	2.39	3	2.39	3
RAMAL PISO MILUSKA	2.98	1	2.35	1	2.35	1
RAMAL TECHO MILUSKA	2.68	3	2.39	1	2.39	1
RUBLO	2.72	1	2.57	1	2.56	1
RAMAL TECHO KENIA	2.67	1	2.42	1	2.56	1
KENIA NE	2.97	1	2.42	1	2.56	1
CAMILA	2.75	2	2.41	2	2.29	2
CAMILA1	2.85	2	2.48	1	2.51	1
DANA	2.84	1	2.45	1	2.41	1
TERESITA	3.07	1	2.57	1	2.51	1

Mineralized Structure	Vein Bulk Density (BD)	N°. Of Samples	Hangingwall BD	N°. Of Samples	Footwall BD	N°. of Samples
All Structures	**2.93**	**2,069**	**2.43**	**412**	**2.45**	**409**

11.6 Analytical laboratories

11.6.1 Introduction to sample reception, preparation & analysis

Upon reception in the laboratory, sample batches are registered in the internal ´LIMS´ system and assigned a work order number.

Sample preparation is one of the most critical steps in the entire laboratory operation. The objective of the sample preparation process is to produce a very small (±300 g) homogeneous sub-sample for analytical analysis that is fully representative of the original (±5 kg) DDH or CHN sample material submitted to the laboratory. Sample preparation involves several steps such as weighing, drying, reweighing, crushing, quartering, and pulverizing of the sample.

Most DDH and CHN samples collected from the Kolpa Huachocolpa Uno mine during the period 2001 to 2023, have been submitted for sample preparation and analytical analysis at Kolpa's mine-site laboratory.

11.6.2 Sample preparation procedure

Once a batch of samples is accepted in the Kolpa mine-site laboratory, prior to removing the individual samples from their plastic bags, they are weighed. After weighing and prior to initiating the sample preparation for analytical analysis stage, the samples are placed into drying trays in preparation for drying. To avoid confusion between sample numbers, the ticket which accompanies the sample in the plastic bag is placed into the drying tray together with the sample. To facilitate this practice in a more user-friendly manner, given that the sample tag is attached to the bag, it is recommended that an additional loose duplicate sample tag is inserted inside the bag to accompany the sample. This practice provides an added control which benefits the sampling staff to ensure that there is minimum opportunity for confusion between sample numbers whilst transferring the contents of the sample bag to the sample drying trays.

After drying, the samples are reweighed before moving through the crushing, quartering and pulverizing stages of the sample preparation process as detailed below:

- Weighing

In preparation for weighing of the sample, the sample trays are transported to the weighing room and weighed on the scale. The weight is recorded in the LIMS. The sampler places Kraft paper in the trays, then the samples are poured into the trays and the label with its respective client code is placed in the tray together with the mineralized sample to prevent any confusion between samples and their numbers. The wet sample weight is registered by the LIMS.

- Drying

The sampler places the trays with the samples in the drying oven at a temperature of 105°C +/-5°C, the drying time of the samples will depend on their humidity.

After drying, the sampler verifies that the samples are dry by introducing a metal spatula and observing that no particles adhere to it.

- Reweighing

The tray is removed from the oven, then placed on the scale and weighed while hot and the dry weight is transferred to the LIMS.

- Crushing

Crushing is carried out to obtain a 2 mm granulometry, with acceptance criteria of ≥ 90% at 10 mesh ASTM standard. The sample is loaded into the hopper of the crusher, making sure that the discharge of the crusher (the opening between jaws), is set at less than 2 mm, and the hopper lid is closed to avoid the emission of projectiles formed by flying particles.

Between samples the sampler must clean the crusher by processing a sample of ½ to 1-inch sized sterile quartz material and then follow-on by cleaning the crushing equipment with compressed air.

- Quartering and/or division process

Once the crushing stage is finished, the sample is sub-divided by using a Jones Riffle splitter or divider, where the sampler spreads the sample across the equipment, adding it in an even, homogeneous fashion, and making sure that it is uniformly distributed across the underlying trays. Each tray should be centered with respect to the Riffle splitter. This process is repeated until an approximate final weight of 250 to 350 g is obtained through the splitting process. This final representative sample is transferred from the tray into pre-labelled envelopes (previously enabled in the LIMS through the envelope codes). Once each representative sample is inside its respective envelope, these are placed in an ascending order for subsequent pulverization.

- Pulverizing

Once quartering has been completed, the continued preparation of the sample is carried out according to the Kolpa in-house procedure "LABO_PRO007: Preparation of Geology Samples", see Figure 11-14.

The sampler selects the grinding bowls marked for this process, cleans the grinding bowl, lid, and rings and puck by first grinding 1/16-inch quartz and then blasting the equipment pieces with compressed air. The sample is poured into the grinding bowl and the coded ticket is placed inside the sample envelope with the same code (verify that the sub-sample ticket code is the same as the code on the envelope). The sample is pulverized for a period of 120 seconds.

The pulverized sample in its independent grinding bowl is transferred to the worktable and is poured onto glassine paper before being transferred to its ´pulp´ envelope. The rings and the pot are cleaned with the compressed air gun, directing any dust particles to the extractor vents.

In ascending order, with the pulverising of each sample from the batch, the sampler places the pulverized sample envelopes into a specially prepared cardboard box which will be accompanied by each sample request form or memorandum. The sampler delivers the box of pulverized ´pulp´ samples to the analyst on duty in the balance room.

Figure 11-14 Geology sample registration, preparation, pulverizing and equipment review stages

11.6.3 Storage of ´pulp duplicate´ and ´coarse reject´ DDH and CHN sample material

Complying with the internal Kolpa protocol, “PETS-GEO-024: TRANSFER AND STORAGE OF PULP REJECTS”, for each sample analysed, representative ´pulp duplicate´ reject samples are separately stored in special Kraft paper envelopes for pulverized pulp material (Figure 11-15). Pulp duplicate samples for every sample from each sample batch are stored per batch in a separate, clearly labelled, cardboard box.

Figure 11-15 Pulp duplicate storage in Kraft paper sample envelopes (batches stored in separate boxes)

Remnant coarse reject sample materials remaining from the preparation process, including the crushing stage of DDH and CHN samples, are returned to the original, labelled sample bags. In compliance with the Kolpa in-house protocol “PETS-GEO-023: TRANSFER AND STORAGE OF COARSE REJECTS”, the resealed bags are stored in batches in the relevant warehouse, inside separate, heavy-duty, clearly labelled, plastic, hessian or canvas sacks (Figure 11-16).

Figure 11-16 Storage of diamond drill hole and channel sample coarse reject material from sample preparation

CORES CHANNELS

11.6.4 Sample analysis

The determination of the metal concentration levels for the elements of potential economic interest in all samples, is carried out in accordance with the Kolpa mine-site analytical laboratory procedure “LABO_PRO009: Determination of Ag, Cu, Pb, Zn and Fe by EAA”.

Upon the completion of sample preparation for each sample batch delivered for the analytical analysis for Ag, Cu, Fe, Pb and Zn, the Kolpa Laboratory performs the analyses utilizing 0.125 g aliquot samples digested with aqua regia and finished with the Atomic Absorption Spectroscopy (AAS) Agilent-280 method (Figure 11-17). When the Pb, Zn, Cu and Fe elements detection concentration exceeds the 9.99% upper limit of this method, the sample is then subjected to the Volumetric EDTA method for determination of the higher-grade metal concentrations of the sample. Ag (oz/Tm) that are greater than 9.99% are determined by Fire Assay with a gravimetric finish.

Figure 11-17 Kolpa laboratory modern Atomic Absorption analysis equipment

11.6.5 Laboratory independence and certification

Prior to 2021, no quality assurance and quality control programs had been implemented at Kolpa. To remedy this deficiency and as a means of certifying the quality and reliability of the Kolpa laboratory analytical process and results, some 1,584 historical DDH pulp samples were randomly selected for verification analyses in an independent, commercial analytical laboratory, Certimin Peru, during 2021. These samples constituted 23% of all samples analyzed at the Kolpa laboratory at that time. The 1,584 samples were sent to the Certimin certified laboratory in Lima, Peru. The results of the evaluation are described in Section 11.7.

The Certimin Lima laboratory is independent from Kolpa and has the following accreditation: ISO 9001 Certification for preparation and testing of geochemical, metallurgical, and environmental samples, environmental monitoring, metallurgical testing at laboratory and pilot scale, and laboratory administration", as well as the "NTP-ISO/IEC 17025 Accreditation (www.inacal.gob.pe)". Both of the above were obtained over ten years ago, additionally, Certimin has ´Supplier Evaluation Certification, ISO 14001, ISO 45001 ASTM´ membership.

11.7 Quality Assurance/Quality Control (QA/QC)

11.7.1 QA/QC Introduction

Quality Assurance (QA) concerns the establishment of measurement systems and procedures to provide adequate confidence that quality is adhered to. Quality Control (QC) is one aspect of QA and refers to the use of control checks of measurements to ensure that systems are working as planned. The QC terms commonly used to discuss geochemical data obtained from an analytical laboratory are:

- Bias: the amount by which the analysis varies from the correct result.
- Precision: the ability to consistently reproduce a measurement in similar conditions.
- Accuracy: the closeness of those measurements to the “true” or accepted value.
- Contamination: the transference of material from one sample to another.

Since 2020, Kolpa Mine has invested significantly into the introduction and development of a QA/QC program at its Huachocolpa Uno mine-site analytical laboratory facility. With the objective of achieving NI

43-101 compliancy, Kolpa actively initiated this approach to QA/QC on a full-time basis in mid-2021. The QA/QC programs, which have been introduced, are designed to monitor the performance of the sample preparation and analytical process stages and continue to be part of Kolpa´s QA/QC routine.

With the introduction of a full-time QA/QC approach including the insertion of QC control samples since 2021, Kolpa reports that approximately 29% of DDH and CHN samples collected between 2001 to March 31st, 2023 DDH and CHN have been assayed with the current QA/QC protocols (Table 11-4).

Table 11-4 Numbers & percentages of DDH and CHN analyses including insertion of QC control samples effective March 31st, 2023

Sample Type	Number of samples with QC			Total N°. of Samples with QC	Total N°. of 2001-2023 Samples	% of Samples with QC
	Year					
	2021	2022	Q1-2023			
CHN	5,160	7,155	2,227	14,542	68,954	21.1
DDH	2,837	6,910	872	10,619	16,989	62.5
			TOTALS:	25,161	85,943	29.3

The Kolpa geology department are responsible for administering the Kolpa QA/QC program, maximizing sample analysis precision and accuracy whilst minimizing sample contamination and bias in assay results. To achieve these objectives, geologsits routinely insert QC samples into the sample train for preparation and analysis in the Kolpa mine-site analytical laboratory. Control samples include certified reference materials (CRMs), coarse and pulp blanks, coarse reject (duplicate), pulp duplicate and field duplicate (twin) samples. The Kolpa objective is to comply with industry best practice. Since inception, Kolpa has been perfecting its in-house approach to QA/QC. Monthly analysis of QA/QC data is performed at the operation to assess the reliability of sample preparation and assay data and the levels of confidence in the resulting DDH and CHN assay data.

The mine-site Huachocolpa Uno analytical laboratory additionally conducts its own routine internal QA/QC programs. For each batch of 20 samples at least one duplicate sample and one certified standard is submitted by the laboratory. The laboratory information management system, (LIMS), which connects with the 3D modelling Datamine packages Fusion software, ensures that the results are saved directly into the database without possibilities for data transcription errors.

11.7.2 Objectives of Using Quality Control Samples

Certified Reference Materials (CRM´s) are specially prepared control samples which contain standard, predetermined concentrations of select material(s) (silver, lead, zinc, copper, etc.) and are inserted into the sample stream to check the analytical accuracy of the laboratory. For each economic mineral being evaluated, it is recommended the use of at least three CRM´s with values:

- At the approximate economic cut-off grade (COG) of the mineral deposit.
- At the approximate expected average grade of the mineral deposit.
- At a selected higher but practical realistically achievable grade in the mineral deposit being evaluated.

The analytical results of CRM´s should be monitored on a batch-by-batch basis and remedial action, if considered necessary, should be taken immediately.

Coarse Duplicate control samples are inserted to determine the precision of the laboratory for the sample preparation step. Coarse ´reject´ duplicate samples monitor sub-sampling variance and analytical variance.

Pulp Duplicate control samples are used to determine the precision of the laboratory for the sample analytical step. Pulp duplicates monitor analytical variance.

Coarse Blank control samples are for testing for contamination during the sample preparation and analytical processes. Depending on the style of mineralization, coarse blanks for diamond drill core are usually inserted at or near the end of runs of potentially economic mineralization, as identified by the logging geologist.

Pulp Blank control samples are included to test for contamination, or issues with reagent quality or quantity imprecision, or imprecision in analysis conditions, during the analytical process.

Field Duplicate control samples monitor actual sampling variance, sample preparation variance, and analytical variance. The majority of field duplicate samples should be selected from zones of mineralization of potential economic interest.

Umpire ´Check-Laboratory´ Duplicate samples are pulp samples sent to a separate independent and certified analytical laboratory to assess the accuracy of the primary (mine-site or independent) laboratory. Umpire duplicates measure analytical variance and pulp sub- sampling variance.

11.7.3 Resolution of Non-conformity in Assay Results

Kolpa´s Huachococha Uno Mine has established a Cía. Minera KOLPA Quality Control protocol involving a series of actions designed to rapidly resolve non-conforming results (where these are identified), during processing of the QC results.

The following is a summary of the QC procedures which have been adopted:

First Step: The general approach, when non-conforming results are found in any type of QC samples, involves an initial action which is to review the results from neighboring samples in the sample stream, trying to identify any nearby obvious errors in the results approaching to the QC sample in question. When chemical analyses include a large number of elements, this kind of comparison can facilitate a relatively safe and early identification of accidental or intentional changes in sample sequencing or equivalence assignment between duplicates and original samples, as well as errors in labeling and/or identification of the CRM.

If a situation such as those described above is detected, it is valid to correct the error, leaving a record of the modifications made in the database and in the digital record.

More specific cases can include:

Case 1: Non-conformity in Twin Samples (Field Duplicates) and Internal Duplicate samples

> The results of internal duplicates inserted as part of the QC procedure are processed by the hyperbolic method, as a result of which non-conformities can be identified, that is, pairs of samples whose relative error exceeds the acceptable limit, according to said method. It is important to point out that the identification of non-conformities must be done once the analysis of possible obvious errors has been completed, as explained in the above ´first step´ introductory paragraph.
>
> If the error rate does not exceed the value of 10%, it is accepted in principle that the corresponding precision is within acceptable limits. On the contrary, if the error rate exceeds this value, it is necessary to carry out a deeper evaluation, which can conclude whether the precision is acceptable or not.
>
> Once obvious errors are excluded, the problems detected in the evaluation of internal duplicates are due to precision errors, that is, random errors, it is not advisable to repeat the analysis of these samples. The procedure to follow must be a laboratory investigation to identify the probable cause of problems, in order to proceed with the elimination or improvement of the condition that causes this situation.

In the case of duplicates, the most common causes of accuracy problems are usually the following:

For Pulp Duplicates:

- Pulverized sample too coarse.
- Imprecision in the weighing of the aliquots during the analysis.
- Imprecision in the supply of reagents (during digestion, dissolution, fire assay, titration, etc.).
- Imprecision in the analysis conditions (temperature, digestion or melting time, etc.).

For Coarse Duplicates:

- Crushing is too coarse (or absent).
- Final mass of divided sample too small.
- Imprecision in the divided sample (deficient homogenization, badly built riffle divider, incorrect operation of the riffle divider, etc.).

For Twin Samples (Field Duplicates):

- In core sampling, lower mass obtained than that required due to the use of a drilling diameter which is too small, incorrect sampling (incorrect splitting of the core, incomplete sampling), or taking a duplicate sample that does not correspond to the original sample.
- In channel sampling, lower mass than required due to the channel dimensions being too small, incorrect sampling (incomplete or irregular sampling of the channel), duplicate collection from a locality that does not correspond to the original sample.

Case 2: Non-conformity in Certified Reference Materials

Evaluation of the results of CRM´s inserted as part of the QC procedure, is achieved through the preparation of a control chart. As a result of control chart plots, non-conformities can be identified, that is, samples with ´out of control´ results whose values do not meet the criteria established from the average value and the standard deviation of the values as obtained in the certifying laboratory for the CRM analysed. As explained in the general introductory section, it is important to emphasize that the identification of non-conformities must be done only once a review of the results from neighbouring samples in the sample train has been completed, to detect whether possible obvious errors have taken place.

The occurrence of a non-conforming CRM result can be due to two possible causes: specific analytical precision errors (random errors) or analytical accuracy errors (systematic errors). The indicated procedure to determine if the cause of the non-conforming result is one or the other, is to ask the laboratory to repeat the out-of-control sample, together with some neighbouring samples (three or four on each side).

If, as a result of this repetition, the out-of-control sample now returns an acceptable value (within the control limits), and if a certain evident pattern (such as a systematic increase or decrease in grades), is not observed in the behaviour of the neighbouring samples, it can be concluded that the nonconformity was due to a random error. In this case, it is valid to correct the error in the database, considering the new CRM value as the correct value, but leaving a record both in the database and in a digital record of the modification made.

On the contrary, if as a result of this repetition the out-of-control sample reflects an acceptable value (within the control limits), but at the same time a certain evident pattern is observed in the behaviour of the neighbouring samples, it can be concluded that the nonconformity was due to a systematic error. In this case, it is necessary to ask the laboratory to repeat the entire portion of the lot that is between the 3 preceding and 3 following CRM´s that showed acceptable values. Once the rigorous QC evaluation has been carried out, if the results are acceptable (that is, if there are no non-conformities), they will be incorporated into the database, replacing the previous values of all the samples, but leaving a record both in the database of data as in a digital record of the modification made.

Case 3: Non-conformity in Blanks

When evaluating the results of blanks inserted as part of the QC procedure, then Blank vs. Previous Sample graphs must be constructed. Non-conformities can be identified from the plotted results, that is, blanks whose values exceed the acceptable limits, or from which it can be inferred that there is a pattern of contamination in some process. It is important to again point out as previously explained in the general introductory section, that the identification of non- conformities must only be done once an analysis of possible obvious errors has been completed.

The occurrence of this type of non-conforming result in blanks is generally due to insufficient cleaning of the sample preparation equipment (crushing, dividing, pulverizing), weighing or analysis (glassware, utensils, etc.), or to deficiencies in sample handling during all or part of the process. These problems cannot be solved without an active and conscious participation of the laboratory.

Once this type of problem is detected, the laboratory should not be asked to repeat the analysis. If we detect contamination during preparation, the samples were already contaminated, so retesting would no longer serve a purpose.

However, objective analysis of the impact of contamination on sample preparation and analysis indicates that it is virtually impossible for such contamination to become significant, except in situations where there are extraordinarily high grades of gold, which is not the case for the Huachocolpa Uno polymetallic deposits. For this reason, if at any time evidence of possible contamination is appreciated, the solution is to discuss the issue with the laboratory, show said evidence, and request the elimination of the cause that produces this contamination.

Case 4: Non-conformity in External Duplicates

When evaluating the results of external control duplicates submitted to a secondary laboratory as part of the QC procedure, regression analysis by the Reduced Major Axis method (RMA) is used.

The RMA regression makes it possible to demonstrate the existence of bias in the primary laboratory compared to the secondary laboratory, that is, a systematic error between the results of both laboratories. For this, it is necessary to discard the disparate values (outliers), so that the aforementioned bias only reflects the true trend between the analyses of both laboratories. Samples with dissimilar values should not be reanalysed, since these values are affected by four types of errors: precision errors inherent to the primary laboratory and secondary laboratory, as well as systematic errors independently inherent to both laboratories.

The interaction between the mentioned errors can be so complex that it is not advisable to try to separate them, but only to eliminate from the analysis those values that deviate from the real trend between both laboratories. To do this, the value of the coefficient of determination R^2, a direct indicator of the goodness of fit, must be calculated and the pairs of samples that cause a greater mismatch in the goodness of regression must be progressively eliminated from the evaluation, so that with its elimination the value of R^2 increases. Although a good correlation between the two laboratories is always desirable, it is not always the case, and experience shows that it is sometimes necessary to eliminate up to 10-15% of the pairs in order to identify a clear trend between the two laboratories, which is achieved when R^2 preferably exceeds the value of 0.990.

The evaluation of the bias between the two laboratories follows a similar criterion to that used when evaluating the results of the CRMs´. However, the occurrence of significant bias between the two laboratories is not necessarily evidence of a problem in the primary laboratory. External control should be considered as a complementary element in the evaluation of accuracy through CRMs´. Before assuming that the bias between the two laboratories indicates that there is a significant systematic error in the primary laboratory, it is necessary to assess how the CRMs´ perform in each of the two laboratories individually.

Only after comparing the three elements (individual bias and inter-laboratory bias) is it possible to reach a conclusion about the possible systematic error in the primary laboratory, since there must be some consistency between them. If the review of these three elements shows that the problem is in the secondary laboratory, then it is valid to consider that the results of the primary laboratory, that is, of the original samples, are sufficiently accurate.

11.7.4 Responsibilities

The Kolpa mine-site laboratory assumes responsibility for the preparation and assaying of all Huachocolpa Uno DDH & CHN samples. The resulting assay results, after compilation and sign-off by the QC Geologist and Administrator, are added into database.

The geology department oversees the insertion of the QAQC control samples.

Responsibility for the processing and interpreting of the QC data, as well as making the appropriate recommendations designed to resolve non-conforming results, rests with the QC Geologist.

Based on any recommendations of the geologist in charge of the QC, the responsibility for realizing the corresponding adjustments to the database is that of the Database Administrator.

11.7.5 Internal Quality Control of the KOLPA Mine-site Laboratory

The Kolpa Huachocolpa Uno mine implemented a comprehensive QA/QC program effective from mid-2021. The program started with the insertion of QC samples into DDH drilling and sampling programs in mid-2021. After a few months, the new procedures expanded to include CHN sampling programs in 2022. Kolpa´s QA/QC programs include the insertion of CRM´s, duplicates, and blanks to evaluate sample preparation and analytical precision, accuracy and the potential for contamination during the sample preparation and analytical analyses processes.

Table 11-5 tabulates the QA/QC program by type QC sample numbers inserted vs rates of submission of QC samples of all types, per period. Table 11-6 tabulates the Kolpa QA/QC program by type QC sample totals vs element. Kolpa´s QA/QC program has been in effect from 2021 to present. QAQC information to March 31st, 2023 is summarized in this report. The QC program was suspended from March 2022, but restarted in November 2022 and continues to be active. Since inception and whilst active, the QC insertion rates for DDH and CHN sample sequences were 16.68% and 17.55% respectively (Table 11-5).

Table 11-4, Table 11-5 & Table 11-6 include data collected during the period 2021 to March 2023 for a total of 10,619 DDH and 14,542 CHN samples submitted for laboratory analysis (total number of samples analysed = 25,161). During this period, a total of 698 QC samples were inserted with the DDH sample sequences, and 984 QC samples with the CHN sample sequences. These numbers represent a QC sample submission rate of between 6.5 to 6.8%. A summary of the QA/QC sample submission rates and numbers submitted, per period, is presented in the Table 11-5 and Table 11-6.

Table 11-5 Kolpa QC Type Sample Insertion Rates by Period & Element

Company & Type Sample	Year(s)	Element	QC Sample Type							Total % QC Insertion Rate
			% of CRM"s	% of Coarse Blanks	% of Pulp Blanks	% of Coarse Duplicates	% of Pulp Duplicates	% of Field Duplicates	% of Umpire Samples	
C.M. Kolpa S.A. (DDH / CHN)	2001 - 2015	Ag	NO DATA AVAILABLE							
		Cu								
		Pb								
		Zn								
C.M. Kolpa S.A. (DDH / CHN)	2016 - 2020	Ag	NO DATA AVAILABLE							
		Cu								
		Pb								
		Zn								
C.M. Kolpa S.A. (DDH - Exploraciones)	2021 - 2023	Ag	5.71 %	2.35%	2.35 %	2.07%	2.22%	1.91%	0.82%	16.60%
		Cu	5.71 %	2.35%	2.35 %	2.07%	2.22%	1.91%	0.82%	16.60%
		Pb	5.71 %	2.35%	2.35 %	2.07%	2.22%	1.91%	0.82%	16.60%
		Zn	5.71 %	2.35%	2.35 %	2.07%	2.22%	1.91%	0.82%	16.60%
C.M. Kolpa S.A. (CHN)	2021 - 2023	Ag	5.97 %	2.05%	2.05 %	1.98%	2.01%	3.49%	8.44%	17.55%
		Cu	5.97 %	2.05%	2.05 %	1.98%	2.01%	3.49%	8.44%	17.55%
		Pb	5.97 %	2.05%	2.05 %	1.98%	2.01%	3.49%	8.44%	17.55%
		Zn	5.97 %	2.05%	2.05 %	1.98%	2.01%	3.49%	8.44%	17.55%
C.M. Kolpa S.A.(DDH - Infill Drilling)	2022 - 2023	Ag	6.36 %	2.12%	2.12 %	2.16%	2.16%	1.83%	NO DATA AVAILABLE	16.76%
		Cu	6.36 %	2.12%	2.12 %	2.16%	2.16%	1.83%		16.76%
		Pb	6.36 %	2.12%	2.12 %	2.16%	2.16%	1.83%		16.76%
		Zn	6.36 %	2.12%	2.12 %	2.16%	2.16%	1.83%		16.76%

Table 11-6 Kolpa QC Type Sample Total Numbers by Period & Element

QC Sample Type								
Company & Type Sample	Year(s)	Element	N° of CRM¨s	N° of Coarse Blanks	N° of Pulp Blanks	N° of Coarse Duplicates	N° of Pulp Duplicates	N° of Field Duplicates
C.M. Kolpa S.A. (DDH / CHN)	2001 - 2015	Ag	NO DATA AVAILABLE					
		Cu						
		Pb						
		Zn						
C.M. Kolpa S.A. (DDH / CHN)	2016 - 2020	Ag	NO DATA AVAILABLE					
		Cu						
		Pb						
		Zn						
C.M. Kolpa S.A.(DDH - Exploraciones)	2021 - 2023	Ag	389	160	160	141	151	130
		Cu	389	160	160	141	151	130
		Pb	389	160	160	141	151	130
		Zn	389	160	160	141	151	130
C.M. Kolpa S.A. (CHN)	2021 - 2023	Ag	984	338	338	326	331	575
		Cu	984	338	338	326	331	575
		Pb	984	338	338	326	331	575
		Zn	984	338	338	326	331	575
C.M. Kolpa S.A.(DDH - Infill Drilling)	2022 - 2023	Ag	309	103	103	105	105	89
		Cu	309	103	103	105	105	89
		Pb	309	103	103	105	105	89
		Zn	309	103	103	105	105	89

The size of the Kolpa laboratories sample analysis batch is 36 samples. Within each batch, 6 control samples are inserted. These include: pulp blank, coarse blank, pulp duplicate, coarse duplicate, twin sample & any 1 of 3 different CRM´s. The earlier QC CRM standard samples were acquired from Smee & Associates Consulting Ltd. and from Geostats Pty Ltd. As of March 31st, 2023 CRM standards have been prepared by and sourced from Target Rocks Peru SAC. The order of insertion of QC samples is random.

Tabulated information reporting on the performance of the CRM analyses results from the Kolpa laboratories, is provided for Underground CHN, Exploration DDH and Infill DDH samples in Table 11-7, Table 11-8 & Table 11-9 respectively.

Table 11-7 Tabulated Results for Kolpa Laboratory CRM Performance (UG CHN Samples)

Name of KOLPA Certified Reference Material (period used)	Silver N° Inserted	Silver N° Fails	Silver Fail Rate %	Copper N° Inserted	Copper N° Fails	Copper Fail Rate %	Lead N° Inserted	Lead N° Fails	Lead Fail Rate %	Zinc N° Inserted	Zinc N° Fails	Zinc Fail Rate %
PLSUL-06 (2021 -2022)	137	1	1.23%	137	2	3.27%	137	2	1.18%	137	0	0.83%
PLSUL-09 (2021 -2022)	145	1	3.09%	145	1	3.29%	145	1	1.87%	145	1	1.28%
GBM310-16 (2021-2022)	136	3	2.12%	136	0	0.19%	136	1	2.57%	136	0	1.61%
PLSUL32 (2022 - 2023)	150	0	0.24%	150	0	2.41%	150	0	2.57%	150	0	1.71%
PLSUL31 (2022 - 2023)	146	0	0.26%	146	0	5.34%	146	0	0.31%	146	0	0.23%
PLSUL55 (2022 - 2023)	149	1	1.56%	149	1	4.31%	149	0	1.81%	149	0	0.07%
KLP-01 (2023)	39	0	4.11%	39	0	8.25%	39	0	1.65%	39	0	3.82%
KLP-02 (2023)	42	0	0.48%	42	0	8.52%	42	0	0.84%	42	0	0.29%
KLP-03 (2023)	40	0	2.08%	40	0	- 0.74%	40	0	1.19%	40	0	5.18%

Table 11-8 Tabulated Results for Kolpa Laboratory CRM Performance (EXPLOR DDH Samples)

Name of KOLPA Certified Reference Material (period used)	Silver N° Inserted	Silver N° Fails	Silver Fail Rate %	Copper N° Inserted	Copper N° Fails	Copper Fail Rate %	Lead N° Inserted	Lead N° Fails	Lead Fail Rate %	Zinc N° Inserted	Zinc N° Fails	Zinc Fail Rate %
PLSUL-06 (2021 -2022)	63	0	0.62%	63	0	0.95%	63	0	0.24%	63	0	0.70%
PLSUL-09 (2021 -2022)	63	0	1.22%	63	0	2.03%	63	0	1.24%	63	0	0.55%
GBM310-16 (2021-2022)	62	0	2.31%	62	0	1.28%	62	0	1.33%	62	0	1.91%
PLSUL32 (2022 - 2023)	53	0	0.21%	53	0	2.21%	53	0	2.24%	53	0	1.74%
PLSUL31 (2022 - 2023)	52	0	0.30%	52	0	5.26%	52	0	0.69%	52	0	0.36%
PLSUL55 (2022 - 2023)	51	0	0.79%	51	0	4.14%	51	0	1.60%	51	0	0.57%
KLP-01 (2023)	15	0	4.67%	15	0	8.25%	15	0	0.96%	15	0	4.23%
KLP-02 (2023)	16	0	0.04%	16	0	7.89%	16	0	0.70%	16	0	1.00%
KLP-03 (2023)	14	0	2.00%	14	0	0.86%	14	0	0.82%	14	0	6.93%

Table 11-9 Tabulated Results for Kolpa Laboratory CRM Performance (INFILL DDH Samples)

Name of KOLPA Certified Reference Material (period used)	Silver N° Inserted	Silver N° Fails	Silver Fail Rate %	Copper N° Inserted	Copper N° Fails	Copper Fail Rate %	Lead N° Inserted	Lead N° Fails	Lead Fail Rate %	Zinc N° Inserted	Zinc N° Fails	Zinc Fail Rate %
PLSUL-06 (2021 -2022)	24	0	0.47%	24	0	0.96%	24	0	1.20%	24	0	1.48%
PLSUL-09 (2021 -2022)	26	0	1.07%	26	0	3.77%	26	0	0.54%	26	0	0.65%
GBM310-16 (2021-2022)	23	0	0.76%	23	0	0.18%	23	0	1.53%	23	0	0.27%
PLSUL32 (2022 - 2023)	62	0	0.29%	62	0	2.19%	62	0	3.13%	62	0	1.44%

Name of KOLPA Certified Reference Material (period used)	Silver N° Inserted	Silver N° Fails	Silver Fail Rate %	Copper N° Inserted	Copper N° Fails	Copper Fail Rate %	Lead N° Inserted	Lead N° Fails	Lead Fail Rate %	Zinc N° Inserted	Zinc N° Fails	Zinc Fail Rate %
PLSUL31 (2022 - 2023)	59	0	0.47%	59	0	5.26%	59	0	0.32%	59	0	0.16%
PLSUL55 (2022 - 2023)	62	1	0.96%	62	1	2.48%	62	1	0.08%	62	1	1.45%
KLP-01 (2023)	16	0	4.13%	16	0	8.25%	16	0	1.07%	16	0	3.48%
KLP-02 (2023)	19	0	0.61%	19	0	7.48%	19	0	0.93%	19	0	0.40%
KLP-03 (2023)	18	0	2.12%	18	0	0.88%	18	0	1.18%	18	0	6.34%

Table 11-10 provides an indication of contamination percentages and numbers of fails vs pass rates for the other remaining QC samples inserted into each batch [coarse blank, pulp blank, coarse duplicate, pulp duplicate, twin sample (field duplicate)].

Table 11-10 Tabulated Results for Kolpa Laboratory Control Sample Performances (UG CHN / EXPLOR DDH / INFILL DDH) (June 2021 - March 2023)

Name of KOLPA Control Sample	Type Sample	Silver N° Inserted	Silver N° Fails	Silver Contamination Rate %	Copper N° Inserted	Copper N° Fails	Copper Contamination Rate %	Lead N° Inserted	Lead N° Fails	Lead Contamination Rate %	Zinc N° Inserted	Zinc N° Fails	Zinc Contamination Rate %
Coarse Blank	UG CHN	338	0	0.00%	338	0	0.00%	338	0	0.00%	338	0	0.00%
	EXPLOR DDH	160	0	0.00%	160	0	0.00%	160	0	0.00%	160	0	0.00%
	INFILL DDH	103	0	0.00%	103	0	0.00%	103	0	0.00%	103	0	0.00%
Pulp Blank	UG CHN	338	0	0.00%	338	0	0.00%	338	0	0.00%	338	0	0.00%
	EXPLOR DDH	160	0	0.00%	160	0	0.00%	160	0	0.00%	160	0	0.00%
	INFILL DDH	103	0	0.00%	103	0	0.00%	103	0	0.00%	103	0	0.00%
Coarse Duplicate	UG CHN	326	0	0.00%	326	1	0.31%	326	1	0.31%	326	2	0.61%
	EXPLOR DDH	141	0	0.00%	141	0	0.00%	141	0	0.00%	141	0	0.00%
	INFILL DDH	105	0	0.00%	105	0	0.00%	105	0	0.00%	105	0	0.00%
Pulp Duplicate	UG CHN	331	0	0.00%	331	0	0.00%	331	0	0.00%	331	2	0.60%
	EXPLOR DDH	151	0	0.00%	151	0	0.00%	151	0	0.00%	151	0	0.00%
	INFILL DDH	105	0	0.00%	105	0	0.00%	105	0	0.00%	105	0	0.00%
Field Duplicate	UG CHN	575	65	11.30%	575	39	6.78%	575	77	13.39%	575	76	13.22%
	EXPLOR DDH	130	2	1.54%	130	5	3.85%	130	26	20.00%	130	28	21.54%
	INFILL DDH	89	10	11.24%	89	1	1.12%	89	15	16.85%	89	15	16.85%

An established Kolpa protocol is in place to ensure that any failed QC sample results are promptly identified and that the required corrective action is taken in a timely manner, which more often than not, involves a review of procedures to ensure that the established sample preparation and analysis protocols are being followed.

Kolpa produces regular QA/QC performance reports. Reports from the following periods were reviewed, H2/2021, 2022 & Q1/2023, and a general synopsis of findings, conclusions and recommendations from Laymen and Mc Iver (2024) is presented below. Example QC sample performance graphs and QC performance charts have been selected from the annual QA/QC report for 2022 INFILL DDH activities, and are provided below (Table 11-11 to Table 11-17 and Figure 11-18 to Figure 11-25).

11.7.6 KOLPA Mine-site Laboratory 2022 Infill DDH QC Performance Example

Table 11-11 Summary of control samples and their maximum bias/error rates (INFILL DDH 2022)

Laboratory	Control	Type control	Code	N°	Accept.	Global bias/Error rates (%)- Failures			
						Ag	Cu	Pb	Zn
Laboratorio KOLPA	Blanks	Fine Blank	FB	77	<5%	0.00%	0.00%	0.00%	0.00%
		Coarse	CB	77	<5%	0.00%	0.00%	0.00%	0.00%
	Standards	Standard1	CRM1	24	<10%	0.47%	0.96%	1.20%	1.48%
		Standard2	CRM2	26	<10%	-1.07%	3.77%	-0.54%	0.65%
		Standard3	CRM3	23	<10%	-0.76%	0.18%	-1.53%	-0.27%
	Standards May - - December	Standard1	CRM1	53	<10%	0.18%	2.30%	3.10%	1.38%
		Standard2	CRM2	51	<10%	-0.41%	5.26%	0.40%	0.10%
		Standard3	CRM3	54	<10%	-1.26%	2.16%	-0.20%	-1.75%
	Duplicates	Twin	TS	71	<10%	21.13%	0.00%	15.49%	15.49%
		Coarse	CD	79	<10%	0.00%	0.00%	0.00%	0.00%
		Pulp	PD	79	<10%	0.00%	0.00%	0.00%	0.00%
TOTAL				**614**					

Table 11-12 Summary of inserted control samples (INFILL DDH 2022)

Control		type	N° Samples	Insertion Rate (%)
Blanks		FB	77	2.11%
		CB	77	2.11%
Standards	Enero - Abril	CRM1	24	0.66%
		CRM2	26	0.71%
		CRM3	23	0.63%
Standards	Mayo - Diciembre	CRM1	53	1.45%
		CRM2	51	1.40%
		CRM3	54	1.48%
		PD	79	2.16%

Control	type	N° Samples	Insertion Rate (%)
Duplicates	CD	79	2.16%
	TS	71	1.94%
TOTAL		**614**	**16.81%**

Table 11-13 Summary of CRM biases (INFILL DDH 2022)

Laboratory	Type Standard		Element	N° Samples	Best value	Mean	Bias
Kolpa	**Standards (CRM) January - Abril**	CRM1	Ag(oz/TM)	24	0.970	0.98	0.47%
			Cu (%)	24	0.208	0.21	0.96%
			Pb (%)	24	1.940	1.96	1.20%
			Zn (%)	24	1.600	1.62	1.48%
		CRM2	Ag(oz/TM)	26	2.154	2.13	-1.07%
			Cu (%)	26	0.245	0.25	3.77%
			Pb (%)	26	3.810	3.79	-0.54%
			Zn (%)	26	2.240	2.25	0.65%
		CRM3	Ag(oz/TM)	23	10.100	10.03	-0.76%
			Cu (%)	23	0.346	0.35	0.18%
			Pb (%)	23	11.260	11.09	-1.53%
			Zn (%)	23	17.020	16.97	-0.27%
	Standards (CRM) May - December	CRM1	Ag(oz/TM)	53	1.366	1.37	0.18%
			Cu (%)	53	0.429	0.44	2.30%
			Pb (%)	53	0.530	0.55	3.10%
			Zn (%)	53	1.040	1.05	1.38%
		CRM2	Ag(oz/TM)	51	2.990	2.98	-0.41%
			Cu (%)	51	0.095	0.10	5.26%
			Pb (%)	51	2.020	2.03	0.40%
			Zn (%)	51	3.280	3.28	0.10%
		CRM3	Ag(oz/TM)	54	6.076	6.00	-1.26%
			Cu (%)	54	0.199	0.20	2.16%
			Pb (%)	54	1.690	1.69	-0.20%
			Zn (%)	54	2.960	2.91	-1.75%
	TOTAL			231			

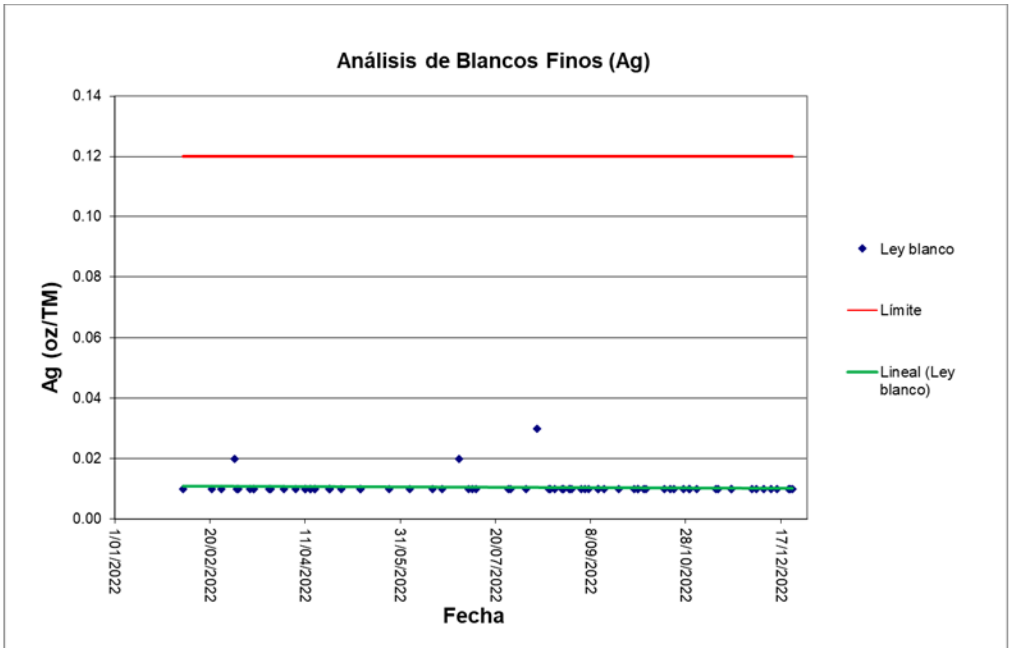
11.7.7 KOLPA Mine-site Laboratory 2022 Infill DDH QC Performance - Fine blanks (FB)

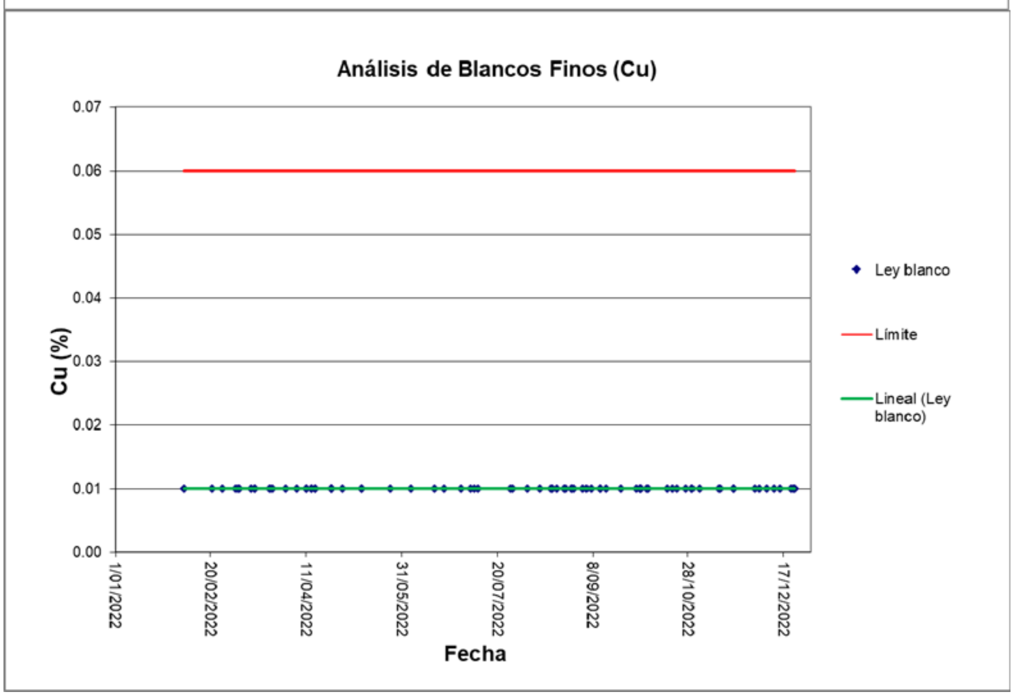
In total, the results of 77 fine blank QC samples were reviewed, which represents an insertion rate of 2.11%. Fine blank performance charts were prepared for Ag, Cu, Pb and Zn. No contamination events were identified from the fine blank QC sample results during the analysis of the 2022 Infill DDH sample batches (Contamination rate < 5). See Table 11-14 and Figure 11-18.

