



2020

PORTFOLIO OF MINING CONSTRUCTION PROJECTS



PERÚ

Ministerio
de Energía y Minas

2020

PORTFOLIO OF MINING CONSTRUCTION PROJECTS

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EXECUTIVE SUMMARY

The Ministry of Energy and Mines, through the General Directorate of Mining Promotion and Sustainability presents the **2020 Mine Construction Projects Portfolio**. An informative publication that includes, in this edition, 46 mining projects with a joint investment of US\$ 51,158 million.

This portfolio includes mining projects with objectives to build a mine or to modify or optimize components to expand or support the productive capacity; also, all the projects are privately owned within the general regime (great and medium mining) and address metallic and non-metallic ore production.

On the other hand, this document has been drafted considering the main characteristics a mine construction project should comply with in the country. Therefore, those characteristics are reviewed at both, individual¹ and at Portfolio level². Sections included in this publication are detailed as follows:

Section II: This section analyzes projects by groups based on the year estimated to start construction; likewise, Portfolio investment analysis is addressed from different perspectives, which are: according to the project location, country of origin of the main investor, water consumption supply source, type of mine and finally, according to the ore to be extracted.

Section III: It is devoted to the comparative analysis between the current Portfolio and the prior edition (September 2019)³.

Section IV: The annualized projection of investments of the projects in the Portfolio is detailed in 3 periods: investments executed until 2019, projections of investments between 2020 - 2023 and the investments to be executed after 2023.

Section V: A detailed analysis of the positive impact generated by mining projects in macroeconomic indicators by a forecast to 2025 is presented; such as national production of Copper and Gold, national employment and gross added value.

Section VI: This section covers Portfolio annexes, which explains the methodology used (coverage, project characterization and sources of information); also, it includes the description of project technical records (general data, main data and the current situation of the mining project).

¹ Review Annexes 2: Project Technical Records

² Review Section II: Mine Construction Projects Portfolio

³ 2019 Mine Construction Projects Portfolio, Ministry of Energy and Mines

SYMBOLS AND ABBREVIATIONS

Weights and measures

tn	Metric ton
Kt	Thousands of tons
Mt	Millions of metric tons
oz	Troy oz (31.1035 g)
Koz	Thousands of troy oz
Moz	Million of troy oz
lb	Pound
Klb	Thousands of pounds
Mlb	Millions of pounds
m	Meter
km	Kilometer
TMF	Fine Metric Tons

Geographical Abbreviations

masl	Meters above sea level
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Currency

US\$	US Dollars
MMUS\$	Millions of US Dollars

Power and Energy

MW	Megawatts
MWA	Annual Megawatts
MVA	Megavolt ampere

Metallurgical Processes

SX	Solvent Extraction
EW	Electrowinning

Stock Exchange

NYSE	New York Stock Exchange
LSE	London Stock Exchange
TSX	Toronto Stock Exchange

Entities

SENACE	Servicio Nacional de Certificación Ambiental para las Inversiones Sostenibles (National Service of Environmental Certification for Sustainable Investments)
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MINEM	Ministry of Energy and Mines
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Reserves and Resources

(P&P)	Proven and Probable
(M&I)	Measured and Indicated

Ore

Ag	Silver
Au	Gold
Cu	Copper
Fe	Iron
Mo	Molybdenum
Pb	Lead
Zn	Zinc
Sn	Tin
U	Uranium
Li	Lithium
P ₂ O ₅	Phosphorus oxide (V)
U ₃ O ₈	Triuranium Octaoxide

Production

g/t	Grams per ton
oz/t	Ounces per ton
ppm	Parts per million
MT/day	Metric tons per day
MT/year	Metric tons per year

Societies

Inc.	Incorporated
Int.	International
Ltda.	Limitada
Ltd.	Limited
S.A.	Sociedad Anónima (Limited Liability Company)
S.A.A.	Sociedad Anónima Abierta (Listed Limited Liability Company)
S.R.L.	Sociedad de Responsabilidad Limitada (Sole Responsibility Company)
S.A.C.	Sociedad Anónima Cerrada (Non-listed Limited Liability Company)
Co.	Company
Lp.	Limited Partner
Corp.	Corporation
S.A.B of C.V.	Public Limited Company with Variable Capital

Environmental Management Instrument

EIA	Environmental Impact Assessment
EIAd	Detailed Environmental Impact Assessment
EIAsd	Semi-Detailed Environmental Impact Assessment
ITS	Supporting Technical Report
MEIA	Amendment of the Environmental Impact Assessment
IGA	Environmental Management Instrument Assessment
MEIAd	Amendment of the Detailed Environmental Impact Assessment
MEIAsd	Amendment of the Semi-Detailed Environmental Impact Assessment

I. INTRODUCTION

Throughout Peruvian history, from the distant Inca era to the present day, the importance of mining activity has always manifested itself positively in the various macroeconomic indicators that make up national economic activity.

In this manner, in 2019⁴, mining represented 9.1% of the GDP in Peru, even more, if we consider the multiplying effect of the mining activity in other economic sectors it is estimated a 15.9% share of the national GDP⁵. Likewise, mining exports made up of 97.9% of metallic products (copper, gold, zinc, lead, among others) and 2.1% of non-metallic products, represented 60.2% of the total value of national exports. Also, in 2019, the mining subsector contributed with 8.1% of the total internal income collected by SUNAT.

Equally important, mining activities also contribute to the development of the country's regions, through transfers to regional and local governments for mining Canon, legal and contractual mining royalties, and legal fees and penalties, which in 2019 totaled S/. 4,644 million. In the same manner, employment generation is another important factor to measure the share level of the mining sub-sector in improving the quality of life of the inhabitants where mining activities are being developed. In 2019, 208,716 jobs were generated in average in every region of the country.

Based on the above, it is crucial to maintain the momentum of the mining investments in the country from exploration activities that allow to determine the geological assets of a specific place, as well as the startup of new mining operations as soon as construction finishes; this will ensure that the contribution of mining to the growth and development of the country is protected.

⁴ Ministry of Energy and Mines 2019 Mining Report / PROYECTA Virtual Platform- MINEM [MINEM Website].

⁵ Methodology: The added value of mining in Peru. Peruvian Institute of Economics. June 2017.

In this context, the Ministry of Energy and Mines, through the General Directorate of Mining Promotion and Sustainability presents the 2020 Mine Construction Projects Portfolio. An informative publication that includes, in this edition, 46 mining projects with a joint investment of US\$ 51,158 million.

II. MINE CONSTRUCTION PROJECTS PORTFOLIO

2020 Mine Construction Projects Portfolio is comprised by 46 projects with a total investment amount of US\$ 56,158 million. It includes greenfield (to build new mine sites) and brownfield (to expand or replace existing mines) projects. In addition, these project comply with three (3) requirements.

- i. Investment (CAPEX) equal or higher than US\$ 70 million.
- ii. Start of operations or startup in the next 10 years.
- iii. That at least have or are drafting pre-feasibility assessments.