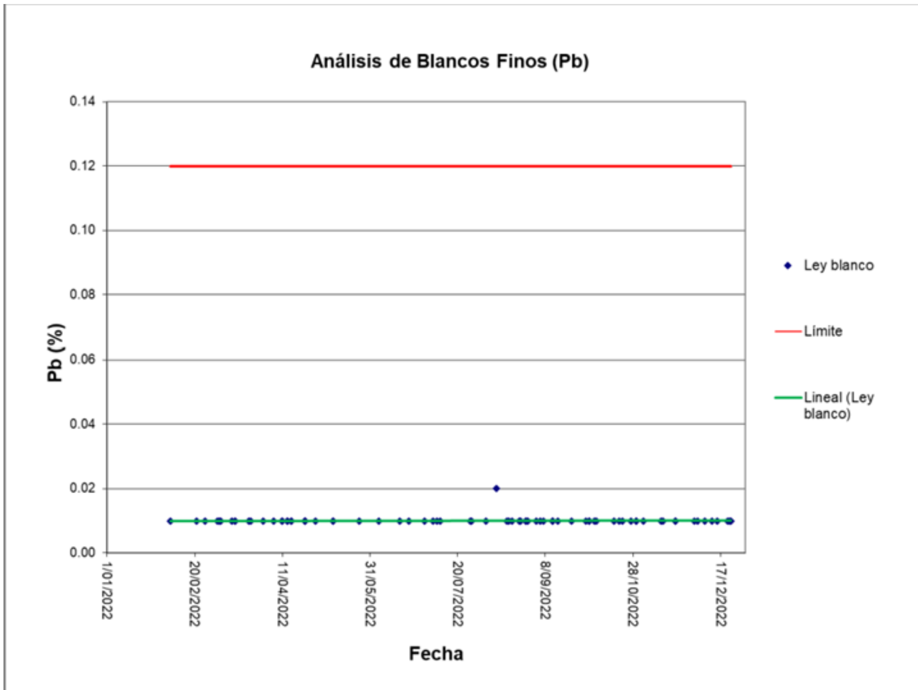
Table 11-14 Summary results of analyzed Fine Blank contamination rates

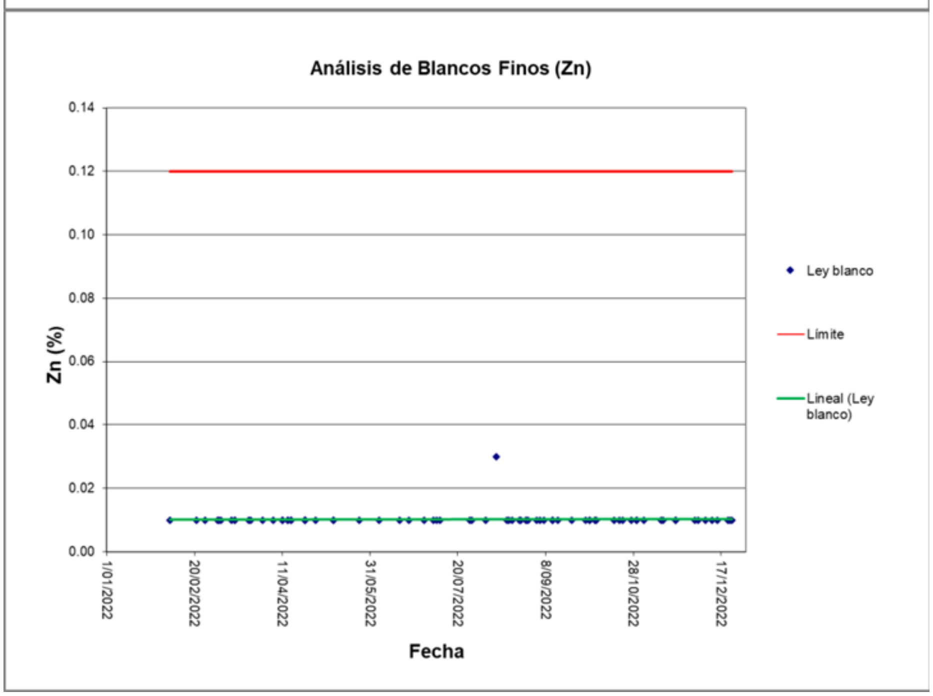
	KOLPA LAB		
Element	**Total**	**Failure**	**Failure Rate%**
Ag(oz/TM)	77	0	0.00%
Cu (%)	77	0	0.00%
Pb (%)	77	0	0.00%
Zn (%)	77	0	0.00%

Figure 11-18 Mine-site Laboratory 2022 Infill DDH Fine Blank performance charts









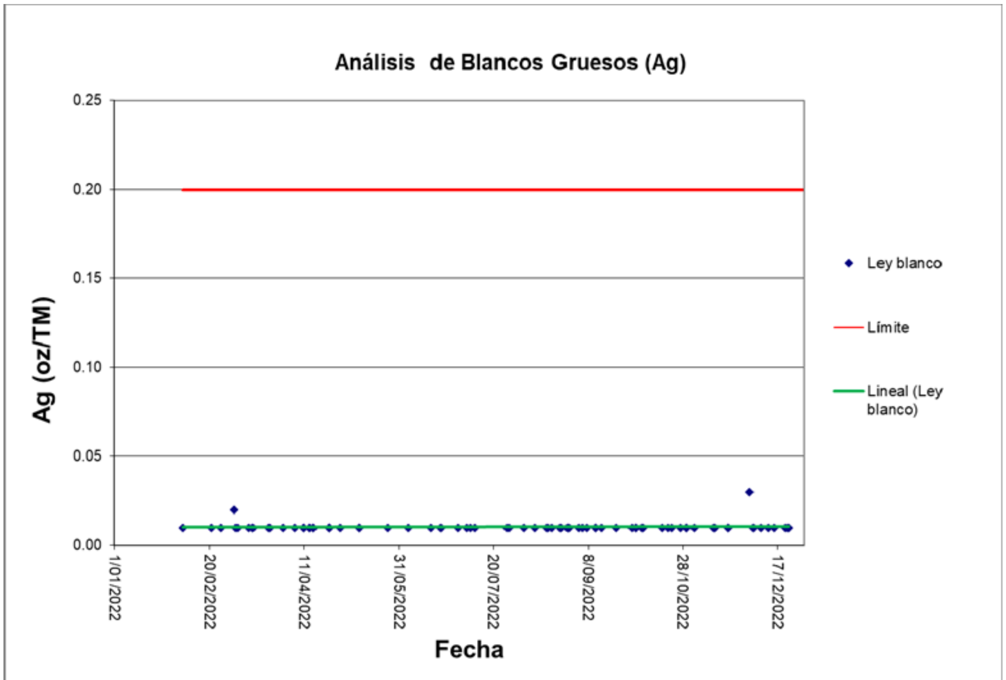
11.7.8 KOLPA Mine-site Laboratory 2022 Infill DDH QC Performance - Coarse Blanks (CB)

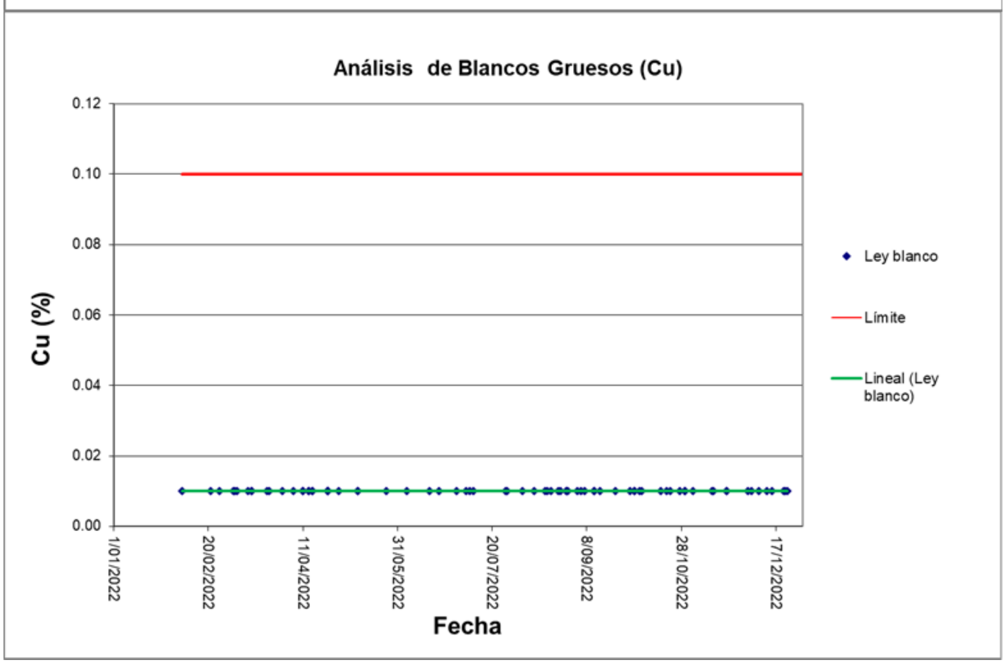
In total, the results of 77 coarse blank QC samples were reviewed, which represents an insertion rate of 2.11%. Coarse blank performance charts were prepared for Ag, Cu, Pb and Zn. No significant contamination events were identified from the coarse blank QC sample results during the preparation or analysis of the 2022 Infill DDH sample batches (Contamination rate < 5). See Table 11-15 and Figure 11-19.

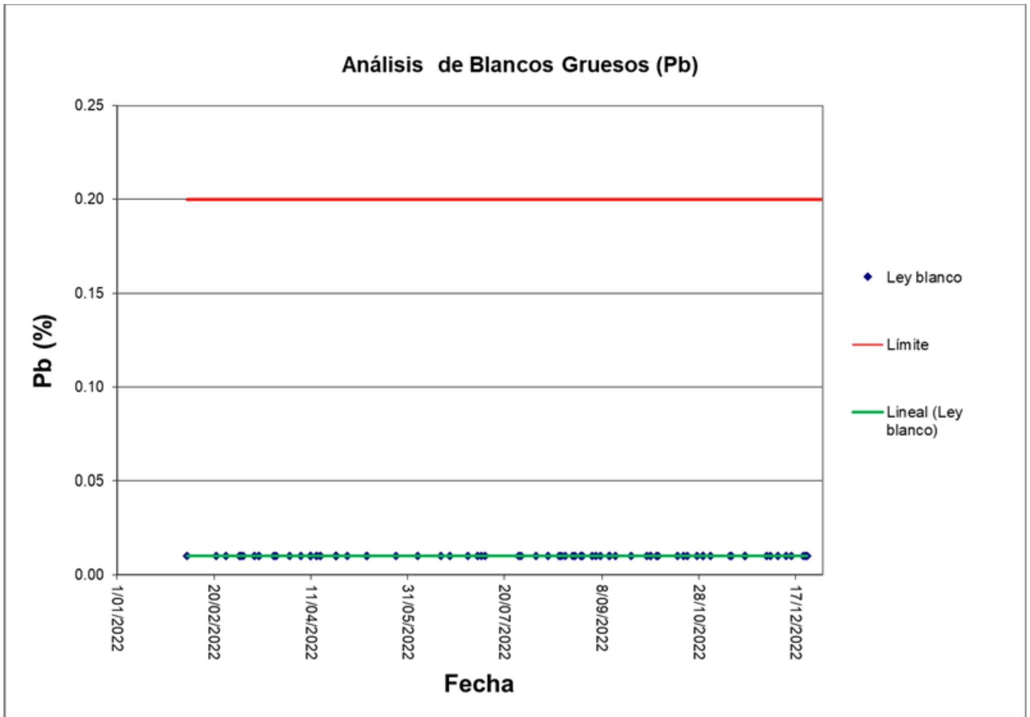
Table 11-15 Summary results of analyzed Coarse Blank contamination rates

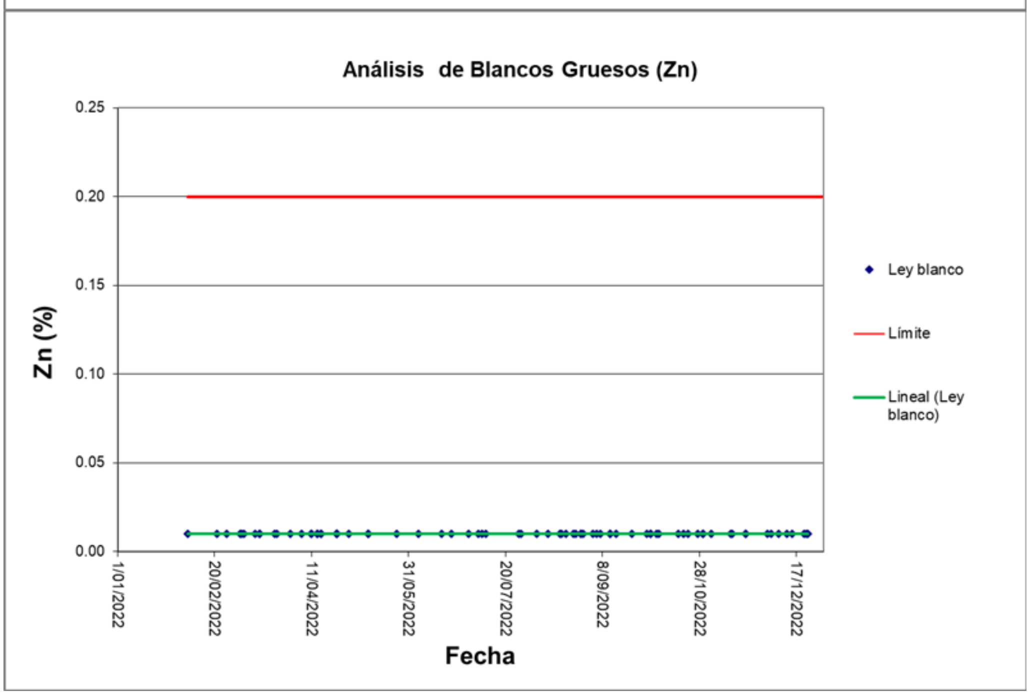
	KOLPA LAB		
Element	**Total**	**Failure**	**Failure Rate%**
Ag(oz/TM)	77	0	0.00%
Cu (%)	77	0	0.00%
Pb (%)	77	0	0.00%
Zn (%)	77	0	0.00%

Figure 11-19 Mine-site Laboratory 2022 Infill DDH Coarse blank performance charts





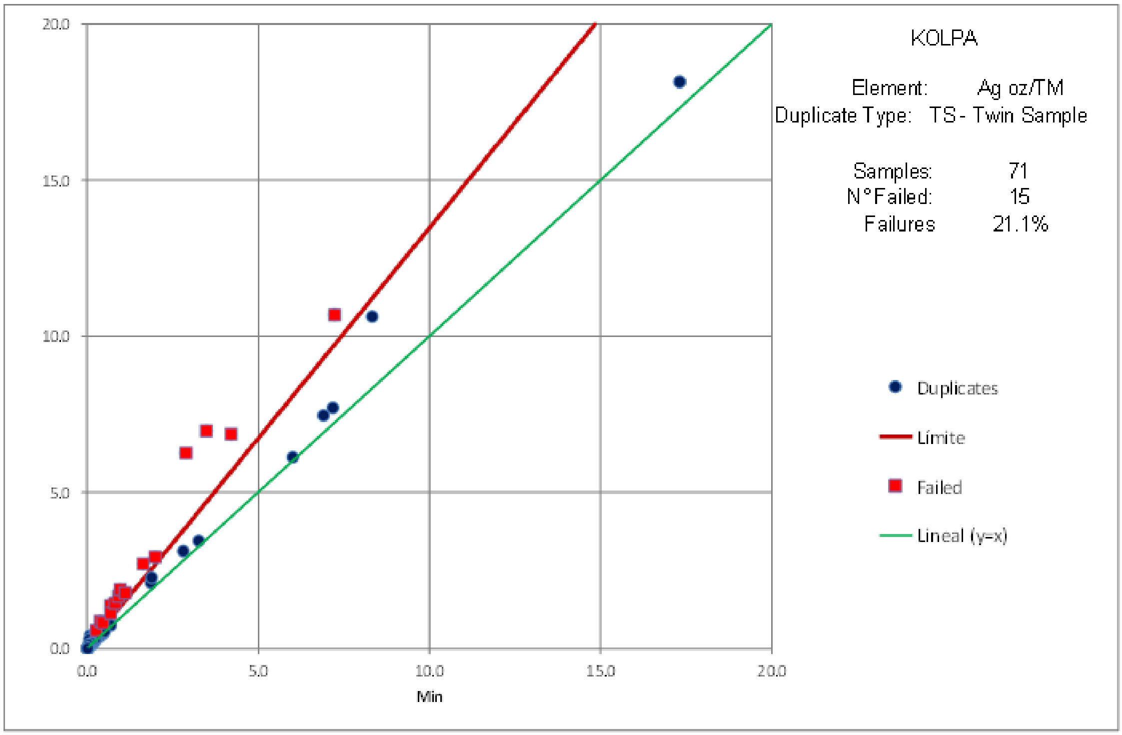


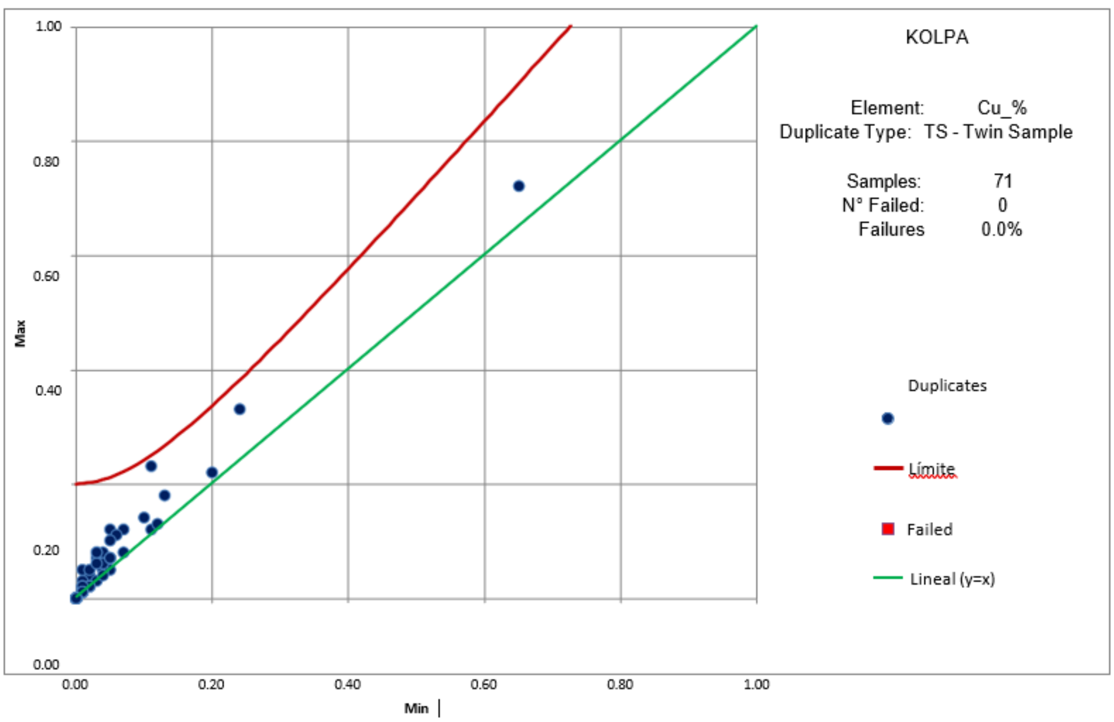


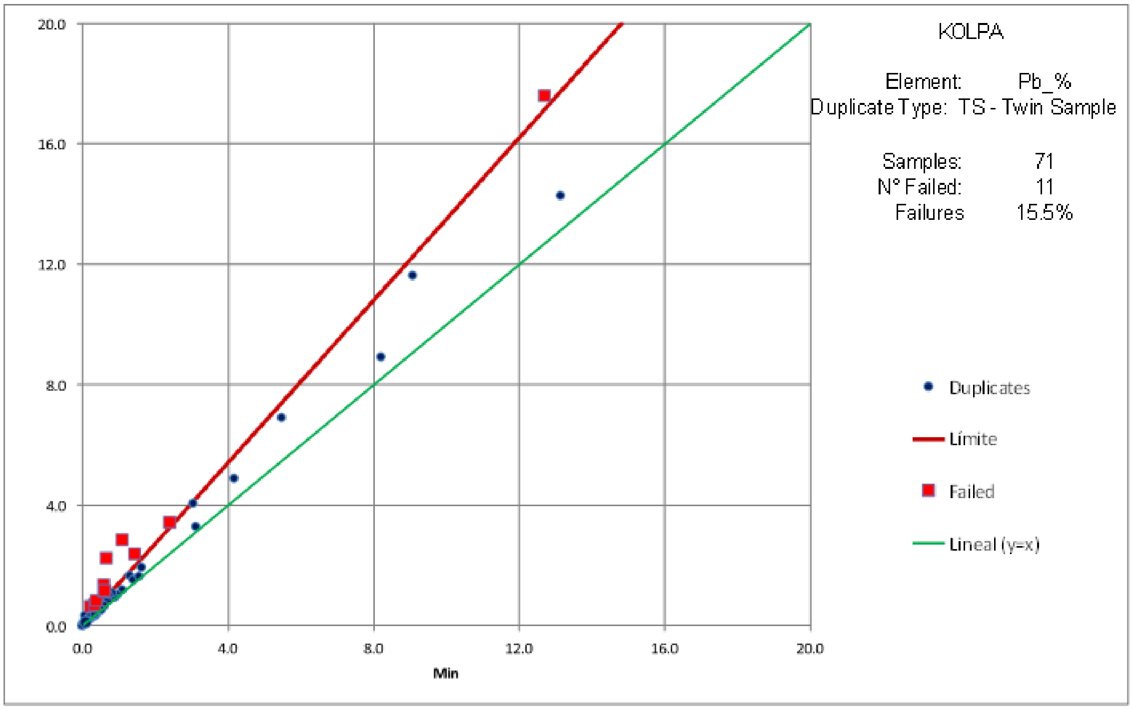
11.7.9 KOLPA Mine-site Laboratory 2022 Infill DDH QC Performance - Twins (TS)

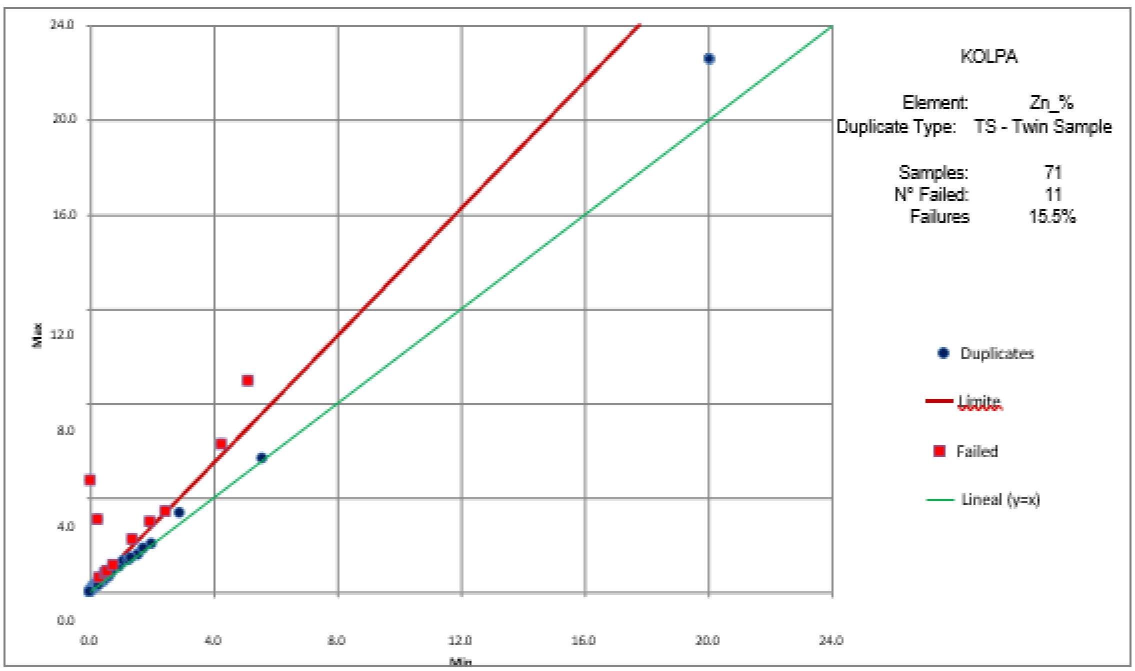
In total, the results of 71 twin (field duplicate) QC samples were reviewed, which represents an insertion rate of 1.94%. Twin Max-Min performance graphs were prepared for Ag, Cu, Pb and Zn. The interpretation of the results indicates a high analytical precision for the element Cu, and low analytical precision for the elements Ag, Pb and Zn (<10% of pairs rejected; tested for a maximum relative error of 30). See Figure 11-20.

Figure 11-20 Twin (Field Duplicate) performance graphs





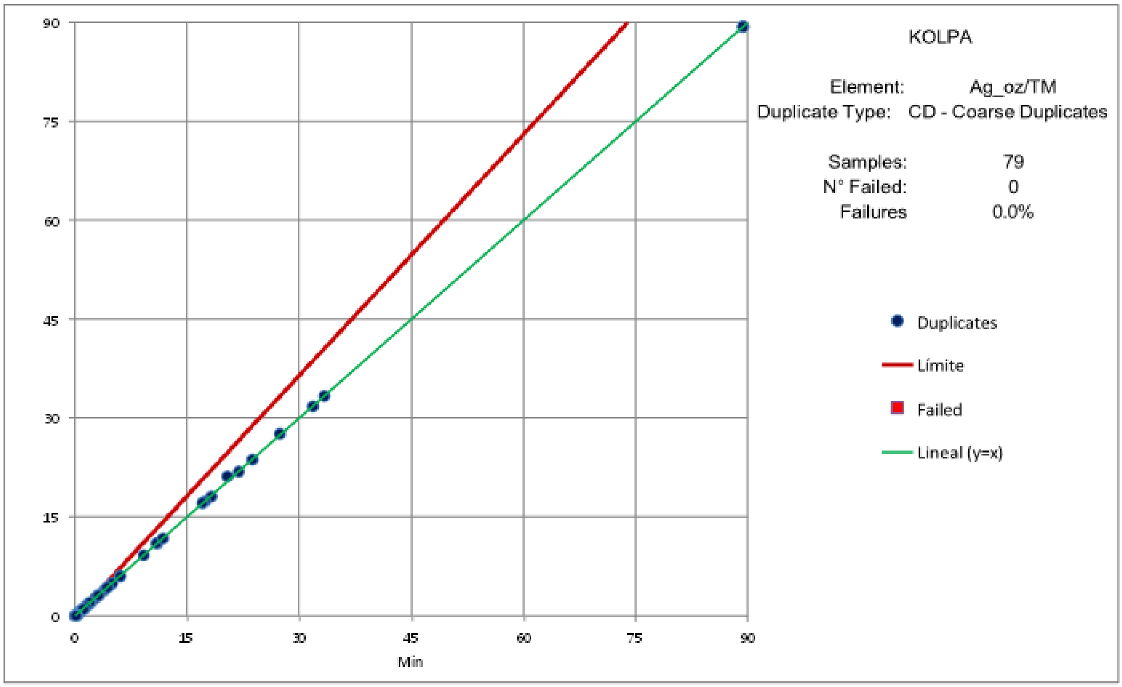


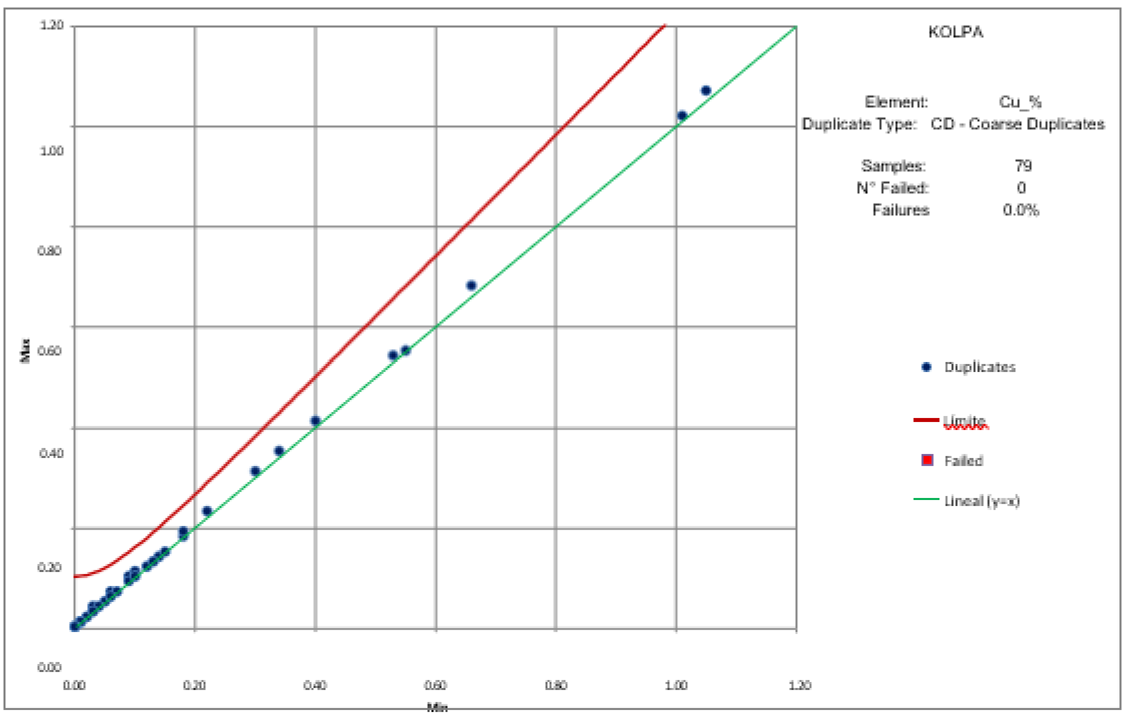


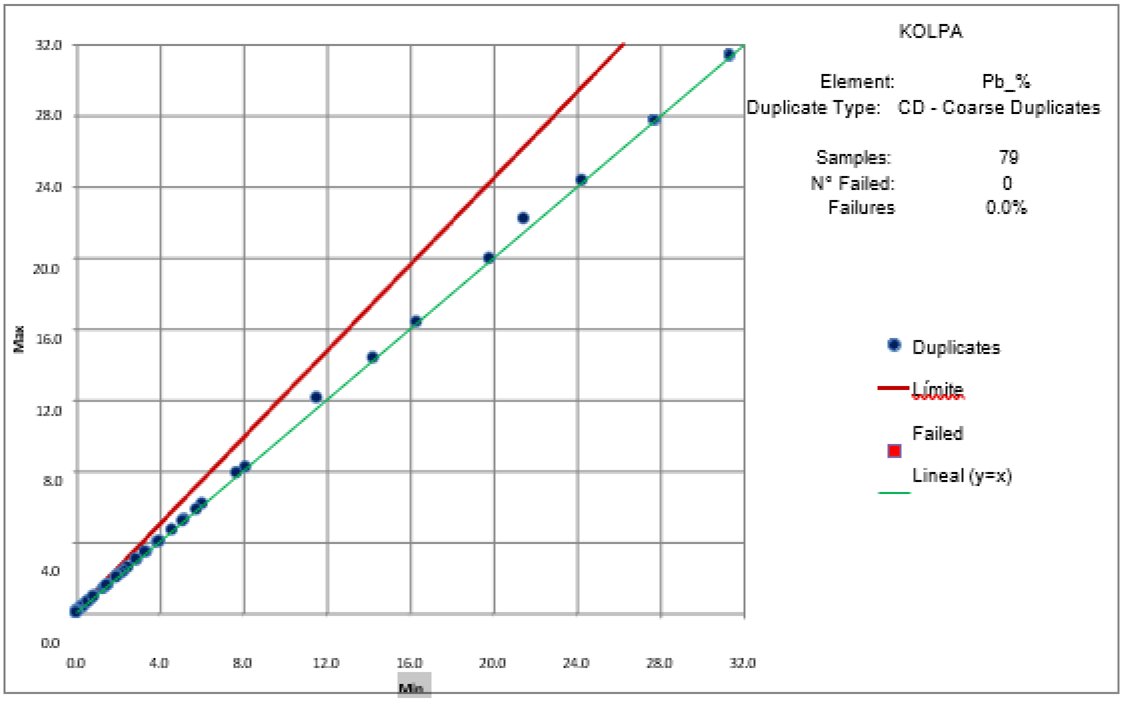
11.7.10 KOLPA Mine-site Laboratory 2022 Infill DDH QC Performance - Coarse Duplicates (CD)

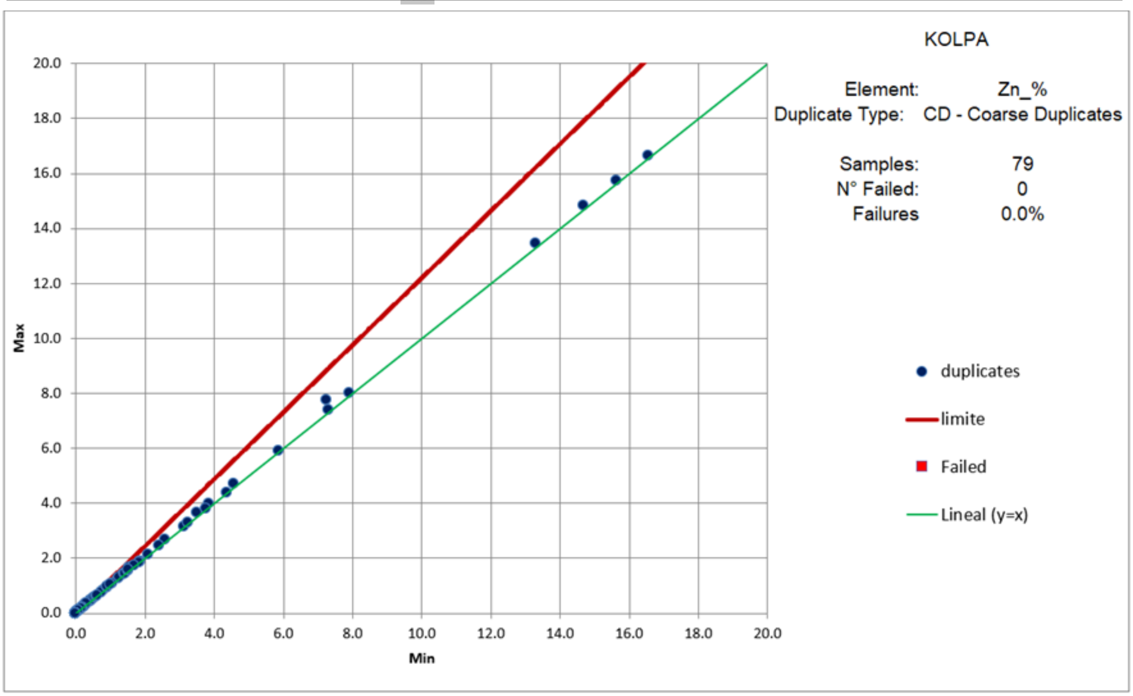
In total, the results of 79 coarse duplicate QC samples were reviewed, which represents an insertion rate of 2.16%. Coarse duplicate Max-Min performance graphs were prepared for Ag, Cu, Pb and Zn. The interpretation of the results for the preparation or the quartering process (under-sampling error), indicates a high precision for all the elements analyzed Ag, Cu, Pb and Zn (<10% of pairs rejected; tested for a maximum relative error of 20). See Figure 11-21.

Figure 11-21 Coarse Duplicate performance graphs









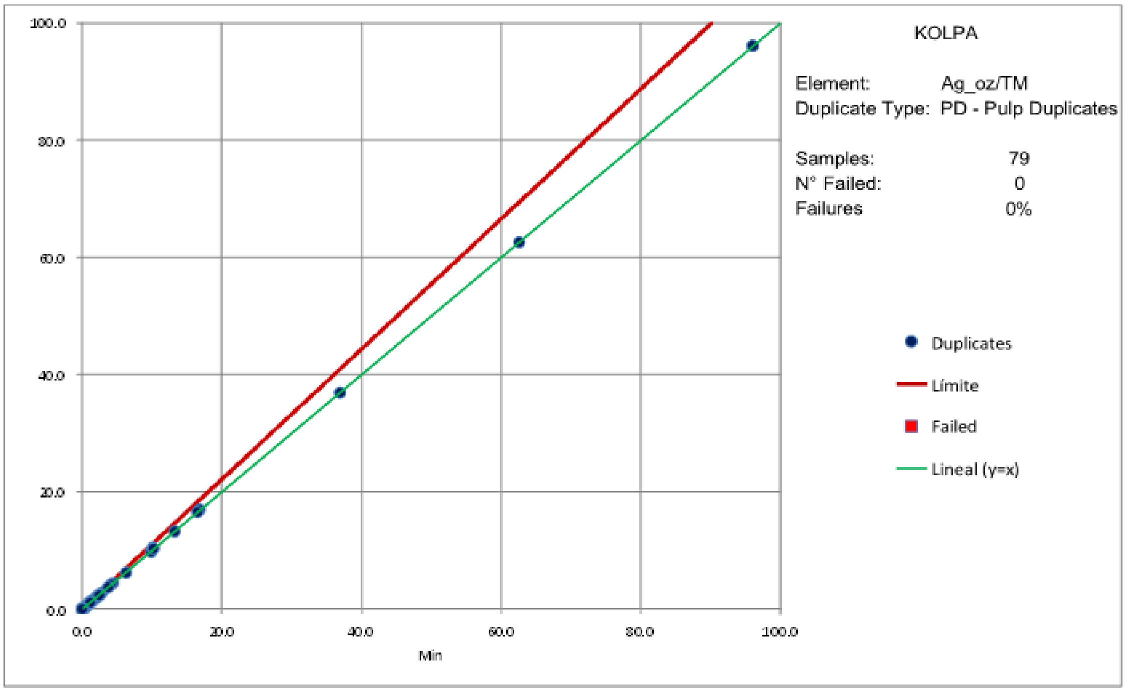
11.7.11 KOLPA Mine-site Laboratory 2022 Infill DDH QC Performance - Pulp Duplicates (PD)

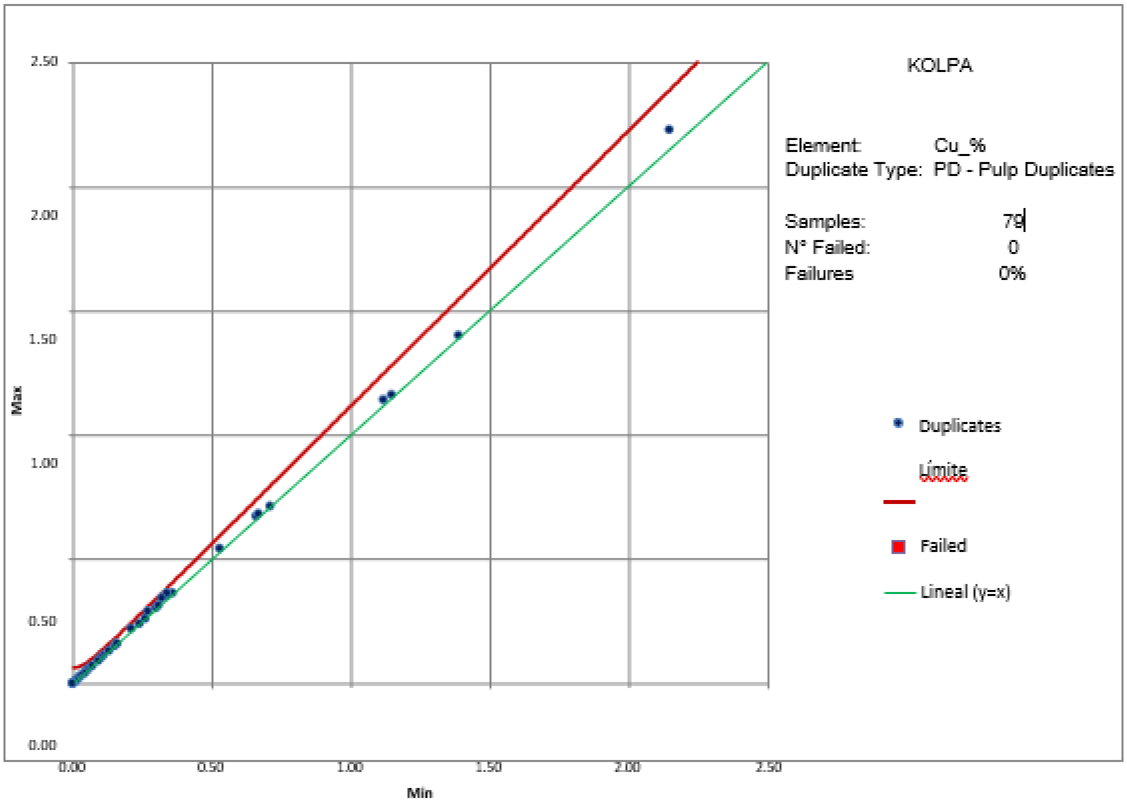
In total, the results of 79 pulp duplicate QC samples were reviewed, which represents an insertion rate of 2.16%. Pulp duplicate Max-Min performance graphs were prepared for Ag, Cu, Pb and Zn. The interpretation of the results for the analysis process indicates a high precision for all the elements analyzed Ag, Cu, Pb and Zn (<10% of pairs rejected; tested for a maximum relative error of 10). See Table 11-16 and Figure 11-22.