Precisely, according to progress stage, the Portfolio has 5 projects in construction stage and a joint investment of US\$ 8,501 million, 4 projects in detail engineering stage with a joint investment of US\$ 4,219 million, 17 projects in feasibility stage with a joint investment of US\$ 16,590 million and 20 projects in pre-feasibility stage with a joint investment estimated in US\$ 26,847 million.

Also, according to the type of mine, there are 28 projects with open pit exploitation method, 12 underground and 3 projects that are considering to use both methods (open pit and underground). In addition, the Portfolio has 1 reuse tailings project, 1 refinery project and 1 project that has not defined the exploitation method yet.

Regarding the source of water supply for consumption, there are 29 projects with a single source of water, 6 projects with a mixed source and 11 projects that have not yet defined the source of water supply, so there is no information available.

With respect to the type of ore to extract, copper projects are the majority within the Portfolio (25 out of 46 projects) representing 67.7% of global investment share. Followed by 6 gold projects, representing 9.3% of the Portfolio Global investment; also, it has 3 iron projects, 3 of phosphate, 6 of zinc, 1 of uranium and 2 of silver.

⁶ Ariana project, owned by Ariana Operaciones Mineras S.A.C has its construction stage at a standstill [See registry: Ariana]

Based on the above, the 2020 Construction Portfolio projects are detailed as follows [See table 01]:

Table 01: Mine Construction Projects Portfolio (11.01.2020)

START OF CONSTRUCTION	START OF OPERATION	PROJECT	OPERATOR	REGION	MAIN ORE	PROGRESS STAGE	GLOBAL INVESTMENT US\$ MILLIONS
2018	2021	Mina Justa	Marcobre S.A.C.	Ica	Copper	Construction	1,600
2018	2022	Toromocho Expansion	Minera Chinalco Perú S.A.	Junín	Copper	Construction	1,355
2018	2022	Quellaveco	Anglo American Quellaveco S.A.	Moquegua	Copper	Construction	5,300
2019	2023	Santa María Expansion	Compañía Minera Poderosa S.A.	La Libertad	Gold	Construction	121
2021	2022	Shouxin Expansion	Minera Shouxin S.A.	Ica	Iron	Detail Engineering	140
2021	2024	Corani	Bear Creek Mining S.A.C.	Puno	Silver	Detail Engineer	579
2021	2024	Yanacocha Sulfuros	Minera Yanacocha S.R.L.	Cajamarca	Gold	Detail Engineering	2,100
2021	2022	Inmaculada Optimization	Compañía Minera Ares S.A.C	Ayacucho	Gold	Feasibility	136
2021	2022	Chalcobamba Fase I	Minera Las Bambas S.A.C.	Apurímac	Copper	Feasibility	130
2021	2022	Pampacancha	Hudbay Peru S.A.C.	Cusco	Copper	Feasibility	70
2021	2023	San Gabriel	Compañía de Minas Buenaventura S.A.A.	Moquegua	Gold	Feasibility	422
2022	2024	Río Seco Copper Plant	Procesadora Industrial Río Seco S.A.	Lima	Copper	Feasibility	350
2022	2025	Magistral	Nexa Resources Perú. S.A.A.	Áncash	Copper	Feasibility	490
2023	2026	Zafranal	Compañía Minera Zafranal S.A.C.	Arequipa	Copper	Feasibility	1,263
2024	2027	Los Chancas	Southern Perú Copper Corporation, Apurímac Branch	Copper	Pre-Feasibility	2,600	
2024	2026	Trapiche	El Molle Verde S.A.C.	Apurímac	Copper	Pre-Feasibility	973
2025	2028	Michiquillay	Southern Perú Copper Corporation, Cajamarca Branch	Copper	Pre-Feasibility	2,500	
TBD	TBD	Ariana	Ariana Operaciones Mineras S.A.C	Junín	Copper	Construction	125
TBD	TBD	Pampa de Pongo	Jinzhao Mining Perú S.A.	Arequipa	Iron	Feasibility	2,200
TBD	TBD	Tía María	Southern Perú Copper Corporation, Arequipa Branch	Copper	Detail Engineering	1,400	
TBD	TBD	Bayóvar	Compañía Minera Miski Mayo S.R.L.	Piura	Phosphate	Feasibility	300
TBD	TBD	Pachapaqui Expansion	ICM Pachapaqui S.A.C.	Áncash	Zinc	Feasibility	117
TBD	TBD	Cañariaco (Norte)	Cañariaco Copper Perú S.A.	Lambayeque	Copper	Feasibility	1,437
TBD	TBD	Conga	Minera Yanacocha S.R.L.	Cajamarca	Gold	Feasibility	4,800
TBD	TBD	Fosfatos Pacífico	Fosfatos del Pacífico S.A.	Piura	Phosphate	Feasibility	831
TBD	TBD	Ollachea	Minera Kuri Kullu S.A.	Puno	Gold	Feasibility	165
TBD	TBD	Quechua	Compañía Minera Quechua S.A.	Cusco	Copper	Feasibility	1,290
TBD	TBD	Río Blanco	Río Blanco Copper S.A.	Piura	Copper	Feasibility	2,500
TBD	TBD	San Luis	Reliant Ventures S.A.C.	Áncash	Silver	Feasibility	90
TBD	TBD	Integración Corocohuayco	Compañía Minera Antapaccay S.A.	Cusco	Copper	Pre-Feasibility	590
TBD	TBD	Antilla	Panoro Apurímac S.A.	Apurímac	Copper	Pre-Feasibility	250
TBD	TBD	Aywilca	Tinka Resources S.A.C	Pasco	Zinc	Pre-Feasibility	262
TBD	TBD	AZOD (Accha and Yanque)	Exploraciones Collasuyo S.A.C.	Cusco	Zinc	Pre-Feasibility	346
TBD	TBD	Cañón Florida	Nexa Resources Perú. S.A.A.	Amazonas	Zinc	Pre-Feasibility	214
TBD	TBD	Cotabambas	Panoro Apurímac S.A.	Apurímac	Copper	Pre-Feasibility	1,530
TBD	TBD	Don Javier	Junefield Group S.A.	Arequipa	Copper	Pre-Feasibility	600
TBD	TBD	El Galeno	Lumina Copper S.A.C.	Cajamarca	Copper	Pre-Feasibility	3,500
TBD	TBD	Fosfatos Mantaro	Mantaro Perú S.A.C.	Junín	Phosphate	Pre-Feasibility	850
TBD	TBD	Haquira	Minera Antares Perú S.A.C.	Apurímac	Copper	Pre-Feasibility	1,860
TBD	TBD	Hierro Apurímac	Apurímac Ferrum S.A.	Apurímac	Iron	Pre-Feasibility	2,900
TBD	TBD	Hilarión	Nexa Resources Perú. S.A.A.	Áncash	Zinc	Pre-Feasibility	585
TBD	TBD	La Granja	Río Tinto Minera Perú Limitada S.A.C.	Cajamarca	Copper	Pre-Feasibility	5,000
TBD	TBD	Los Calatos	Minera Hampton Perú S.A.C	Moquegua	Copper	Pre-Feasibility	655
TBD	TBD	Macusani	Macusani Yellowcake S.A.C.	Puno	Uranium/Lithium	Pre-Feasibility	887
TBD	TBD	Pukaqaqa	Nexa Resources Perú. S.A.A.	Huancavelica	Copper	Pre-Feasibility	655
TBD	TBD	Shalipayco	Nexa Resources Perú. S.A.A.	Junín	Zinc	Pre-Feasibility	91
TOTAL	46	PROJECTS					56,158

TBD: To be defined.