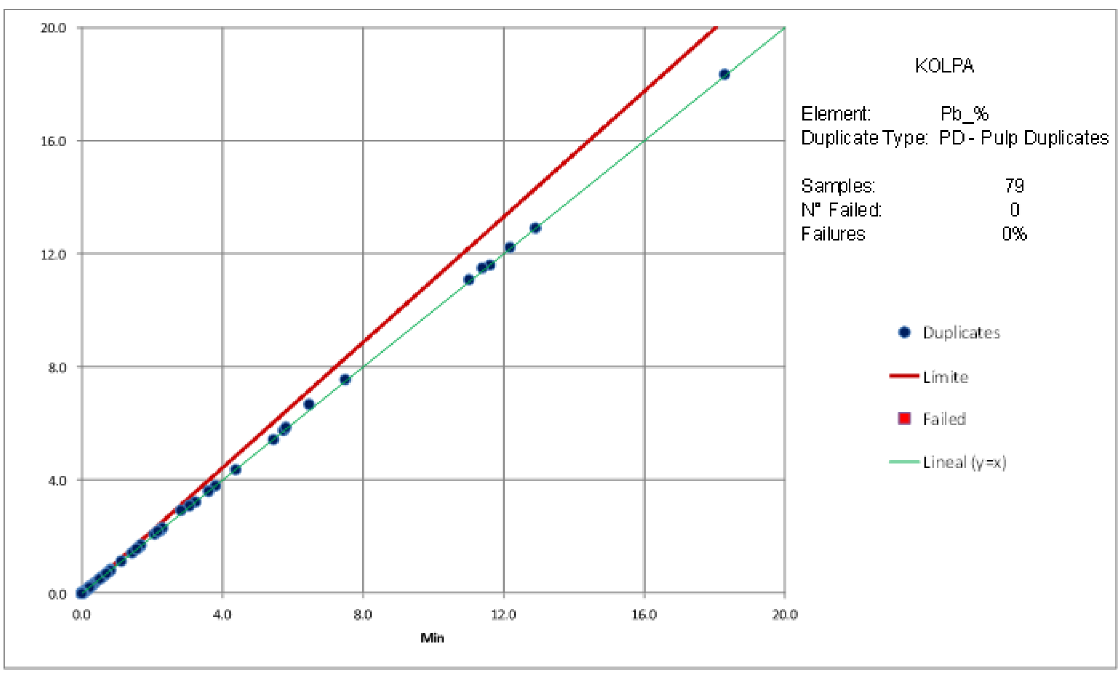
Table 11-16 Summary results for all analyzed Duplicates

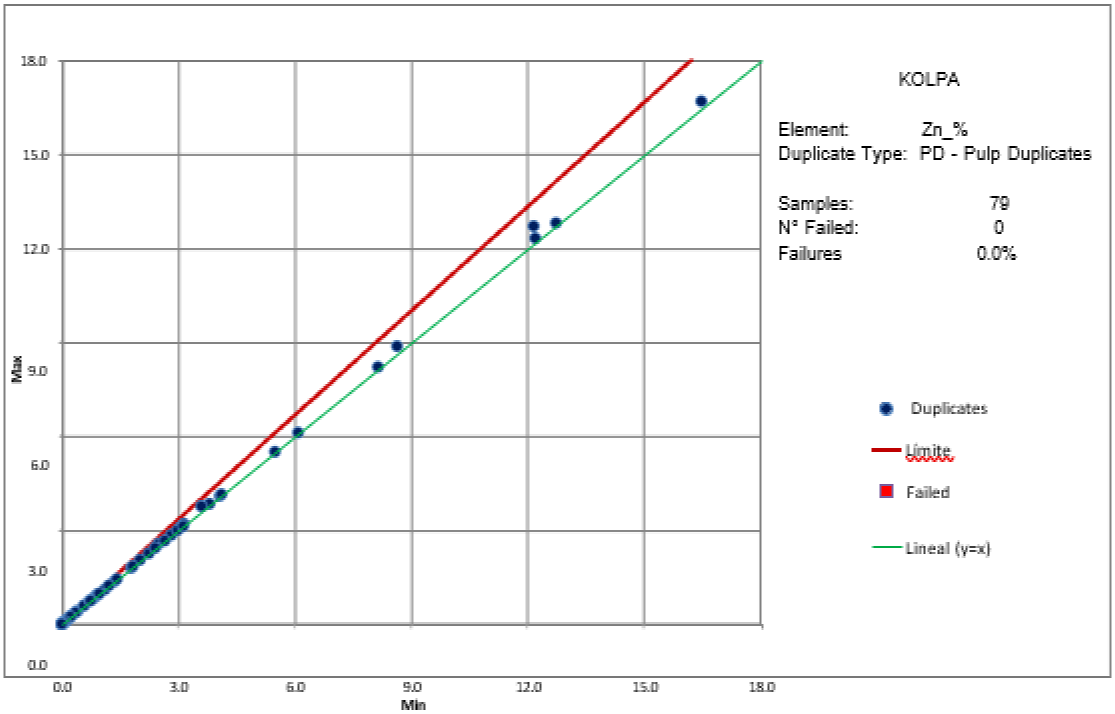
	Twin Samples			Coarse Duplicates			Pulp Duplicates		
Element	Sample	Failure	Failure Rate%	Sample	Failure	Failure Rate %	Sample	Failure	Failure Rate %
Ag(oz/TM)	71	15	21.13%	79	0	0.00%	79	0	0.00%
Cu (%)	71	0	0.00%	79	0	0.00%	79	0	0.00%
Pb (%)	71	11	15.49%	79	0	0.00%	79	0	0.00%
Zn (%)	71	11	15.49%	79	0	0.00%	79	0	0.00%

Figure 11-22 Pulp Duplicate performance graphs




KOLPA
Element: Cu_%
Duplicate Type: PD - Pulp Duplicates
Samples: 79
N° Failed: 0
Failures 0%
Duplicates
Límite
Failed
Lineal (y=x)
Max
Min
2.50
2.00
1.50
1.00
0.50
0.00
0.00
0.50
1.00
1.50
2.00
2.50


KOLPA
Element: Pb_%
Duplicate Type: PD - Pulp Duplicates
Samples: 79
N° Failed: 0
Failures 0%
Duplicates
Límite
Failed
Lineal (y=x)
Min
20.0
16.0
12.0
8.0
4.0
0.0
0.0
4.0
8.0
12.0
16.0
20.0



11.7.12 KOLPA Mine-site Laboratory 2022 Infill DDH QC Performance - Certified Reference Materials (CRM´s)

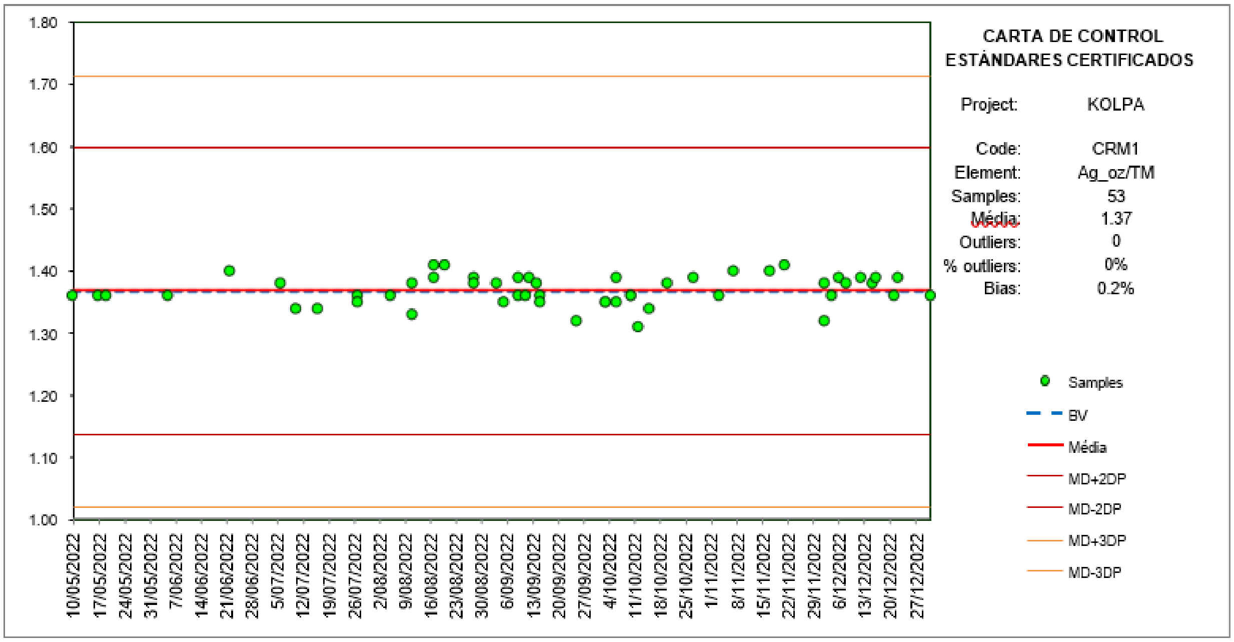
In total, 231 CRM (QC standard samples) were processed, which represents an insertion rate of 6.32%. For 2022, there were two groups of standards: i) January – April & ii) May – December. The two groups differ from each other by the certified values of each (best value). In total, 77 Low Grade samples (CRM1), 77 Medium Grade samples (CRM2) and 77 High Grade samples (CRM3) were inserted. The standards were analyzed for Ag, Cu, Pb and Zn contents, the results revealing slight analytical biases however being plotted within acceptable limits. See Table 11-17.

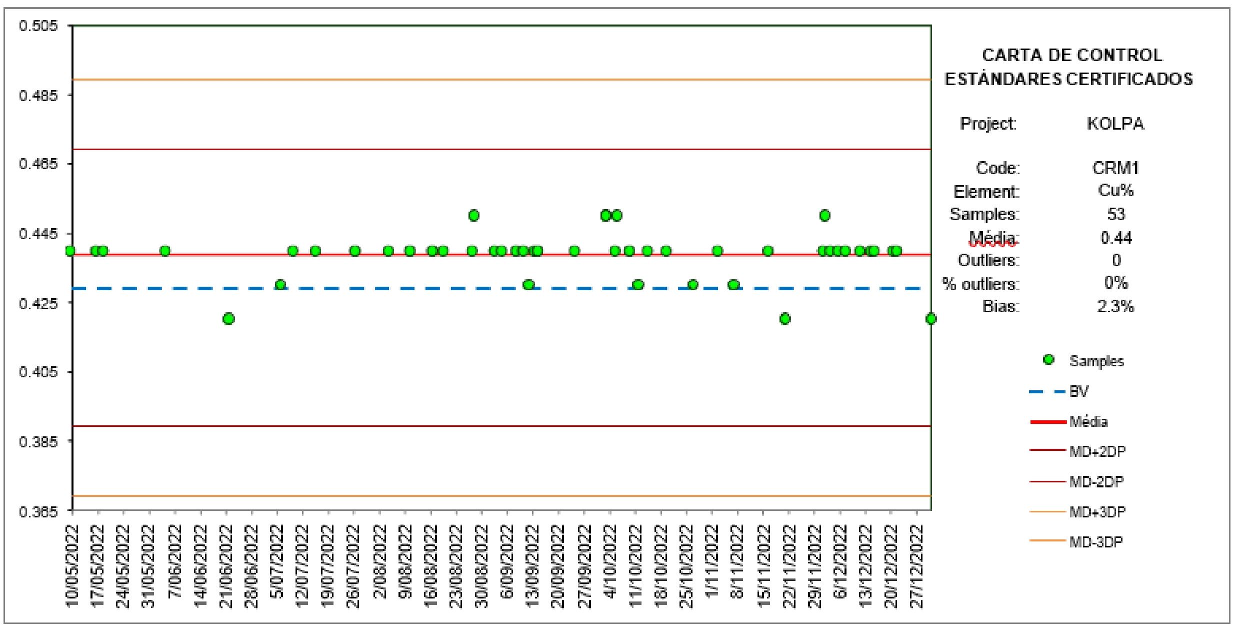
- Standards (January – April, 2022)
  - CRM1: High Accuracy in the elements evaluated; Ag, Cu, Pb and Zn.
  - CRM2: High Accuracy in the elements evaluated; Ag, Cu, Pb and Zn.
  - CRM3: High Accuracy in the elements evaluated; Ag, Cu, Pb and Zn.
- Standards (May – December, 2022).
  - CRM1: High Accuracy in the elements evaluated; Ag, Cu, Pb and Zn (Figure 11-23).
  - CRM2: Acceptable Accuracy for Cu element and High Accuracy in the Ag, Pb, Zn elements (Figure 11-24).
  - CRM3: High Accuracy in the elements evaluated; Ag, Cu, Pb and Zn (Figure 11-25).

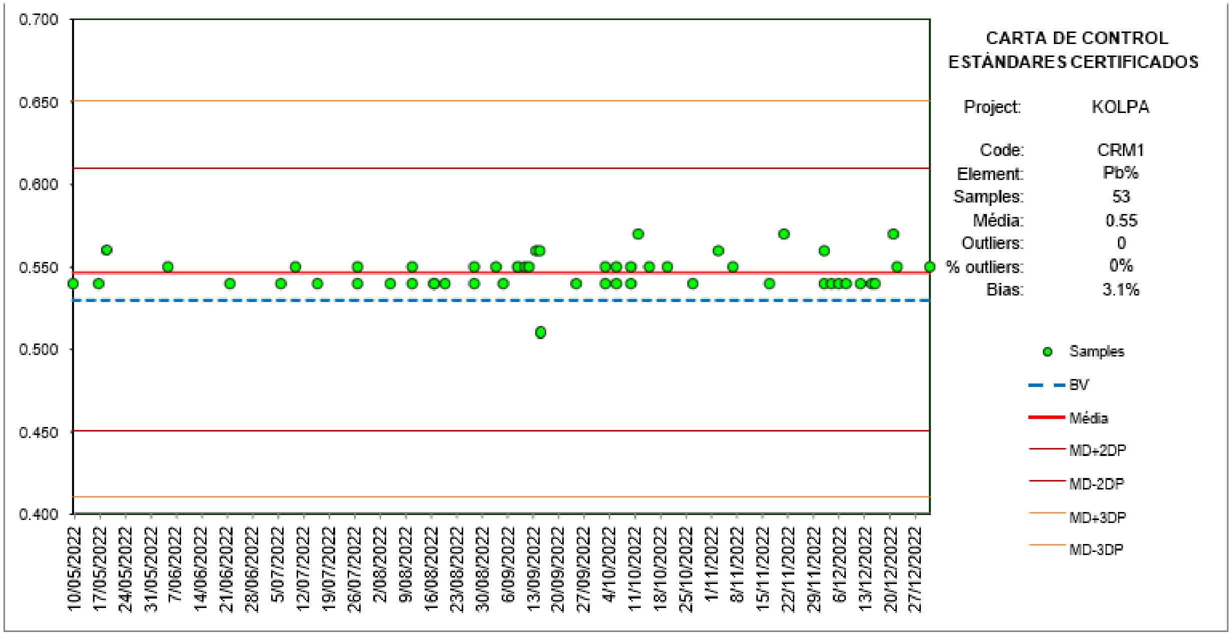
Table 11-17 Summary of CRM standard sample biases

Laboratory	Type Standard		Element	N° Samples	Best value	Mean	Bias
Kolpa	**Standards Enero - Abril**	CRM1	Ag(oz/TM)	24	0.970	0.98	0.47%
			Cu (%)	24	0.208	0.21	0.96%
			Pb (%)	24	1.940	1.96	1.20%
			Zn (%)	24	1.600	1.62	1.48%
		CRM2	Ag(oz/TM)	26	2.154	2.13	-1.07%
			Cu (%)	26	0.245	0.25	3.77%
			Pb (%)	26	3.810	3.79	-0.54%
			Zn (%)	26	2.240	2.25	0.65%
		CRM3	Ag(oz/TM)	23	10.100	10.03	-0.76%
			Cu (%)	23	0.346	0.35	0.18%
			Pb (%)	23	11.260	11.09	-1.53%
			Zn (%)	23	17.020	16.97	-0.27%
	Standards Mayo - Diciembre	CRM1	Ag(oz/TM)	53	1.366	1.37	0.18%
			Cu (%)	53	0.429	0.44	2.30%
			Pb (%)	53	0.530	0.55	3.10%
			Zn (%)	53	1.040	1.05	1.38%
		CRM2	Ag(oz/TM)	51	2.990	2.98	-0.41%
			Cu (%)	51	0.095	0.10	5.26%
			Pb (%)	51	2.020	2.03	0.40%
			Zn (%)	51	3.280	3.28	0.10%
		CRM3	Ag(oz/TM)	54	6.076	6.00	-1.26%
			Cu (%)	54	0.199	0.20	2.16%
			Pb (%)	54	1.690	1.69	-0.20%
			Zn (%)	54	2.960	2.91	-1.75%
	TOTAL			231			

Figure 11-23 CRM graph: CRM-01







CARTA DE CONTROL
ESTÁNDARES CERTIFICADOS
Project: KOLPA
Code: CRM1
Element: Pb%
Samples: 53
Média: 0.55
Outliers: 0
% outliers: 0%
Bias: 3.1%
Samples
BV
Média
MD+2DP
MD-2DP
MD+3DP
MD-3DP
0.700
0.650
0.600
0.550
0.500
0.450
0.400
10/05/2022
17/05/2022
24/05/2022
31/05/2022
7/06/2022
14/06/2022
21/06/2022
28/06/2022
5/07/2022
12/07/2022
19/07/2022
26/07/2022
2/08/2022
9/08/2022
16/08/2022
23/08/2022
30/08/2022
6/09/2022
13/09/2022
20/09/2022
27/09/2022
4/10/2022
11/10/2022
18/10/2022
25/10/2022
1/11/2022
8/11/2022
15/11/2022
22/11/2022
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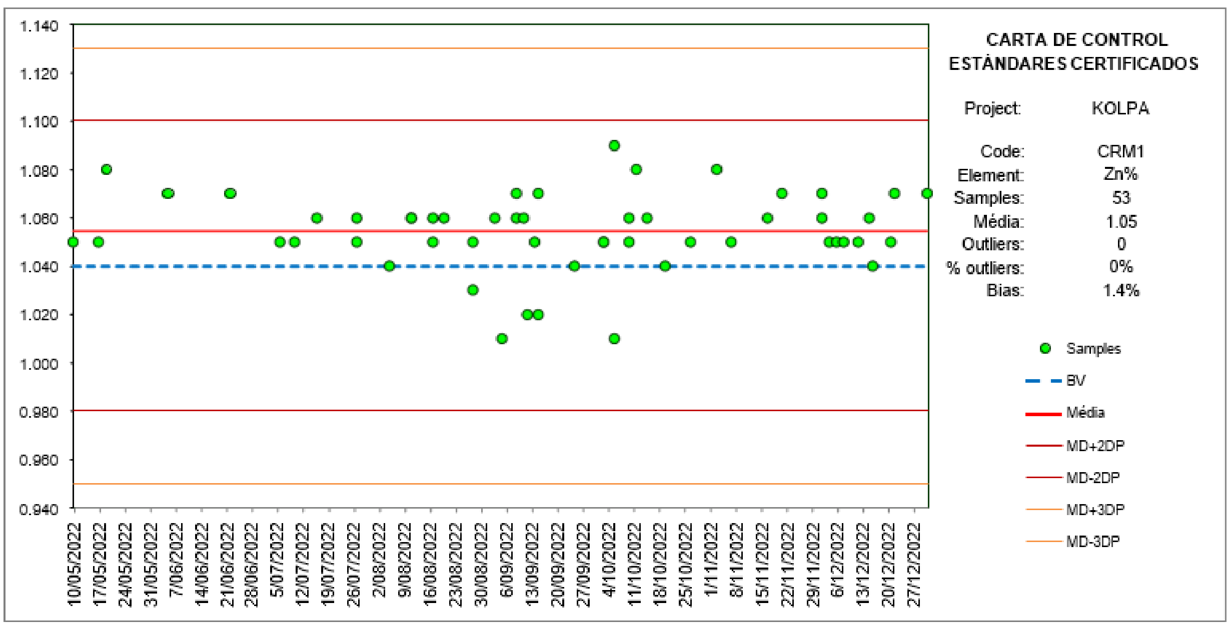
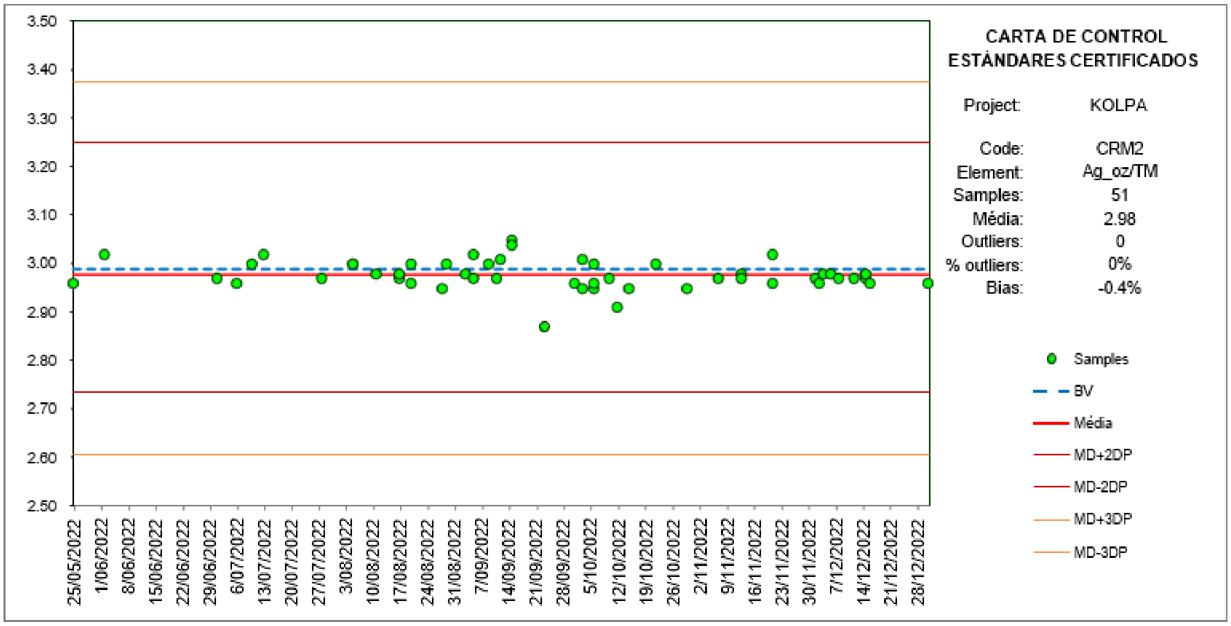
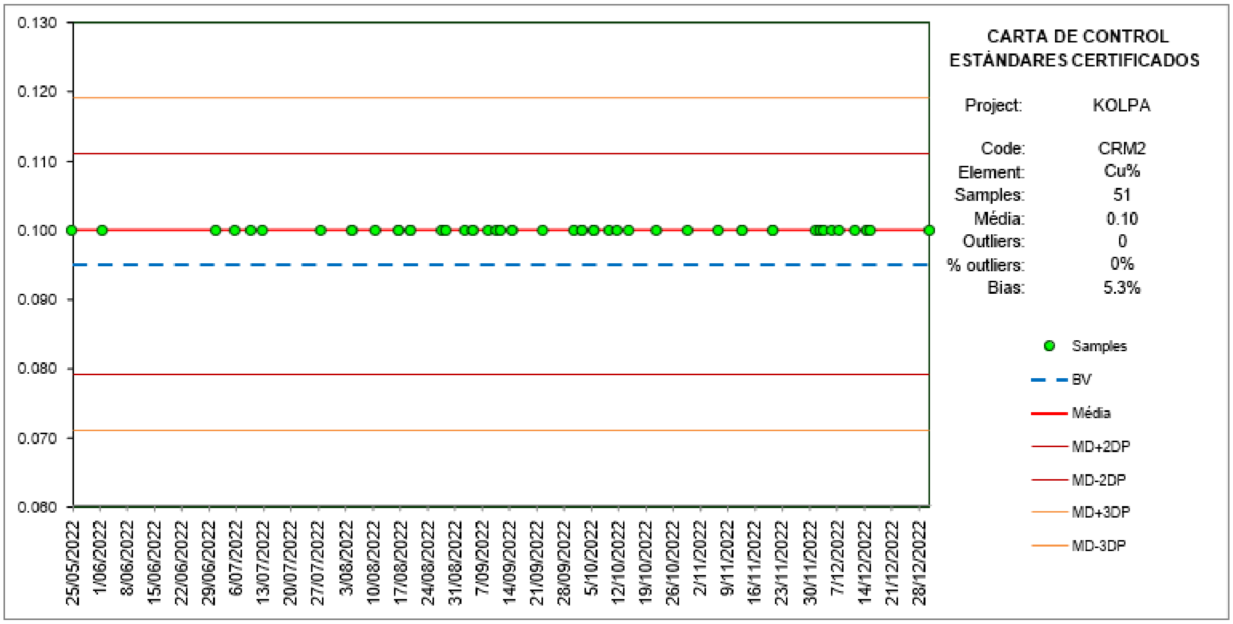
6/12/2022
13/12/2022
20/12/2022
27/12/2022

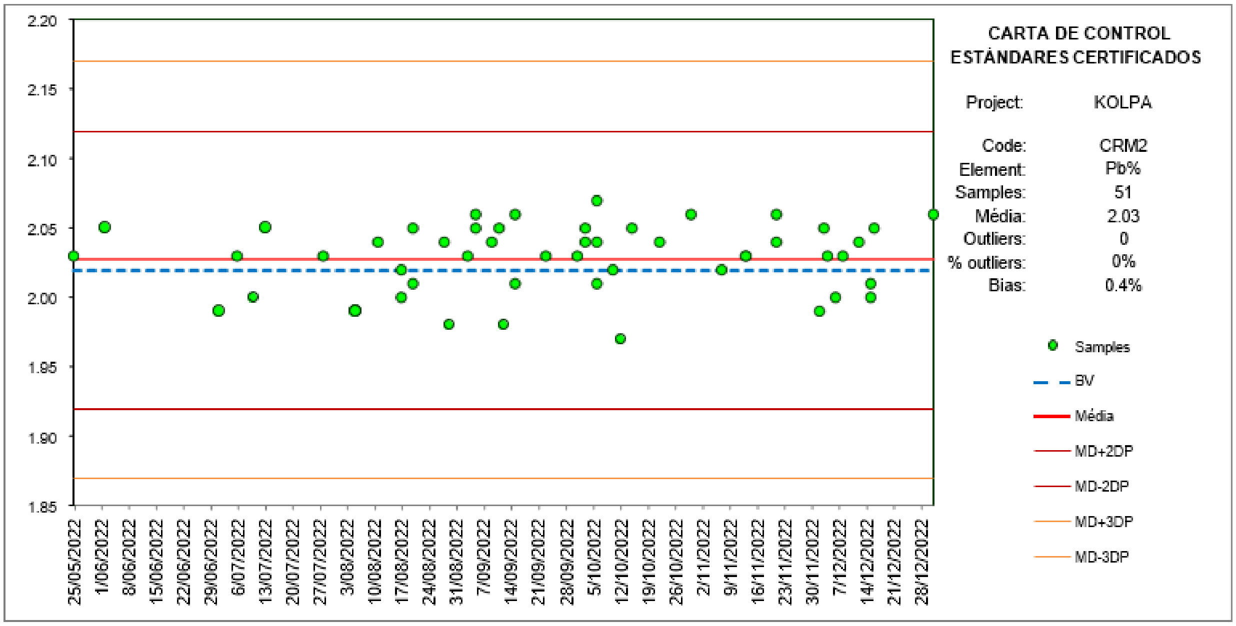


CARTA DE CONTROL
ESTÁNDARES CERTIFICADOS
Project: KOLPA
Code: CRM1
Element: Zn%
Samples: 53
Média: 1.05
Outliers: 0
% outliers: 0%
Bias: 1.4%
Samples
BV
Média
MD+2DP
MD-2DP
MD+3DP
MD-3DP
1.140
1.120
1.100
1.080
1.060
1.040
1.020
1.000
0.980
0.960
0.940
10/05/2022
17/05/2022
24/05/2022
31/05/2022
7/06/2022
14/06/2022
21/06/2022
28/06/2022
5/07/2022
12/07/2022
19/07/2022
26/07/2022
2/08/2022
9/08/2022
16/08/2022
23/08/2022
30/08/2022
6/09/2022
13/09/2022
20/09/2022
27/09/2022
4/10/2022
11/10/2022
18/10/2022
25/10/2022
1/11/2022
8/11/2022
15/11/2022
22/11/2022
29/11/2022
6/12/2022
13/12/2022
20/12/2022
27/12/2022

Figure 11-24 CRM graph: CRM-02






CARTA DE CONTROL
ESTÁNDARES CERTIFICADOS
Project: KOLPA
Code: CRM2
Element: Pb%
Samples: 51
Média: 2.03
Outliers: 0
% outliers: 0%
Bias: 0.4%
Samples
BV
Média
MD+2DP
MD-2DP
MD+3DP
MD-3DP
2.20
2.15
2.10
2.05
2.00
1.95
1.90
1.85
25/05/2022
1/06/2022
8/06/2022
15/06/2022
22/06/2022
29/06/2022
6/07/2022
13/07/2022
20/07/2022
27/07/2022
3/08/2022
10/08/2022
17/08/2022
24/08/2022
31/08/2022
7/09/2022
14/09/2022
21/09/2022
28/09/2022
5/10/2022
12/10/2022
19/10/2022
26/10/2022
2/11/2022
9/11/2022
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14/12/2022
21/12/2022
28/12/2022

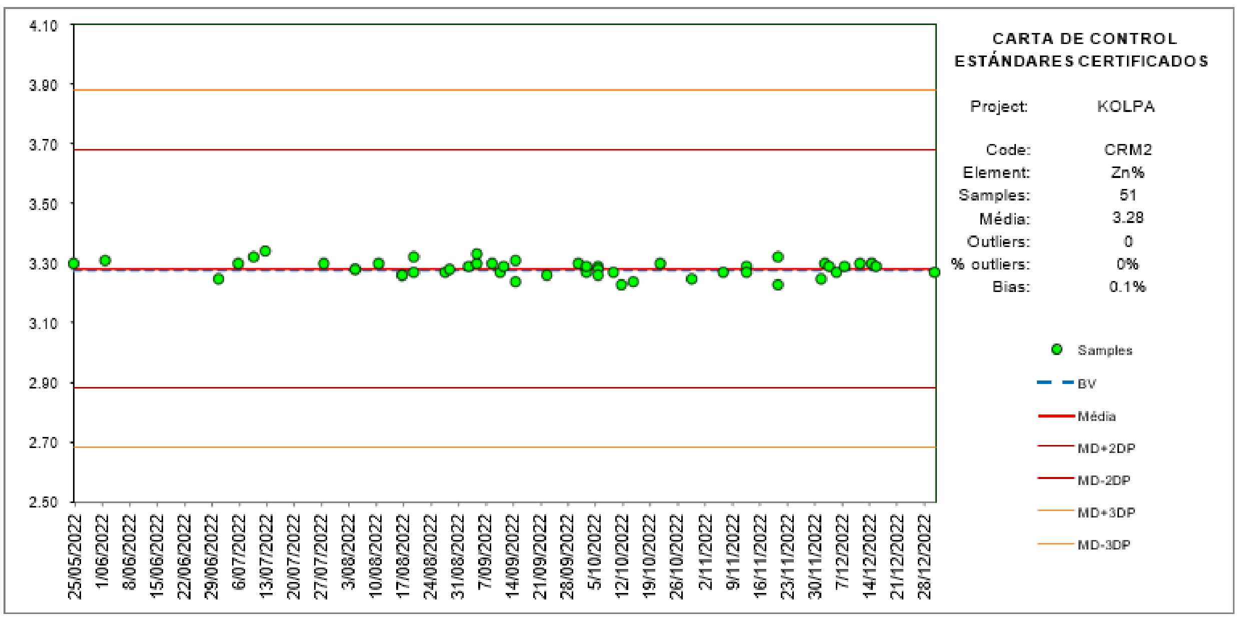
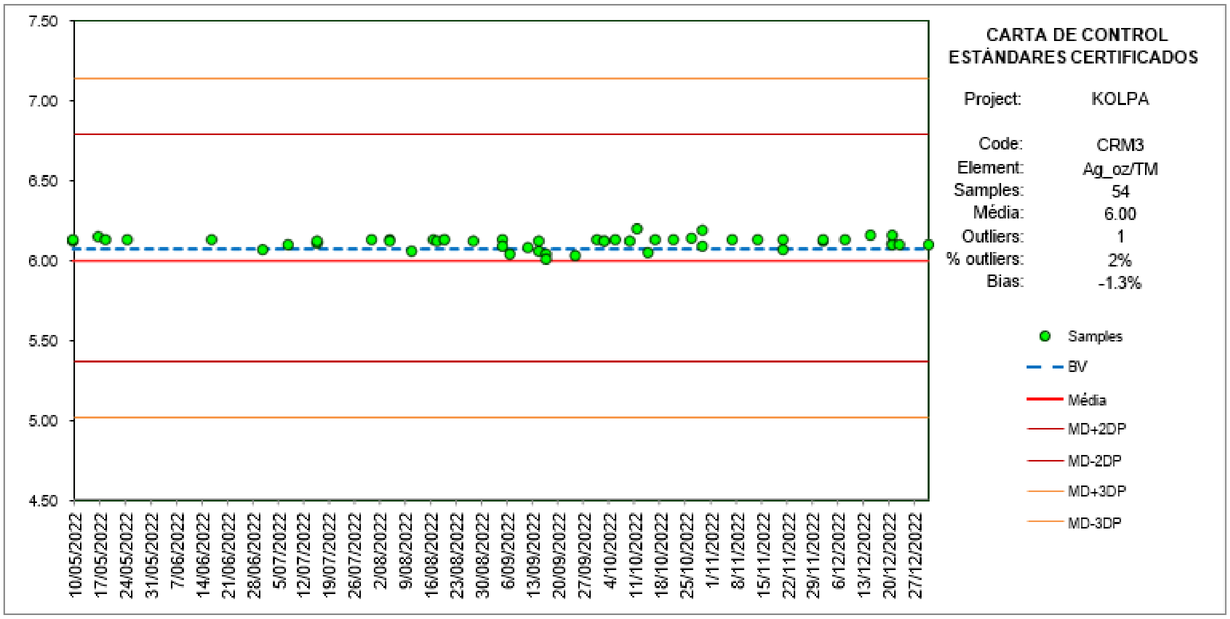
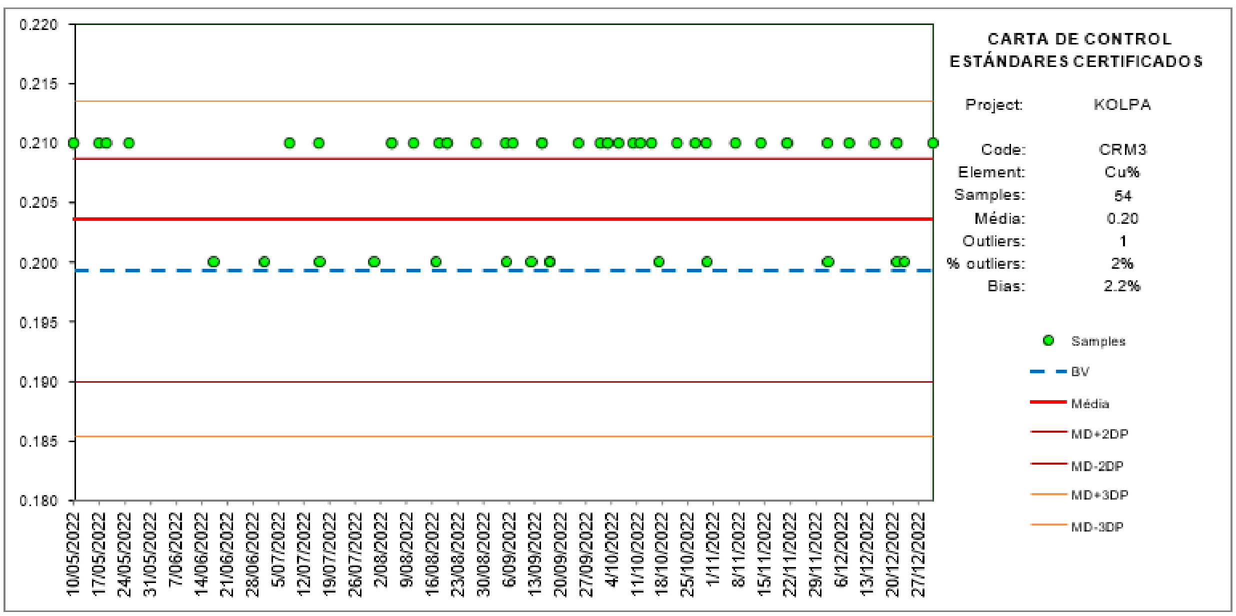
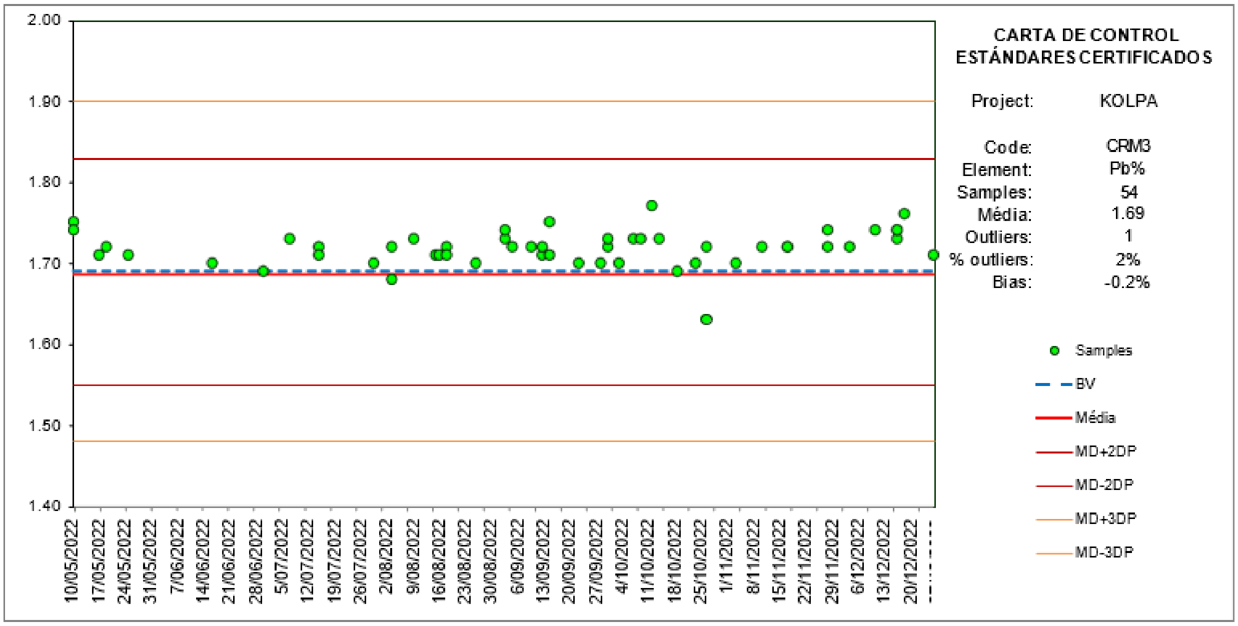
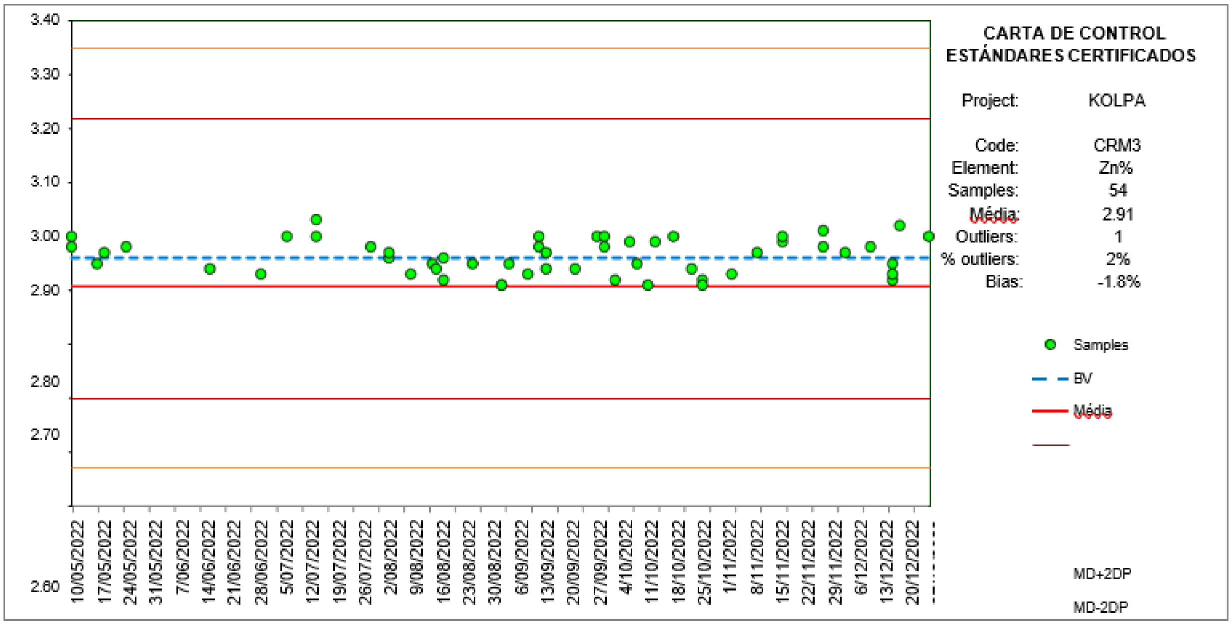

CARTA DE CONTROL
ESTÁNDARES CERTIFICADOS
Project: KOLPA
Code: CRM2
Element: Zn%
Samples: 51
Média: 3.28
Outliers: 0
% outliers: 0%
Bias: 0.1%
Samples
BV
Média
MD+2DP
MD-2DP
MD+3DP
MD-3DP
4.10
3.90
3.70
3.50
3.30
3.10
2.90
2.70
2.50
25/05/2022
1/06/2022
8/06/2022
15/06/2022
22/06/2022
29/06/2022
6/07/2022
13/07/2022
20/07/2022
27/07/2022
3/08/2022
10/08/2022
17/08/2022
24/08/2022
31/08/2022
7/09/2022
14/09/2022
21/09/2022
28/09/2022
5/10/2022
12/10/2022
19/10/2022
26/10/2022
2/11/2022
9/11/2022
16/11/2022
23/11/2022
30/11/2022
7/12/2022
14/12/2022
21/12/2022
28/12/2022

Figure 11-25 CRM graph: CRM-03









11.7.13 Conclusions

1. For the 2022 infill DDH QC, the results obtained by the Kolpa analytical laboratory for the analyses of the fine blank (FB) samples inserted into the sample sequences, indicate that there has been no contamination during the period of the sample analyses processes.
2. Similarly, the results obtained from the analyses of the coarse blank (CB) samples by the Kolpa analytical laboratory indicate that there is no evidence of contamination during the period of the sub-sample preparation processes.
3. The results obtained from the analyses of the twin (TS) samples during the period of the 2022 infill DDH sample collection processes, indicate a high precision for the element Cu; and low analytical precision for the Ag, Pb and Zn elements, but only at low concentrations, with generally acceptable

precision at elevated concentrations. Results for twin sample analyses from samples collected from DDH core taken from a Kolpa polymetallic-type structure, reflect the inherent variability and irregular nature of the heterogeneously distributed mineralization. This makes the collection of genuinely representative ´twin´ samples from DDH core, challenging. It is likely that given the generally high precision rates reported for the other 2022 infill DDH QC sample results, that in the afore-mentioned description of the nature of the mineralization, lies the reasons for the twin sample low analytical precisions obtained for Ag, Pb and Zn elements, particularly at lower concentrations.

4. The results obtained from the analyses of the coarse duplicate (CD) samples indicate a high precision for all of the elements Ag, Cu, Pb and Zn analyzed during the sub-sample preparation processes.
5. The results from the analyses of the fine duplicate (PD) samples indicate that a high precision was obtained for the elements Ag, Cu, Pb and Zn during the processes of the analytical analyses.
6. The 2022 Kolpa laboratory analyses results obtained for the three CRM standard QC samples inserted into the infill drilling sequences, present the following results:
    a. Low Standard: high to moderately high accuracy in all of the elements Ag, Cu, Pb and Zn.
    b. Moderately Low Standard: high accuracy in all of the elements Ag, Cu, Pb and Zn.
    c. Moderately High Standard: high accuracy for the elements Ag, Pb and Zn; low accuracy for the element Cu.
7. Overall, the reviewed results appear to indicate that the Kolpa analytical laboratory has performed at a consistently high level.
8. A high level of sample collection consistency by the geological team is additionally apparently reflected in the above reported results.
9. Aside from the 2022 infill DDH results reported in more detail above (Items 11.6.6 – 11.6.12), review of annually reported results from QC samples inserted into the Infill DDH, DDH Exploration and CHN sampling campaigns for the years 2021, 2022 and Q1-2023, reflect similarly consistent performance levels by the Kolpa geological and analytical laboratory teams.
10. Of concern: no genuine high concentration CRM standard QC sample has been included for the 2022 infill DDH QC evaluations (conclusion 6. above).
11. Sample preparation and analytical analyses procedures as applied in the Kolpa analytical laboratory appear to have been carried out in accordance with the established procedures.

11.7.14 Recommendations

1. Continuously train laboratory personnel on the proper and correct procedures to be applied in the preparation, analysis and reporting of sample analytical grade results.
2. It is important to remember that for compliance with QA/QC procedure, a minimum of three CRM QC samples should be included at the following recommended CRM metal concentrations:
    a. At the approximate cut-off grade (COG) of the mineral deposit.
    b. At the approximate expected average grade of the mineral deposit.
    c. At a selected higher yet realistically achievable grade for the type mineral deposit being evaluated.
3. Laboratory instruments should display a precision of 3 decimal places, since currently the grades are reported with 2 decimal places.
4. Provide feedback to the samplers on the importance of their work in obtaining representative sampled material, on the correct filling out of the sampling stubs and on the proper coding of the sample (sample obtained; sample labeled and sample sealed).
5. With respect to the collection of twin samples from DDH core:

- With the objectives of i) taking an original representative sample to submit for analysis together with the standard routine batch of samples; ii) taking a fully representative twin sample as a QC control sample; and iii) maintaining a representative sample of the core for storage as part of the drilling archive in the core-box, and considering that the majority of core at Huachocolpa is HQ in size (63.5 mm in core diameter), the following approach is recommended:
- For the portion of core to be twin-sampled, first split off 1/3 of the core along its length (i.e.: aligned parallel to the core axis). This 1/3 core, in line with good QA/QC practices, should be maintained in the core-box as the representative ´archive´ sample for future geological reviewing. Then split the remaining 2/3 core along its length in an even manner to present two (02) equivalent sample ´halves´, each representing 1/3 of the original core. One of these 2 samples will represent the sample to be submitted for routine analysis, and the other (as and where required), will represent the twin QC sample.