* The Ariana project owned by Ariana Operaciones Mineras S.A.C. It is in the paralyzed construction stage [See file: Ariana].

2.1. START OF CONSTRUCTION OF THE PROJECTS

This section will analyze the projects of the Portfolio according the year they started or they have scheduled to start construction. So, in 2018, Mina Justa in Ica, Quellaveco in Moquegua and Toromocho Expansion in Junín started construction, which add up to an estimate investment of US\$ 8,255 million (14.7% of the global investment of this Portfolio).

In 2019, the construction of Santa Maria Expansion project in La Libertad started with an estimated investment of US\$ 121 million. In 2020, the start of 6 projects was foreseen; however, because of Covid-19 pandemics, these have been rescheduled for later years. In the case of this situation, projects such as Corani in Puno, Yanacocha Sulfuros in Cajamarca, Inmaculada Optimization in Ayacucho and San Gabriel in Moquegua rescheduled their start of construction for 2021.

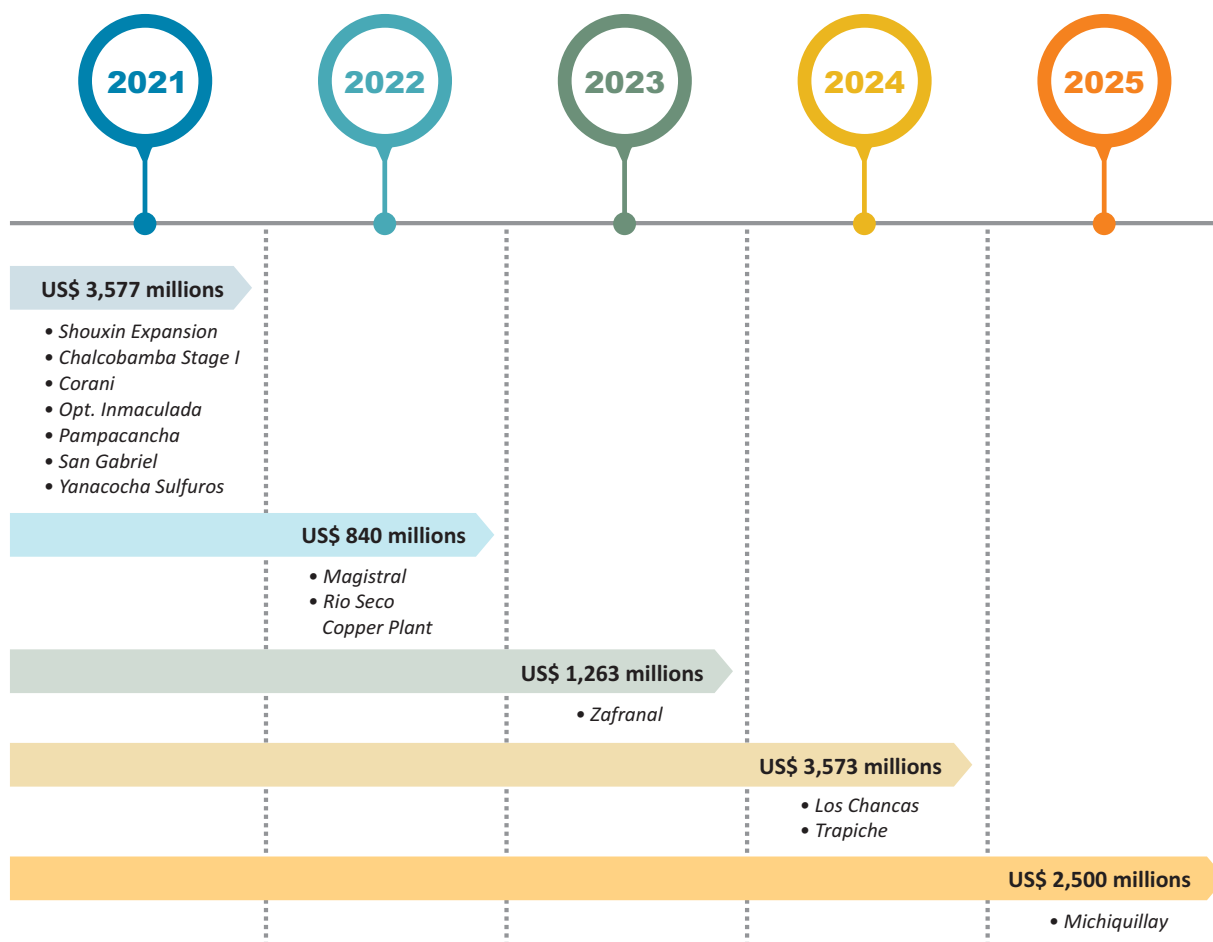
Therefore, for 2021, the start of construction of 7 projects with a total investment of US\$ 3,577 million (6.4% of the Portfolio's global investment), was considered. Shouxin Expansion in Ica, Chalcobamba Stage I (Las Bambas reposition project) in Apurímac and Pampacancha (Constancia reposition project) in Cusco belong to this group, which were included in this edition of the Portfolio. Likewise, the 4 above-mentioned projects are included, which reschedule the start of construction for that year.

In the same manner, the start of construction for 2 projects is expected for 2022, with an estimated join investment of US\$ 840 million, figure representing 1.5% of total investment of the Portfolio. Magistral (Ancash) and Río Seco Copper Plant, new addition, (Lima) belong to this group.

While for 2023, the construction of Zafranal project in Arequipa with an estimated amount of US\$ 1,263 million is estimated for 2023. While that, for 2024, the start of construction of Los Chancas and Trapiche projects are expected. This adds an investment of US\$ 3,573 million, and in 2025, the start of construction of Michiquillay project in Cajamarca is forecast. In this same manner, projects with a start of construction forecast between 2023 and 2015 have a joint estimated investment of US\$ 7,336 million, which represents 13.1% of the Portfolio's total investment.

Finally, 2020 Construction Portfolio includes 28 projects that have not defined the start date of construction yet since they are at an early stage of development or are fixing unforeseen social, legal and financial issues; in addition, there is a construction at a standstill⁷. This group represents 64.2% of the Portfolio's global investment (US\$ 36,029 million).

Chart 01: Start-up of mine construction projects

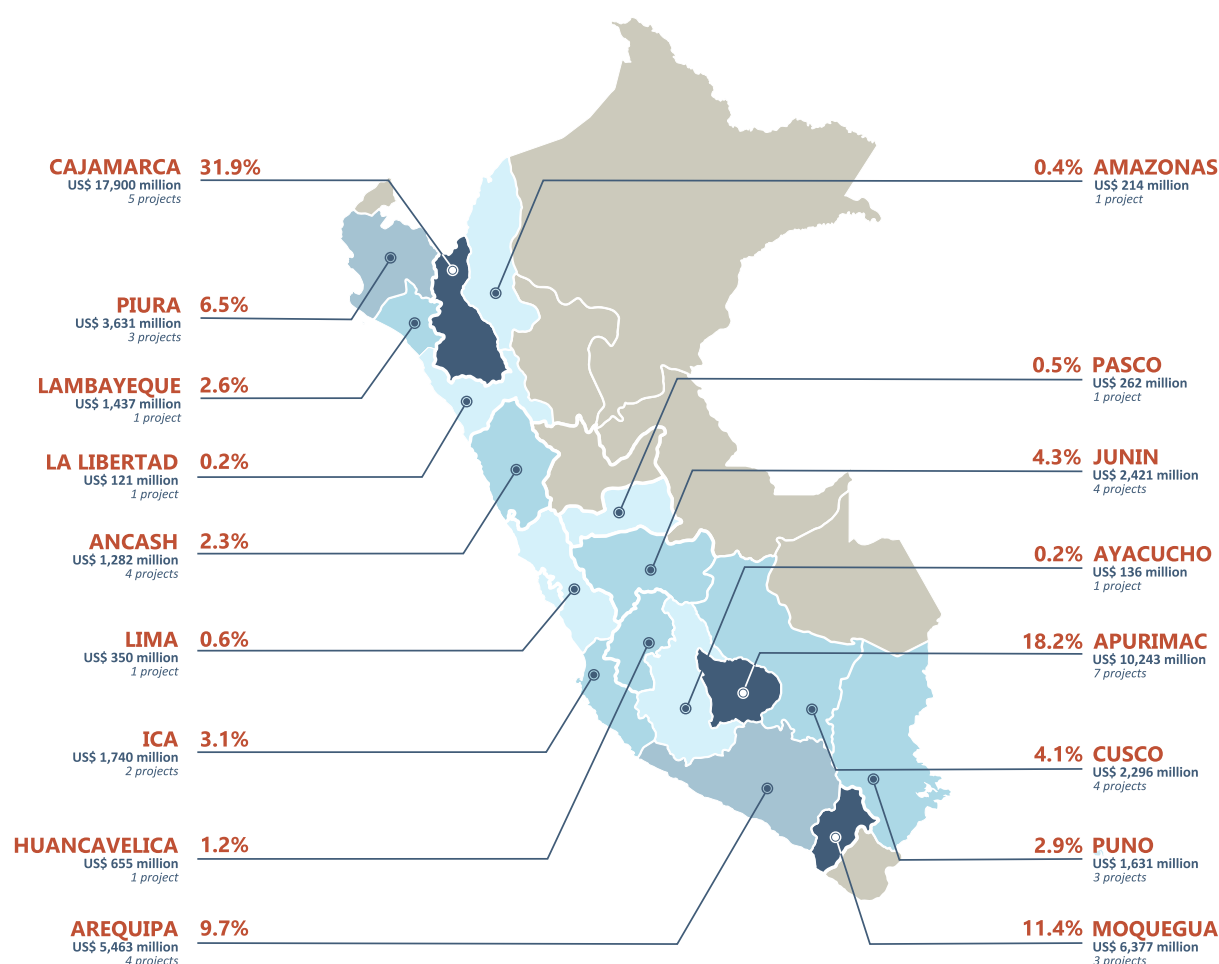


⁷ Ariana project, owned by Ariana Operaciones Mineras S.A.C has its construction stage at a standstill [See registry: Ariana]

2.2. INVESTMENTS BY PROJECT LOCATION

Regarding investments by their project location, we have considered mining projects in 17 regions nationwide; Cajamarca is the lead region with the largest global investment amount in the Portfolio, representing 31.9% (US\$ 17,900 million) and a total of 5 projects in this Northern region. Among these 5 projects in this area of the country, Yanacocha Sulfuros stands out based on its start of construction estimated for 2021.

Chart 02: Investment in mine construction projects by location



Apurímac is ranked second with an investment amount equivalent to US\$ 10,243 million, which represents 18.2% of global investment, distributed in 7 projects. The outstanding projects are Hierro Apurímac and Los Chancas because they have higher investment amounts with US\$ 2,900 million and US\$ 2,600 million, accordingly. Also, it is important to mention that Chalcobamba Stage I, corresponding to a new pit exploited by Minera Las Bambas, which will start construction in 2021.

In third place, Moquegua, with a US\$ 6,377 million investment representing 11.4% of total investment, distributed in 3 projects. Quellaveco is the most representative project in the region with an estimated investment of US\$ 5,300 million, which started construction in 2018 and has scheduled to finish by 2022.

Likewise, Arequipa regions (4 projects) and Piura (3 projects) with investments of USD\$ 5,463 million and US\$ 3,631 million, accordingly, together represent 16.2% of the total investment in construction portfolio. In Piura, non-metallic phosphate exploitation projects are located, such as Bayóvar Expansion and Fosfatos Pacíficos with US\$ 1,131 millions of investment. In Arequipa, with the largest investment in Pampa de Pongo iron project with US\$ 2,200 million.

In addition, Junín and Cusco regions have 4 projects, each with a total investment of US\$ 2,421 million and US\$ 2,296 million, accordingly. Both regions, together, represent 8.4% of the global investment within the portfolio. Regarding these two regions, the most representative projects are Toromocho Expansion that started construction in 2018, with an estimate investment amount of US\$ 1,355 million and Pampacancha project, corresponding to the exploitation of a new pit of the current Constancia Unit (US\$ 70 million) which was included in this edition and its construction should start in 2021.