11.7.15 Independent verification

During March 2021, with the objective of validating the results of Ag, Cu, Pb and Zn grades for the Huachocolpa Uno core drilling sampling program, independent consultants Linares Americas Consulting S.A.C. (LINAMEC), a specialized, multidisciplinary team of professionals, was contracted by Compañia Minera Kolpa S.A. to assist in a verification process to evaluate the analytical precision and accuracy of the Kolpa laboratory. LINAMEC and Kolpa randomly selected 1,584 pulps (representing some 23% of DDH sample assays at that time) for verification analysis at an independent, certified analytical laboratory, Certimin, located in Lima. The samples were submitted for external control analysis to Certimin, which acted as a secondary laboratory. A comparison of the Ag, Cu, Pb and Zn analytical results obtained support that the analytical precision and accuracy of the Kolpa Laboratory results are comparable to those of the Certimin Laboratory (Table 11-18). Results are shown as X-Y dispersion graphs using the Reduction-to-Major Axis method (Sinclair, 1999), which offers a non-biased adjustment on both series of results (Figure 11-26, Figure 11-27, Figure 11-28 and Figure 11-29). This mathematical procedure treats both series as independents.

RMA statistics for this validation program is presented in Table 11-18 and Table 11-19.

A similar external verification exercise has recently been conducted in the Certimin Peru laboratory, for DDH core and channel samples from the 2022 and 2023 Kolpa sampling campaigns. Data and analysis from this verification program is not currently available.

Table 11-18 Accuracy of Kolpa laboratory relative to Certimin laboratory on the basis of all check assays

Kolpa 2021 QAQC Program - RMA Parameters - All Check Samples								
Element	R^2	N (total)	Pairs	m	Error (m)	b	Error (b)	Bias
Ag (oz)	0.9769	1584	1584	1.006	0.004	0.037	0.073	-0.6%
Cu (%)	0.9925	1584	1584	0.928	0.002	0.009	0.005	7.2%
Pb (%)	0.9718	1584	1584	1.033	0.004	-0.050	0.065	-3.3%
Zn (%)	0.9228	1584	1584	1.051	0.007	-0.036	0.127	-5.1%

Table 11-19 Accuracy of Kolpa laboratory relative to Certimin laboratory with outliers excluded

Kolpa 2021 QAQC Program - RMA Parameters - Outliers Excluded									
Element	R^2	Accepted	Outliers	Outliers (%)	m	Error (m)	b	Error (b)	Bias
Ag (oz)	0.9955	1574	10	0.6%	1.001	0.002	0.037	0.031	-0.1%
Cu (%)	0.9957	1576	8	0.5%	0.947	0.002	0.002	0.003	5.3%
Pb (%)	0.9970	1575	9	0.6%	1.015	0.001	0.013	0.021	-1.5%
Zn (%)	0.9585	1571	13	0.8%	1.024	0.005	0.029	0.090	-2.4%

For the four previously mentioned elements, the RMA plots indicate a good fit between the results obtained by the Certimin Laboratory and the Kolpa Laboratory. After the exclusion of 10 outliers for Ag (0.6%), 8 outliers for Cu (0.5%), 9 outliers for Pb (0.6%) and 13 outliers for Zn (0.8%), the interpreted good fit is reflected in the high values of the coefficient of determination R^2 for Ag (0.9955), Cu (0.9957), Pb (9970) and Zn (0.9585) and the acceptable relative biases (-0.1%, 5.3%, -1.5% and 2.4%, respectively). The bias of RMA for Huachocolpa Uno DDH samples is less than 10% (Figure 11-26, Figure 11-27, Figure 11-28, and Figure 11-29).

Based on the results obtained for Ag, Cu, Pb and Zn in the verification of Kolpa's commodity grades from the DDH core sampling program, LINAMEC concluded that the accuracy of the Kolpa Laboratory analyses relative to the Certimin laboratory analyses is adequate for use in the estimation of mineral resources.

Figure 11-26 RMA plot for check samples in Ag for Huachocolpa Uno (Kolpa vs. Certimin)

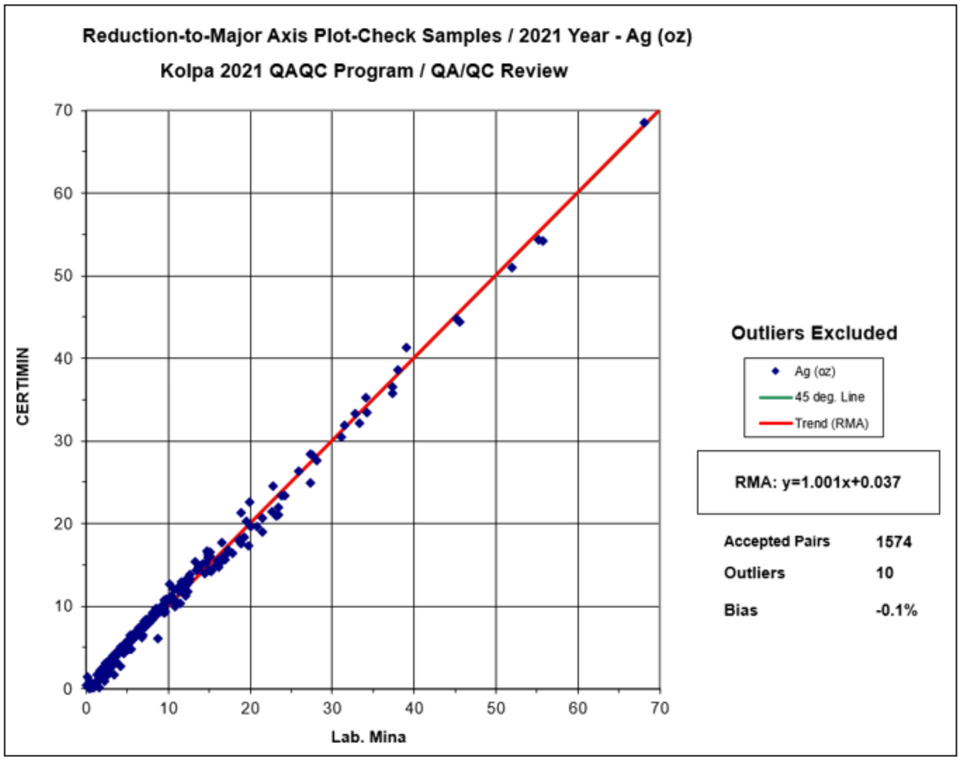


Figure 11-27 RMA plot for check samples in Cu for Huachocolpa Uno (Kolpa vs. Certimin)

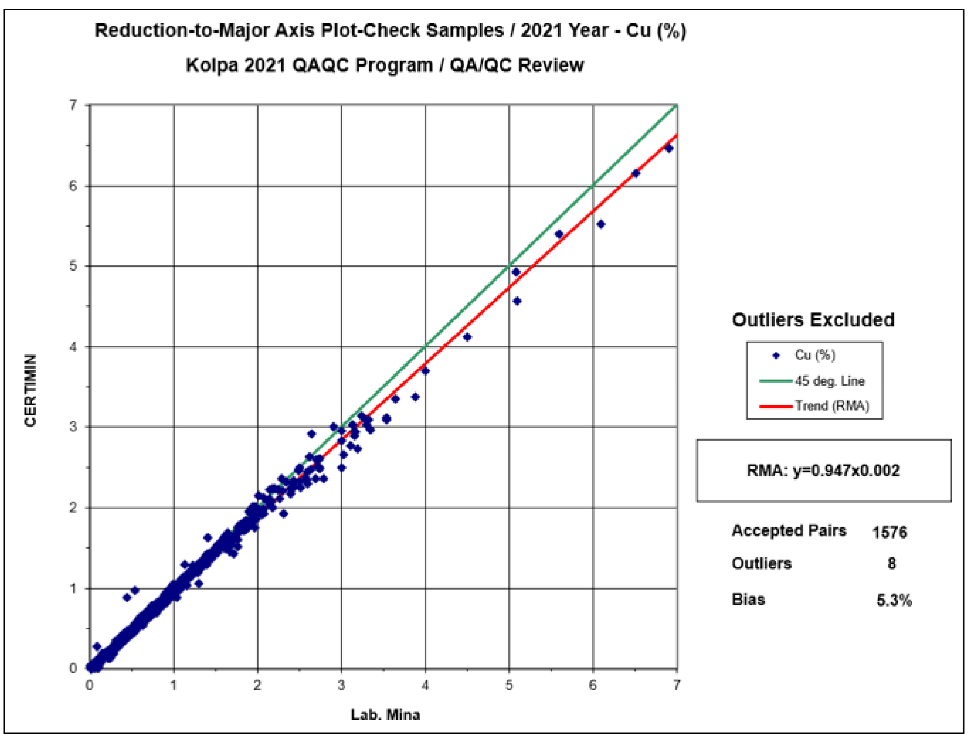


Figure 11-28 RMA plot for check samples in Pb for Huachocolpa Uno (Kolpa vs. Certimin)

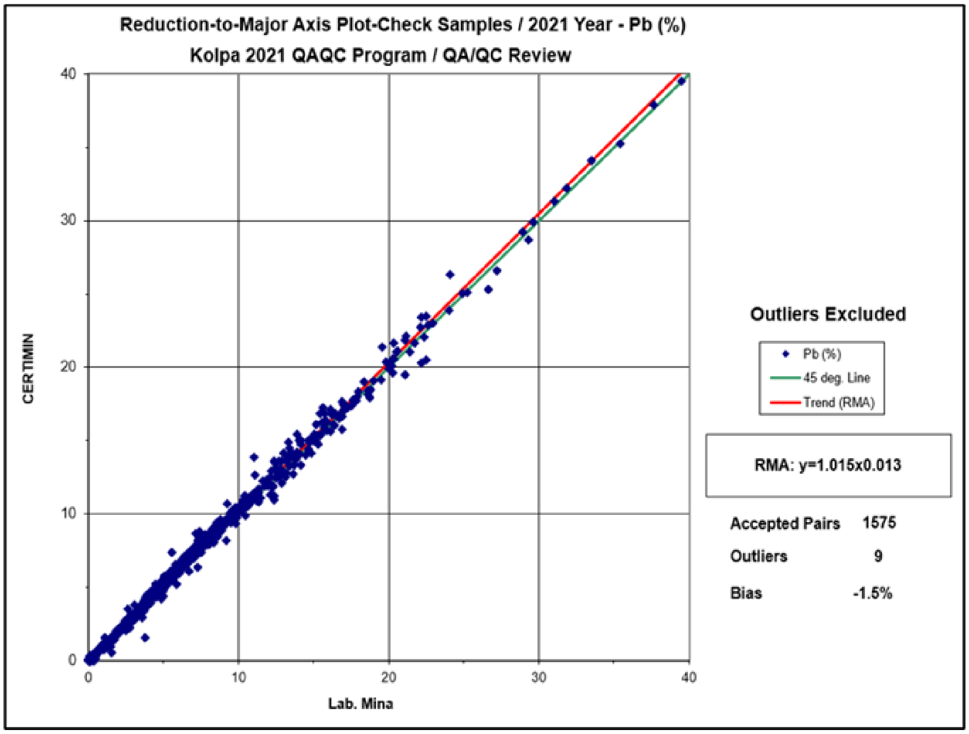
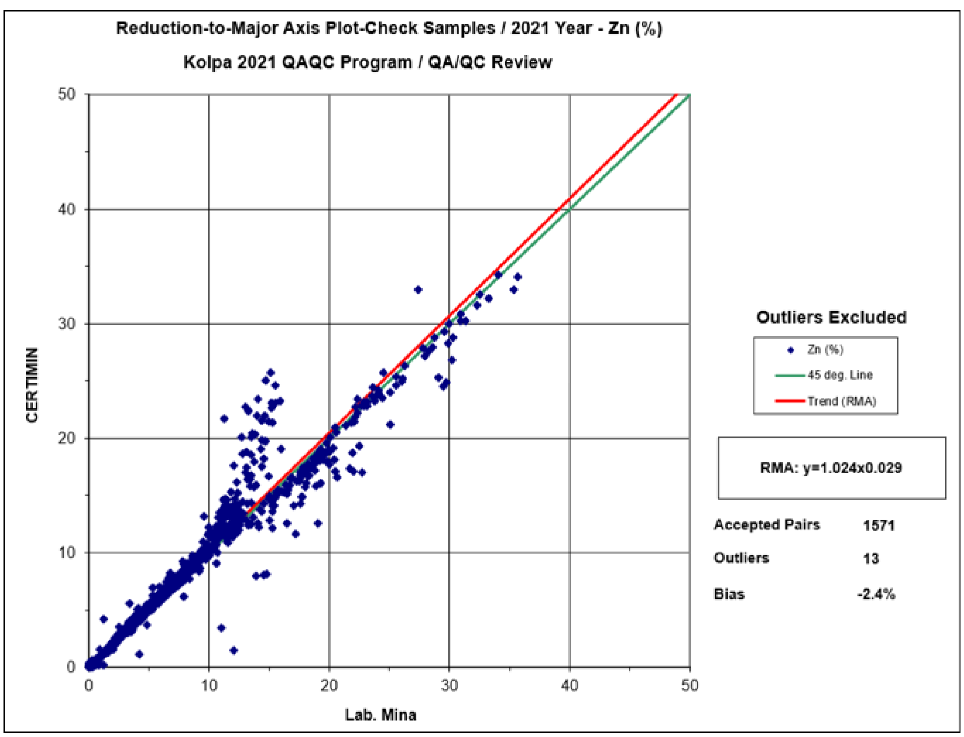


Figure 11-29 RMA plot for check samples in Zn for Huachocolpa Uno (Kolpa vs. Certimin)



11.8 QP's Comments

It is the QP's opinion, based on a review of all available information to March 31st, 2023, that the sample preparation, analyses and security used on the Project by Kolpa meet acceptable industry standards (past and current). Review of the Company's QA/QC program indicates that there are no significant issues with the drill core assay data. The data verification programs undertaken on the data collected from the Project support the geological interpretations and the analytical and database quality, and therefore data support the historical MREs.

Endeavour has yet to complete exploration on the Property. The historical MREs completed for the Property were prepared prior to Endeavour's purchase agreement with Kolpa. Additional diamond drilling, underground channel sampling and mining has been conducted on the Property since the last historical MRE was completed and subsequent to the latest documentation available of the sample preparation, analyses and security used on the Project. To upgrade historical estimates to current MREs, Endeavour will need to review all drill data and underground channel sampling completed to date.

12 DATA VERIFICATION

12.1 Introduction

The following section summarises the data verification procedures that were carried out and completed and documented by the Authors for this technical report, including verification of all drill data collected by Kolpa during their 2016 to 2024 drill programs, as of the effective date of this report.

12.2 Drill Sample Database

The Project drill sample database has been reviewed in 3D software with available Kolpa mineralization models. An independent verification of the assay data in the drill sample database is required prior to use in a current MRE. Verifications should also be completed on drill hole locations, down hole surveys, lithology, SG and topography information before the database can be considered of sufficient quality to be used for a current MRE.

Eggers has reviewed the sample preparation, analyses, and security (see Section 11) completed by Kolpa for the Property. Based on a review of all available information, the sample preparation, analyses, and security used on the Project by Kolpa, including QA/QC procedures, are consistent with standard industry practices and the drill data can be used for geological and resource modeling, and therefore data support the historical MREs.

12.3 Site Visits and Scope of Personal Inspection

12.3.1 Site Inspection by Dale Mah, P.Geo.

The Kolpa Project was visited by Dale Mah on October 9, 2024, and January 12, 2025, for the purpose of:

- Inspection of selected drill sites and outcrops to review the drill and local geology
- Reviewing current core sampling, QA/QC and core security procedures
- Inspection of drill core, drill logs, and assay certificates to validate sampling, confirm the presence of mineralization in drill core and underground workings.
- Inspection of the project site to access accessibility, topography, available infrastructure and proximity to towns and roads,
- The visit also included a general tour of the property to assess road conditions, surface water, power supply, process plant, tailings storage and mine portals

12.3.2 Site Inspection by Donald Gray, SME-RM.

The Kolpa Project property was visited by Donald Gray on January 12 and 13, 2025 for the purpose of:

- Inspection of the project site to assess accessibility, topography, available infrastructure and proximity to towns and roads,
- Review of underground mining methods, mine planning, mine stope design model with Kolpa technical staff
- Inspection of underground mine workings, surface mining activity, geotechnical conditions, process plant and tailings storage facility
- Review of the processing plant, infrastructure, tailings storage and active mine portals and workings.

12.4 Conclusion

All geological data has been reviewed and verified as being accurate to the extent possible, and to the extent possible, all geologic information was reviewed and confirmed. There were no significant or material errors or issues identified with the drill database. There are no current Mineral Resource Estimates on the Property.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Process Plant Performance

Metallurgical test work is limited for the Property. However, a process plant has been running successfully on the Property for a number of years. A summary of the processing plant performance since 2016 is provided in Table 13-1 and Figure 13-1 to Figure 13-6. The feed rate has increased since 2020. Concentrate production has accordingly increased.

Table 13-1 Processing Plant Historical Record Performance (Kolpa Corporate Presentation, January 2025)

	2016	2017	2018	2019	2020	2021	2022	2023	2024
Tonnes Processed	283,714	283,445	326,005	400,117	455,564	593,545	631,455	661,535	686,503
Head Grade Ag (opt)	3.39	3.80	3.99	3.40	2.26	2.04	2.66	3.06	3.30
Head Grade Pb (%)	4.21	3.34	3.07	3.60	2.92	2.44	2.85	2.90	3.08
Head Grade Zn (%)	3.91	3.74	3.04	2.48	2.87	2.44	2.02	2.12	2.13
Head Grade Cu (%)	0.45	0.33	0.26	0.27	0.27	0.22	0.18	0.18	0.18
Recovery Ag (%)	81.36	81.40	82.92	90.67	89.21	86.58	85.35	89.14	89.88
Recovery Pb (%)	85.95	86.15	90.13	94.53	91.50	89.60	89.98	92.82	93.79
Recovery Zn (%)	84.85	80.96	81.96	81.40	84.84	82.99	82.15	83.91	85.82
Recovery Cu (%)	54.05	52.73	67.98	63.32	56.23	47.04	33.01	44.33	42.54
Produced Ag (oz)	783,664	853,849	1,070,030	1,237,452	863,159	1,049,111	1,431,962	1,805,663	2,037,053
Produced Pb (tonnes)	10,255	8,065	8,998	13,623	12,158	12,971	16,202	17,825	19,820
Produced Zn (tonnes)	9,415	8,394	8,052	7,943	11,011	12,028	10,488	11,746	12,554
Produced Cu (tonnes)	688	492	602	95	690	608	379	522	518
Produced AgEq (oz)	2,812,087	2,536,298	2,827,071	3,153,182	3,206,687	3,532,924	3,916,593	4,599,018	5,066,852

Note : AgEq Calculated using (Pb tonnes x $1,984 + Zn tonnes x $2,755 + Cu tonnes x $9,369)/$26) + Ag oz

Figure 13-1 Historical Processing and production (Kolpa Corporate Presentation, January 2025)

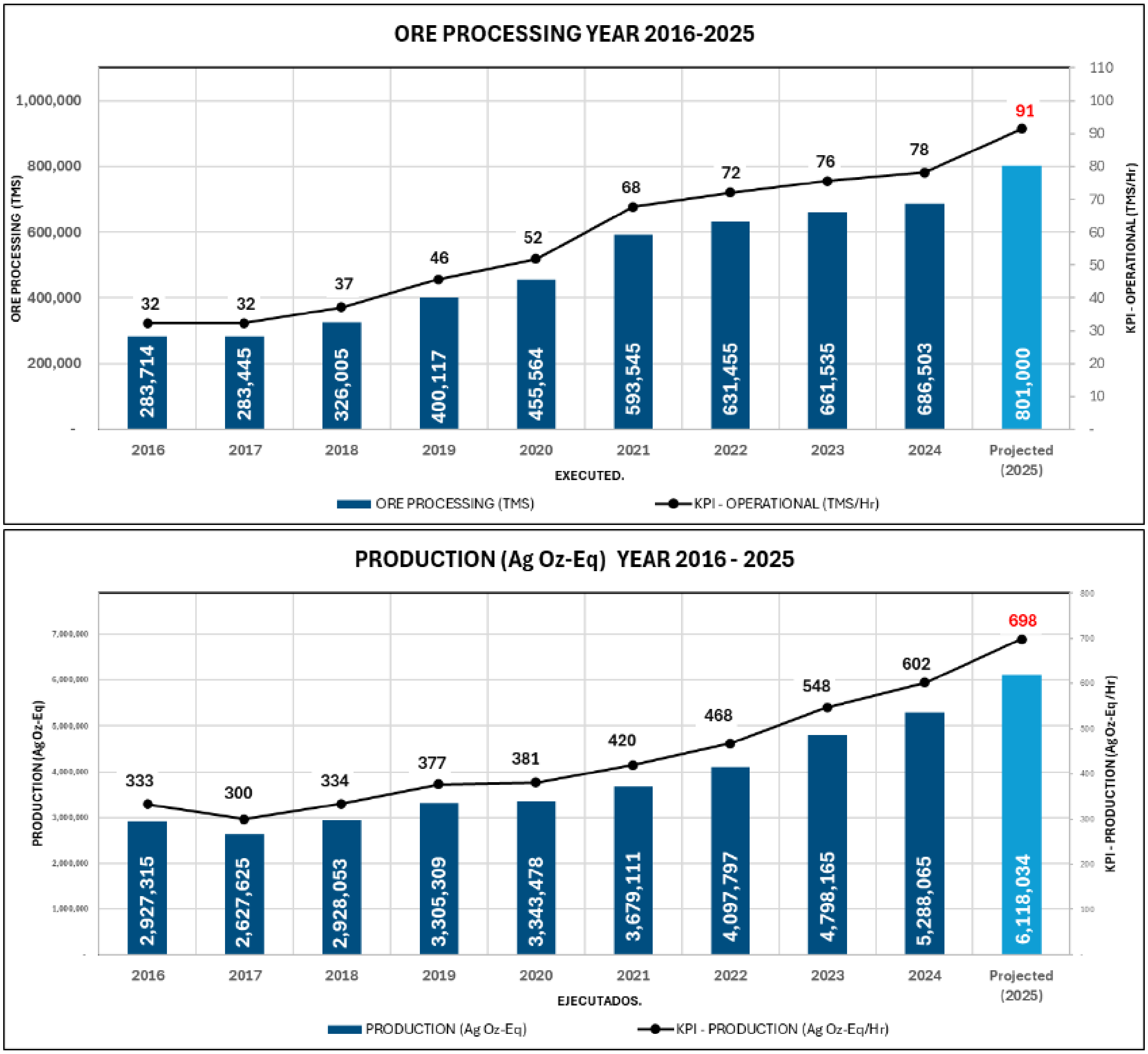


Figure 13-2 Value Contribution per Metal (Kolpa Corporate Presentation, January 2025)

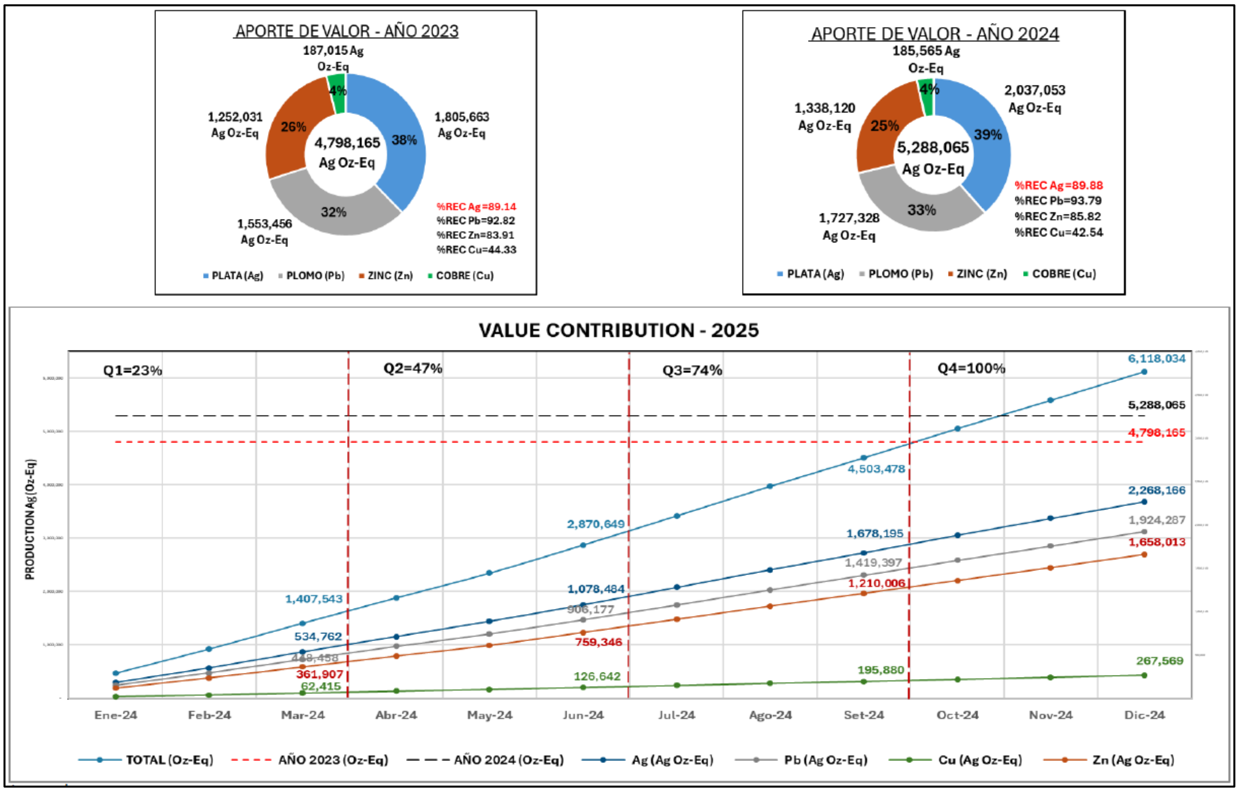


Figure 13-3 Historical Metallurgy Lead (Kolpa Corporate Presentation, January 2025)

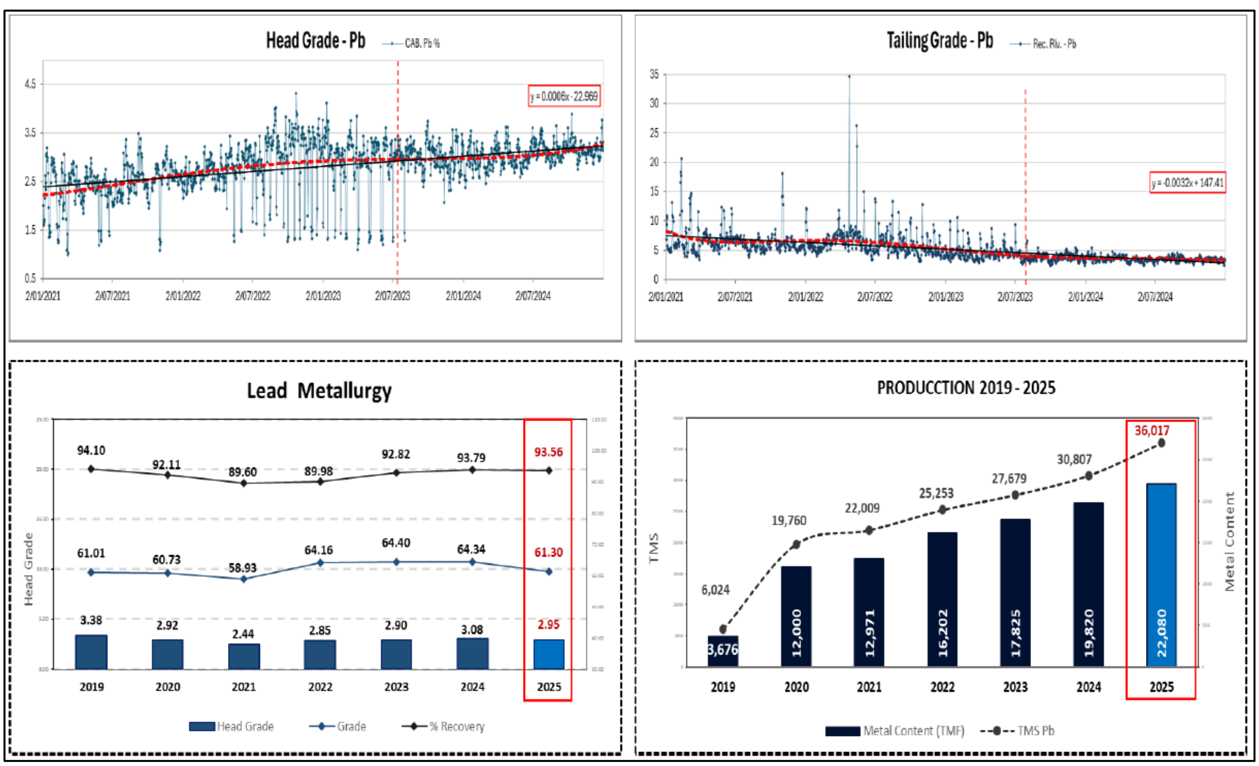


Figure 13-4 Historical Metallurgy Zinc (Kolpa Corporate Presentation, January 2025)

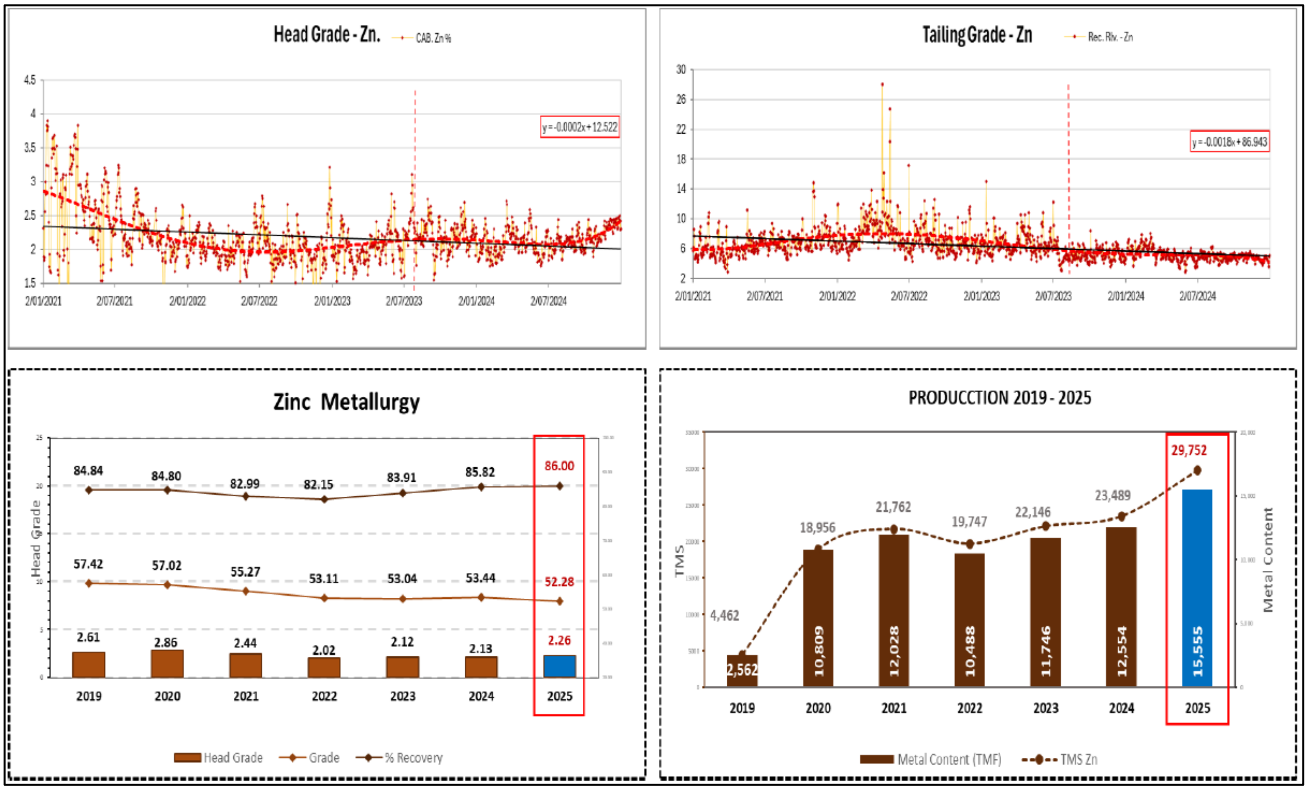


Figure 13-5 Historical Metallurgy Copper (Kolpa Corporate Presentation, January 2025)

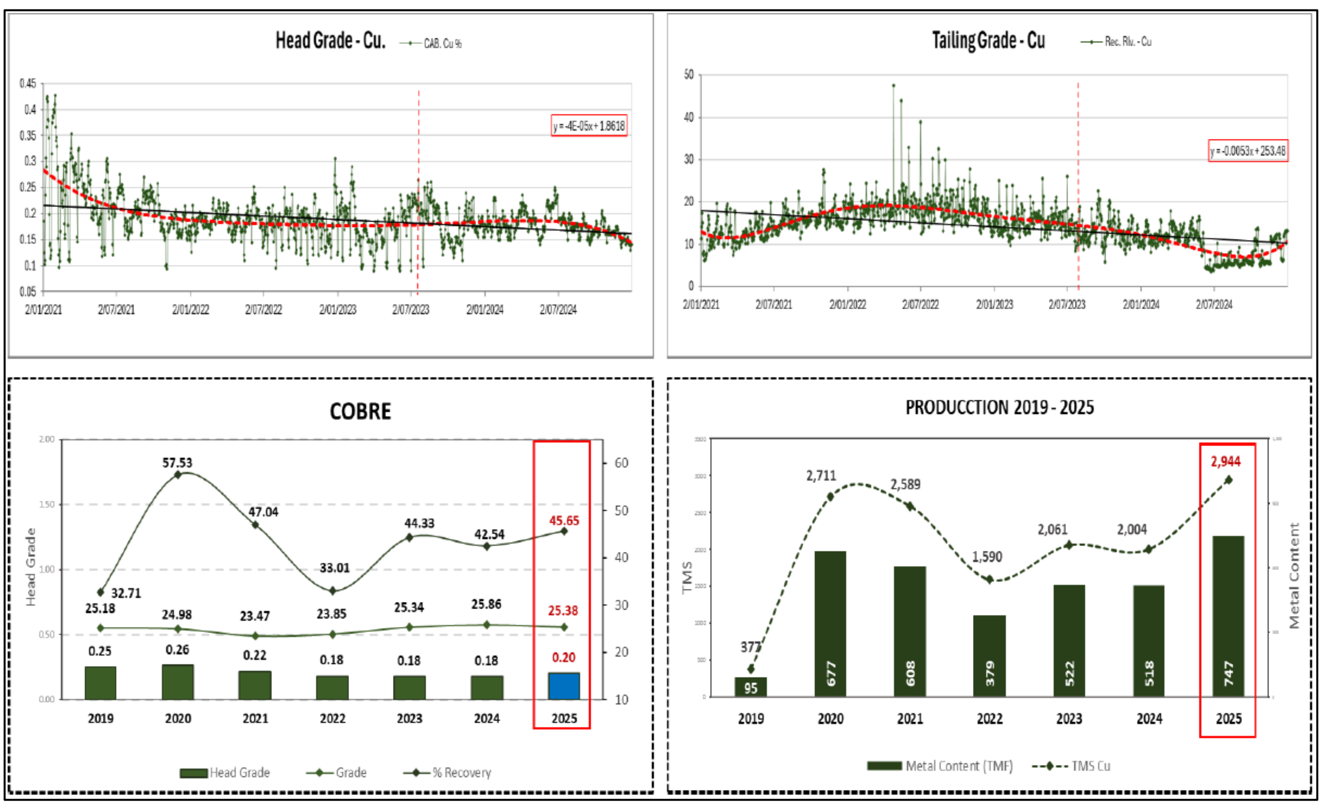
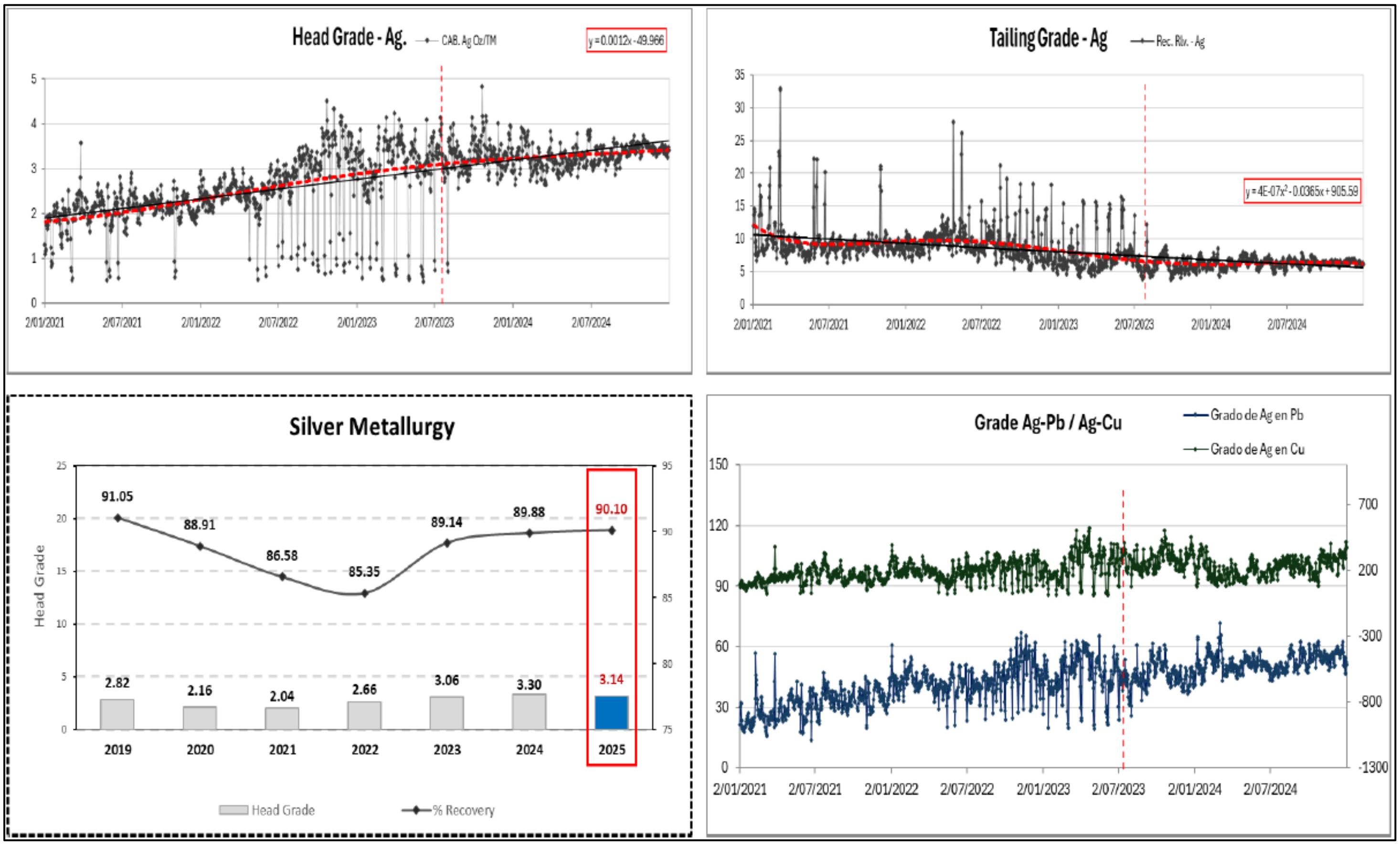


Figure 13-6 Historical Metallurgy Silver (Kolpa Corporate Presentation, January 2025)



14 MINERAL RESOURCE ESTIMATES

There are no current Mineral Resource Estimates on the Property

15 MINERAL RESERVE ESTIMATE

There are no current Mineral Reserve Estimates for the Property.

16 MINING METHODS

16.1 Background

Kolpa has operated the Huachocolpa Mining Unit since 2015 with two production zones differentiated by mining method: Underground mine in the Bienaventurada mine and Yen open pit. Additionally, the operation has two new zones named Chonta/Escopeta that will contribute to production in the following years.

16.2 Geotechnical considerations

Several independent geomechanical studies are available for the Bienaventurada Mine: Geomecánica Latina, 2017, Asesoria Kolpa- Meza, (2018), DCR Engineers, (2018), UNI Rock Mechanics Laboratories, (2021) and Kolpa's internal finite element numerical modeling and stability evaluation within the mine. These evaluations provide recommended design standards for development and production workings, backfill strength characterization, maximum stope dimensions and sequencing.

The geomechanical rock mass classification criteria (Table 16-1) indicates that when applied to the Bienaventurada Vein, the rock mass quality varies in a wide range from Poor B (IVB) to Good (II)), with the following characteristics:

- Far hanging wall: Rock mass quality varies from Poor A (IVA) to Good (II) and a general predominance of Regular B (IIIB) and Regular A (IIIA) quality
- Near hanging wall and near footwall: l Rock mass quality varies from Poor B (IVB) to Regular A (IIIA)
- Mineralized zone: Rock mass quality varies from Poor B (IVB) to Regular A (IIIA).
- Far footwall: Rock mass quality ranges from Regular B (IIIB) to Good (II)

Table 16-1 Rock Mass Classification Criteria (Laymen and Mc Iver, 2024)

Rock Class	RMR-values	Q-values	Quality as RMR
II	> 60	> 5.92	Good
IIIA	51 – 60	2.18 – 5.92	Regular A
IIIB	41 – 50	0.72 – 1.95	Regular B
IVA	31 – 40	0.24 – 0.64	Poor A
IVB	21 – 30	0.08 – 0.21	Poor B
V	< 21	< 0.08	Very Poor

In summary, approximately 80% of the rock mass is classified as regular rock Type III (DCR, 2018), although the percentage could vary between 75 to 90% depend on the level.

Cut-and-Fill (CAF) is the primary mining method and continues to be used over the full range of geomechanical conditions in the Bienaventurada Mine.

Numerical modelling has indicated that sublevel stoping (SLS) mining method was possible to use at Kolpa for rock class III-B or better. DCR Engineers (2018), similarly concluded this mining method could be used in rock formations categorized as class IV-A domain using adequate roof support, and in the case of the class III-B for the host rock, SLS mining was possible.

According to the geomechanical characterizations of different workings of the KOLPA mine, it was concluded that the SLS method with bench-and-fill variation could be less at risk than the conventional overhand CAF method.

For the Yen open cast, the geomechanical characterization shows that the rock is predominantly class III, with an RMR rating of 41 to 60. Physical slope stability analyses for the Yen Open Cast show evidence of a stable condition, with FS ratings of 2.56 for a static condition and 1.66 for a pseudo-static condition.

16.2.1 Ground control

For mine development work, Kolpa planned the following types of support: In case of permanent opening:

- Helical bolts combined with electro-welded wire mesh.
- Shotcrete reinforced with metallic fiber.
- Metal frames

In case of temporal opening:

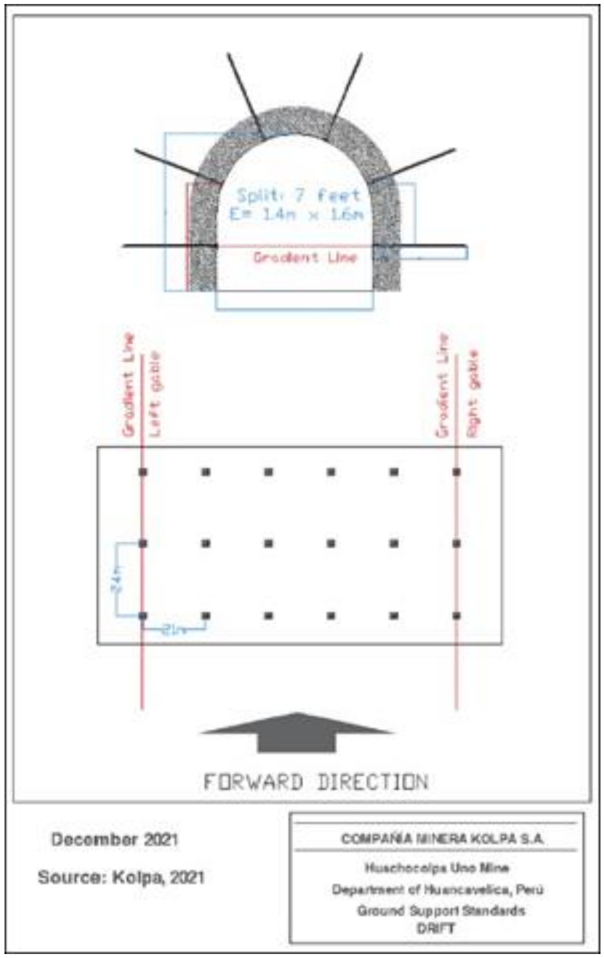
- Split Set bolts combined with electro-welded metal mesh.
- Shotcrete reinforced with synthetic fiber.

The support standard for mine development work, developed by Kolpa personnel, is shown in Figure 16-1. Split bolts 7 ft long spaced at 4 ft (1.4 m). When required, shotcrete is typically 2 inches thick. In areas where there are major facilities such as mine entries or the main pumping system, the support is more extensive and must be design for the conditions.

The stope support is part of the mining cycle and is a very important to control rockfall accidents, and as such, Kolpa considers the following alternatives in its mine planning process:

- Split Set bolts combined with electro-welded metal mesh.
- Helical bolts combined with electro-welded metal meshes.
- Large cable and bolt (greater than 10') for walls.
- Shotcrete reinforced with metallic fiber.

Figure 16-1 Ground Support Standards for Horizontal Development (Laymen and Mc Iver, 2024)



The support selection depends on the rock type and quality, the open section, the maximum openings, the exposure time and the degree of rock mass alteration. Waste backfill is used for both CAF and SLS mining methods.

Support design and stopes dimensioning are determined using finite element analysis and structural geology evaluation combined with stability graphs. SLS openings are sized for stable conditions or transition zones without support. In this case, the stability number N' is based on stopes dimensions of 20 meters high by 20 meters long by variable widths of 1 to 3 meters according to the stope width of the structure.

Mine workings are inspected, and additional support is installed where needed. Convergence points are installed in critical mine openings for constant monitoring of rock displacements.

16.3 Hydrogeological considerations

The observed hydrogeological conditions in Bienaventurada mine indicate flow of low temperature geothermal waters along the deep subvertical faults with a remarkable increase in permeability near the roof and floor of the fault zones. Diamond drilling in the intrusive has been dry, indicating the porphyries possibly represent barriers to groundwater flow, although it is possible that significant geothermal groundwater upward flow could be encountered in the faults delineating the flanks of the intrusive.

The geomechanical mapping conducted by DCR (2018) confirmed that the Bienaventurada mine is 95% dry, with fracture flow found in some locations. Two out of 55 mapped stations have been found to be wet. It can be inferred that the water impact on the stability will be minimal, the most likely instabilities will come from the presence of fault breccias in the contact zones of the vein with the bedrock or a greater degree of fracturing of rock mass. Groundwater locally affects operations in the 4030 to 4080 levels.

16.4 Mining methods

16.4.1 Bienaventurada underground mine

Underground mining method using mechanized equipment has been used for the extracting material in all mine developments and stopes. Operations have been carried out in five clearly identified veins and associates connecting veins between 4080 and 4555 levels (Figure 16-2 and Figure 16-3). The main structure is Bienaventurada vein, with splits at the east and west ends; Bienaventurada Vein splits into three veins on the 4330 Level. All veins in Bienaventurada mine are mined using CAF methods for extraction, with vertical cut, of 2 m, and SLS with height between 8 m to 11 m. Both methods include waste backfill material from mine development and stopes using mechanized equipment.

The Bienaventurada underground mine operated at 1,200 tpd average production in 2021. It reached a maximum mine production of 2,000 t/day. A plan view is shown in Figure 16-2 which shows the current and planned mine developments and stopes.

Mining operations have reached a depth of 500 meters. Mineralized material is hauled to surface and then to the processing plant, located at an average 3 km from the portal.

In the long range, the plan was to increase the application of SLS to 66% of total tonnes of underground inventories. Successful trial mining undertaken in Bienaventurada demonstrated the viability of increasing the sublevel designed height to 14-m, which can increase productivity while reducing operating costs.

Figure 16-2 Bienaventurada Underground Development – Plan View (Laymen and Mc Iver, 2024)

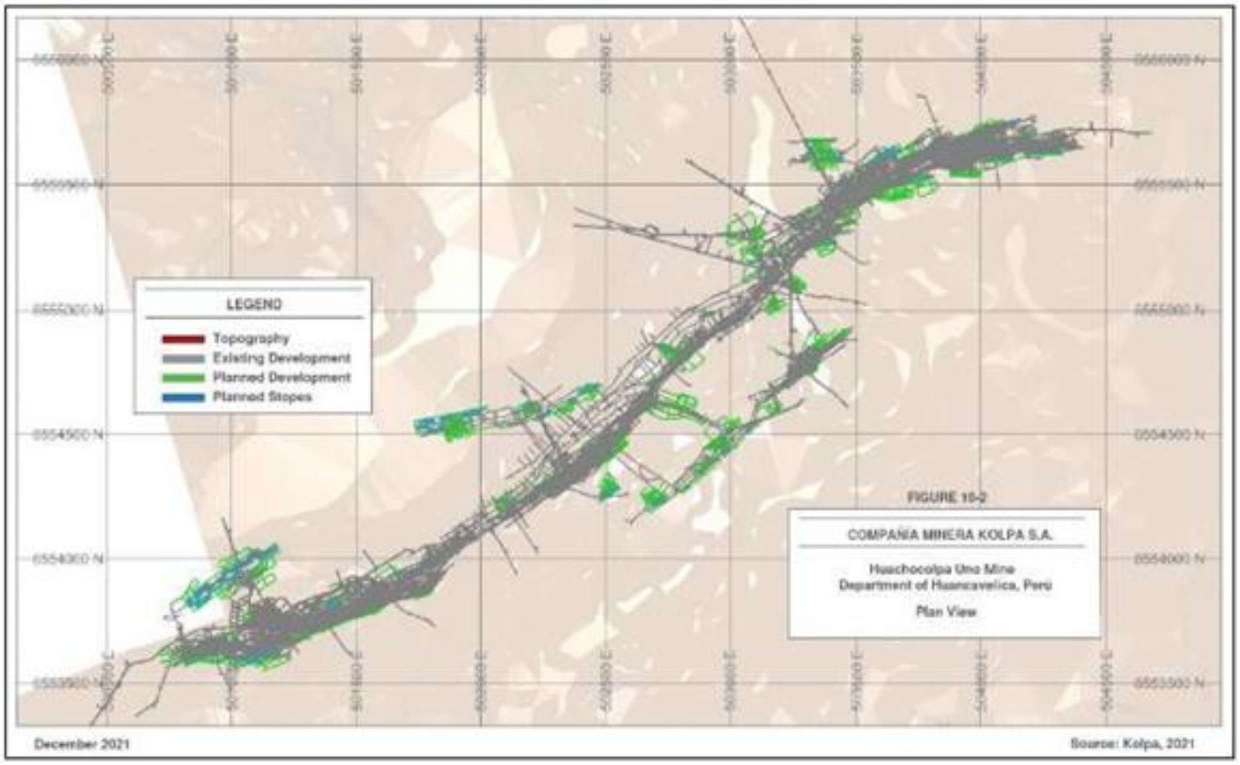
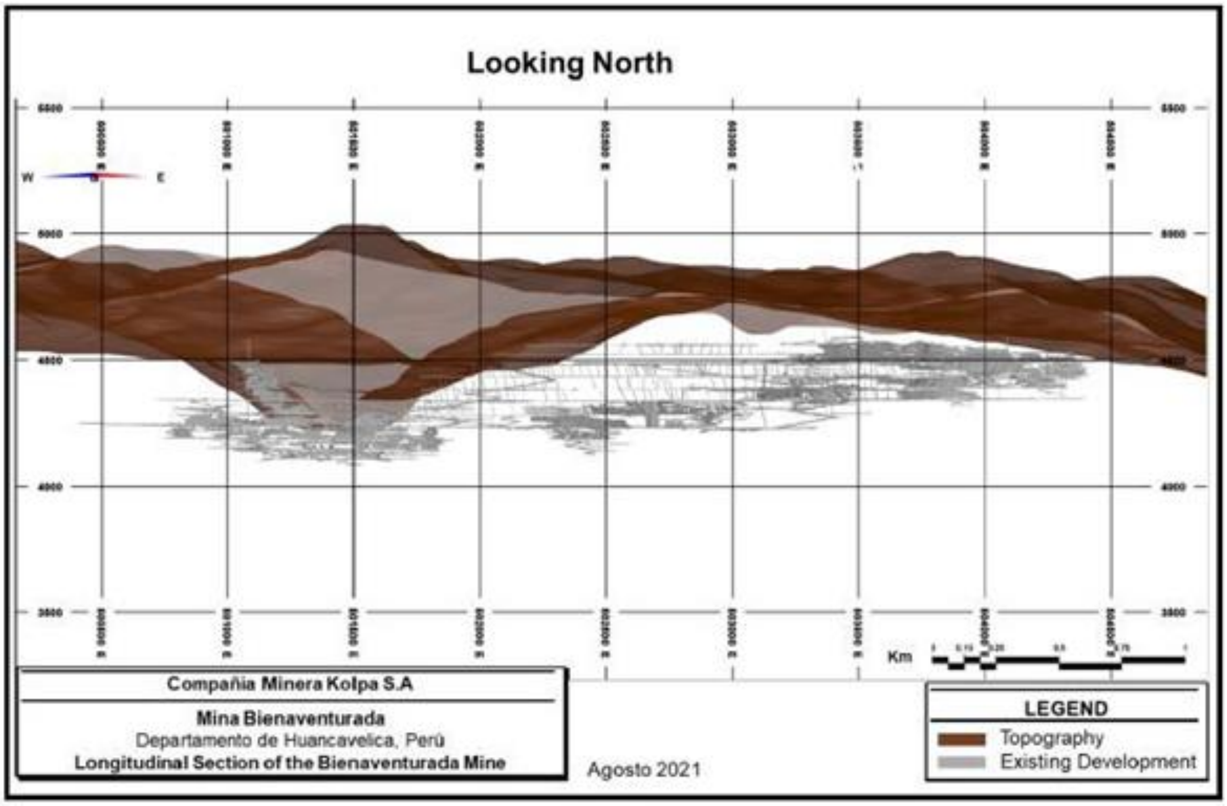


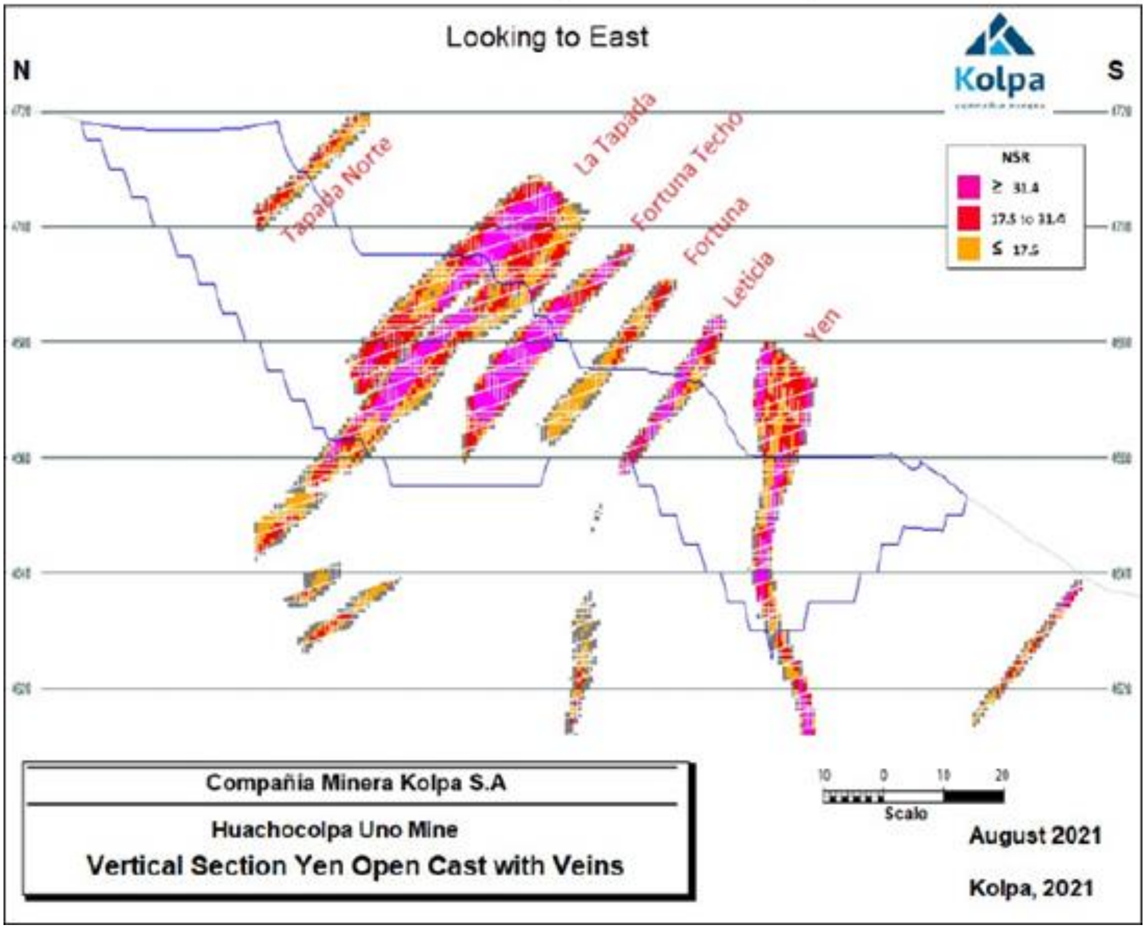
Figure 16-3 Bienaventurada Underground Development – Logintudinal View (Laymen and Mc Iver, 2024)



16.4.2 Yen open pit

The Yen open pit was operated using mechanized conventional mining methods with 15 m^3 or 30 T dump trucks. The pit design is designed with 5-m high benches and 45-degree inter-ramp angle and 6-m wide one-way ramps. Eleven veins had been identified in the pit area. Scattered areas between veins were also present (Figure 16-4). The mine was accessed by 2 ramps through which the mineralized material was hauled to the processing plant. The Yen pit averaged production of 300 t per day.

Figure 16-4 Vertical Section of the Yen Pit (Laymen and Mc Iver, 2024)



16.5 Mining method parameters

16.5.1 Bienaventurada underground mine

The mining methods used at the Bienaventurada UG mine are Sublevel Stoping (SLS) and Cut and Fill (CAF). Production by cut and fill is performed by specialized companies (contractors) and SLS mining is performed by Kolpa employees.

In the CAF method, each cut is mined at a 2 m height, and each stope is 50 m high and 300 m long to the vein width; each cut is accessed by inclined ramps. Each cut is filled with waste rock.

In certain areas, Kolpa uses the Avoca method. This method is used to extract areas with weak wall rocks which are susceptible to premature wall collapse and only along a relatively short strike length where the void can be immediately filled tight with waste rock. The long holes can be drilled either upward or downward.

with the SLS method, stopes dimensions are typically 8 m to 14 m high and 50 m length to the vein width. The dimensions may according to mineralization and local geomechanical conditions. Drill hole diameters are 64 mm. Extraction plans include detailed stope plans, and drill and blast plans to provide the best results (Figure 16-5).

Kolpa uses comprehensive procedures describing all aspects of stopes designs, including access, refuge areas, loading zones, drill and blast pattern designs, ground support according to local geology and the geomechanical assessment used to determine the required ground support. These procedures provide a sound approach to Kolpa's mining operations and comply with Peruvian mining industry standard practices.

Typical mining designs for CAF and SLS Stoping are shown at Figure 16-6 and Figure 16-7.

Figure 16-5 SLS Production Drilling Pattern at Buenaventura (Laymen and Mc Iver, 2024)

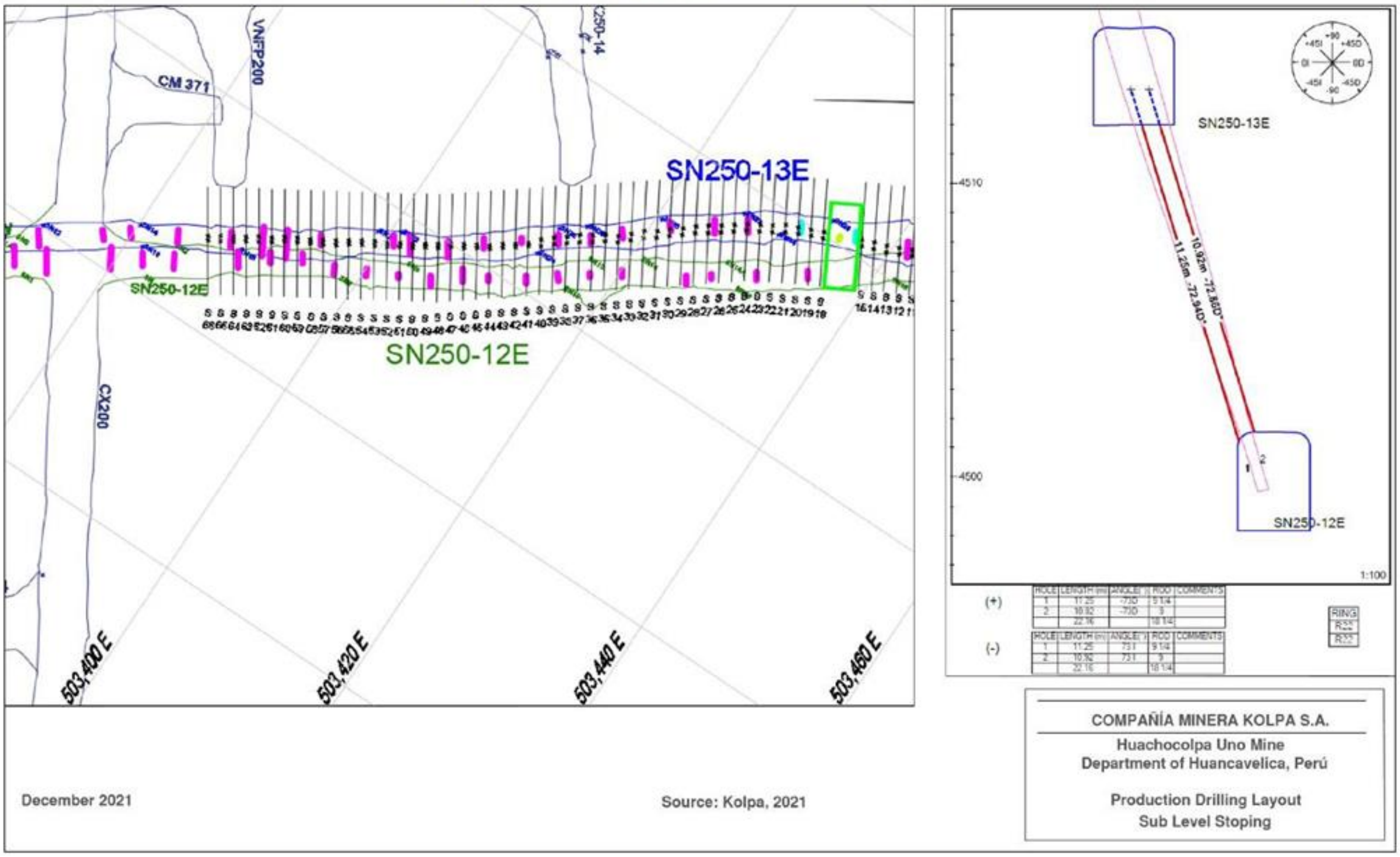


Figure 16-6 SLS Production Cycle (Laymen and Mc Iver, 2024)

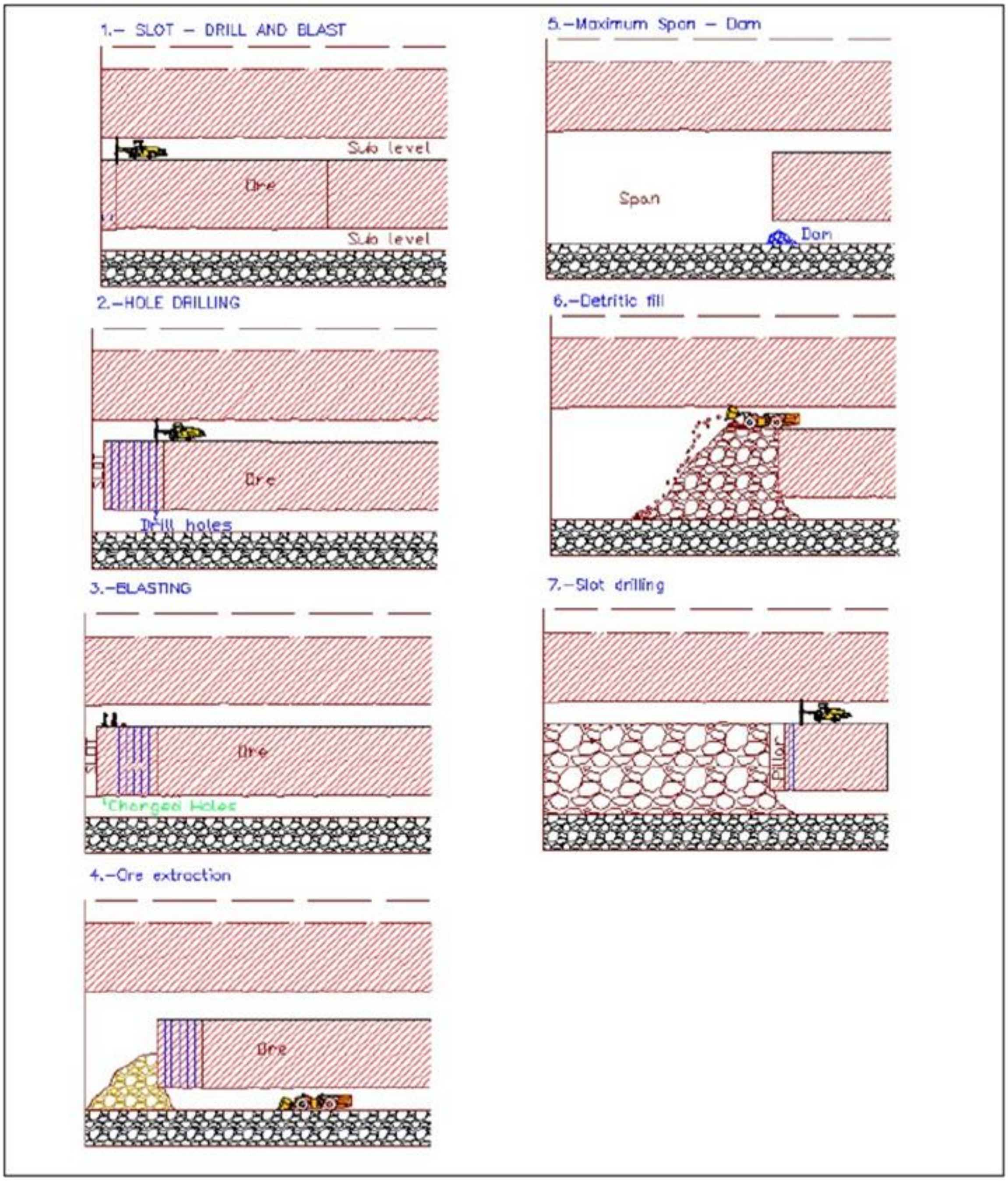
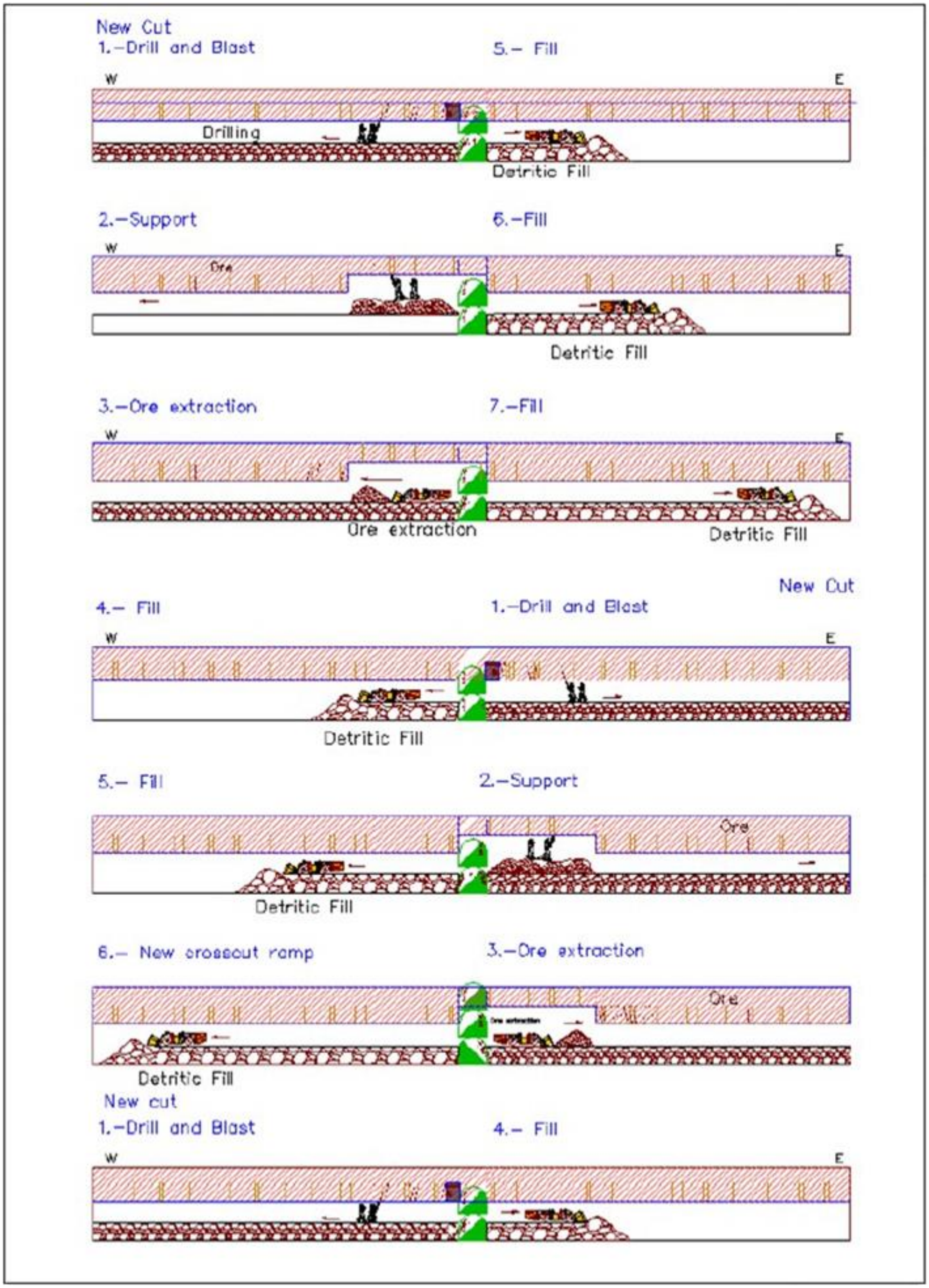


Figure 16-7 CAF production cycle (Laymen and Mc Iver, 2024)



16.5.2 Yen open pit

Yen is outsourced in its mining operations, including drilling, blasting, loading, and hauling.

The mine has a 5 m bench height design, a 2.0 m x 2.0 m drill mesh is used, and a 0.5 m sub drilling, the loading of the drills is done with emulsion and ANFO.

Loading is done with a 2.1 m^3 excavator and a 4.2 m^3 capacity front loader. The ramps are 6 m wide with a gradient of 10% to 12%. Hauling is by 15 m^3 dump trucks to the concentrator plant located 5.9 km from the pit and the sterile materials are disposed in waste dump located 1.2 km from the pit.

16.6 Stope optimization

Underground mining inventories were estimated at Kolpa using a NSR value factors included to the resource model. 3D mining software has been used to generate optimized mining stopes. Planned dilution parameters according to Table 16-2 were considered in the final dilution and resource recovery (85% SLS and 90% CAF). The optimization was performed separately for each vein.

The stopes generated are created from dimensions that have the general standard size used as a mining pattern, after which they are interrogated against the block model to obtain their grade attributes and are filtered to exclude mined areas, inferred category resources and out of surface topography.

The designs and stopes are added to the software to generate a production schedule. Dilution and recovery factors are validated in the planner. Extraction estimates are reported as diluted tonnes and grades for a long-term mining plan.

Table 16-2 Mine Dilution Factors

Mining Method	Vein Width	Measurement Condition	Dilution
Cut and Fill (CAF)	Vein width < 1.0	1/Vein width < 1.40	1.40
		1/Vein width >= 1.40	1/Vein width
	Vein width >= 1.0		1.40
Sub Level Stoping (SLS)	Vein width < 1.5	1/Vein width < 1.53	1.53
		1/Vein width >= 1.53	1/Vein width
	Vein width >= 1.5		1.53

16.7 Yen pit optimization

Yen Open Cast includes 11 closely spaced veins. The initial resource block model was 1x1x1 meters used for the pit size optimization process using the Lerch & Grossman algorithm, then this model was resized to a block size of 2x2x5 meters to model dilution and for production estimates. These new dimensions were used to better reflect mining equipmentsizes , drill grid geometry and bench height.

16.8 Mine design

The main mining methods at the Huachocolpa Uno underground operations used sublevel stoping (SLS) and cut and fill (CAF). The underground mines accounted for nearly 70% of production supplemented with 30% of from the Yen pit. The main mining method at the underground operations was cut-and-fill (CAF), which represented 75% of the total underground production. However, the mine has been increasing the proportion of SLS so that, in the long term, it is planned to target 66% of the underground tonnages mined with SLS at 14-m level height.

The largest mine production source is Bienaventurada mine, which includes 260 veins. The second underground production area has been Chonta / Escopeta operations, which included up to 76 veins.

All veins to be mined by underground (UG) and open pit (OP) methods are considered polymetallic sulfide minerals containing silver, lead, zinc and, in lower concentration, copper.

For the ventilation of the Bienaventurada mine, ramp 01, ramp 02 and raise are used for the main ventilation. At the beginning of 2022, the construction of a 3 m x 3 m raise with a length of 220 m was being implemented at level 4518 that will connect to the surface to the south of the Bienaventurada mine.

The Yen mine was accessed by operating ramps from the north wall that provided access to the production levels, these ramps were connected to a main road that leads to the plant located 5.9 km from the mine. Total mine production from Yen pit was an average of 300 t/day and was considered a supplementary area to provide mineralized material to process continuously.

The Chonta and Escopeta underground project were new projects.

16.8.1 Bienaventurada underground mine

The underground mine encompasses 4.0 m x 4.0 m access declines and 4.0 m x 4.0 m by-passes at main levels where infrastructure is located (sumps, electrical substations, refuges, storage areas, etc.), as well as 3.0 m x 3.0 m operating ramps to access the stopes. A contractor used a fleet of 20-tonne and 25-tonne haul trucks to move the material from the pits to final destination.

The stopes mining widths are variable depending on the mining method, but minimum width is governed by the unit drilling operation, the mining method itself, and vein width. For CAF, the minimum width is 1.0 m and for the SLS method, minimum width is 1.5 m. In the case of mine development, width is determined equipment to be used in the heading.

16.8.2 Yen open cast

The Yen pit design is based on pit optimized in the mining software with the Lerch and Grossman algorithm with a bench height of 5 m and bench angle (BFA) of 70° and an inter-ramp angle (IRA) of 45°, vertically between elevations 4630 and 4725 masl.

16.9 Mine infrastructure

The underground mine has well developed infrastructure. The main surface infrastructure is described in Section 18 Project Infrastructure.

16.9.1 Mine access

The underground mine is accessed using 2 ramps oriented to reach the extreme operating zones located at both upper and lower levels. The ramps extend deep into the various operating levels required along the various mineralized structures. Ramp dimensions are typically 4.0 m x 4.0 m, which corresponds to the dimensions necessary to meet equipment clearance regulations, ventilation requirements and adequate space for the installation of services run through the ramp accesses. There are also local ramps that provide access to the stopes in operation and advance fronts that are being developed and prepared for production.

The Yen mine is accessed by operating ramps from the north wall that provides access to the production levels. These ramps are connected to a main road that leads to the plant located 5.9 km from the mine.

16.9.2 Ventilation

The underground mine's ventilation circuit is extensive, consisting of secondary and auxiliary fans, as well as workings connected through ventilation raises.

Local ventilation circuits are usually separate for each stope in operation. A total of 506,679 cfm inflows the mine through 5 inlets (2 mine entrances and 3 raises). The ventilation system is powered by 39 fans (6 secondary and 33 auxiliary) that are installed in the ventilation circuits and several booster fans. The secondary fans extract the stale air from the various mining areas and direct it to the outside through 3 main raises.

16.9.3 Haulage

Underground development waste is used to backfill the production stopes. If there is excess waste, it is transported to the surface and deposited in a waste dump.

The produced mineralized material is transported from the stopes to the nearest loading chamber and then loaded into dump trucks and transported to the beneficiation plant crusher or stockpile.

At Yen Open Cast, the produced mineralized material is transported by 15 m^3 dump trucks to the beneficiation plant located 5.9 km from Yen Open Cast and the waste rock is transported to the DD-15 waste dump located 1.2 km away.

16.9.4 Power

The mine is supplied by a power system that provides approximately 6 MW. The main power supply to surface is 22 kV and supplied to the mine UG at 4.4 kV, to the substations and reduced to 440 V to power equipment such as mine pumps, mine fans and others. The mine has a back-up generator to support the main ventilation system.

16.9.5 Water

Recycling and reuse provide the water supply for the underground mine. In the case of Kolpa, water is collected from the UG mine's centralized pumping system and from sump 7A, pumped to surface reservoirs for distribution inside the mine to the work areas. Water is used mainly for drilling, dust control, and shotcrete requirements.

16.9.6 Dewatering

The underground mine workings are generally dry or with limited water occurrences in flow up to level 4130, below which a water table has been defined with a measured flow of 70 l/s of water in the deepest part. Inflows from upper levels accumulate a flow of 95 l/s pumped at a rate of 18 hours per day. The pumping system includes a central system at level 4230 (Ramp 02) with 500 HP pumps (2) and an auxiliary system at level 4130 with 175 HP pumps (3). The water pumped from depth has a pH 6.5 and is treated (central system level 4230) with other water from inside the mine for pumping to the surface. Pumped water is either returned to the mine network and overflows to the surface treatment plant.

16.9.7 Backfill

Backfill for the CAF and SLS is obtained from the development waste, and at times, extra waste material excavated in the footwall of CAF stopes. The mine operating plans includes avoiding extracting waste to the surface. It is not necessary to transfer backfill material from the surface.

16.9.8 Compressed Air

The drilling rigs in the underground mine are electric and equipped with on-board air compressors. There are also manual pneumatic machines for drilling in the semi-mechanized workings.

The compressed air system supplies air from the compressor house (1 compressor of 1648 cfm and 1 compressor of 2208 cfm). This system has 12" pipes in the main circuits, 10" pipes in the main access branches to the levels and feeds the work zones with 4" pipes. The compressed air is also used for shotcrete spraying and other operational processes.

16.9.9 Maintenance

The maintenance facilities for the underground mine consist of 2 in-mine workshops, one operated by the contractors and the other by Kolpa management. These shops are equipped for minor maintenance and preventive maintenance services, while equipment requiring major repairs and service is transferred to the surface shop facilities. Contractors supporting the mine maintain their own surface service and do not use the subsurface facilities. In Yen Open Cast, the same workshop is used on the surface.

16.9.10 Communications

The underground mine is equipped with a leaky-feeder radio system that provides effective communications to all areas of the mine and hard-wired telephones to select annexes. The mine is supported by a communications center, which operates 24 hours per day. Mine rescue teams are available in case of emergency situations. Wi-Fi fiber optics are currently being implemented in a workshop area and pumping system.

Consideration has been given to upgrading the mine's ground data communications capabilities by replacing the current system with a fiber optic Wi-Fi network or a 4G-LTE cellular network throughout the mine. An upgraded communications system would allow better control and monitoring of underground operations from a surface control room. These centralized functions can include functions such as real-time personnel and equipment tracking, telemetry, on-demand ventilation, and pump control.
In Yen Open Cast, there is radio signal and cellular network.

16.10 Mining equipment

The mining equipment list is shown in Table 16-3 and includes the several contractors operating at Compañia Minera Kolpa (Underground Mine and Yen Open Cast). The equipment list can vary as contractor work schedules and conditions vary over time.

Mining equipment performance and productivity criteria are shown in Table 16-5 for the UG mine and Table 16-6 for the Yen Open Cast. The required equipment fleet is also shown and estimated from the productivity levels and production requirements.

Table 16-3 Underground Mining Fleet (Laymen and Mc Iver, 2024)

1. SCOOP	2024	2025	2026	2027	2028	2029	2030
BNV + RUBLO	13	17	18	17	16	14	9
TERESITA	0	6	4	4	4	3	5
ESCOPETA	0	0	0	4	5	4	7
CHONTA + YEN NE			0	4	4	4	3
Total	**13**	**27**	**26**	**29**	**28**	**26**	**30**
2. DUMPER	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
BNV + RUBLO	6	8	7	8	7	5	4
TERESITA	0	2	2	2	2	1	2
ESCOPETA	0	0	0	2	2	2	2
CHONTA + YEN NE			0	2	2	2	2
Total	**6**	**12**	**11**	**14**	**13**	**10**	**10**
3. TRUCKS	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
BNV + RUBLO	11	14	14	14	12	9	6
TERESITA	0	3	2	2	2	1	3
ESCOPETA	0	0	0	2	2	2	2
CHONTA + YEN NE			0	2	2	2	2
Total	**11**	**19**	**18**	**20**	**18**	**14**	**14**
4. JUMBO TL	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
BNV + RUBLO	5	4	5	5	6	7	5
TERESITA	0	1	1	1	1	0	0
ESCOPETA	0	0	0	0	0	1	1
CHONTA + YEN NE			0	0	0	0	1
Total	**5**	**5**	**6**	**6**	**8**	**9**	**8**
5. JUMBO H	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
BNV + RUBLO	8	11	10	9	6	0	0
TERESITA	0	2	2	2	2	0	0
ESCOPETA	0	0	0	2	2	2	2
CHONTA + YEN NE			0	2	2	2	2
Total	**8**	**15**	**14**	**15**	**12**	**4**	**4**

Table 16-4 Open Pit Mining Fleet (Laymen and Mc Iver, 2024)

Description	Transtop	Nazareno	Cohersa	Total
Production Drills	2			2
Excavator	2			2
Front End Loaders	2			2
Conventional Trucks 15 m^3	2	2	1	5
Total	8	2	1	11

Table 16-5 KPI's for the Underground Mining Fleet (Laymen and Mc Iver, 2024)

Description	UG Method	Nº Units	Distribution Contract / Kolpa	Availability %	Utilization %	Productivity Avg.	Units	Crew Avg.
Jumbos	CAF / DRIFT	8	6/2	64	45	24	m/h	5.2
Raptor	SLS	2	0/2	64	48	29	m/h	1.3
Muki Lhbp	SLS	1	0/1	74	38	23	m/h	0.7
Bolters	DRIFT	1	1/0	90	0	0	m/h	0.9
Underground Truck	CAF / SLS	3	0.5	69	61	36	t/h	2.1
Scoops	CAF / SLS / DRIFT	35	30/5	65	56	55	t/h	22.7
Conventional trucks 20t	SURFACE / UG	12	12/0	75	71	18	t/h	9
Conventional trucks 22t	SURFACE / UG	2	2/0	85	75	17	t/h	1.7
Dozers	SURFACE	1	0/1	70	41	47	m/h	0.7
Front End Loaders	SURFACE / UG	1	0/1	81	84	17.8	m/h	0.8
Graders	UG	1	0/1	92	50	51	m/h	0.9
Skid Steer Loader	SURFACE / UG	2	0/2	68	45	15	m/h	1.4

Table 16-6 KPI's for the Open Pit Fleet (Laymen and Mc Iver, 2024)

Description	Nº Units	Distribution Contract / Kolpa	Availability %	Utilization %	Productivity (Avg.)	Units	Crew (Avg.)
Production Drills	2	2/0	1	0	39	m/h	2.0
Excavator	2	2/0	1	1	197	t/h	1.0
Front End Loaders	2	2/0	1	0	67	t/h	1.0
Conventional Trucks 15 m^3	5	5/0	1	1	68	t/h	5.0

16.11 Workforce

The workforce is composed of company personnel and contractors. The lists of personnel and contractors for the mining operations are presented in Table 16-7. The number of personnel required for mining operations is not expected to change significantly in the expected future.

At the UG mine, production of the Sub Level Stoping (SLS) stopes is carried out by personnel of Kolpa, while production and stopes-related Cut and Fill (CAF) stopes are carried out by contractors. Operators and technical personnel work a 14 x 7 work shift cycle consisting of seven days of dayshift, seven days on nightshift, and seven days off.

At the Yen Open Cast mine, production and additional work is performed by contractors. Operators and technical personnel work a 14 x 7 work shift cycle consisting of seven days on day shift, seven days on night shift, and seven days off.

Table 16-7 Kolpa Workforce – Underground and Open Pit Mine (Laymen and Mc Iver, 2024)

	2024	2025	2026	2027	2028	2029	2030
Kolpa Operators	308	426	426	426	426	426	463
Kolpa Staff	314	314	314	314	314	314	314
Total	622	740	740	740	740	740	777
Mining contractor operators	246	341	341	341	341	341	370
Mining contractor staff	160	160	160	160	160	160	160
Total	406	501	501	501	501	501	530
Other contractors operators	393	544	544	544	544	544	591
Other contractors staff	95	95	95	95	95	95	95
Total	488	639	639	639	639	639	686
Open pit operators	28	28	28	28	28	28	10
Open pit staff	6	6	6	6	6	6	6
Total	34	34	34	34	34	34	16
Grand total operators	975	1,339	1,339	1,339	1,339	1,339	1,434
Grand total staff	575	575	575	575	575	575	575
Grand total	**1,550**	**1,914**	**1,914**	**1,914**	**1,914**	**1,914**	**2,009**

17 RECOVERY METHODS

17.1 Introduction

Kolpa conducts exploration, exploitation and beneficiation of polymetallic minerals with high contents of lead, silver, zinc and copper, to produce and market concentrates of copper (Cu), lead (Pb) and zinc (Zn).

New and replacement processing equipment procurement is progressing to expand milling capacity from 1,800 tpd to 2,500 tpd

The following sections describe the 1,800 tpd processing flowsheet and the flowsheet for the expansion to 2,500 tpd, including equipment, key consumables and utilities for the concentrator at the Huachocolpa Unit (Laymen and Mc Iver, 2024).

17.2 Process Flowsheet

The existing concentrator plant beneficiates the polymetallic mineralization using a conventional selective flotation process to obtain a bulk concentrate that is subsequently separated into lead-copper and zinc concentrates. The concentrator plant performs the following processes:

- Crushing;
- Grinding and classification to the pulp;
- Bulk flotation Cu-Pb-Ag;
- Separation Pb-Cu;
- Flotation Zn;
- Thickening and filtering of the Zn, Pb and Cu concentrates;
- Classification, transport and tailings disposal.

The existing processing flowsheet is shown in Figure 17-1. The existing process plant layout is shown in Figure 17-2 while the future flowsheet for the expansion to 2,500 tpd is presented in Figure 17-3.