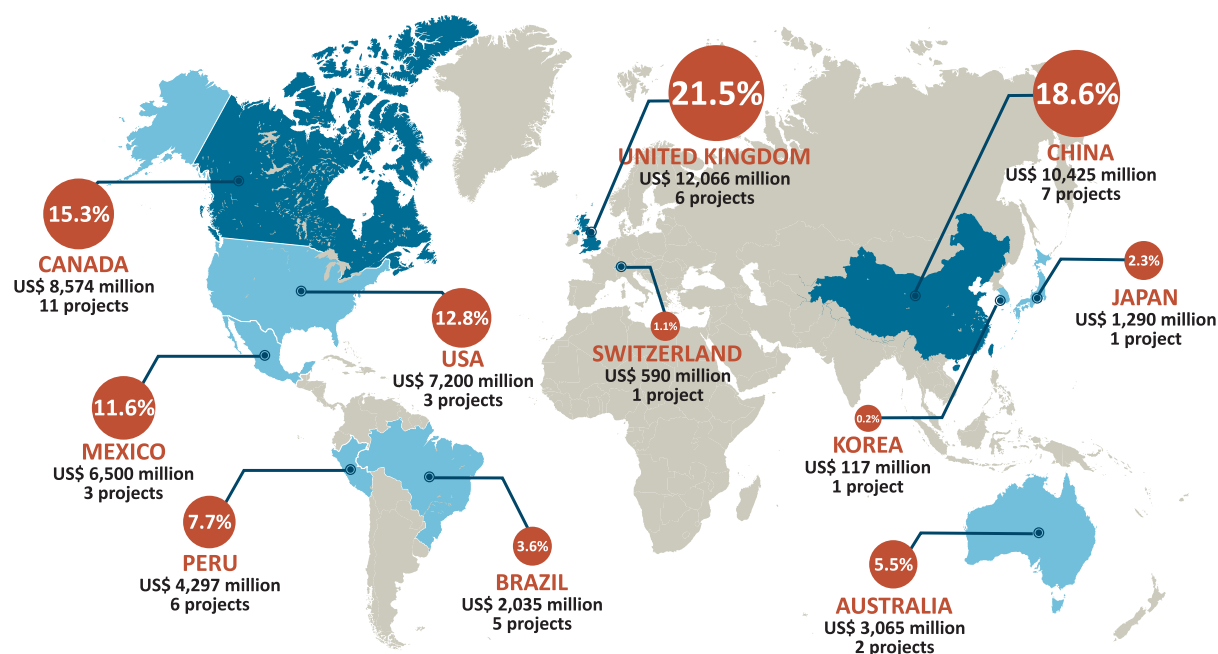
On the other hand, regions with a share higher than 2% of the total investment are: Ica (US\$ 1,740 million), Puno (US\$ 1,631 million), Lambayeque (US\$ 1,437 million) and Ancash (US\$ 1,282 million). The most representative project is Mina Justa in Nazca province, Ica region, which started construction in 2018 and holds a US\$ 1,600 million investment.

Lastly, Huancavelica, Lima, Pasco, Amazonas, Ayacucho and La Libertad jointly concentrate 3.1% of the of the Portfolio's total investment. amounting US\$ 1,738 million, with a project in each stated region.

2.3 INVESTMENTS ACCORDING TO THE COUNTRY OF ORIGIN OF THE MAIN INVESTOR

In the analysis of investments according the country of origin of the main investor, the main project funding source that are part of this Portfolio comes from 11 countries located in 4 different countries. From these eleven countries, The United Kingdom, is the country with the largest share in global investment in 2020 portfolio, with an estimate joint investment of US\$ 12,066 million contained in 6 projects, which translated in 21.5% of the total share. The investors that stand out from this country are: Anglo American Plc. and Rio Tinto Plc. with Quellaveco and La Granja projects, respectively.

Chart 03: Investment in mine construction projects by country of origin of its main investor



Investments from China, amounting US\$ 10,425 million are represented in 7 projects, which puts this country in second place. Aluminum Corporation of China Overseas Holdings Limited holds 100% of shares for Toromocho Expansion that will start construction in 2018.

Likewise, Baiyin Nonferrous Group Co Ltd. holds 51% of Shouxin Expansion project (US\$ 140 million), while MMG Limited holds 63% of Chalcobamba Stage I (US\$ 130 million); both projects expect to start construction in 2021.

In addition, investment from Canada ranked third with a joint investment of US\$ 8,574 million and 11 projects in total, representing 15.3% from global investment and maintaining itself as the country with the largest number of projects in the Portfolio by the origin of investments. From this group, the following stand out First Quantum Minerals Ltd. with Haquira project (US\$ 1,860 million), Panoro Minerals Ltd. with Cotabambas project (US\$ 1,530 million) and Candente Copper Corp. with Cañariaco project (US\$ 1,437 million). In addition, Bear Creek Mining Corporation with Corani project and Hudbay Minerals Inc. with Pampacancha project expect to start construction in 2021.

Regarding investments from United States they jointly amount US\$ 7,200 million, representing 12.8% of the total investment. Unlike the previous portfolio, in this edition we have 3 projects with American investments, due to the completion and implementation of Quecher Main (US\$ 300 million) so the former project is no longer considered in this edition. It is worth to highlight that 2 out of 3 projects have majority shareholder from Newmont Goldcorp Corp., with Yanacocha Sulfuros as one of them, which is currently in Detail Engineer stage and estimates to start construction in 2021.

Mexican investments jointly, reflect US\$ 6,500 million investment with 3 projects, representing 11.6% of the Portfolio's global investment. Projects mentioned are: Los Chancas (US\$ 2,600 million), Michiquillay (US\$ 2,500 million) and Tía María (US\$ 1,400 million) belong to Grupo México S.A.B. de C.V. operated in Peru by Southern Perú Copper Corporation, branch of Perú.

In addition, Peruvian investments amount US\$ 4,297 million contained within 6 projects and representing 7.7% of the total consolidated investment of the Portfolio. Unlike the previous portfolio, in this edition we have 1 less project with Peruvian capital, due to the completion of Relaves B2 (US\$ 209 million) so the former project is no longer considered in this edition. Also, it is important to mention that 3 projects hold 100% share by Grupo Buenaventura; and there are 2 projects under construction, Mina Justa with a 60% share by Grupo Breca and Santa María Expansion with 100% share from Grupo Arias.

On its part, Australia and Brazil together reflect 9.1% of the total investment of the portfolio, with 2 and 5 projects, accordingly. Australian Strike Resources Limited is the most representative with Hierro Apurimac project (US\$ 2,900) and the Brazilian Nexa Resources holds a majority share in the 5 projects of its country.