Figure 17-1 Existing Process Flowsheet Diagram (Laymen and Mc Iver, 2024)

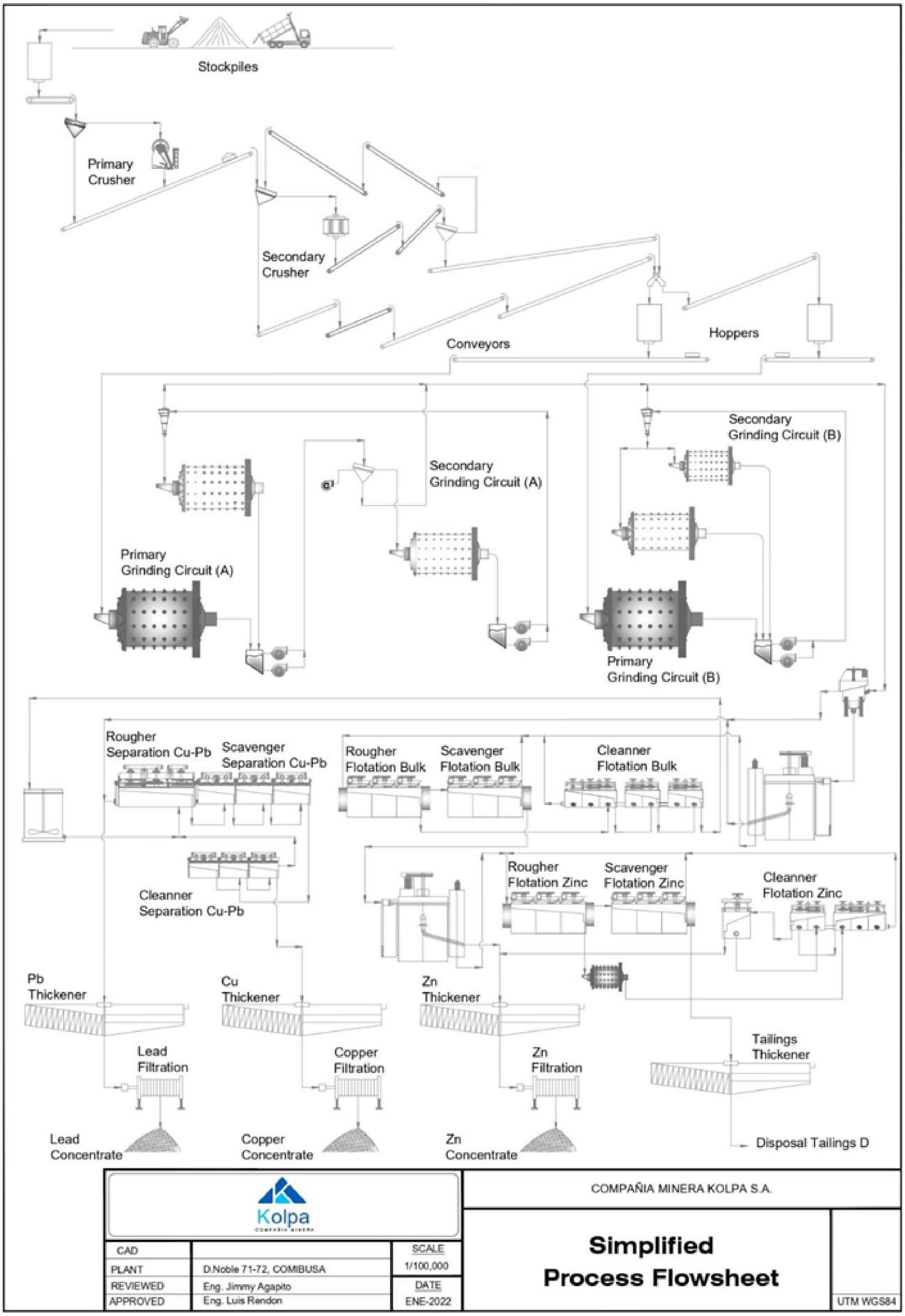


Figure 17-2 Existing Process Plant Layout (Laymen and Mc Iver, 2024)

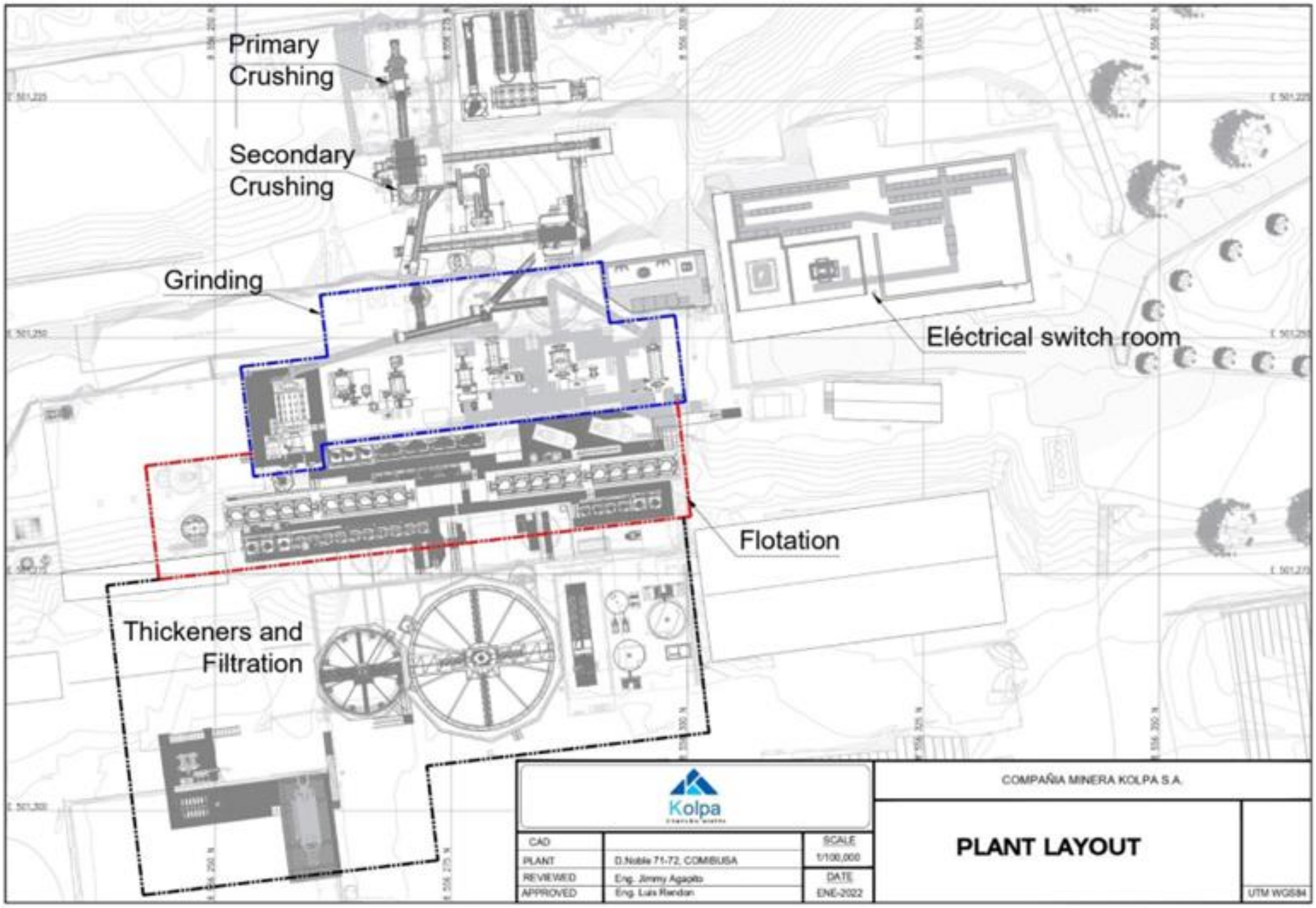
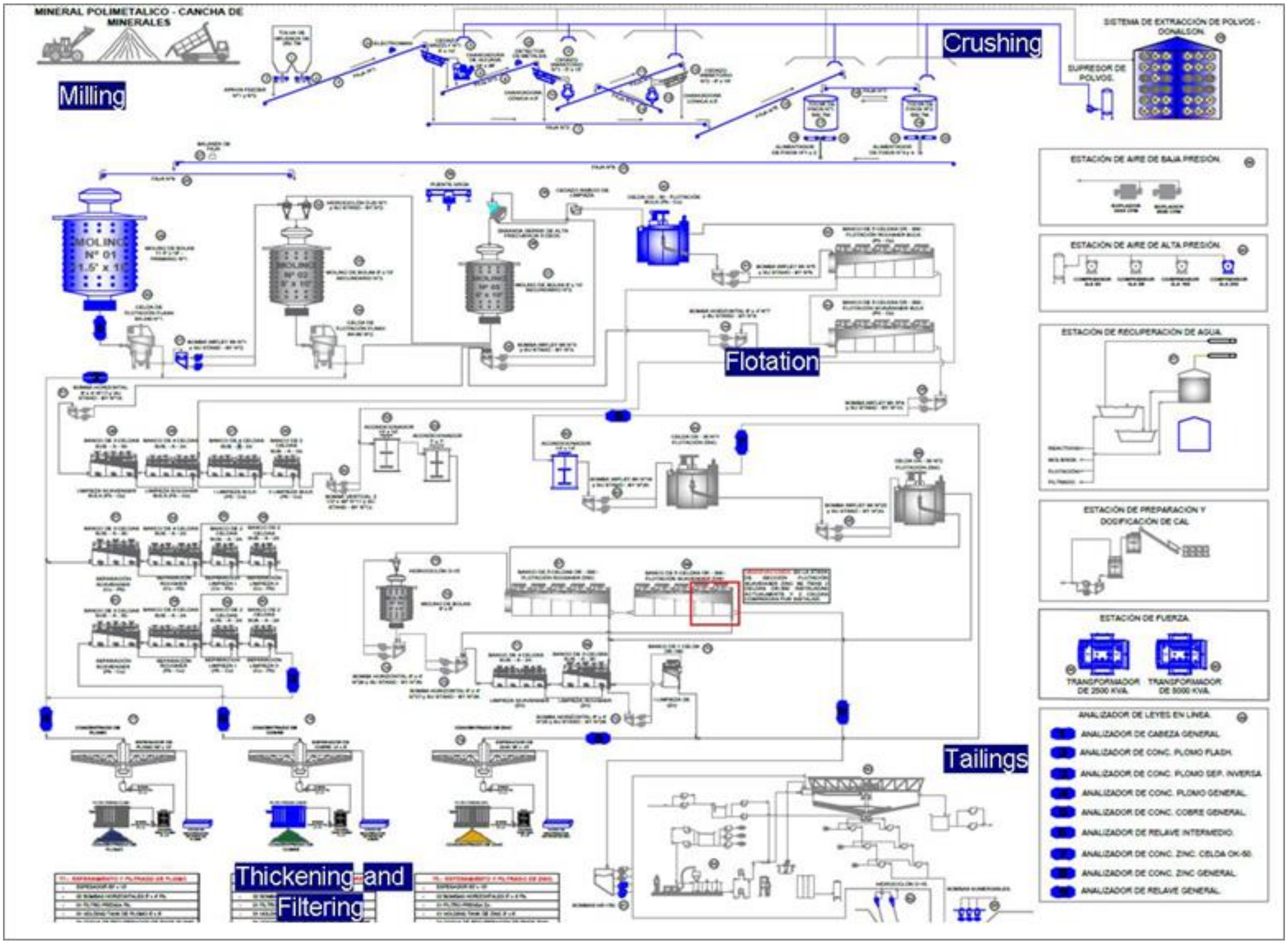


Figure 17-3 Future Process Flow Sheet for the Expansion to 2,500 tpd (Laymen and Mc Iver, 2024)



17.3 Crushing

The primary crushing has a hopper with a 280-tonnes capacity. The mineralized material is extracted at the bottom of the hopper using a 24"x48" apron feeder; the apron feeder discharge feeds the 4'x8 Vibratory Grizzly, with 2.5” openings.

The larger material is discharged as feed to the 24" x 36" jaw Primary Crusher, which reduces material after crushing to less than 2".

The material from the Primary Crusher and the 4'x8' vibratory Grizzly is discharged to a No. 1 conveyor belt, which feeds the 6' x 16' Vibratory Screen (3/4" openings), for classification; the oversized product of the Vibratory Screen is fed to a Conical Secondary Crusher 4-1/4' (Symons), which reduces the material to a maximum size of 0.5”. This material is transported by the conveyor belt No. 4 that unloads in the conveyor belt No. 5 to feed the vibratory sieve 5'x12' for classification. The coarse product (oversize) is placed on the conveyor belt No. 6, which in turn discharges to the conveyor belt No. 7 and then onto the vibratory sieve

6'x16', thus closing the circuit. The undersize material passes through to conveyor belt No. 10 and then the fines hoppers of 300 MT capacity each.

The undersized material from the 6' x 16' Vibratory Screen is placed in the conveyor belt No. 2, which then feeds to the conveyor belt No. 3 and discharges to the conveyor belt No. 8 followed by discharging to the conveyor belt No. 9, and then into Fine Hopper No. 1 of 300 MT capacity. Because belt No 9 is reversible, material can be discharged onto conveyor belt No. 11, and then into Fines Hopper No. 2 of 300 MT capacity.

17.3.1 Grinding

Grinding includes:

Grinding Circuit A:

Grinding Circuit A includes the Comesa 8' x 10' primary ball mill, 6' x 6' secondary ball mill and a 5' x 5' ball mill. Mineralized material is discharges from the fines hoppers of 300 MT capacity using conveyor belt numbers 14, 15 and 16 tto the mill 8' x 10'; the mill discharge enters a Wilfley 6k pump to feed the Derrick high-frequency sieve; the oversized material feeds by gravity to the 6'x6' mill, while the undersized material gravity flows and is directed to the flotation circuit.

The mill 6'x6' discharge enters a pump box and from this box is pumped to a hydrocyclone D-15, which separates the flow into two fractions: The coarse underflow material gravity flows to the mill 5' x 5', which discharges to to box 1 thus closing the circuit. And the fine overflow material gravity flows to the flotation circuit joining with the Derrick sieve fines.

Grinding Circuit B:

Grinding Circuit B includes the primary rod mill 5' x 10', and the secondary Comesa 5' x 6' ball mill and the mill 4' x 8' working closed circuit with a hydrocyclone D10. The mineralized material is fed from the fines hopper of 300 MT capacity, onto the conveyor belt No. 13 to the primary rod mill 5' x 10'; the primary –mill discharge is pumped to hydrocyclone D-10, which separates the flow: The coarse underflow material gravity flows to the 4'x8' and 5' x 6' mills, which grinds the material in closed circuit. And the fine overflow material joins with the fines from the grinding circuit A as the overall flotation head.

17.3.2 Flotation

The flotation includes:

Bulk flotation Cu-Pb-Ag

The fine overflow pulp material from the two grinding circuits A and B, is fed into the SK-80 and SK-240 flash cells that will work in parallel; the flotation concentrate is fed to the lead-copper separation circuit and the flotation tailing are sent to the first Rougher stage of the OK-30 Cell, where the the concentrate is fed to the cleaning circuits (Table 17-1).

The tailing of the OK-30 cell are sent to the second Rougher stage consisting of DR-300 cells where the concentrate is sent to the cleaning stage and the tailing continue in the circuit passing to the scavenger stage consisting of DR-300 cells. The concentrate from the DR-300 cells is sent to the discharge box of the 6'x6' ball mill to mix, and the tailing are sent to the Zinc circuit.

The concentrate from the rougher stage are sent to the first cleaning stage, which includes the Sub A-30 cells; the concentrate is sent to the second cleaning and the tailing are returned to the Rougher cells continuing the process.

The concentrate from the first cleaning enters the second, third, fourth, fifth and sixth cleaning stages, which include the Sub-A 24 cells; this concentrate is the final Bulk concentrate, which advances to a last flotation stage, which is the Pb/Cu separation circuit where the flotation product is the final copper concentrate and the tailing are the final Pb concentrate.

Table 17-1 Summary of Major Equipment in the Bulk Flotation (Laymen and Mc Iver, 2024)

Description	Equipment	Specification
Bulk	SK-240	1 x 8 m^3
Bulk	Ok-30	1 x 30 m^3
Bulk	DR-300	10 x 8.5 m^3
Bulk	SUB A-30	3 x 2.8 m^3
Bulk	SUB A-24	10 x 2.8 m^3

Differential flotation for Cu/Pb separation

The copper/lead separation differential flotation circuit includes conventional cells, with Rougher, scavenger and cleaner stages.

The final bulk flotation circuit concentrate of the first pass passes through two conditioners (7.5' x 7.5' and 4' x 4') where activated carbon is added with reagents (sodium bisulfite, carboxymethyl cellulose and monosodium phosphate) mixture of reagents to initiate the separation Copper / Lead with the Rougher stage in the cells Sub A-24. The Rougher concentrate is sent to the cleaning circuit (cells SP-18), and the scavenger concentrate sent to the Sub A-30 cells and then returned to the Rougher flotation. In the S P-18 cell circuit, this concentrate is cleaned in several in stages to produce the final Cu concentrate; the tailing are returned to the Cu-Pb rougher separation. Table 17-2).

Table 17-2 Summary of Main Equipment in the Separation Cu-Pb Flotation (Laymen and Mc Iver, 2024)

Description	Equipment	Specification
Separation Cu-Pb	SUB A-30	3 x 2.8 m^3
Separation Cu-Pb	SUB A-24	8 x 2.8 m^3
Separation Cu-Pb	SP-18	8 x 1.8 m^3

Zn flotation

The tailing coming from the Bulk circuit passes to the conditioner 10' x 10' , where copper, lime and xanthate sulfate are added before the first Rougher stage in the OK-30 Cells. The concentrate from this separation is final zinc concentrate. The tailing of the OK- 30 cell are sent to the second Rougher stage consisting of DR-300 cells; from this separation, the concentrate is sent to the cleaning stage and the tailing continue in the circuit to the scavenger stage consisting of DR-300 cells. The scavenger concentrate is sent to the mill 5'X36" for regrinding to lierate the zinc particles and then sent to the Cleaning stage, and the Scavenger circuit tailing is the final tailing.

The concentrate from the Rougher stage is sent to the first cleaning stage consisting of Sub A-30 cells; the concentrate from this separation is sent to the second cleaning and the tailing return to the rougher cells.

The concentrate from the first cleaning proceeds to the second and third cleaning consisting of Sub-A 24 cells; the concentrate from this separation is sent to the fourth cleaning and the tailing is passed to the first cleaning.

The concentrate from the third cleaning proceeds to the fourth and last cleaning that consists of a DR-180 cell; the concentrate from this separation is final zinc concentrate that is combined with the concentrate of the OK30 cells and the tailing is passed to the second cleaning. (Table 17-3)

Table 17-3 Summary of Main Equipment in the Zinc Flotation (Laymen and Mc Iver, 2024)

Description	Equipment	Specification
Zinc	Ok-30	2 x 30 m^3
Zinc	DR-300	10 x 8.5 m^3
Zinc	SUB A-30	2 x 2.8 m^3
Zinc	SUB A-24	4 x 2.8 m^3
Zinc	DR-180	1 x 2.5 m^3
Zinc	Molino	5 x 36

17.3.3 Thickening and Filtering Zn concentrate

The concentrate from the zinc cleaning circuit, with a density of 1,230 g/L is fed to the 30' x 10' thickener to remove water. The thickened concentrate (Underflow), isent to a Holding Tank, is pumpled to the 22-plate Cortelco filter press. The final zinc concentrate has a moisture content of 7.5%.

Pb concentrate

The Lead Concentrate, with a density of 1180 g/L, passes to a 50' x 10' Thickener to remove water. The thickened concentrate (underflow) is sent to a holding tank and then that is pumped to the 31-plate Andritz Filter Press to reduce the lead concentrate to 7.5% moisture content.

Cu concentrate

In the Cu-Pb separation circuit, the copper minerals are floated to produce the copper concentrate, while the tailing is the lead concentrate. The copper concentrate, with a density of 1080 g / L, passes to a Denver Thickener 14' x 8' to remove water, and the thickened concentrate (underflow) is sent to a holding tank and then pumped to the Andritz dam filter of 31´plates to reduce copper concentrate to 5.5% moisture content.

17.3.4 Tailings Disposal

The final tailing, with a density of 1230 g/l, from the flotation circuit, gravity flow to pumping station No. 1.

Station No. 1 includes 02 horizontal pumps, for pumping to station No. 2, which includes 3 horizontal pumps METSO HR-150 of which 2 operate and 1 is stand-by.

Taiing are managed in two ways: (i) the first way involved ending the tailingto the 85'x10' thickener, with the thickened pulp sent to the tailing storage facility and the overflow water from the thickener returns to the process; (ii) the second way includes pumping from station 2 to the two cyclones, located in the tailing impoundment area, where the coarse tailing are disposed on the beach and the fine tailling flow to the water pool. Consequently, the water contained in the pool is pumped using two FLYGT submersible pumps to the NCD water treatment plant process.

17.3.5 Paste Fill

Future planning include installing a paste fill facility, which is planned to use much of the tailing from the plant. The paste will include the granular material from tailing mixed with sufficient water and binder, and then reticulated underground through a pipeline system.

A key advantage of the paste fill plant is to reduce the tailing storage requirements on surface and to support mined stopes in the mine.

17.4 Water Consumption

The beneficiation plant water consumption is summarized in Table 17-4. The total water consumption in the concentrator is 66.49 L/s, which is supplied from the water treatment plant (NCD), moisture from the mineralized feed, fresh water from the dam and Pepito creek which has been authorized by the National Water Authority (ANA) through resolution 490-2015-ANA-AAX MANTARO and water tailings thickener overflow as shown in Table 17-5.

Table 17-4 Water Consumption (Laymen and McIver, 2024)

Water Consumption	Caudal (l/s)
Grinding and classification	41.8
Flotation	20.03
Filtration	0.77
Reagents	2.47
Total	**66.49**

Table 17-5 Water Source (Laymen and McIver, 2024)

Water Consumption	Flow (L/s)
Mineral Moisture	0.94
Fresh Water	1.22
Water Treatment Plant (NCD)	36.00
Tailings Thickener	28.34
Total	**66.49**

Plans include expanding the existing water treatment plant (NCD) to 120 L/s tfor the expansion to 2,500 tpd.

17.4 Water Recovery System

Water is recovered from the Tailings Deposit "D" supernatant water pool is pumped to the water treatment plant (NCD) in a 6" pipe in HDPE material to the pre-treatment tank in NCD plant. After treatment, the water stored in an overflow tank located at the NCD plant is pumped to the concrete reservoir located in the upper part of the Concentrator Plant float to be used in the metallurgical process.

17.5 Process Consumables

The main consumables oinclude steel balls and rods for the grinding stage, and sodium cyanide, lime and various flotation reagents. The reagent dosages are adujsted according to the mineral being fed therefore, the unit consumption is expected to remain constant with historical consumptions as shown in Table 17-6.

Table 17-6 Key Process Consumables (Laymen and Mc Iver, 2024)

Reagent	Concentration	Kg/TMS Consumption Index Consumption	Kg (Month) Index Consumption
Bulk Flotation Circuit			
Sodium Cyanide	2.50%	0.07	3,406.20
Zinc Sulphate	7.33%	0.55	26,763.00
Sodium Bisulphite	0.67%	0.065	3,162.90
MIBC	100.00%	0.06	2,919.60
Xanthate Z-11	5.00%	0.02	973.2
Ditiophosphate 105	5.00%	_	_
Ditiophosphate 238	5.00%	_	_
Aerophine 3418	5.00%	0.018	875.88
Separation Circuit			
Sodium Bisulphite	5.83%	0.518	25,205.88
Monosodic Phosphate	0.83%	0.06	2,919.60
Carboxi methyl cellulose	0.83%	0.06	2,919.60
Active Carbon	1.50%	0.065	3,162.90
Reagents for the Zn circuit			
Copper Sulphate	11.50%	0.225	10,948.50
Lime (grout)	grout	1	48,660.00
Xanthate Z-6	5.00%	0.02	973.2
Reagents for thickeners and filters			
Magnafloc Separant 351	0.30%	0.008	389.28
Flocculant Rp-610	0.24%	_	_
Reagents for thickening tailings			
Flocculant Magnafloc	0.40%	0.085	4,136.10
Separation circuit			
Bars 3' Ø		0.21	10,218.60
Balls 4' Ø		0.265	12,894.90
Balls 3' Ø		0.13	6,325.80
Balls 2' Ø		0.26	12,651.60
Balls 1.5' Ø		0.01	486.6

17.6 Energy Consumption

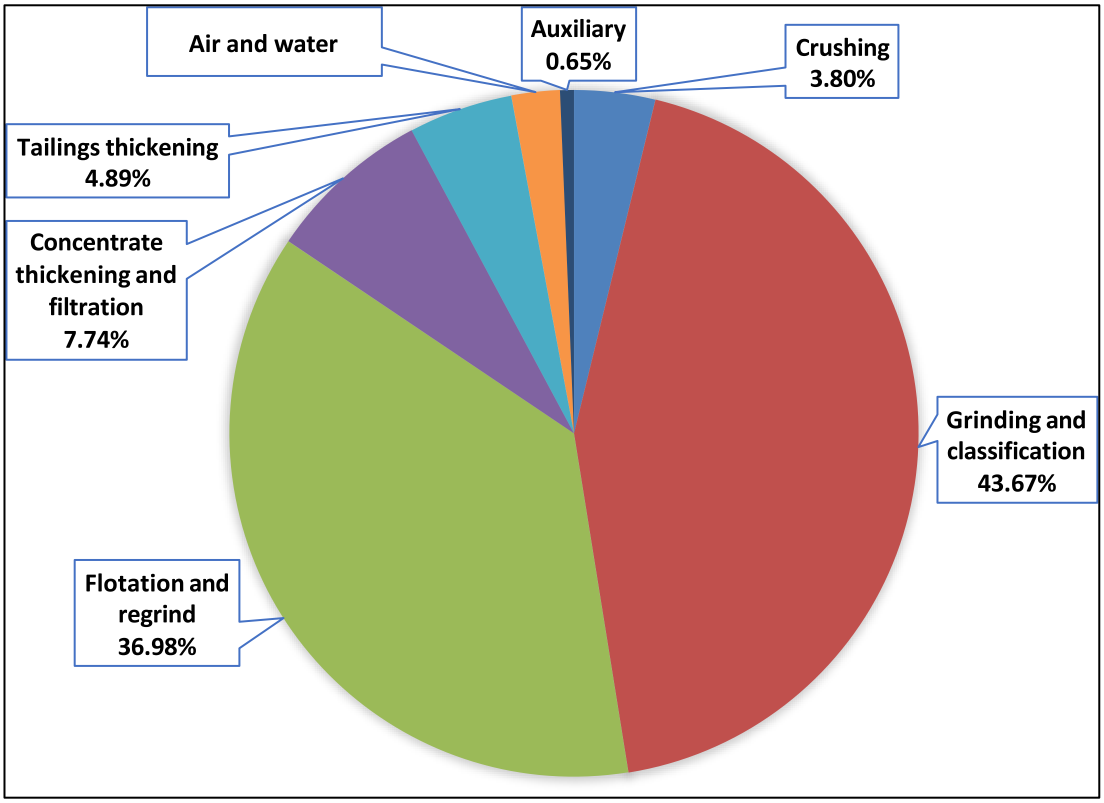
The processing plant energy consumption is summarized in Table 17-7. The average annual energy consumption is 17 GWh, which equates to 29.45 kWh/t of processed material.

Table 17-7 Power Consumption by the Process Plant (Laymen and Mc Iver, 2024)

Area	Average Operating (kW)	Power Consumed (kWh/t)
Crushing	1,810	1.12
Grinding and classification	20,862	12.86
Flotation	17,664	10.89
Concentrate thickening and filtration	3,698	2.28
Tailings thickening	2,339	1.44
Air and water services	1,080	0.67
Auxiliary	315	0.19
Total	**47,768**	**29.45**

As shown in Figure 17-4 thighest energy consumption is Grinding and Classificaiton (43.67%), followed by Flotation (36.98%) and Concentrate Thickening and Filtering (7.74%).

Figure 17-4 Process Plant Power Consumption by Area (Laymen and Mc Iver, 2024)



17.7 Workforce

The concentrator plant staff includes management and supervisory personnel, as well as metallurgical personnel and operators, totaling 110 employees and 21 contractors 21.

17.8 Metallurgical recoveries

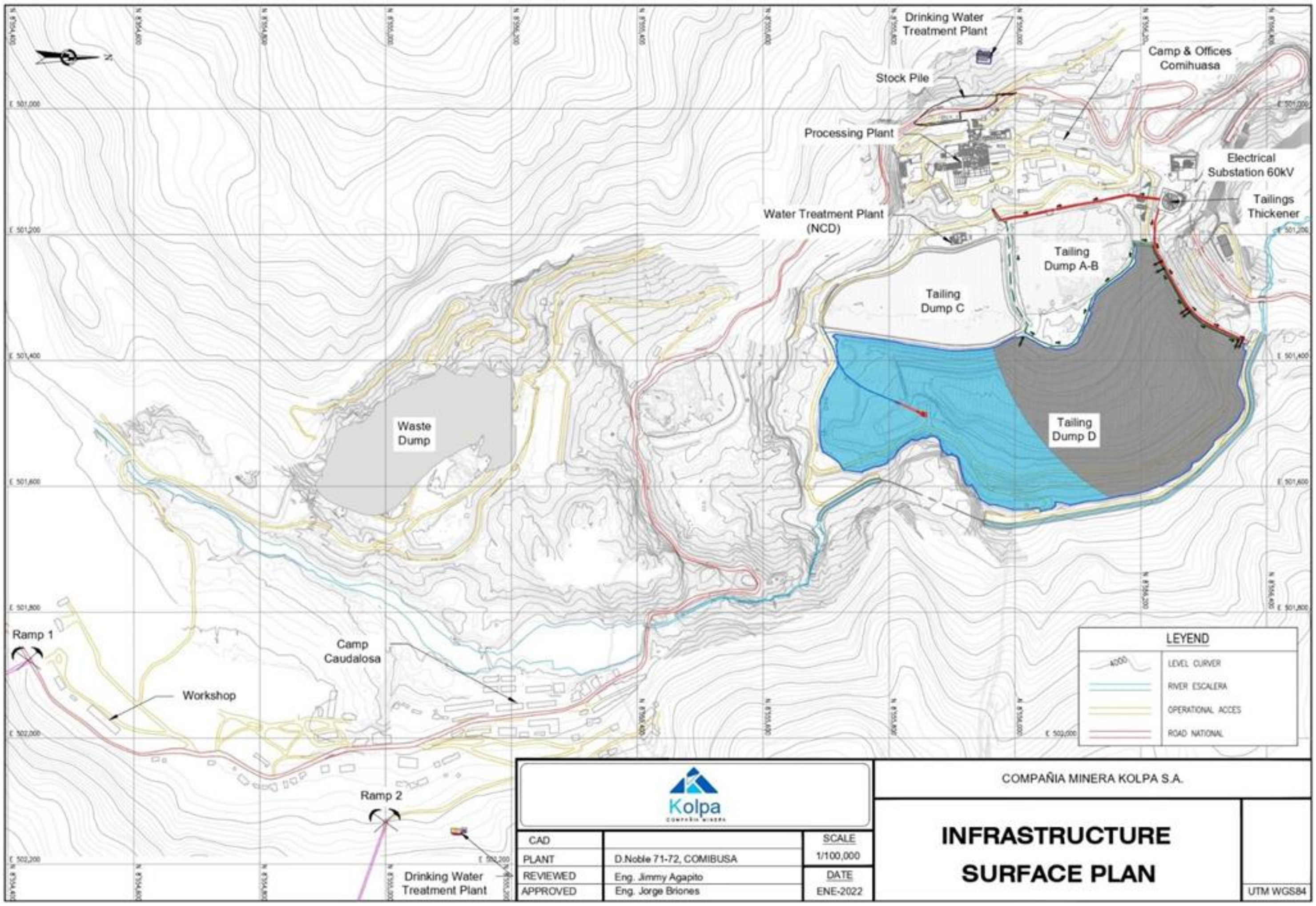
Historical metallurgical recoveries are presented in Table 13-1.

18 PROJECT INFRASTRUCTURE

18.1 Introduction

The Huachocolpa Uno Mining Unit has sufficiently sized and maintained infrastructure to conduct mining activities responsibly and sustainably and are socially and environmentally compliant. Figure 18-1 shows the Huachocolpa Mining Unit surface infrastructure plan (Laymen and Mc Iver, 2024).

Figure 18-1 Mine Site Infrastructure Plan View (Laymen and Mc Iver, 2024)



18.1.1 Access and Roads

The Huachocolpa Uno Mining Unit is easily accessible from Lima and any other city on the Peruvian coast, also from the center of the country, through paved national public roads. The last stretch of 19 km is on a departmental road, which the Regional Government maintain in good condition, that reaches the Mining Unit entrance; Kolpa has constructed gravel roads and paved roads to access the Mine, Plant, tailing facilities, waste dumps and other facilities.

18.1.2 Power

The electricity is supplied via the national power grid form major producers through long-term contracts. These long-term supply contracts are being extended until December 2025.

To supply power to the Mining Unit, KOLPA acquired a 60-Kv line that transports energy from Huancavelica to the substation that Kolpa constructed and reduces energy from high voltage 60 Kv to medium voltage in 22.9 Kv. The average monthly electricity consumption of the Mining Unit is 5.5 KWH. The Mine consumes approximately 60% and the Concentrator Plant approximately 40%.

Three backup diesel generators with total 1.5 MW capacity of are maintained and available.

The existing power systems are suitable to meet the requirements for the 2,500 tpd expansion.

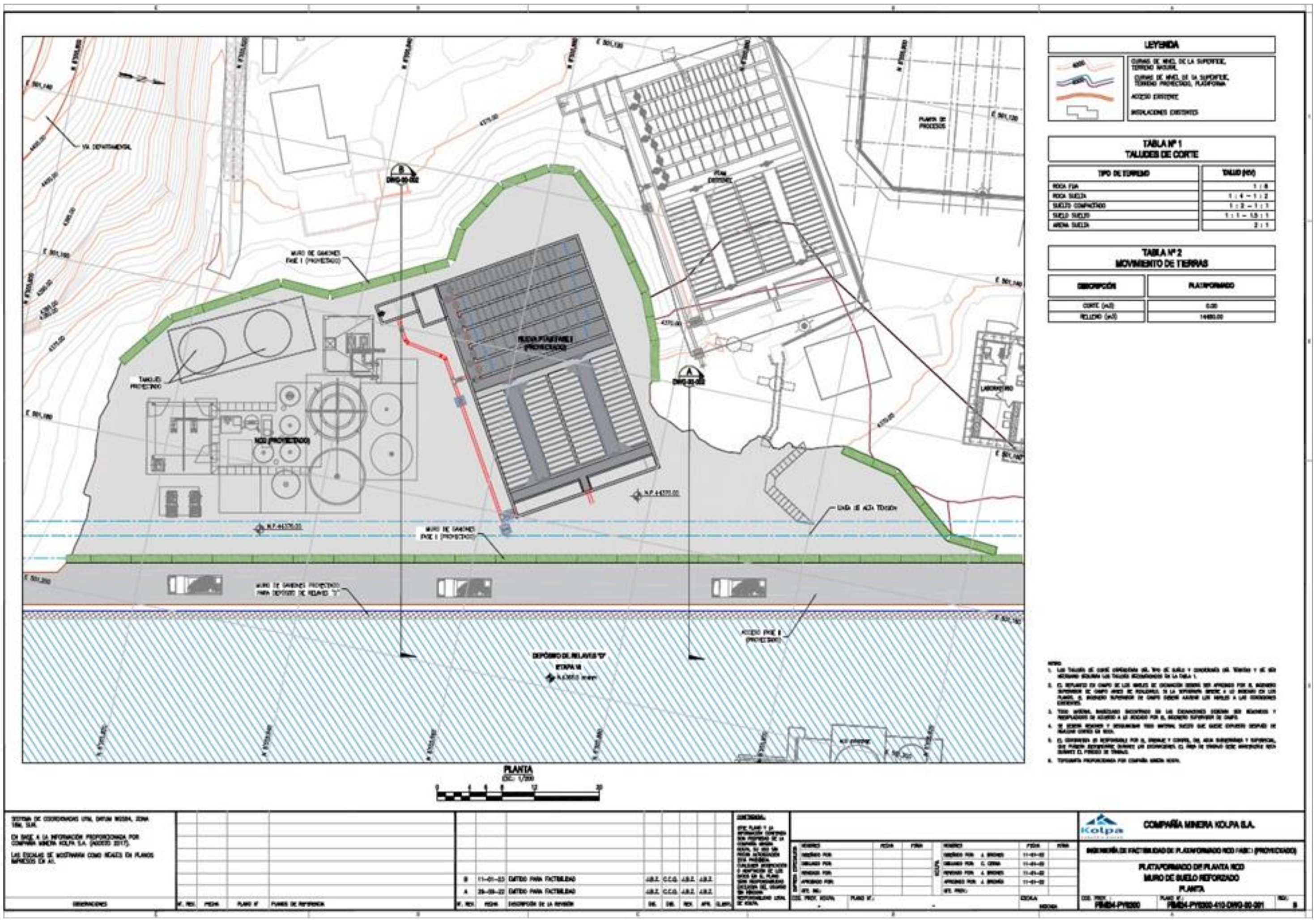
18.1.3 Water Supply

The project has four water-use licensesthat include consumption purposes (0.6 L/s and 0.55 L/s), mining (1,034 L/s) and industrial (15 L/s) mainly from springs (Bienaventurada 1, 2 Bienaventurada 3, Chipchilla, Poderosa, Rublo) and the Escalera River. In recent years the water for the mining operations is recirculated from the Centralized Pumping System inside the underground mine, where water infilrating into the operating areas is directed to the treatment sumps located at level NV 4230. In these sumps, the suspended solids are removed and the pH is adjusted; some water is reused for the equipment operation, and for drilling, dust control and concrete and shotcrete supply some water is pumped to the surface t for treatment at mine water treatment plant (NCD Plant) to ensure effluent compliance limits are met.

Water treated at the NCD Plant is used at the Concentrator Plant and any excess is discharged into the river, at the V-01 discharge point, complying with the standards and a permit limits approved by the environmental authorities. Due to the large amount of water reuse, wanter consumption from natural sources is very low and mainly for human consumption.

The plan is to increase the water treatment plant capacity to 120 L/s for the 2,500 tpd expansion.

Figure 18-2 Water Treatment Plant Expansion Layout (Laymen and Mc Iver, 2024)



18.1.4 Waste Dump

The Project currently uses the Rublo Alto waste deposit to deposit waste material not used as backfill in the mine; this waste deposit has a capacity of 575,812 m^3 and the DD-15 waste deposit has a storage capacity of 415,000 m^3. Additionally, permits were applied for the construction and operation of DD-01 with a capacity of 791,340 m^3 and DD-60 with a capacity 337,710 m^3, DD-61 with a capacity 419,466 m^3. The waste dump projects to meet the life-of-mine waste generation are presented in Table 18-1 and Figure 18-3 to Figure 18-5.

Table 18-1 Waste Dumps for Expansion (Laymen and Mc Iver, 2024)

Parameter	Waste Dump 01	Waste Dump DD- 60	Rublo Alto II Expansion
Batter angle	1:4H:1V	1:4H:1V	1:4H:1V
Bench height	8 m	8 m	8 m
Berm	6 m	6.8 m	7 m
N° of levels	6 levels	5 levels	5 levels
Volume	**791 341 m^3**	**337 710 m^3**	**1 500 000 m^3**

Figure 18-3 Waste Dump 01 Expansion (Laymen and Mc Iver, 2024)

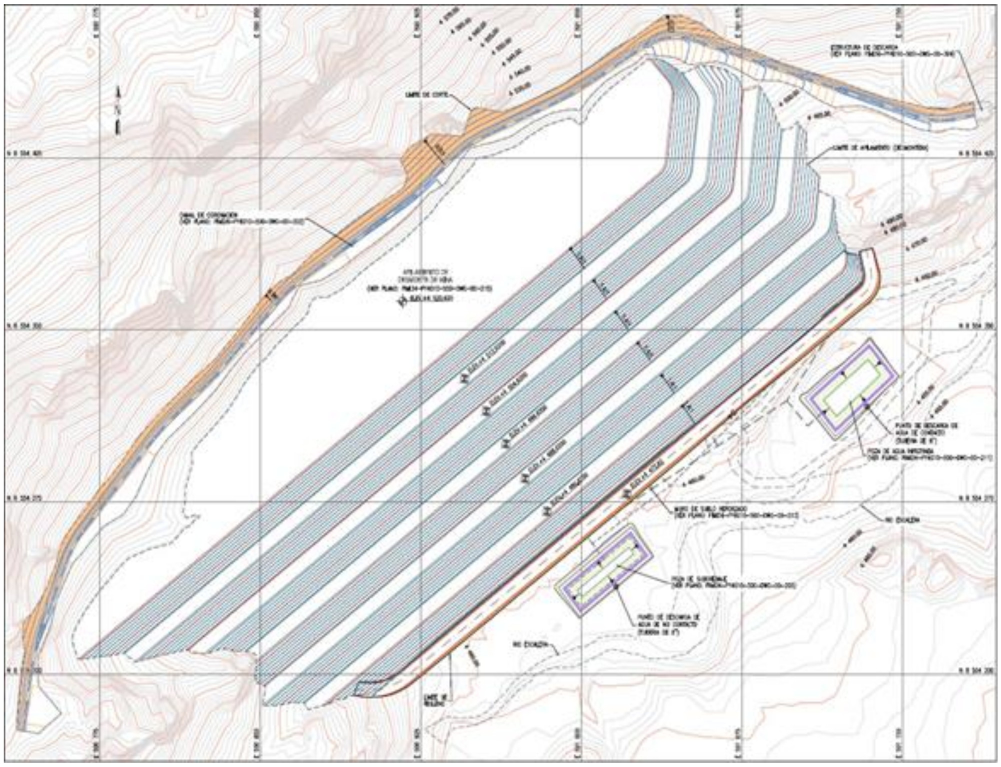


Figure 18-4 Waste Dump DD-60 Expansion (Laymen and Mc Iver, 2024)

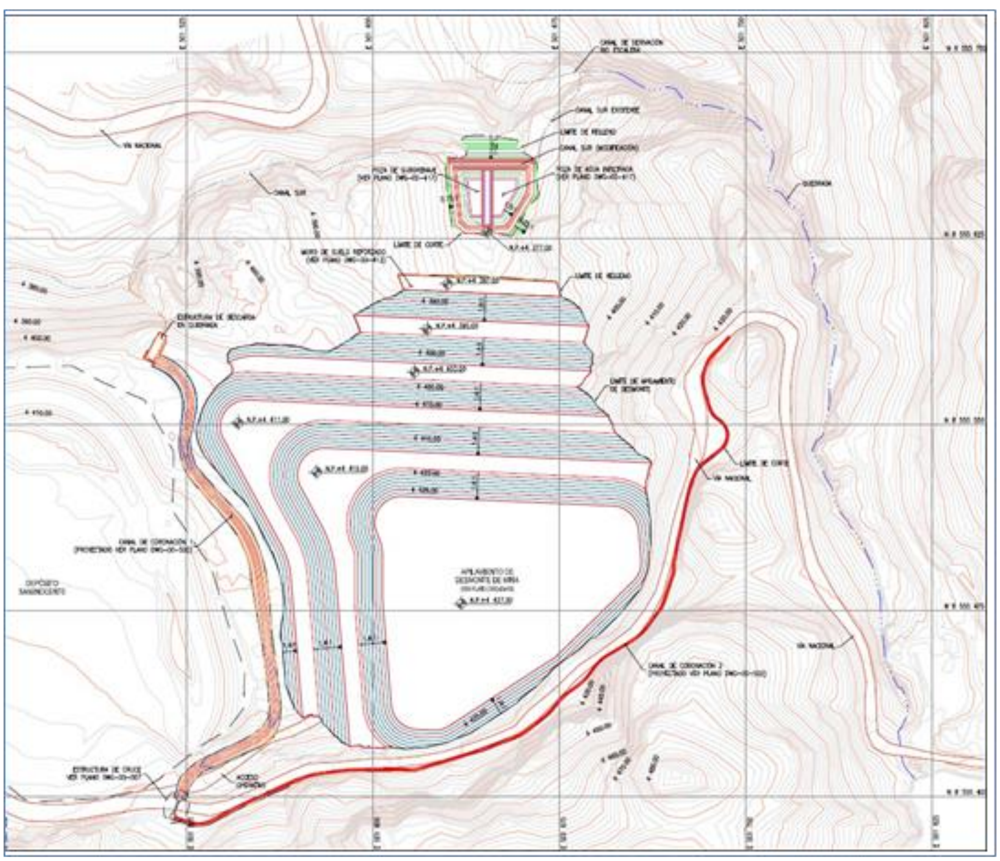
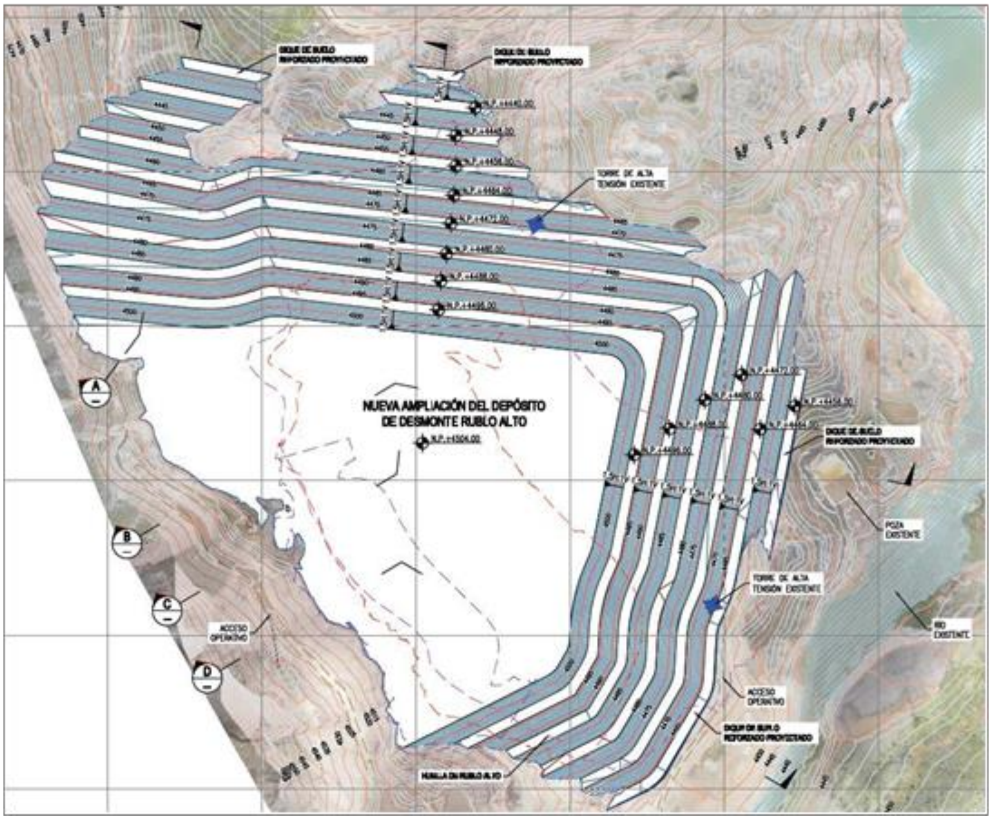


Figure 18-5 Waste dump Rublo Alto II Expansion (Laymen and Mc Iver, 2024)



18.1.5 Mineral Stockpile

The mineral extracted from the Mine is transported to the stockpile area located in Comihuasa, for classification and blending prior to delivery to the concentrator plant. The stockpile location has an area of 10,000 m^2 and an approximate storage capacity of 30,000 tonnes.

18.1.6 Tailing Storage Facilities

The tailing storage facilities planned for the LOM are designated as "D" and "C". The tailing deposit "D" built in 2018 has been designed in five stages for a total life of 12 years at current production levels.

Engineering studies have been undertaken for each TSF project. The Stage IV study was completed in January 2022.

The tailing deposit "C" had a storage capacity for six (06) months with the current production levels. Deposit “C” has environmental permits and controls and serves as a contingency for the operation. The deposited tailings are thickened and cycloned.

Design concepts have been prepared for future expansions to phases VI, VII and VIII. The need for these expansions will include plans for using tailing to prepare backfill for the underground mine once the paste fill plant is constructed.

18.1.7 Buildings

The buildings and facilities for the Huachocolpa Uno Mining Unit are built along the Escalera River ravine, in two well-defined areas:

- In the area called Caudalosa, where the Bienaventurada mine is located, the facilities include warehouses, explosives magazines, workshops, offices, dining rooms, and camps. The Caudalosa camp will be expanded to accommodate a maximum 1,200 workers for the 2,500 tpd expansion.
- In the area called Comihuasa, facilities include the concentrator plant, tailings "D" and "C", mineral stockpile, Kolpa electrical substation, fuel station, water treatment plant, tailing thickener, drinking water treatment plant, workshops, medical center, chemical laboratory, metallurgical laboratory, offices and camps. The camp will be expanded to accommodate 500 workers for the 2,500 tpd expansion.

19 MARKET STUDIES AND CONTRACTS

Endeavour has reviewed market studies for commodities and price outlook. The long-term markets for lead, zinc, copper, and silver are influenced by demand growth in industries like construction, electronics, renewable energy, and electric vehicles (EVs), as well as supply constraints, geopolitical factors, and environmental regulations. The outlook for lead is likely to remain relatively stable, while zinc could see moderate increases due to supply constraints. Copper demand is expected to grow due to structural supply deficits and silver prices are likely to trend upwards in the long term due to industrial demand, and its role as a hedge against inflation. The Authors have reviewed the studies and analysis. It is the Authors's opinion that the results support the long-range pricing assumptions and other marketing premises used in this technical report.

19.1.1 Zinc concentrate

Zinc prices are currently in the range of US$ 1.30–1.47/lb, having reached a 2022 high of US$ 2/lb in April 2022.

Smelter treatment charges (TCs) have experienced a volatile market over the last 16 months, with zinc supplies in deficit, leading to lower smelter Spot treatment charges (and in some limited cases, negative TCs). As of the last quarter of 2024, zinc supply appears to be in a deficit situation for the near term and stabilizing in the longer term.

Existing sales agreements are expected to continue in the near term and may require updating upon expiry.

19.1.2 Lead-Silver Concentrate

Lead prices are currently in the range of US$ 0.90 – 1.10/lb.

As stated above, although lead is not in the same supply deficit as zinc, treatment charges have experienced volatility to lower prices over the last 16 months, but existing sales agreements are expected to continue in the near term.

Transport and shipping costs are the same as those for the zinc concentrates. No lead smelter is currently operational in Peru, so it is presumed that the concentrates referred to in this study will be shipped to Asia.

19.1.3 Copper concentrate

Copper prices over the last 18 months range from US$ 4.00 – 5.05/lb.

Copper prices have shown a strong performance in international markets. The copper market is exhibiting a long-term supply deficit, and the same volatility exists in smelter charges as for zinc and lead.

19.2 Metal Price Projections

The metal prices used for the mining inventory estimation are from projections considered reasonable by Kolpa. Table 19-1 presents the metal prices used in the economic analysis derived from JP Morgan data.

Table 19-1 Long Range Metal Price Projections

Metal	Unit	Metal Price
Ag	US$/ oz	25.69
Cu	US$/t	8,626
Pb	US$/t	2,287
Zn	US$/t	2,700

19.3 Smelter Terms and Contracts

Kolpa has a number of contracts in place with international commodity traders.

Treatment and refining charges for lead-silver-gold concentrates as well as zinc concentrates have been estimated in accordance with Kolpa’s current agreement with international traders.

The main assumptions are:

- Transportation Cost is $48/tonne of concentrate.
- Treatment Cost for the Concentrate of Zinc assumed for the LOM is $150 per tonne
- Treatment Cost for the Concentrate of Lead assumed for the LOM is $101 per tonne
- Refining Cost for the Silver in the Lead Concentrate assumed for the LOM is $32 per tonne
- Treatment Cost for the Concentrate of Copper is assumed for the LOM is $108 per tonne.
- Refining Cost for the Silver in the Copper Concentrate assumed for the LOM is $101 per tonne.
- Refining Cost for the Copper in the Copper Concentrate assumed for the LOM is $55 per tonne.

A summary of the payability factors, treatment/refining charges (TC/RC) and penalties for Zn concentrate, Pb-Ag concentrate and Cu-Ag concentrate are shown in Table 19-2, Table 19-3 and Table 19-4 respectively.

Table 19-2 Smelting and Refining Terms – Zn Concentrate

Item	Unit	Value
Payable Zinc	US$/t	1,211
Treatment Cost	US$/t	150
Other penalties	US$/t	5
Concentrate Value	US$/t	1,056

Table 19-3 Smelting and Refining Terms – Pb-Ag Concentrate

Item	Unit	Value
Payable Lead	US$/t	1,310
Payable Silver	US$/t	1,047
Treatment Cost	US$/t	101
Refining Cost	US$/t	32
Other penalties	US$/t	21
Concentrate Value	US$/t	2,203

Table 19-4 Smelting and Refining Terms – Cu-Ag Concentrate

Item	Unit	Value
Payable Copper	US$/t	2,006
Payable Silver	US$/t	5,189
Treatment Cost	US$/t	108
Refining Cost	US$/t	156
Other Penalties	US$/t	130
Concentrate Value	US$/t	6,800

19.4 Concentrate Quality

Quality records of sold concentrate are shown in Table 19-5. It is noted that the metal contents have generally been constant for the lead, copper and zinc.

Table 19-5 Concentrate Quality Historic Records

	Concentrate Quality					
Year	**Ag Oz/TM Bulk**	**Ag Oz/TM Cu**	**Ag Oz/TM Pb**	**% Pb**	**% Cu**	**% Zn**
2018	63.8	-	-	55.14	3.65	51.89
2019	56.49	-	-	59.7	3.8	54.88
2019	-	142.33	40.4	61.01	25.18	57.42
2020		109.83	27.9	60.68	24.92	55.87
2021		140.15	31.18	58.93	23.47	55.27
2022		200.44	44.16	64.16	23.93	53.11
2023	-	235.68	46.13	64.67	25.16	53.14
Sept 2023	-	237.57	45.72	64.78	24.26	54.96
2024		170	42	62.9	21.74	51.97

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 Environmental Considerations and Regulations

20.1.1 Mining Unit Description

Kolpa conducts its mining and production activities within the EAU, in full compliance with Peruvian environmental and metallurgical regulations. The company prioritizes health and safety, environmental protection, cultural heritage preservation, and sustainable development.

Mining in Huachocolpa Uno dates back to colonial times. In the mid-20th century, with support from the Mining Bank of Peru, the Huachocolpa Mineral Concentrator Plant S.A. (Comihuasa) was established, driven by contributions from small mining companies, including Caudalosa (Laymen and Mc Iver, 2024).

Today, Kolpa extracts polymetallic minerals from the Bienaventurada vein using underground mining methods such as Cut and Fill (CAF) and Sublevel Stoping (SLS). The process includes exploration, drilling, blasting, hauling, and transportation from the Bienaventurada mine to the Comihuasa concentrator plant.

At the concentrator plant, the mill feed undergoes selective flotation through crushing, grinding, flotation, thickening, and filtering to produce lead, zinc, and copper concentrates with silver content. These concentrates are then transported in covered vehicles for commercialization.

20.1.2 Environmental Baseline

At the end of the 20th century, the Administrative Economic Unit (UEA) Huachocolpa Uno began a phase of environmental adaptation and management in response to emerging environmental regulations. This process included assessing existing environmental conditions in the mining area and implementing regular updates to the environmental baseline as part of ongoing management efforts (Laymen and McIver, 2024).

Recent studies have thoroughly examined various environmental factors, including meteorology, climate, geology, geomorphology, geochemistry, hydrography, hydrology, and hydrogeology. Additionally, ongoing monitoring assesses water, air, noise, soil quality, as well as local flora and fauna.
Location and Climate

The Huachocolpa Uno mining unit is situated in the Huachocolpa district, Huancavelica province and department, on the eastern slopes of the Western Cordillera in the central Andes of Peru. The area experiences a dry climate with moderate humidity during summer months.

Weather station data indicate:

- Average temperatures range from 0.9°C to 13.6°C, with an annual mean of 5.6°C.
- Relative humidity varies seasonally, dropping below 69.4% in the dry season and exceeding 73.0% in the wet season.
- Annual rainfall averages 724.32 mm, with the highest precipitation occurring between December and March.

Geology and Mineralization

The region's geomorphology reflects ancient glaciation, characterized by U-shaped valleys surrounded by high mountains. The geology is controlled by regional tectonic structures, oriented northwest-southeast (Andean) and southwest-northeast (anti-Andean). The area features Tertiary volcanic rocks from the Tinqui and Manchaylla Formations, composed of andesitic breccias, andesitic lavas, and porphyritic rocks, intruded by dacites and quartz-rich latites.

To the east, Mesozoic carbonate rocks lie beneath a Miocene volcanic sequence, serving as the host rock for polymetallic vein mineralization. These mineralized veins primarily formed along structural intersections and deformation zones, where fracturing created favorable conditions for mineralization.

Hydrology and Hydrogeology

The mining unit is located in the Escalera River basin, which joins the Accurupampa ravine and becomes the Huachocolpa stream, a tributary of the Mantaro River on the Atlantic slope. Water sources in the area include streams, springs, and wetlands.

Hydrogeological studies reveal:

- Limited groundwater discharge to the surface, with small, scattered springs of low flow.
- Four hydrogeological units:
  - Mesozoic carbonate aquifers
  - Volcanic aquicludes with minimal groundwater storage
  - Highly fractured veins, allowing deep geothermal water circulation
  - Surface alluvial aquifers storing precipitation-derived water

Groundwater recharge occurs within a fractured hydrogeological system, where tectonic structures and rock fractures facilitate water movement and discharge.
Environmental Monitoring

Water Quality:

- Water quality is assessed at seven monitoring stations located upstream, downstream, and near the mining site.
- AGQ Labs, accredited by INACAL, conducts quarterly monitoring.
- Water quality in the Escalera River and tributaries generally meets national standards, but some areas exceed limits due to natural mineralization, volcanic influence, and historical mining activities.
- Persistent exceedances are recorded in the Pezeta ravine (HG-09b), primarily due to third-party mining operations.

Soil and Air Quality:

- Metal concentrations in soil can naturally exceed standards due to regional geology.
- Air quality meets D.S. No. 003-2008-MINAM standards, except for localized PM 2.5 exceedances, likely due to dust from the HV 115 departmental road.
- Noise levels comply with Supreme Decree No. 085-2003-PCM, which regulates industrial zones.

Biodiversity

Flora:

- 250 plant species from 45 families recorded in the dry season.

- 94 plant species from 26 families recorded in the wet season.
- Endemic and threatened species:
  - 7 threatened species and 11 endemic species in the dry season.
  - 10 threatened species and 11 endemic species in the wet season.
- Vegetation is dominated by Bofedal wetlands and Andean “Puna” grasslands.

Fauna:

- 114 species recorded, including:
  - 22 mammals
  - 82 birds
  - 10 amphibians and reptiles
- 20 species are of conservation concern:
  - 9 mammals, 14 birds, and 3 amphibians
  - 6 endemic species

Cultural and Archaeological Considerations

20.1.3 Mine Closure

As part of project development, Certificates of Non-Existence of Archaeological Remains (CIRA) were obtained, confirming that no archaeological sites or cultural heritage zones are present within the mining area.Mine Closure

In accordance with current legislation and ongoing environmental studies, the Huachocolpa Uno Mining Unit developed its Mine Closure Plan (PCM) to ensure a planned and responsible closure of mining operations. The goal is to minimize post-closure environmental impacts, focusing on Passive Care during the closure phase.

The PCM was approved on December 10, 2009, through Directorial Resolution No. 403-2009-MEM-AAM. The first update was certified on January 8, 2014, under Directorial Resolution No. 010-2014-MEM-AAM (Laymen and Mc Iver, 2024).

The plan underwent subsequent revisions:

- January 5, 2016: First modification approved by Royal Decree No. 345-2016-MEM-AAM.
- July 23, 2020: Second modification certified by R.D. No. 082-2020-MEM-AAM.
- October 15, 2021: The third modification of the PCM was approved by R.D. No. 199-2021/MINEM-DGAAM.

Each revision updated the closure components, criteria, and schedule, ensuring that Kolpa is committed to executing and monitoring the closure measures during both the closure and post-closure stages.
Post-Closure Responsibilities

The post-closure phase will be the responsibility of Kolpa for a period of five years after the completion of the closure activities. During this period, Kolpa will continue to monitor the effectiveness of the implemented measures.

The Post-Closure Monitoring Program will involve:

- Observations, sampling, measurement, and analysis of technical and environmental data, including physical, geochemical, hydrological, and biological stability.
- This data will be used to evaluate and track the environmental conditions of the rehabilitated area and monitor any changes over time.

Financial Assurance

The total financial assurance required for progressive closure, final closure, and post-closure monitoring was calculated in 2021, taking into account the inflation rate and discount rate. The total amount required is US$4.52 million.

This ensures that Kolpa has allocated sufficient funds for proper mine closure and long-term environmental monitoring.

20.1.4 Permitting

Mining in the Huachocolpa district dates back to colonial times. In the 1940s, the Comihuasa Concentrator Plant was established to process mineralized material from small-scale miners in the area. Over the years, as mining regulations evolved, companies have had to secure the necessary permits for operation.

In 2001, Supreme Decree No. 046-2001-EM (Mining Safety and Health Regulations) recognized all ongoing mining operations as "Continuous Mining Activities." As a result, mining operators classified under this category do not require specific authorization to begin operations (Laymen and McIver, 2024).

As the owner of the Huachocolpa Uno Administrative Economic Unit (UEA), Compañía Minera Kolpa S.A. holds the status of "Continuous Mining Activity." While the Ministry of Energy and Mines (MINEM) has not issued a formal credential for operators with this status, Report No. 636-2019-MINEM-DGM/DTM, issued on September 3, 2019, confirms Kolpa's right to conduct mining activities under this designation.

In addition, the mining unit has the following licenses, permits and authorizations:

- The Huachocolpa Uno Concentrator Plant, with 20 hectares of extension, was approved by Directorial Resolution No. 118, on June 2, 1955.
- Authorization for the operation of a Huachocolpa Uno concentrator plant with a capacity of 450 TPD, approved by Directorial Resolution No. 382, on March 15, 1958.
- Grants Ordinary Concession to Huachocolpa Uno Concentrator Plant, with the rights and obligations of the General Mining Law, through Ministerial Resolution No. 0630-77- EM/DGM, on December 2, 1977.
- Authorizes the reduction of the installed capacity of the Huachocolpa Uno Concentrator Plant benefit concession to 324 TPD, approved by Report No. 435-2002-EM-DGM/DPDM, on September 20, 2002.
- Authorization for the construction of tailings dam C, expansion of concentrator plant to 800 MT/day and auxiliary facilities, approved by Directorial Resolution No. 223-2013-MEM- DGM/V, on May 22, 2013.
- Authorization for the operation of the Huachocolpa Colpa Concentrator Plant at 800MT/day, operation of tailings deposit C and granting of expansion of the area of the concession title to 366.23 hectares; by Directorial Resolution No. 323-2013-MEM/DGM, on December 19, 2013.
- Authorization for the construction of Stages II and III of the tailings deposit C and auxiliary facilities, through Directorial Resolution No. 0468-2014-MEM-DGM/V, on October 3, 2014.

- Authorization for the construction of a system for optimization and improvement of technology in the management and use of tailings of the Concentrator Plant and auxiliary facilities, approved by Directorial Resolution No. 0471-2014-MEM-DGM/V, on October 7, 2014.
- Authorization for the operation of Stage II of tailings deposits C up to 4357 meters above sea level and auxiliary facilities, through Directorial Resolution No. 056-2015-MEM- DGM/V, on February 5, 2015.
- Authorization for the operation of Stage III of tailings deposits C up to elevation 4361 m.a.s.l., through Directorial Resolution No. 0562-2015-MEM-DGM/V, on November 18, 2015.
- Authorization for the construction and operation of the regrowth of tailings deposit C up to 4365 m.a.s.l., tailings thickening system, auxiliary facilities and modification of the construction method of tailings deposit dam – central line, approved by Directorial Resolution No. 0142-2016-MEM-DGM / V, on April 13, 2016.
- Authorization for the operation of a cycloneated tailings storage yard, cyclone nest and auxiliary facilities, approved by Directorial Resolution No. 0506-2017-MEM-DGM/V, on June 2, 2017.
- Authorization of the construction of the new tailings deposit D, channeling of the Escalera River and expansion of the Plant to 960 TMD, by Directorial Resolution No. 02-2018- MEM-DGM / V, on January 9, 2018.
- Operating authorization for Regrowth of Tailings C (V Stage) for elevation 4366.6 meters above sea level and relocation and modification of the tailings thickener in 340 m with access construction, through Directorial Resolution No. 0020-2018-MEM-DGM/V, on January 17, 2018.
- Authorization for the operation of the new tailings deposit D, channeling of the Escalera River and expansion of the Plant to 960 TMD, through Directorial Resolution No. 0372- 2018-MEM/DGM/V, on April 27, 2018.
- Authorization for the operation of tailings deposit D - Stage I, up to 4334 meters above sea level, approved by Directorial Resolution No. 0325-2019-MINEM-DGM / V, on July 3, 2019.
- Authorization for the operation of the 1200 TMD Processing Plant and inclusion of closed crushing circuit, through Directorial Resolution No. 0340-2019-MEM-DGM/V, on July 15, 2019.
- Authorization for the operation of tailings deposit D - Phase 2 Stage I, up to an elevation of 4345 meters above sea level, approved by Directorial Resolution No. 0106-2020- MINEM-DGM/V, on February 26, 2020.
- Authorization for construction and operation of optimization of the metallurgical process for the expansion of capacity to 1440 MT / day, which includes the relocation of the mineralized collection platform and the Comihuasa channel, approved with Directorial Resolution No. 0037-2021-MINEM-DGM / V on January 28, 2021.
- Water Use Licenses granted by the National Water Authority: Industrial Surface Water Use License, R.D No. 490-2015-ANA-AAAXMANTARO; Surface Water Use License Population, R.D No. 489-2015-ANA-AAAXMANTARO; Mining Surface Water Use License, R.D No. 488-2015-ANA-AAAXMANTARO and Population Surface Water Use License, R.D No. 487-2015-ANA-AAAXMANTARO; issued on July 30, 2015.
- Sanitary Authorization for the Treatment Systems and Sanitary Disposal of Domestic Wastewater by Infiltration in the field, from the UEA Huachocolpa Uno, approved by Directorial Resolution No. 426-2015-DSB/DIGESA/SA, on August 7, 2015.
- Authorization of industrial and domestic dumping, approved by R.D. 087-2021-ANA- DCERH on May 20, 2021.
- Certificate of Non-Existence of Archaeological Remains for the area of the tailings deposit and related works, by CIRA 2008-0466 on October 20, 2008.

- Certificate of Non-Existence of Archaeological Remains for Toromachay Explorations, through CIRA 056-2015-DDC-HVA-MC, on June 16, 2015.
- Certificate of Non-Existence of Archaeological Remains by the Modification of Exceptional Environmental Impact Study (EIA ex), through CIRA 326-2016-DDC-HVA-MC, on October 20, 2016.
- Certificate of Non-Existence of Archaeological Remains for the Modification of the EIA ex of the Expansion of the Concentrator Plant to 960 TMD, through CIRA 49-2019-DDC-HVA- MC, on May 15, 2019.
- Archaeological Monitoring Plan in the area for the new tailings deposit and related works, expansion of the Comihuasa concentrator plant to 960 TMD, new tailings deposit, channeling of the Escalera River and mineral collection platform, approved by Directorial Resolution No. 900066-2018/DDC HVCA/MC on August 17, 2018.
- Archaeological Monitoring Plan in the area of the new clearing of the Rublo Alto Zone, approved by Directorial Resolution No. 0051-2020-DDC HVCA/MC on August 6, 2020.
- Proof of direct consumer with fixed installations, approved by OSINERGMIN No. 9159-2015/OS/OR-HUANCAVELICA, on August 20, 2015.
- Contract of Constitution of Mining Easement, Usufruct, Surface and Easement celebrated by Huachocolpa Peasant Community and Kolpa Mining Company, registered in instrument 0427 of June 22, 2016.
- Resolution N° 0163-2022-MINEM-DGM/V dated May 3, 2022, which approves the modification project for the capacity expansion from 1440 TMD to 1622 TMD of the tailings dam D and auxiliary facilities, without area expansion. Additionally, its construction is authorized.
- Resolution N° 0266-2022-MINEM-DGM/V dated June 30, 2022 authorizing the operation of Stage 2 of Tailings Deposit "D" at elevation 4354.0 masl and auxiliary facilities.
- Resolution N° 0163-2022-MINEM-DGM/V dated May 3, 2022 approving the modification of the design of the tailings deposit "D".
- Resolution N° 0155-2023-MINEM-DGM/V dated March 23, 2023 authorizing the operation of stage 3 of Tailings Deposit "D" from elevation 4354 to 4359.0 m.a.s.l.
- Directoral Resolution No. 142-2017-DC-HVA/MC dated November 15, 2017, authorizing the execution of the Archaeological Monitoring Plan (I MEIA EX).
- Directoral Resolution No. D000001-2019-DDC HVCA/MC dated May 7, 2019, approving the execution of the Archaeological Monitoring Plan (New waste dump area Rublo Alto).
- Directoral Resolution No. 000129-2022-DDC HCA/MC dated July 13, 2022, authorizing the execution of the Archaeological Monitoring Plan (expansion of the Rublo Alto waste dump).
- Directoral Resolution No. 000150-2022-DDC HVCA/MC dated August 8, 2022, modifying the start date of the validity of the Archaeological Monitoring Plan.
- Registration in SUNAT's Register of Chemical Inputs and Controlled Goods for the activities of consumption, local purchase, import, storage and use of controlled goods or products.
- Resolution Nº 00094-2023-PRODUCE/DGPCHDI dated January 30, 2023 that approves the authorisation to carry out activities to collect hydrobiological resources in accordance

with the work plan "Hydrobiological Baseline for the Second Modification of the Environmental Impact Study for the Project to Increase the Capacity to 2500 TPD of the Huachocolpa Uno Mining Unit".

- Resolution No. 00922-2024-SUCAMEC/GEPP dated March 20, 2024 - Authorization for the Storage of Explosives and Related Materials for 1 Permanent and Surface-Type Magazine/Storage Facility

- Resolution No. 00942-2024-SUCAMEC/GEPP dated March 21, 2024 - Authorization for the Storage of Explosives and Related Materials for 1 Permanent and Surface-Type Magazine/Storage Facility

- Resolution No. 00935-2024-SUCAMEC/GEPP dated March 21, 2024 - Authorization for the Storage of Explosives and Related Materials for 1 Permanent and Surface-Type Magazine/Storage Facility

- Resolution No. 00943-2024-SUCAMEC/GEPP dated March 21, 2024 - Authorization for the Storage of Explosives and Related Materials for 1 Permanent and Surface-Type Magazine/Storage Facility

- Resolution No. 00951-2024-SUCAMEC/GEPP dated March 21, 2024 - Authorization for the Storage of Explosives and Related Materials for 1 Permanent and Surface-Type Magazine/Storage Facility

- Resolution No. 00947-2024-SUCAMEC/GEPP dated March 21, 2024 - Authorization for the Storage of Explosives and Related Materials for 1 Permanent and Surface-Type Magazine/Storage Facility

- Resolution No. 00950-2024-SUCAMEC/GEPP dated March 21, 2024 - Authorization for the Storage of Explosives and Related Materials for 1 Permanent and Surface-Type Magazine/Storage Facility

- Resolution No. 00948-2024-SUCAMEC/GEPP dated March 21, 2024 - Authorization for the Storage of Explosives and Related Materials for 1 Permanent and Surface-Type Magazine/Storage Facility

- Resolution No. 00949-2024-SUCAMEC/GEPP dated March 21, 2024 - Authorization for the Storage of Explosives and Related Materials for 1 Permanent and Surface-Type Magazine/Storage Facility

- Resolution No. 00928-2024-SUCAMEC/GEPP dated March 21, 2024 - Authorization for the Storage of Explosives and Related Materials for 1 Permanent and Surface-Type Magazine/Storage Facility

- Resolution No. 00941-2024-SUCAMEC/GEPP dated March 21, 2024 - Authorization for the Storage of Explosives and Related Materials for 1 Permanent and Surface-Type Magazine/Storage Facility

- Resolution No. 00583-2021-SUCAMEC/GEPP dated Feburary 12, 2021 -Authorization for the Acquisition and Use of Explosives and Related Materials

- Resolution No. 0092-2021-SUCAMEC/GEPP dated Janurary 8, 2021 - Authorization for the Acquisition and Use of Explosives and Related Materials
- Resolution No. 00497-2023-SUCAMEC/GEPP dated Janurary 31, 2023 Authorization for the Acquisition and Use of Explosives and Related Materials
- Resolution No. 00491-2024-SUCAMEC/GEPP dated Feburary 12, 2024 - Authorization for the Acquisition and Use of Explosives and Related Materials
- Resolution No. 0572-2024-SUCAMEC/GEPP dated September 20, 2024 - Authorization for the Acquisition and Use of Explosives and Related Materials
- Directorate Resolution No. 0134-2023-MTC/28 dated Janurary 25, 2023 - Authorization and Permit for the Installation to Establish and Operate Twenty-Five (25) Private Teleservice Radio Station
- Resolution No. 7842-2023-OS/OR Huacavelica dated June 16, 2023, modifying the registration No. 82491-051-200815, to develop the activity of Direct Consumer of Liquid Fuels, at the establishment located on the Chonta – Lircay Road Km. 22

In addition to obtaining the necessary permits, ongoing environmental monitoring and management are conducted throughout operations in accordance with the Environmental Management Plan (EMP).

The EMP includes preventive and corrective measures to ensure compliance with environmental commitments and minimize impacts. These measures cover:

- Effluent treatment
- Waste management and disposal
- Dust control and road irrigation
- Environmental training programs
- Continuous supervision of operational criteria and controls

Through permanent oversight and strict adherence to management practices, the company ensures compliance with its environmental commitments while reducing its impact on the environment.

20.1.5 Environmental Studies

The Huachocolpa Uno Mining Unit operates in compliance with environmental regulations, demonstrating a commitment to environmental responsibility, community well-being, and sustainable practices. The company has developed and implemented various environmental management instruments, all approved by the relevant national authorities (Laymen and McIver, 2024).
Key Environmental Approvals and Programs

- Environmental Adaptation and Management Program (PAMA) – 1996. In August 1996, the PAMA was submitted to the Ministry of Energy and Mines (MINEM), prioritizing:
    - Treatment of acidic mine water and tailings effluents
    - Construction of canals and effluent processing systems
    - Stability of deposit slopes

  - Development of septic tanks and a sanitary landfill for waste management in the mining camp
  - The program was approved on August 15, 1997, under Directorial Resolution No. 286-97-EM/DGM.

- Exceptional Environmental Impact Study (EIA ex) – 2010. In June 2010, an Exceptional Environmental Impact Study (EIA ex) was submitted for the expansion of the Comihuasa Concentrator Plant to 800 TMD and related infrastructure. The study, prepared by SVS Ingenieros, covered the:

  - Huachocolpa Concentration Plant (benefit concession)
  - Pepito 95 mining concession
  - The study was approved on October 24, 2012, under Directorial Resolution No. 345-2011-MEM/AAM.

- Modification of the Environmental Impact Study (MEIA ex) – 2015. In December 2015, an updated environmental study was submitted to expand the concentrator plant from 800 TMD to 960 TMD, including:
  - A new tailings deposit (Deposit D)
  - Escalera River channeling
  - Mineral storage platform
  - The MEIA ex was approved on July 18, 2017, through Directorial Resolution No. 193-2017-MEM/DGAAM.

Technical Sustainability Reports (ITS) and Approvals

To optimize and modify key components of the mining unit, eight (8) Technical Sustainability Reports (ITS) have been approved over the years:

- July 21, 2014 – Optimization and technological improvement for tailings management in mining operations (R.D. No. 372-2014-MEM-DGAAM).
- February 26, 2016 – Regrowth of Tailings Deposit Reservoir C and implementation of a tailings thickener (R.D. No. 060-2016-MEM-DGAAM).
- October 31, 2017 – Permanent sludge storage in geotubes at the Rublo deposit (R.D. No. 329-2017-SENACE/DCA).
- December 15, 2017 – Regrowth of Tailings Deposit C – Stage V and relocation of the tailings thickener (R.D. No. 034-2017-SENACE-JEF/DEAR).
- February 13, 2019 – Expansion of plant capacity to 1,200 TPD and related works (R.D. No. 033-2019-SENACE-PE/DEAR).
- September 25, 2020 – Expansion of plant capacity to 1,440 TPD, construction of a mineral storage platform, and Comihuasa canal implementation (R.D. No. 00109-2020-SENACE-PE/DEAR).
- June 4, 2021 – Regrowth of the Rublo clearing deposit (R.D. No. 085-2021-SENACE-PE/DEAR).
- December 3, 2021 – Expansion of plant capacity to 1,622 TPD and modifications to Tailings Deposit D (R.D. No. 155-2021-SENACE-PE/DEAR).

Additional Environmental Compliance Measures

Component Regularization

- March 15, 2017 – Approval of the Detailed Technical Report for adapting mine components (R.D. No. 078-2017-MEM-DGAAM).

- September 3, 2021 – Endorsement of the Detailed Environmental Plan, formalizing auxiliary components (R.D. No. 176-2021-MINEM/DGAAM).

Ongoing Environmental Adaptation Programs
The company is actively managing:

- Comprehensive Plan for Compliance with Maximum Permissible Limits and Water Quality Standards (PIA).

- Contaminated Sites Identification Report to align with soil quality standards which was approved with RD 0210-2022-MINEM-DGAAM.

Commitment to Environmental Responsibility

Through these environmental management initiatives and approvals, the Huachocolpa Uno Mining Unit ensures compliance with national regulations, prioritizing environmental protection, waste management, and operational safety.

20.1.6 Environmental Management

The Huachocolpa Uno Mining Unit operates under its own environmental management system, following a continuous improvement approach. In the future, the company plans to certify its system under the ISO 14001 environmental management standards.

Environmental management instruments have been used to assess both existing and potential environmental impacts from mining operations and new projects. To mitigate these impacts, various management measures and plans have been implemented as part of the unit's overall environmental strategy.
Environmental Monitoring Program

Kolpa has established a comprehensive Environmental Monitoring Program that includes:

- Air quality monitoring
- Noise level assessments
- Surface water quality and flow monitoring
- Groundwater level and quality analysis
- Drinking water quality testing
- Effluent monitoring
- Soil and sediment quality assessments
- Biological monitoring of flora and fauna
- Hydrobiological and meteorological data collection

Additionally, environmental monitoring and surveillance are conducted with the participation of local communities, ensuring transparency and collaboration in assessing environmental conditions in the direct impact area.

20.1.7 Mining Waste Management

The primary by-products of mining and mineral concentration at the Huachocolpa Uno Mining Unit are mine waste (clearings) and tailings from the concentrator plant.

Recent studies have analyzed the geochemistry of mineralization, mine waste, and tailings using procedures from the American Society for Testing Materials (ASTM). The Acid-Base Accounting (ABA) tests determined the potential for acid generation in mining waste by measuring total sulfur content, including sulfide sulfur and sulfate sulfur. These tests were supplemented with the Synthetic Precipitation Leaching Procedure (SPLP) to assess metal concentrations.

Results from SPLP tests indicate that mine waste could release metals into the environment when exposed to rainfall, emphasizing the need to limit contact with precipitation.

To safely dispose of mine clearings, the Rublo Deposit, a mixed waste storage facility located 700 meters from the main mine entrances, is used. Clearings are transported to the deposit using 30-ton trucks.

- The deposit sits on old tailings and clearings with low conductivity, a deep water table, and an impermeable rock foundation, which limits groundwater flow.
- The site has been expanded to 5.7 hectares and includes:
  - Dikes built with borrow material
  - Coronation channels to prevent surface water entry
  - Sub-drainage systems and collection pools to manage contact water, which is directed to the acid water treatment system
  - Geotechnical and topographic instrumentation for stability monitoring

The stability analysis confirmed that the deposit meets minimum safety standards, ensuring an environmentally safe disposal site.

Tailings Disposal – "D" Tailings Deposit

Tailings generated from mineral processing are stored in the "D" Tailings Deposit, located 200 meters from the Concentrator Plant.

- Capacity and Construction:
  - Designed for five expansion stages, with a total capacity of 2.67 million m^3
  - Built over old tailings deposits (A, B, and C) in the former natural channel of the Escalera River
  - A 1.1 km river diversion channel was created to reroute the Escalera River
  - A variant to the departmental road HV115 was developed to accommodate the deposit

- Engineering Features:

  - A central-axis regrowth dam, projected to exceed 50 meters in height in its final stage

- Perimeter channels to prevent surface water entry
- A fishbone-type sub-drainage system and collection pools to capture runoff from older tailings deposits
- A high-density geomembrane liner to prevent seepage

- Geotechnical Monitoring:
  - The dam is equipped with piezometers, inclinometers, and topographic control markers to measure groundwater levels and structural stability
  - Stability tests, based on a 500-year seismic event, confirm that the dam remains structurally sound under both static and seismic conditions
- Tailings Management:
  - Tailings are sorted using a thickener or hydrocyclones before disposal
  - Water from tailings sedimentation is pumped to the mine water treatment plant, where it is recycled back to the Concentrator Plant or discharged at an authorized location

All tailings disposal activities are conducted under strict environmental controls, ensuring safe and compliant waste management.

- Industrial and Domestic Solid Waste Management
  - Industrial waste (such as scrap metal and used oils) is collected by specialized companies for recycling.
  - Organic waste is disposed of in the unit's sanitary landfill, following environmental regulations.
  - Non-recyclable waste is sent to authorized sanitary or safety landfills, ensuring compliance with current environmental standards.

By implementing these measures, the Huachocolpa Uno Mining Unit ensures that all waste—whether mining waste, tailings, or industrial/domestic waste—is managed in an environmentally responsible and safe manner.

20.1.8 Water Management

Water is essential for nearly all mining processes. To meet its needs, the Huachocolpa Uno Mining Unit has obtained the necessary permits for water use in residential, industrial, and mining operations. Water is sourced from nearby springs and natural bodies of water.

Groundwater Infiltration and Mining Impact

Most of the underground water infiltration comes from rainwater recharging fractured volcanic rock formations at higher elevations. These fractured andesitic volcanic rocks and mineralized veins act as natural flow channels, allowing water to enter the underground aquifers. However, mining activities in the area have altered the natural groundwater flow, causing:

- Depression of the original water table in the mining area.
- Formation of a cone of depression, aligned with underground tunnels, affecting groundwater distribution.

Water Collection and Treatment

To manage this underground water, the Centralized Pumping System (SCB) collects and processes infiltrated water through:

- Sedimentation chambers to reduce solids.
- A lime dispenser for neutralization.
- A pumping system to move treated water to the surface.

Once neutralized, the water is reused in mining operations, reducing the load on the Neutralization and Dynamic Coagulation (NCD) Plant, which is responsible for treating acidic mine water.

On the surface, a network of pipes transfers collected mine water from key mining areas—including old mine entrances, the Rublo clearing deposit, and mineralized stockpiles—to the NCD Plant for treatment.
Neutralization and Recycling Process

The NCD Plant was designed for neutralization, sedimentation, and coagulation to treat up to 120 L/s of collected water, including:

- Mine water from underground workings.
- Water from the tailings deposit.
- Filtration water from old tailings deposits.

Treated water is then recycled and reused:

- Up to 65 L/s is recirculated to the concentrator plant, reducing the need for fresh water from the Escalera River.
- Any excess treated water is discharged into the Escalera River at an authorized discharge point (V-01) after quality control ensures compliance with environmental regulations.

Water for Human Consumption

Water for human consumption is directed to drinking water treatment plants (PTAP) at the Caudalosa and Comihuasa camps, supplying potable water to both facilities.
Domestic Wastewater Management

Wastewater from residential and operational facilities is managed through a separate drainage network, leading to:

- San Inocente Septic Tank (for Caudalosa camp wastewater).
- Comihuasa Domestic Wastewater Treatment Plant (PTARD) (for the Comihuasa camp).

The treated effluent from both systems is then sent to the NCD Plant before being discharged at the authorized V-01 discharge point.

This comprehensive water management system ensures efficient water use, minimizes environmental impact, and reduces the need for freshwater extraction from local rivers.

20.1.9 Waste Dump and TSF Closure

Over the years, the Huachocolpa Uno Mining Unit has used 59 waste deposits and six tailings deposits to manage mining waste.
Closure of Waste Deposits

- Most of the 59 waste deposits were small-scale and are now either closed or in progressive closure, with commitments scheduled for the coming years.
- The Otongocucho tailings deposit, located north of the concentrator plant, has been fully closed.

Progressive Closure of Tailings Deposits

- The old tailings deposits (A, B, and C) form part of the left slope of the current "D" tailings deposit. Their closure is being carried out progressively as part of the construction of the new deposit.
- The old Rublo deposit, originally used for storing tailings from the Rublo mine, has been repurposed into a mixed waste deposit and remains in use.

Closure Commitments and Supervision

- The closure of waste and tailings deposits follows a progressive closure schedule approved by the Ministry of Energy and Mines (MEM).
- Regular inspections and supervision are conducted by the Environmental Supervision and Inspection Agency (OEFA) to ensure compliance.

Final Closure and Post-Closure Responsibilities

- Mining components that remain operational until the end of the mine's lifecycle have final closure commitments, backed by a guarantee letter to the MEM.
- These deposits were constructed with physical stability measures, ensuring that no additional stabilization work will be required during closure.
- Kolpa is responsible for the post-closure stage, which lasts five years after completing the closure activities outlined in the Mine Closure Plan.
- Post-closure monitoring will ensure stability based on Environmental Quality Standards, Maximum Permissible Limits, and international best practices in:
    - Physical stability (geotechnical integrity).
    - Chemical stability (contaminant containment).
    - Hydrological balance (water quality and management).
    - Biological recovery (restoration of ecosystems).
    - Social impact (community well-being).

This structured approach guarantees safe, environmentally responsible, and regulatory-compliant mine closure.

Table 20-1 Summary of Studies and Permits (Laymen and Mc Iver, 2024)

License	Approval Doc.	Date
Environmental Certifications		
Environmental Adaptation and Management	R.D N° 286-97-EM/DGM	15 August 1997

License	Approval Doc.	Date
Program		
Environmental Impact Statement of Direct Consumer with Dispenser	R.D.R. N° 020-2006/GOB.REG-HCVA/GRDE-DREM	03 July 2006
Exceptional Environmental Impact Study: Expansion of the Comihuasa Concentrator Plant to 800 TMD and Related Works	R.D N° 345-2011-MEM/AAM	24 October 2012
Supporting Technical Report "Optimization and technological improvement for the management and use of tailings in mine operation	R.D No. 372-2014-MEM- DGAAM	21 July 2014
Second Technical Report Supporting the Exceptional Environmental Impact Study for the "Expansion of the Comihuasa Concentrator Plant to 800 TMD and Related Works"	R.D No. 060-2016-MEM- DGAAM/DNAM/B	26 February 2016
Modification of the Environmental Impact Study for the Expansion of the Comihuasa Concentrator Plant to 800 TMD and Related Works for the new tailings deposit D, channeling of the Escalera River, mineralized storage platform and increase of the plant's capacity from 800 TMD to 960 TMD	R.D N° 193-2017-MEM/DGAAM	18 July 2017
First Supporting Technical Report for the Technological Improvement of the Rublo Deposit for the Permanent Storage of Sludge in Geotubes of the Huachocolpa Uno Mining Unit	R.D. No. 329-2017-SENACE/DCA	31 October 2017
Second Technical Report Sustaining the Recrecimiento del Depósito de Relaves C – Stage V, Reubicación y Modificación del Espesor de Relaves de la UM Huachocolpa Uno	R.D. No. 034-2017-SENACE- JEF/DEAR	15 December 2017
Third Technical Report of the Huachocolpa Uno Mining Unit	R.D. No. 033-2019-SENACE- PE/DEAR	13 February 2019
Fifth Supporting Technical Report for the Modification of Components of the Huachocolpa Uno Mining Unit	R.D. N° 00109-2020-SENACE- PE/DEAR*	25 September 2020
Sixth Technical Report for the Modification of Components of the Huachocolpa Uno Mining Unit	RD N° 085-2021-SENACE-PE- DEAR	04 June 2021
Seventh Technical Report for the Modification of Components of the Huachocolpa Uno Mining Unit	R.D. N° 155-2021-SENACE-PE- DEAR	03 December 2021
Mine Closure Plans		
Huachocolpa Uno Mining Unit Mine Closure Plan	R.D N° 403-2009-MEM- AAM	10 December 2009
Update of the Mine Closure Plan of the Huachocolpa Uno Mining Unit	R.D AAM N° 010-2014-MEM-	08 January 2014
First Modification of the Mine Closure Plan of the Huachocolpa Uno Mining Unit	R.D AAM N° 345-2016-MEM-	05 January 2016

License	Approval Doc.	Date
Second Modification of the Mine Closure Plan of the Huachocolpa Uno Mining Unit	R.D AAM N° 082-2020-MEM-	23 July 2020
Third Modification of the Mine Closure Plan of the Huachocolpa Uno Mining Unit	R.D. N° 199-2021/MINEM-DGAAM	15 October 2021
Effluent Discharge Authorizations		
Industrial & Domestic Dumping	R.D. 087-2021-ANA-DCERH	20 May 2021
Water Licenses		
Industrial Surface Water Use License	R.D No. 490-2015-ANA-AAAXMANTARO	30 July 2015
Surface Water Use License Population	R.D No. 489-2015-ANA-AAAXMANTARO	30 July 2015
Mining Surface Water Use License	R.D No. 488-2015-ANA-AAAXMANTARO	30 July 2015
Surface Water Use License Population	R.D No. 487-2015-ANA-AAAXMANTARO	30 July 2015
Tailings		
Authorisation for the construction of the new tailings deposit C	R.D. N°223-2013-MEM-DGM/V	22 May 2013
Authorisation to operate the new tailings deposit C	R.D. N°323-2013-MEM/DGM	19 December 2013
Construction authorization for Stage II and III of the C tailings deposit	R.D. N° 0468-2014-MEM-DGM/V	03 October 2014
Authorization for the construction of a system for the optimization and improvement of technology in the management and use of tailings from the Concentrator Plant	R.D. N° 0471-2014-MEM-DGM/V	07 October 2014
Authorization for the operation of Stage II of tailings deposits C up to an altitude of 4357 m.a.s.l.	R.D. N° 056-2015-MEM-DGM/V	05 February 2015
Authorization for the operation of Stage III of tailings deposits C up to an altitude of 4361 m.a.s.l.	R.D. N° 0562-2015-MEM-DGM/V	18 November 2015
Authorization for the construction and operation of the regrowth of tailings deposit C up to 4365 m.a.s.l., tailings thickening system, auxiliary facilities and modification of the method of construction of tailings deposit dam – centerline	R.D. N° 0142-2016-MEM-DGM/V	13 April 2016
Authorisation for the operation of cycloneous tailings storage yard, cyclone nest and auxiliary facilities	R.D. N° 0506-2017-MEM-DGM/V	02 June 2017
Authorisation for the construction of the new tailings deposit D	R.D N°02-2018-MEM-DGM/V	09 January 2018
Authorisation to operate the new tailings deposit D	R.D N° 0372-2018-MEM/DGM/V	27 April 2018
Authorisation of the construction, installation and operation of the Tailings Dam C at elevation 4366.6	R.D N° 0020-2018-MEM/DGM/V	17 January 2018

License	Approval Doc.	Date
m.a.s.l. (Stage V)		
Operating authorization for the Regrowth of Tailings Dam C (IV Stage)	R.D N° 0340-2019-MEM-DGM/V	15 July 2019
Authorization for the operation of tailings deposit D - Stage I, up to 4334 m.a.s.l.	R.D N° 0325-2019-MINEM-DGM/V	03 July 2019
Authorization for the operation of tailings deposit D - Phase 2 Stage I, up to 4345 m.a.s.l.	R.D N° 0106-2020-MINEM-DGM/V	26 February 2020

20.2 Social Impact

Kolpa recognizes the importance of building transparent and trusting relationships with the local communities in its area of influence. The company is committed to fostering strategic alliances between Kolpa, the State, and local communities to promote sustainable development.