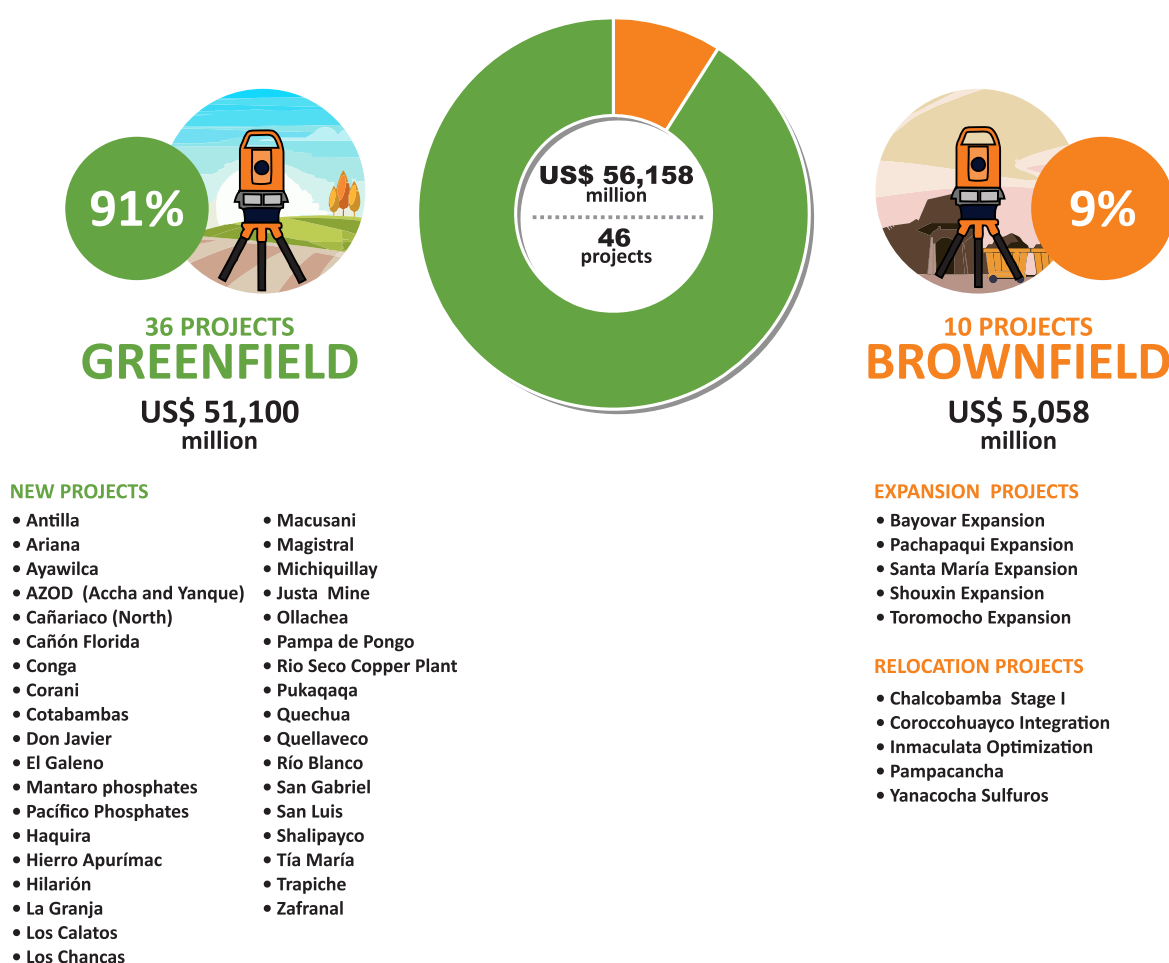
Lastly, investments from Japan, Switzerland and Korea represent 3.6% of the total and, together, amounts US\$ 1,997 million with a project per country.

2.4 INVESTMENTS BY TYPE OF PROJECT

Generally speaking, projects by type of mine can be divided in a) greenfield, those without productivity activity within their mining concessions and b) brownfield, are developed in the same place and in parallel to the productive process in course. It is worth mentioning that brownfield projects are subdivided in expansion and replacement projects (Annex 1: Methodology, type of project).

Based on the above, this Construction Portfolio has a total of 46 projects, 36 of which are greenfield projects and jointly amount US\$ 51,100 million, representing 91% of the Portfolio's global investment. Noted projects from this group are: Quellaveco (US\$ 5,300 million) and Mina Justa (US\$ 1,600 million) because they are in construction and are projects of national interest.

Chart 04: Investment in mine construction projects by type of project



On the other hand, 10 projects are brownfield with a joint investment of US\$ 5,058 million, which represents 9% of the Portfolio's global investment. From this group, 5 are Relocation projects with a joint investment amount of US\$ 3,026 million and, on the other hand, 5 Expansion projects, with an accumulated investment of US\$ 2,033 million.

From brownfield projects Yanacocha Sulfuros stands out (Relocation project) with an estimated investment of US\$ 2,100 million and Toromocho Expansion (Expansion project) with an estimated investment of US\$ 1,355 million.

2.5 INVESTMENTS ACCORDING THE PROJECT PROGRESS STAGE

Based on the progress stage, 5 projects⁸ are under construction with a joint investment amount of US\$ 8,501 million, which represents 15% of Portfolio's global investment. Out of this group, Mina Justa stands out, which started construction in 2028 and would start operations in the first quarter of 2021; then, Santa Maria Expansion projects (US\$ 121 million), Toromocho Expansion (US\$ 1,355 million) and Quellaveco (US\$ 5,300 million), have scheduled start of construction for 2022.

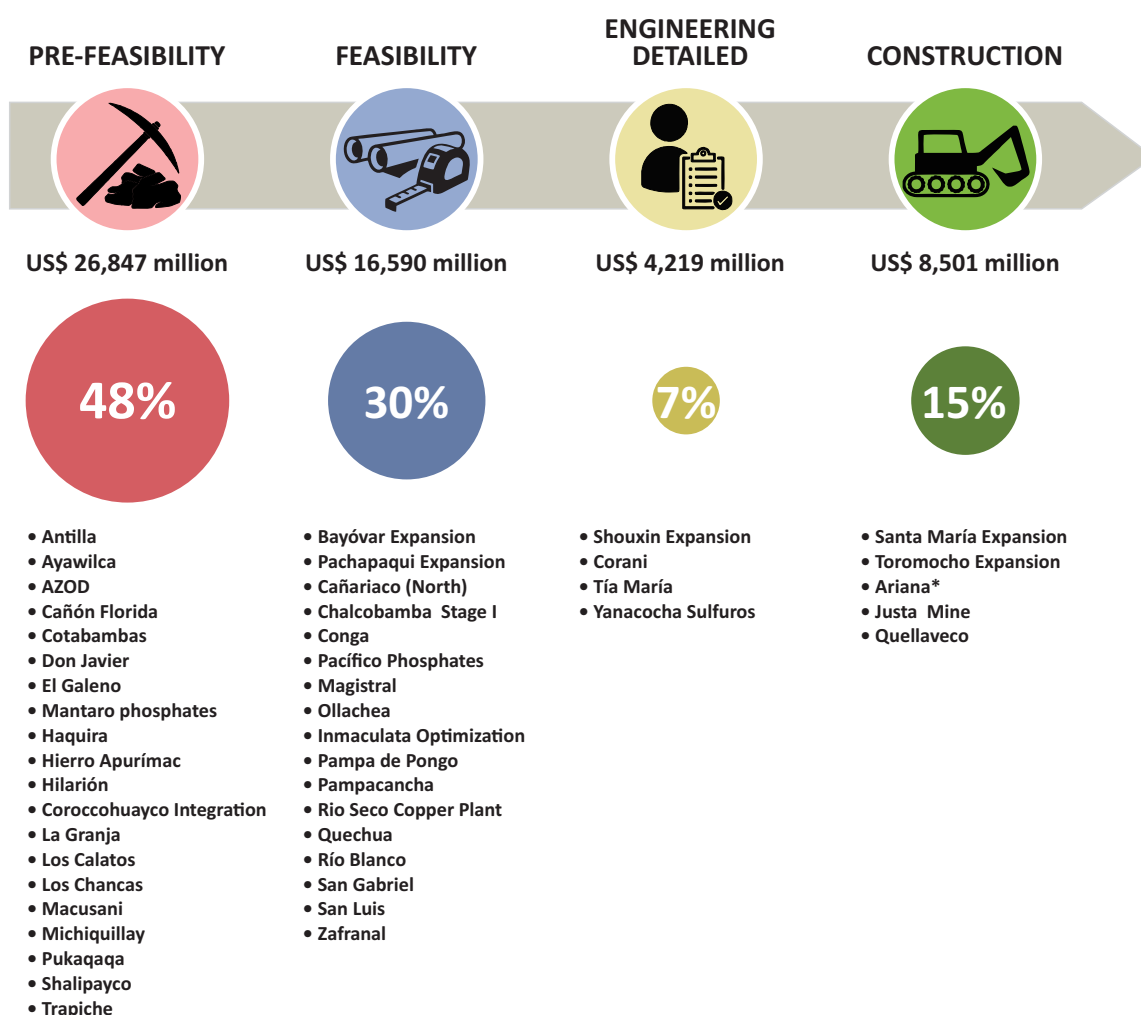
On the other hand, it is important to note that Relaves B2 and Quecher Main, projects considered in the 2019 edition, finished their construction stage in the fourth quarter 2019, this is why they are not considered in this edition.