As part of this commitment, Kolpa prioritizes:

- Maintaining open dialogue and mutual respect with local communities.
- Fulfilling social commitments and continuously supporting community development programs.
- Delivering both short- and long-term benefits to the communities in its area of influence.

Focus on the Huachocolpa Community

Kolpa’s mining operations take place in the Huachocolpa district, where surface lands are owned by the local community ("comunidad campesina"). This community consists of nine annexes and is governed by a central leadership body.

Given this structure, Kolpa’s social programs are primarily focused on supporting the Huachocolpa community, including the successful implementation of several development initiatives.

20.2.1 Education

Huachocolpa Student Internship Program (2018-2019)

In 2018 and 2019, six students participated in the Huachocolpa Student Internship Program, gaining hands-on experience in the Mechanical Maintenance, Electrical Maintenance, and Environmental Affairs departments.

"Let's Play Together" Educational Program

Since 2014, Kolpa has continuously carried out the "Let's Play Together" program through an inter-institutional agreement with the Caritas Graciosas Educational Association. This initiative operates under a strategic alliance involving various institutions, including:

- Huancavelica Educational Management Unit (UGEL)
- District Municipality of Huachocolpa
- Cuna Más Program
- National Country Program
- DEMUNA (Children's Rights Office)

- Health Center
- Women's Emergency Center (CEM)
- Subprefecture
- PNP Police Station
- Community Leaders

This program is designed for children under 8 years old and their parents, providing educational and comprehensive care to strengthen healthy family bonds. By fostering positive relationships between children and parents, the program supports cognitive and socio-emotional development.

Each year, the program benefits approximately 300 families across the annexes of Huachocolpa, Alto Sihua, Corralpampa, and Yanaututo.

20.2.2 Health

Huachocolpa Health Post Strengthening Program (2018)

In 2018, Kolpa implemented the Huachocolpa Health Post Strengthening Program, which included:

- Training workshops with hands-on demonstrations on nutrition
- Comprehensive health action campaigns
- Training sessions for health promoters

Preventive Medical Care Program (2018-2019)

Between 2018 and 2019, Kolpa carried out the Preventive Medical Care Program at the Mining Unit's Medical Center. The center provided medical consultations, pharmacy services, and treatments to community members from Huachocolpa, Totorapampa, and Corralpampa, primarily serving adults and elderly individuals in poverty and extreme poverty.

On average, 30 community members received medical care per session, with the program representing an investment of S/ 3,300.00.

20.2.3 Local Employment

- Improvement of Productive Capacities Program

This program aims to enhance the competitiveness of alpaca and sheep breeders in Huachocolpa, improving their livelihoods. In 2018, Kolpa donated 40 breeding male alpacas, benefiting families in the annexes of Huachocolpa, Alto Sihua, Yanaututo, Chuñomayo, Atoccmarca, Corralpampa, Pallccahuaycco, and Totorapampa, with a total investment of S/ 136,700.00.

- Cooking and Pastry Workshop (2019)

In coordination with the Community of Huachocolpa, a three-month Cooking and Pastry Workshop was organized in 2019, using local ingredients. The workshop, led by the Private Higher Technological Institution "De Perú Máster" in Lircay, was attended by 25 women from the community, helping them develop skills to generate new job opportunities.

- Community Culture Program

Kolpa also provides logistical support and material donations for socio-cultural activities in Huachocolpa, reinforcing its commitment to community engagement and cultural preservation.

Environmental Monitoring & Community Involvement

- Participatory Environmental Monitoring

As part of the Environmental Management Plan, two Participatory Environmental Monitoring sessions are conducted each year at surface water points. These sessions involve:

- The Environmental Monitoring Committee
- Representatives from the District Municipality of Huachocolpa
- Authorities from the Peasant Community of Huachocolpa
- The local directive of the Totorapampa annex

Monitoring is carried out by AGQ PERU S.A.C., a laboratory certified and accredited by INACAL.

Economic & Employment Impact

It is estimated that US$120,000 is spent annually in community support programs. Additionally, mining operations have contributed to job creation, generating both direct employment and secondary/tertiary jobs through service-providing companies, significantly boosting the local economy.

21 CAPITAL AND OPERATING COSTS

This section does not apply to the Technical Report.

22 ECONOMIC ANALYSIS

This section does not apply to the Technical Report.

23 ADJACENT PROPERTIES

There is no information on properties adjacent to the Property necessary to make the technical report understandable and not misleading.

24 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading. To the Authors' knowledge, there are no significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information or MRE.

25 INTERPRETATION AND CONCLUSIONS

25.1 Introduction

SGS Geological Services Inc. was contracted by Endeavour Silver Corp. to prepare a National Instrument 43-101 Technical Report for the Huachocolpa Uno Mine located in the districts of Huachocolpa and Santa Ana, in the province and department of Huancavelica, 490 km southeast of Lima, Peru. Huachocolpa Uno is currently an operating mine.

Endeavour has announce that it has entered into a definitive share purchase agreement (the “Agreement”) to acquire all of the outstanding shares of Compañia Minera Kolpa S.A., (“Kolpa”) and its main asset the Huachocolpa Uno Mine, from subsidiaries of its shareholders Arias Resource Capital Management and Grupo Raffo (collectively, the “Shareholders”) in exchange for total consideration of $145 million comprised of $80 million cash and $65 million payable in Endeavour shares (the “Transaction”). In addition, as part of the Transaction, Endeavour has agreed to pay up to an additional $10 million in contingent payments upon the occurrence of certain events and Endeavour will also assume approximately $20 million in net debt currently held by Kolpa.

The current Technical Report complies with all disclosure requirements set out in the NI 43-101 Standards of Disclosure for Mineral Projects. The current Technical Report will be used by Endeavour in fulfillment of their continuing disclosure requirements under Canadian securities laws, including National Instrument 43-101 – Standards of Disclosure for Mineral Projects. This Technical Report is written in support of the share purchase agreement to acquire all of the outstanding shares of Kolpa and its main asset the Huachocolpa Uno Mine.

25.2 Exploration and Diamond Drilling

Kolpa initiated exploration in on the Property in 2016. Exploration methods have included geological mapping, surface channel sampling, and geophysics in addition to diamond drilling from surface and underground. Surface mapping programs were completed by Kolpa from 2018 to 2021, with surface geochemical sampling programs completed in 2019 to 2023, and a substantial geophysical program (resistivity, IP, magnetics) was completed in 2018. The Huachocolpa Uno Project has significant exploration potential with multiple exploration targets on the Property, classified as Near Mine, Brownfield, and Greenfield targets.

The Huachocolpa Uno Project drilling database utilized for the estimation of historical resources has been limited to drilling completed between 2001 and 2024 by Compañía Minera Caudalosa S.A. and Compañía Minera Kolpa S.A. Effective December 31, 2024, the Huachocolpa database contains results from over 716 drill holes totaling 187,131.71 m. All drill holes included in this dataset correspond to diamond core drilling methods.

Of the total drilling, over 594 holes were completed from underground workings within the Bienaventurada mine totaling 161,602.31 m, and over 112 holes were completed from surface at the Yen Project totaling 25,529.40 m. Compañía Minera Kolpa S.A. has completed over 556 holes for 153,45.65 m for diamond drilling. Only drilling annual meterage totals are available for 2023 and 2024 and exact drill hole counts are not currently available for these years.

In addition to diamond drilling, a total of 39,971 channel samples totaling 52,621 m were collected from 2004 to 2021. Of these, 38,677 channel samples (51,821 m, 96.8%) were collected at the Bienaventurada mine, 688 channel samples (533 m, 1.7%) were collected at the Chonta mine, 606 channel samples (267 m, 1.5%) were collected at the Escopeta project.

25.3 Historical Mineral Resource Estimates

The MREs presented below were prepared for Kolpa and are considered historical in nature with respect to Endeavour. A qualified person has not done sufficient work to classify the historical resource estimates as current mineral resources or reserves and Endeavour is not treating the historical resource estimates presented here as current mineral resources or reserves. There are no current MREs for the Property. The historical estimates were prepared prior to Endeavour's purchase agreement with Kolpa. Additional diamond drilling, underground channel sampling and mining has been conducted on the Property since the last historical MRE was completed. To upgrade historical estimates to current MREs, Endeavour will need to review all drill data and underground channel sampling completed to date, and revised all geological models, resource models and structural models as well as revised economic parameters for resource reporting. As well, Endeavour is planning on completing additional drilling on the Property before estimating new MREs.

The Property was the subject of an internal technical report in 2023 titled Huachocolpa Uno Preliminary Economic Assessment Project, Project Number 0094 which had an effective date of 31 March 2023 and a report date of 7 May 2024. The report was prepared for Kolpa. The technical report included open pit and underground MREs for 9 deposits on the Property, including Bienaventurada, EM Chonta, Tajo Yen, Escondida, Escopeta, Chonta, Teresita, Yen NE and Rublo. The combined MRE included a Measured + Indicated Mineral Resource of 5 Mt at 2.84 oz/t Ag, 3.07% Pb, 3.28% Zn and 0.24% Cu. In addition to the Measured + Indicated Mineral Resources, an Inferred Mineral Resource of 4.2 Mt at 3.16 oz/t Ag, 3.43% Pb, 3.25% Zn and 0.21% Cu is accounted for. The MRE was reported using all material (mineralization and waste) within resource shapes generated in MSO, and using geological criteria, resources were classified by mining method. NSR cut-off values of US$34.20/t for underground methods and US$23.30/t for Yen open cast resources, were used. Mineral resources are estimated using zinc price of US$1.59/lb, lead price of US$1.16/lb, copper price of US$5.36/lb, and silver price of US$31.20/oz. Metallurgical recoveries are based on recovery curves derived from historical processing data.

The MRE was revised in October 2024 (effective date of August 31, 2024) using an updated DDH and underground channel database (Table 25-1) and the same estimation methodology. The updated MRE included open pit and underground MREs for 11 deposits on the Property, including Bienaventurada, EM Poderosa, Tajo Yen, Escondida, Escopeta, Chonta, Teresita, Yen NE, Rublo, Coricancha and Pepito. Similar to the previous historical MRE, NSR cut-off values of US$34.20/t for underground methods and US$23.30/t for Yen open cast resources, were used.

Table 25-1 Summary of Historical Mineral Resources – Huachocolpa Uno, October 2024 (effective August 31, 2024)

		Grade				Contained Metal			
Category	**Tonnage**	**Ag**	**Pb**	**Zn**	**Cu**	**Ag**	**Pb**	**Zn**	**Cu**
	(Mt)	(oz/t)	(%)	(%)	(%)	(Moz)	(Kt)	(Kt)	(Kt)
Measured	2.8	4.07	3.99	3.83	0.33	11.3	110.8	106.3	9.2
Indicated	3.5	2.92	3.06	3.07	0.24	10.1	105.7	106.1	8.3
Measured & indicated	**6.2**	**3.43**	**3.47**	**3.41**	**0.28**	**21.4**	**216.5**	**212.4**	**17.5**
Inferred	5.0	2.90	3.02	3.37	0.24	14.6	152.3	170.0	12.1

- The MRE was performed using MineSight (MS) and Leapfrog. 3D vein shells were constructed in Leapfrog Geo, using geological sections, assays results (underground channels and DDH's), lithological interpretation, underground mapping, and structural data. To determine the length of composites samples by domain, the statistic mode of the sample length was used. To correct outliers, the technique of dimensioning from Cumulative Probability Plot (CPP) graphs was applied.
- Rotated block models of 1 x 3 x 3m were used for the Bienaventurada, Escopeta, Escondida, Teresita, Rublo, Yen NE and Chonta veins coinciding with the vein direction. For Yen Open Cast,

unrotated block model of size 1 x 1 x 1 m was used. The reported grades were estimated using Ordinary Kriging (OK). The block models were validated using industry standard techniques. The resource classification criteria include the distance to the nearest drill hole and the number of samples.

- High-grade assays were capped for Ag, Cu, Pb and Zn to limit the influence of a small number of outliers located in the upper tail of the grade distributions. The raw assays were limited prior to compositing. CPP plots commonly show outliers in the 98th to 99th percentile.
- The Ag, Cu, Pb and Zn grades were estimated using ordinary kriging (OK) in all block models. Inverse distance weighting (IDW) and Nearest neighbour (NN) methodologies were used for estimation comparison and validation. The estimation was performed in four passes, the first one equal to 100% of the variogram range, the second equal to 150% of the variogram range, the third equal to 200% the variogram range, the fourth equal to 1000% variogram range.
- In the block model, most of the veins were assigned the density value by interpolation by the ID method, while in the other veins that did not have a density measurement, the average density of the total data obtained was used (generally 2.90 to 3.00 9g/cm^3).
- The classification of the MRE is consistent with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) standard definitions for mineral resources and reserves dated May 10, 2014 (CIM definitions, 2014).
- For Bienaventurada Measured was estimated within drilling patterns 20m x 10m x 20m and includes channel sampling at 3m x 6m inside the mining developments levels and sublevels. Indicated was estimated within drilling patterns 40m x 20m x 40m and includes channel sampling at 6m x 12m for the mining development levels. Inferred was estimated with drilling patterns greater than 40m x 20m x 40m and maximum search distances at 70m x 46m x 13m in Bienaventurada.
- For Escondida the drilling pattern and the search distances were the same; however, Escondida did not have channel samples, but only drilling information. Chonta, Escopeta and Rublo were mostly explored by development and channel sampling; no drilling data was available. Measured was defined by development drifts inside the deposit, with channel samples collected 2m x 1m x 6m (levels and sublevels). Indicated was defined by development drifts inside the deposit, with channel samples collected 2m x 1m x 12m (levels). Inferred was estimated with the same channels as Indicated resource with extension search distances 91m x 50m x 10m.

25.4 Mineral Processing and Metallurgical Test Work

Metallurgical test work is limited for the Property. However, a process plant has been running successfully on the Property for a number of years. A summary of the processing plant performance since 2016 is provided in Table 25-2. The feed rate has increased since 2020. Concentrate production has accordingly increased.

The current process plant is suitable for continuing operations.

Table 25-2 Processing Plant Historical Record Performance

	2016	2017	2018	2019	2020	2021	2022	2023	2024
Tonnes Processed	283,714	283,445	326,005	400,117	455,564	593,545	631,455	661,535	686,503
Head Grade Ag (opt)	3.39	3.80	3.99	3.40	2.26	2.04	2.66	3.06	3.30
Head Grade Pb (%)	4.21	3.34	3.07	3.60	2.92	2.44	2.85	2.90	3.08
Head Grade Zn (%)	3.91	3.74	3.04	2.48	2.87	2.44	2.02	2.12	2.13
Head Grade Cu (%)	0.45	0.33	0.26	0.27	0.27	0.22	0.18	0.18	0.18
Recovery Ag (%)	81.36	81.40	82.92	90.67	89.21	86.58	85.35	89.14	89.88
Recovery Pb (%)	85.95	86.15	90.13	94.53	91.50	89.60	89.98	92.82	93.79
Recovery Zn (%)	84.85	80.96	81.96	81.40	84.84	82.99	82.15	83.91	85.82
Recovery Cu (%)	54.05	52.73	67.98	63.32	56.23	47.04	33.01	44.33	42.54
Produced Ag (oz)	783,664	853,849	1,070,030	1,237,452	863,159	1,049,111	1,431,962	1,805,663	2,037,053
Produced Pb (tonnes)	10,255	8,065	8,998	13,623	12,158	12,971	16,202	17,825	19,820
Produced Zn (tonnes)	9,415	8,394	8,052	7,943	11,011	12,028	10,488	11,746	12,554
Produced Cu (tonnes)	688	492	602	95	690	608	379	522	518
Produced AgEq (oz)	2,812,087	2,536,298	2,827,071	3,153,182	3,206,687	3,532,924	3,916,593	4,599,018	5,066,852

Note : AgEq Calculated using (Pb tonnes x $1,984 + Zn tonnes x $2,755 + Cu tonnes x $9,369)/$26) + Ag oz

25.5 Mining Methods

Kolpa has operated the Huachocolpa Uno mining property since 2015, with two distinct production areas: the Bienaventurada underground mine and the Yen open pit. Average production is approximately 1,200 tpd from underground operations and 300 tpd from the open pit.

Mine production at the Bienaventurada underground mine uses a combination of longhole stoping, with stope heights ranging from 8 to 11 m, and conventional cut-and-fill mining with 2 m vertical cuts. Mechanized equipment is used primarily for mucking material from development headings and stopes. Both methods are backfilled with waste rock generated from development and stoping activities, placed using mechanized equipment. Waste rock from development is sufficient to meet backfill requirements; no material is backhauled from the surface. Current underground operations reach depths of up to 500 m. Mineralization is hauled to surface and transported to the processing plant, located approximately 3 km from the portal.

The Yen open pit is mined using conventional mechanized methods with 15 m³ or 30-tonne dump trucks. The pit is designed with 5 m high benches, a 45° inter-ramp angle, and 6 m-wide one-way ramps. Two access ramps connect the pit to the processing plant for haulage.

The Property is an operating mine, and production is expected to continue. The mining methods in use are appropriate for sustained operations.

25.6 Recovery Methods

Kolpa conducts exploration, exploitation and beneficiation of polymetallic minerals with high contents of lead, silver, zinc and copper, to produce and market concentrates of copper (Cu), lead (Pb) and zinc (Zn).

New and replacement processing equipment procurement is progressing to expand milling capacity from 1,800 tpd to 2,500 tpd

The following sections describe the 1,800 tpd processing flowsheet and the flowsheet for the expansion to 2,500 tpd, including equipment, key consumables and utilities for the concentrator at the Huachocolpa Unit.

The existing concentrator plant beneficiates the polymetallic mineralization using a conventional selective flotation process to obtain a bulk concentrate that is subsequently separated into lead-copper and zinc concentrates. The concentrator plant performs the following processes:

- Crushing.
- Grinding and classification to the pulp.
- Bulk flotation Cu-Pb-Ag.
- Separation Pb-Cu.
- Flotation Zn.
- Thickening and filtering of the Zn, Pb and Cu concentrates.
- Classification, transport and tailings disposal.

The current process design is suitable for continued operation on the Property.

25.7 Project Infrastructure

The Huachocolpa Uno Mining Unit has sufficiently sized and maintained infrastructure to conduct mining activities responsibly and sustainably as well as socially and environmentally compliant.

25.7.1 Access and Roads

The Huachocolpa Uno Mining Unit is easily accessible from Lima and any other city on the Peruvian coast, also from the center of the country, through paved national public roads. The last stretch of 19 km is on a departmental road, which the Regional Government maintain in good condition, that reaches the Mining Unit entrance; Kolpa has constructed gravel roads and paved roads to access the Mine, Plant, tailing facilities, waste dumps and other facilities.

25.7.2 Power

The electricity is supplied via the national power grid form major producers through long-term contracts. These long-term supply contracts are being extended until December 2025.

To supply power to the Mining Unit, KOLPA acquired a 60-Kv line that transports energy from Huancavelica to the substation that Kolpa constructed and reduces energy from high voltage 60 Kv to medium voltage in 22.9 Kv. The average monthly electricity consumption of the Mining Unit is 5.5 KWH. The Mine consumes approximately 60% and the Concentrator Plant approximately 40%.

Three backup diesel generators with total 1.5 MW capacity of are maintained and available.

The existing power systems are suitable to meet the requirements for the 2,500 tpd expansion.

25.7.3 Water Supply

The project has four water-use licensesthat include consumption purposes (0.6 L/s and 0.55 L/s), mining (1,034 L/s) and industrial (15 L/s) mainly from springs (Bienaventurada 1, 2 Bienaventurada 3, Chipchilla, Poderosa, Rublo) and the Escalera River. In recent years the water for the mining operations is recirculated from the Centralized Pumping System inside the underground mine, where water infilrating into the operating areas is directed to the treatment sumps located at level NV 4230. In these sumps, the suspended solids are removed, and the pH is adjusted; some water is reused for the equipment operation, and for drilling, dust control and concrete and shotcrete supply some water is pumped to the surface t for treatment at mine water treatment plant (NCD Plant) to ensure effluent compliance limits are met.

Water treated at the NCD Plant is used at the Concentrator Plant and any excess is discharged into the river, at the V-01 discharge point, complying with the standards and a permit limit approved by the environmental authorities. Due to the large amount of water reuse, wanter consumption from natural sources is very low and mainly for human consumption.

The plan is to increase the water treatment plant capacity to 120 L/s for the 2,500 tpd expansion.

25.7.4 Waste Dump

The Project currently uses the Rublo Alto waste deposit to deposit waste material not used as backfill in the mine; this waste deposit has a capacity of 575,812 m^3 and the DD-15 waste deposit has a storage capacity of 415,000 m^3. Additionally, permits were applied for the construction and operation of DD-01 with a capacity of 791,340 m^3 and DD-60 with a capacity 337,710 m^3, DD-61 with a capacity 419,466 m^3. The waste dump projects to meet the life-of-mine waste generation.

25.7.5 Mineral Stockpile

The mineral extracted from the Mine is transported to the stockpile area located in Comihuasa, for classification and blending prior to delivery to the concentrator plant. The stockpile location has an area of 10,000 m^2 and an approximate storage capacity of 30,000 tonnes.

25.7.6 Tailing Storage Facilities

The tailing storage facilities planned for the LOM are designated as "D" and "C". The tailing deposit "D" built in 2018 has been designed in five stages for a total life of 12 years at current production levels.

Engineering studies have been undertaken for each TSF project. The Stage IV study was completed in January 2022.

The tailing deposit "C" had a storage capacity for six (06) months with the current production levels. Deposit "C" has environmental permits and controls and serves as a contingency for the operation. The deposited tailings are thickened and cycloned.

Design concepts have been prepared for future expansions to phases VI, VII and VIII. The need for these expansions will include plans for using tailing to prepare backfill for the underground mine once the paste fill plant is constructed.

25.7.7 Buildings

The buildings and facilities for the Huachocolpa Uno Mining Unit are built along the Escalera River ravine, in two well-defined areas:

- In the area called Caudalosa, where the Bienaventurada mine is located, the facilities include warehouses, explosives magazines, workshops, offices, dining rooms, and camps. The Caudalosa camp will be expanded to accommodate a maximum 1,200 workers for the 2,500 tpd expansion.
- In the area called Comihuasa, facilities include the concentrator plant, tailings "D" and "C", mineral stockpile, Kolpa electrical substation, fuel station, water treatment plant, tailing thickener, drinking water treatment plant, workshops, medical center, chemical laboratory, metallurgical laboratory, offices and camps. The camp will be expanded to accommodate 500 workers for the 2,500 tpd expansion.

Current site infrastructure is suitable for continuing operations.

25.8 Markets and Contracts

Endeavour has reviewed market studies for commodities and price outlook. The long-term markets for lead, zinc, copper, and silver are influenced by demand growth in industries like construction, electronics, renewable energy, and electric vehicles (EVs), as well as supply constraints, geopolitical factors, and environmental regulations. The outlook for lead is likely to remain relatively stable, while zinc could see moderate increases due to supply constraints. Copper demand is expected to grow due to structural supply deficits and silver prices are likely to trend upwards in the long term due to industrial demand, and its role as a hedge against inflation. The Authors have reviewed the studies and analysis. It is the Authors's opinion that the results support the long-range pricing assumptions and other marketing premises used in this technical report.

Zinc prices are currently in the range of US$ 1.30–1.47/lb, having reached a 2022 high of US$ 2/lb in April 2022.

Smelter treatment charges (TCs) have experienced a volatile market over the last 16 months, with zinc supplies in deficit, leading to lower smelter Spot treatment charges (and in some limited cases, negative TCs). As of the last quarter of 2024, zinc supply appears to be in a deficit situation for the near term and stabilizing in the longer term.

Existing sales agreements are expected to continue in the near term and may require updating upon expiry.

Lead prices are currently in the range of US$ 0.90 – 1.10/lb.

As stated above, although lead is not in the same supply deficit as zinc, treatment charges have experienced volatility to lower prices over the last 16 months, but existing sales agreements are expected to continue in the near term.

Transport and shipping costs are the same as those for the zinc concentrates. No lead smelter is currently operational in Peru, so it is presumed that the concentrates referred to in this study will be shipped to Asia. Copper prices over the last 18 months range from US$ 4.00 – 5.05/lb.

Copper prices have shown a strong performance in international markets. The copper market is exhibiting a long-term supply deficit, and the same volatility exists in smelter charges as for zinc and lead.

The metal prices used for the mining inventory estimation are from projections considered reasonable by Kolpa. Table 19-1 presents the metal prices used in the economic analysis derived from JP Morgan data.

Kolpa has a number of contracts in place with international commodity traders.

Treatment and refining charges for lead-silver-gold concentrates as well as zinc concentrates have been estimated in accordance with Kolpa's current agreement with international traders.

The main assumptions are:

- Transportation Cost is $48/tonne of concentrate.
- Treatment Cost for the Concentrate of Zinc assumed for the LOM is $150 per tonne
- Treatment Cost for the Concentrate of Lead assumed for the LOM is $101 per tonne
- Refining Cost for the Silver in the Lead Concentrate assumed for the LOM is $32 per tonne
- Treatment Cost for the Concentrate of Copper is assumed for the LOM is $108 per tonne.
- Refining Cost for the Silver in the Copper Concentrate assumed for the LOM is $101 per tonne.
- Refining Cost for the Copper in the Copper Concentrate assumed for the LOM is $55 per tonne.

A summary of the payability factors, treatment/refining charges (TC/RC) and penalties for Zn concentrate,

Regarding concentrate quality, it is noted that the metal contents have generally been constant for the lead, copper and zinc.

25.9 Environmental, Permitting and Community

Kolpa conducts its mining and production activities within the EAU, in full compliance with Peruvian environmental and metallurgical regulations. The company prioritizes health and safety, environmental protection, cultural heritage preservation, and sustainable development.

Mining in Huachocolpa Uno dates back to colonial times. In the mid-20th century, with support from the Mining Bank of Peru, the Huachocolpa Mineral Concentrator Plant S.A. (Comihuasa) was established, driven by contributions from small mining companies, including Caudalosa.

Today, Kolpa extracts polymetallic minerals from the Bienaventurada vein using underground mining methods such as Cut and Fill and Sublevel Stoping. The process includes exploration, drilling, blasting, hauling, and transportation from the Bienaventurada mine to the Comihuasa concentrator plant.

At the concentrator plant, the mill feed undergoes selective flotation through crushing, grinding, flotation, thickening, and filtering to produce lead, zinc, and copper concentrates with silver content. These concentrates are then transported in covered vehicles for commercialization.

Kolpa recognizes the importance of building transparent and trusting relationships with the local communities in its area of influence. The company is committed to fostering strategic alliances between Kolpa, the State, and local communities to promote sustainable development.

As part of this commitment, Kolpa prioritizes:

- Maintaining open dialogue and mutual respect with local communities.
- Fulfilling social commitments and continuously supporting community development programs.
- Delivering both short- and long-term benefits to the communities in its area of influence.

Focus on the Huachocolpa Community

Kolpa’s mining operations take place in the Huachocolpa district, where surface lands are owned by the local community ("comunidad campesina"). This community consists of nine annexes and is governed by a central leadership body.

Given this structure, Kolpa’s social programs are primarily focused on supporting the Huachocolpa community, including the successful implementation of several development initiatives.

26 RECOMMENDATIONS

The Huachocolpa Uno Mine property contains significant historical open pit and underground mineral resources that are associated with well-defined mineralized trends and geological models. The mine is currently in production and has been operated privately under fully consolidated ownership since 2000. Between 2012 to 2024, approximately 5.8 million tonnes of mineralization have been processed at the Huachocolpa Processing Plant.

Additional work is recommended to upgrade historical mineral resources to current NI 43-101 compliant mineral resources, and to optimize the operation and improve margins:

26.1 Mineral Resource Estimate

- Review the current drill hole and underground channel sampling data and QA/QC data completed to date, revise geologic models, mineral resource models and structural models, and estimate mineral resources using the updated data, models and updated metal prices, recoveries and economic parameters, such as current mining and processing costs and G&A costs.

26.2 Mining

- Complete infill drilling plans to convert Inferred resources to Indicated or Measured and possibly add new areas to the mining inventory.
- Evaluate increasing the Sub-level stoping percentage of total mine production. Trial mining had been undertaken in Bienaventurada to demonstrate the viability of increasing the sublevel designed height to 14 meters, which increases productivity while reducing operating costs. This concept can be applied to other veins as well.
- Complete a paste backfill study including tailing characterization and strength test work, paste plant design, reticulation system design, and capital and operating cost estimates.
- Complete a life of mine (LOM) plan that includes updated cut-off values, potential mineralized material sorting benefits, paste backfill, and incorporates geotechnical parameters developed in the ground control management plan for estimating mineral reserves.
- Complete an updated ground control management plan that defines level spacing and stope dimensions, development offsets, and ground support standards.

26.3 Metallurgy and Processing

- Complete a technical and economic evaluation of the mineralized material sorting concept to upgrade mill head grade.
- Perform multi-element analyses for different vein system to fully understand the mineralization.
- Conduct metallurgical testing for the different vein and mineral sources to improve recovery and understand how other metals such as gold could be recovered and improve the NSR and lower cut-off values.
- Conduct a comprehensive risk-based review of the tailing facility and plans to convert from a conventional subaerial deposition to a filtered tailing deposition.
- Update the existing tailing facility design and operating parameters to mitigate risks identified, ensure stability and maximize tailing storage volume using the current facility.

Table 26-1 summarized the estimated cost for the recommended future work on Huachocolpa.

Table 26-1 Huachocolpa Uno Mine 2025-2026 Work Plan Budget

2025-2026		
Item	**Unit**	**Cost**
Data compilation and review, geology and resource modeling, resource estimation, NI 43-101 Technical Report	1	$80,000 - $100,000
Infill Diamond Drilling	26,000m - 30,000m	$2,800,000 - $3,300,000
Infill Drilling Assays	7,000 - 8,000	$315,000 - $360,000
Geological Compilation and Resource Estimation	1	$250,000 - $300,000
Paste Backfill Study	1	$300,000 - $500,000
LOM Plan	1	$200,000 - $300,000
Ground Control Management Plan	1	$300,000 - $350,000
Mineralized Material Sorting Economic Analysis	1	$80,000 - $120,000
Multi-Element Analyses	1	$100,000 - $150,000
Metallurgical Testing	1	$200,000 - $400,000
Tailing Facility Risk Review	1	$120,000 - $150,000
Tailing Facility Design	1	$600,000 - $800,000
Total:		**$5,345,000 - $6,830,000**

27 REFERENCES

CIA Minera Kolpa, 2024a: Comité de Exploraciones y Geologia by CIA Minera Kolpa dated 23 September 2024, 55 p.

CIA Minera Kolpa, 2025a: Comité de Operaciones, Internal annual operations report by CIA Minera Kolpa dated 30 January 2025, 91 p.

CIA Minera Kolpa, 2025b: Corporate Presentation by CIA Minera Kolpa dated January 2025, 117 p.

Layman, P. and Mc Iver, D., 2024: Huachocolpa Uno Preliminary Economic Assessment Project, Project Number 0094, Effective Date 31 March 2023, Report Date 07 May 2024, prepared for Compañia Minera Kolpa, 387 p.

28 DATE AND SIGNATURE PAGE

This Technical Report “Huachocolpa Uno Mine Property, Huancavelica Province, Peru” (the “Technical Report”) for Endeavour Silver Corp. was prepared and signed by the following authors:

The effective date of the report is December 31, 2024.
The date of the report is March 27, 2025.

Signed by:

Allan Armitage, Ph. D., P. Geo.	SGS Geological Services (“SGS”)
Ben Eggers, MAIG, P.Geo.	SGS Geological Services (“SGS”)
Henri Gouin, P.Eng.	SGS Geological Services (“SGS”)
Dale Mah, P.Geo.	Endeavour Silver Corp. (“Endeavour”)
Donald Gray, SME-RM	Endeavour Silver Corp. (“Endeavour”)

March 27, 2025

29 CERTIFICATES OF QUALIFIED PERSONS

QP CERTIFICATE – ALLAN ARMITAGE

To accompany the technical report titled “Huachocolpa Uno Mine Property, Huancavelica Province, Peru” with an effective date of December 31, 2024 (the “Technical Report”) prepared for Endeavour Silver Corp. (the “Company”).

I, Allan E. Armitage, Ph. D., P. Geol. of 62 River Front Way, Fredericton, New Brunswick, hereby certify that:

1. I am a Senior Resource Geologist with SGS Canada Inc., 10 de la Seigneurie E blvd., Unit 203 Blainville, QC, Canada, J7C 3V5.

2. I am a graduate of Acadia University having obtained the degree of Bachelor of Science - Honours in Geology in 1989, a graduate of Laurentian University having obtained the degree of Master of Science in Geology in 1992 and a graduate of the University of Western Ontario having obtained a Doctor of Philosophy in Geology in 1998.

3. I have been employed as a geologist for every field season (May - October) from 1987 to 1996. I have been continuously employed as a geologist since March of 1997.

4. I have been involved in mineral exploration and resource modeling at the grass roots to advanced exploration stage, including producing mines, since 1991, including mineral resource estimation and mineral resource and mineral reserve auditing since 2006 in Canada and internationally. I have extensive experience in Archean and Proterozoic load gold deposits, volcanic and sediment hosted base metal massive sulphide deposits, porphyry copper-gold-silver deposits, low and intermediate sulphidation epithermal gold and silver deposits, magmatic Ni-Cu-PGE deposits, and unconformity- and sandstone-hosted uranium deposits.

5. I am a member of the following: the Association of Professional Engineers, Geologists and Geophysicists of Alberta (P.Geol.) (License No. 64456; 1999), the Association of Professional Engineers and Geoscientists of British Columbia (P.Geo.) (Licence No. 38144; 2012), the Professional Geoscientists Ontario (P.Geo.) (Licence No. 2829; 2017), and Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG) (License No. L4375: 2019).

6. I have read the definition of "Qualified Person" set out in National Instrument 43-101 – Standards of Disclosure for Mineral Projects – (“NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43 101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43 101.

7. I am an author of the Technical Report and responsible for sections 1.1-1.8, 1.15, 2 -8, 13, 14, 23, 24, 25.1, 25.3, 25.4 and 26.1 of the Technical Report. I have reviewed these sections and accept professional responsibility for these sections of the Technical Report.

8. I have not conducted a site visit to the Property.

9. I have had no prior involvement with the Huachocolpa Uno Mine or Property.

10. I am independent of the Company as described in Section 1.5 of NI 43-101.

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

12. I have read NI 43-101 and Form 43-101F1 (the “Form”), and the Technical Report has been prepared in compliance with NI 43-101 and the Form.

Signed and dated March 27, 2025 at Fredericton, New Brunswick.

“Original Signed and Sealed”

Allan Armitage, Ph. D., P. Geo., SGS Canada Inc.

QP CERTIFICATE – BEN EGGERS

To accompany the technical report titled "Huachocolpa Uno Mine Property, Huancavelica Province, Peru" with an effective date of December 31, 2024 (the "Technical Report") prepared for Endeavour Silver Corp. (the "Company").

I, Benjamin K. Eggers, MAIG, P.Geo. of Tofino, British Columbia, hereby certify that:

1. I am a Senior Geologist with SGS Canada Inc., 10 Boulevard de la Seigneurie E., Suite 203, Blainville, QC, J7C 3V5, Canada.
2. I am a graduate of the University of Otago, New Zealand having obtained the degree of Bachelor of Science (Honours) in Geology in 2004.
3. I have been continuously employed as a geologist since February of 2005.
4. I have been involved in mineral exploration and resource modeling at the greenfield to advanced exploration stages, including at producing mines, in Canada, Australia, and internationally since 2005, and in mineral resource estimation since 2022 in Canada and internationally. I have experience in orogenic gold deposits, porphyry copper-gold-silver deposits, epithermal gold and silver deposits, volcanic and sediment hosted base metal massive sulphide deposits, albitite-hosted uranium deposits, and pegmatite lithium deposits.
5. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (P.Geo.) (EGBC Licence No. 40384; 2014), I am a member of the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (P.Geo.) (NAPEG Licence No. L5818, 2024), and I am a member of the Australian Institute of Geoscientists (MAIG) (AIG Licence No. 3824; 2013).
6. I have read the definition of "Qualified Person" set out in National Instrument 43-101 – Standards of Disclosure for Mineral Projects – ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
7. I am an author of the Technical Report and responsible for sections 1.5, 1.6, 9, 10, 11, 12.1, 12.2, 12.4, 25.2 and 27 of the Technical Report. I have reviewed these sections and accept professional responsibility for these sections of the Technical Report.
8. I have not personally conducted a site visit.
9. I have not had prior involvement with the Huachocolpa Uno Mine Property
10. I am independent of the Company as described in Section 1.5 of NI 43-101.
11. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
12. I have read NI 43-101 and Form 43-101F1 (the "Form"), and the Technical Report has been prepared in compliance with NI 43-101 and the Form.

Signed and dated March 27, 2025 at Tofino, British Columbia.

"Original Signed and Sealed"

Ben Eggers, MAIG, P.Geo., SGS Canada Inc.

QP CERTIFICATE – HENRI GOUIN

To accompany the report titled “Huachocolpa Uno Mine Property, Huancavelica Province, Peru” with an effective date of December 31, 2024 (the “Technical Report”) prepared for Endeavour Silver Corp. (the “Company”).

I, Henri Gouin, P.Eng. of Moncton, New-Brunswick, hereby certify that:

1. I am a Mining Engineer with SGS Canada Inc., 10 de la Seigneurie E Blvd., Unit 203, Blainville, QC, J7C 3V5, Canada.
2. I graduated from Laval University, Quebec City, in 2011 with a Bachelor’s Degree in Mining Engineering.
3. I am a member in good standing of the Order of Engineers of Quebec (OIQ No. 5032633).
4. My relevant experience includes thirteen years in mining engineering, in operational mines and as a mining engineering consultant. My roles have included mine design, short- and long-range planning, ventilation, ground control, budgeting, and Technical Services management.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 – Standards of Disclosure for Mineral Projects – (“NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
6. I am an author of the Technical Report and responsible for sections: 1.9, 1.10, 15, 16, 25.5 and 26.2 of the Technical Report. I have reviewed these sections and accept professional responsibility for these sections of the Technical Report.
7. I have not personally conducted a site visit.
8. I have not had prior involvement with the Huachocolpa Uno Mine Property.
9. I am independent of the Company as described in Section 1.5 of NI 43-101.
10. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
11. I have read NI 43-101 and Form 43-101F1 (the “Form”), and the Technical Report has been prepared in compliance with NI 43-101 and the Form.

Signed and dated March 27, 2025 at Moncton, New-Brunswick.

“Original Signed and Sealed”

Henri Gouin, P. Eng., SGS Canada Inc.

CERTIFICATE OF QUALIFIED PERSON

Dale Mah, P.Geo.
Endeavour Silver Corp.
609 Granville St, Suite1130
Vancouver, British Columbia, Canada, V7Y 1G5
Tel: (604) 685-9775

I, Dale Mah, P,Geo., am currently employed as Vice President, Corporate Development with Endeavour Silver Corp. (“Endeavour Silver”).

This certificate applies to the technical report entitled “NI 43-101 Technical Report on the Huachocolpa Uno Mine Property, Huancavelica Province, Peru” with an effective date of December 31, 2024 (the “Technical Report”).

I am a member of the Engineers & Geoscientists, British Columbia (#52136). I graduated from the University of Alberta with a Bachelor of Science (Specialization) degree in Geology in 1996.

I have practiced my profession for over 25 years. In this time, I have been directly involved in generating and managing exploration activities, and in the collection, supervision and review of geological, mineralization, exploration and drilling data; geological models; sampling, sample preparation, assaying and other resource-estimation related analyses; assessment of quality assurance-quality control data and databases; supervision of Mineral Resource estimates; project valuation and cash flow modeling.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101).

I visited the Huachocolpa Uno Mine Property on October 9, 2024 and most recently on January 12, 2025.

I am responsible for Sections: 1.13, 1.14, 2.3.1, 12.3.1, 19, 20, 25.8 and 25.9 of the Technical Report.

I am not independent of Endeavour Silver as independence is described by Section 1.5 of NI 43–101.

I have had no prior involvement with the Huachocolpa Uno Mine Property.

I have read NI 43–101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

“signed and stamped”

Dale Mah, P.Geo.

Dated: March 27, 2025

CERTIFICATE OF QUALIFIED PERSON

Donald P. Gray, SME-RM.
Endeavour Silver Corp.
609 Granville St, Suite1130
Vancouver, British Columbia, Canada, V7Y 1G5
Tel: (604) 685-9775

I, Donald P. Gray, SME-RM, am currently employed as Chief Operating Officer with Endeavour Silver Corp. ("Endeavour Silver").

This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Huachocolpa Uno Mine Property, Huancavelica Province, Peru" with an effective date of December 31, 2024 (the "Technical Report").

I am a member a Registered Member (No. 1217250) in good standing of The Society for Mining, Metallurgy and Exploration, Inc. (SME). I graduated with a BS in Mining Engineering from University of Idaho in 1980, and with an MS in Civil Engineering of Massachusetts Institute of Technology in 1987.

I have been involved in mining operations in respect of silver and base metal projects like the Huachocolpa Uno Mine Project, including technical aspects of mineral resource and reserve estimation, mine planning, process design as well as economic analysis since 1980.

I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43- 101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

I visited the Huachocolpa Uno Mine Property on January 12 and 13, 2025.

I am responsible for Sections: 1.11, 1.12, 2.3.2, 12.3.2, 17, 18, 25.6, 25.7 and 26.3 of the Technical Report.

I am not independent of Endeavour Silver as independence is described by Section 1.5 of NI 43–101.

I have had no prior involvement with the Huachocolpa Uno Mine or Property.

I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1

As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

"signed and stamped"

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Donald P. Gray, SME-RM.

Dated: March 27, 2025