Regarding projects under detail engineering stage, this Portfolio includes 4 with a joint investment of US\$ 4,219 million and represent 7% of total investment, and these are: Yanacocha Sulfuros (US\$ 2,100 million), Tía María (US\$ 1,400 million), Corani (US\$ 579 million) and Shouxin Expansion (US\$ 140 million). From the above-described projects, Yanacocha Sulfuros stand out based on the management carried out by its owner Minera Yanacocha S.R.L. that allowed developing two stages (from pre-feasibility to detail engineering).

On the other hand, 17 projects, with a joint investment of US\$ 16,590 million, are in feasibility stage, which represents 30% of the total investment. Finally, most of the projects are under pre-feasibility stage, 20 projects in total with a joint investment estimated in US\$ 26,847 million, representing 48% of the total Portfolio's investment.

⁸ Ariana project, owned by Ariana Operaciones Mineras S.A.C has its construction stage at a standstill [See registry: Ariana].

Chart 05: Investment in mine construction projects by progress stage



(*) Paralyzed Construction Project Ariana].

2.6 INVESTMENTS BY WATER SUPPLY SOURCE

The General Directorate of Mining Promotion and Sustainability estimated that the use of water in the mining subsector represented in 2018, 2.0% of the National total volume, thanks to the study carried out to the National Collection of Water Resources Statistics, published in 2019 by the National Water Authority (ANA). Such percentage represents the water consumption of mining activities within 14 Water Administrative Authorities (AAA) distributed throughout the different Peruvian water basins⁹.

⁹ National Water Authority (ANA): *Compendio Nacional de Estadísticas de Recursos Hídricos 2019 (2019 National Collection of Water Resources Statistics)* "Waters volumes used" Page 154 [Web publication]. Date of the first edition: December 2019.

Precisely, within mining activities, we can find those involving the operation of a mine site. This is why, this section analyses mining projects of this Portfolio based on future water supply, once operation stage starts.

As follows, Table 02 herein shows the projects of this Portfolio by water supply source, once operation stage starts.

Table 02: Water consumption supply sources

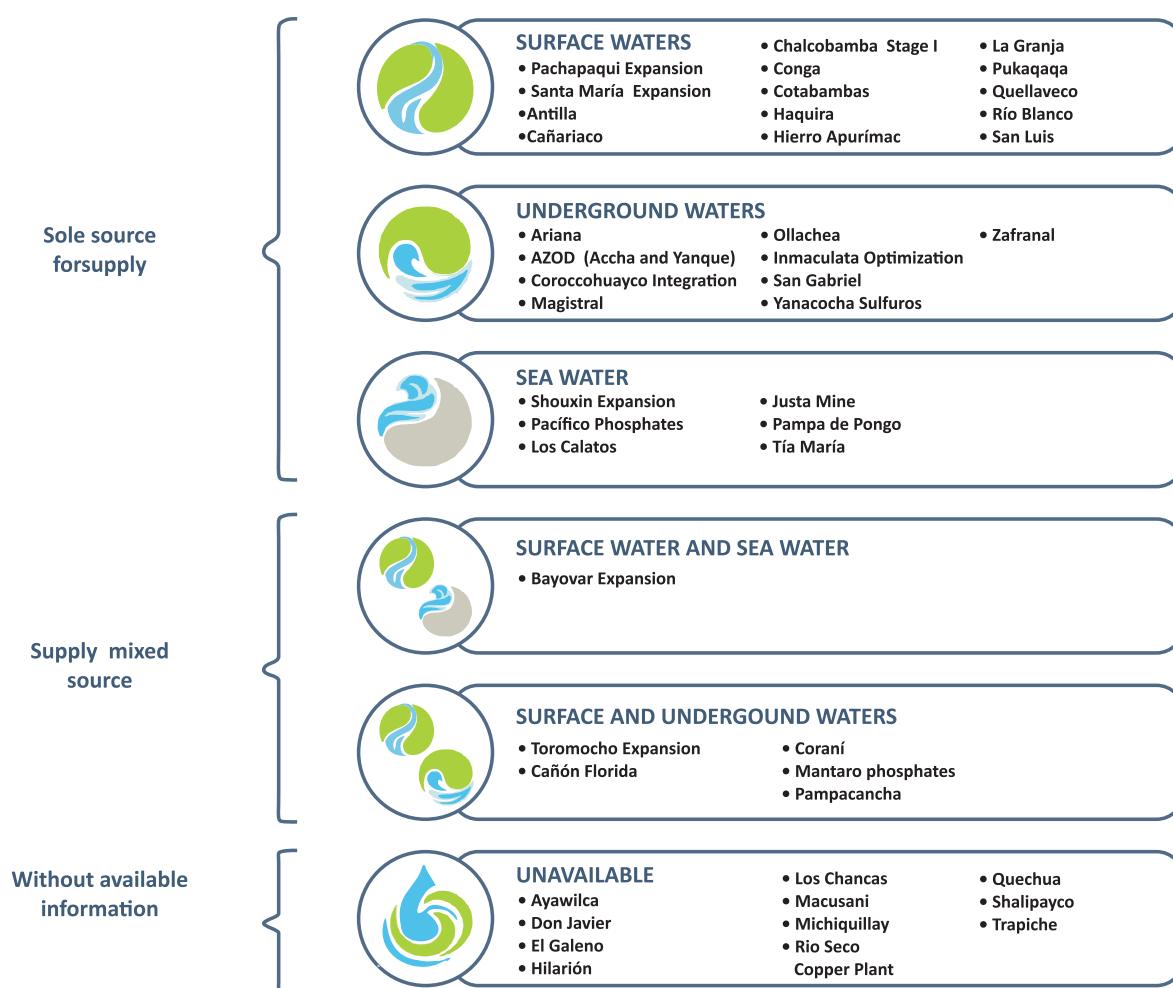
SUPPLY SOURCE	PROJECTS GROUP	TOTAL INVESTMENTS (US\$ MILLIONS)	% SHARE OF THE INV. TOTAL
SURFACE WATERS	14	26,689	47.5%
SEA WATER	6	6,826	12.2%
UNDERGROUND WATER	9	5,636	10.0%
SURFACE AND UNDERGROUND WATERS	5	3,068	5.5%
SEA AND SURFACE WATER	1	300	0.5%
UNAVAILABLE	11	13,638	24.3%
TOTAL (US\$ MILLION)	46	56,158	100.0%

After a detailed analysis, 29 projects have sole water supply source, which jointly represent 69.7% of share of the 2020 Construction Portfolio's total investment. Projects such as Quellaveco in Moquegua (surface water), Pampa de Pongo in Arequipa and Mina Justa in Ica (both using sea water) belong to this group; together with Zafranal in Arequipa and Yanacocha Sulfuros in Cajamarca (both with underground water supply).

On the other hand, mixed source projects are 6 and jointly represent 6.0% of share to the total investment of this Portfolio. Project Toromocho Expansion and Mantaro phosphates in Junion (both using surface and underground water), together with Bayóvar in Piura (surface and sea water) belong to this group.

Finally, this Portfolio has 11 projects without available information about their water supply sources, since most are in early development stages; these projects jointly represent 24.3% of the Portfolio's Global Investment share. El Galeno, Los Chancas and Michiquillay are the representative projects of this group.

Chart 06: Supply sources



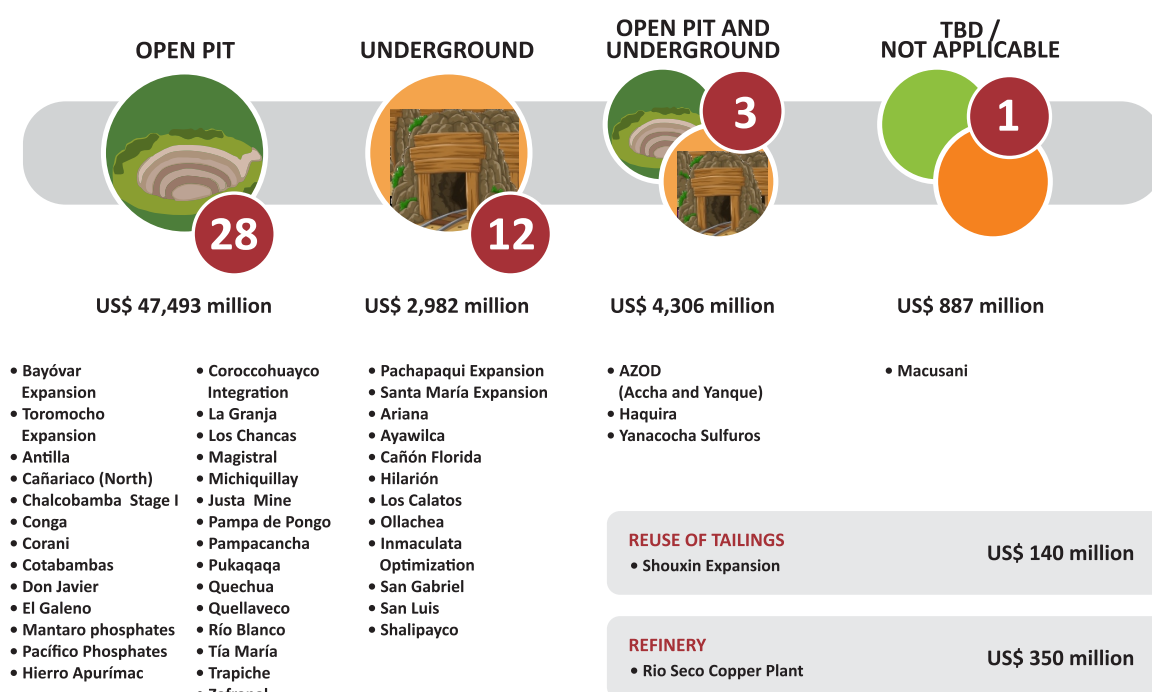
2.7 INVESTMENTS BY TYPE OF MINE

This section addresses the Portfolio's investments by type of mine to be used when projects start operations and exploitation activities are needed. It is worth to mention that the choice of a type of mine will depend on the mineralization and geographical conditions of the area where the mine will be settled. Likewise, it should be the lowest cost alternative and which maximizes the ore extraction level.

In this manner, this Portfolio has a total of 28 projects with open pit exploitation method, which amounts a joint investment of US\$ 47,493 million representing 84.6% of the Portfolio's Global Investment. The most outstanding projects of this group are: Quellaveco (US\$ 5,300 million) in Moquegua, Mina Justa (US\$ 1,600 million) in Ica and Toromocho Expansion (US\$ 1,355 million) in Junín, which are under construction.

Likewise, thanks to technology, it is possible to have deeper underground mines; in this Portfolio there are 12 projects of this type, which has a joint estimated investment of US\$ 2,982 million. San Gabriel (US\$ 422 million) in Moquegua, Inmaculada Optimization (US\$ 136 million) in Ayacucho and Santa María Expansion (US\$ 121 millions) are the most relevant of this group and are under construction in La Libertad.

Chart 07: Investment in mine construction projects by type of mine



On the other hand, there are 3 projects that are planning to use both methods (open pit and underground). These projects have a joint investment amount of US\$ 4,306 million, Yanacocha Sulfuros (US\$ 2,100 million) in Cajamarca stands out, which aims at substantially extend the life of mine with this project.

It is worth to note that for this edition of the Construction Portfolio, the Shouxin Expansion reuse of tailings project is considered (US\$ 140 million) in Ica, consisting of the expansion of its processing plant in 100% of production capacity. In the same manner, the Río Seco Copper Plant refinery project is being considered, which consists in starting the operation of a new plant to treat concentrates with an investment amount of US\$ 350 million. Finally, Macusani project (US\$ 887 million) in Puno still has not defined its exploitation method.

2.8 INVESTMENTS BY THE ORE TO BE EXTRACTED

Peru has always been characterized for being a mining country, thanks to its privileged geography, which has allowed it to consolidate, in 2019, a well-known international positioning regarding Copper, Silver, Zinc, Molybdenum, Lead and other mining reserves. Consequently, these mining reserves constitute the potential future mining production that will make an important contribution to the Peruvian economy and, as a result, to the development of the country in the following years.

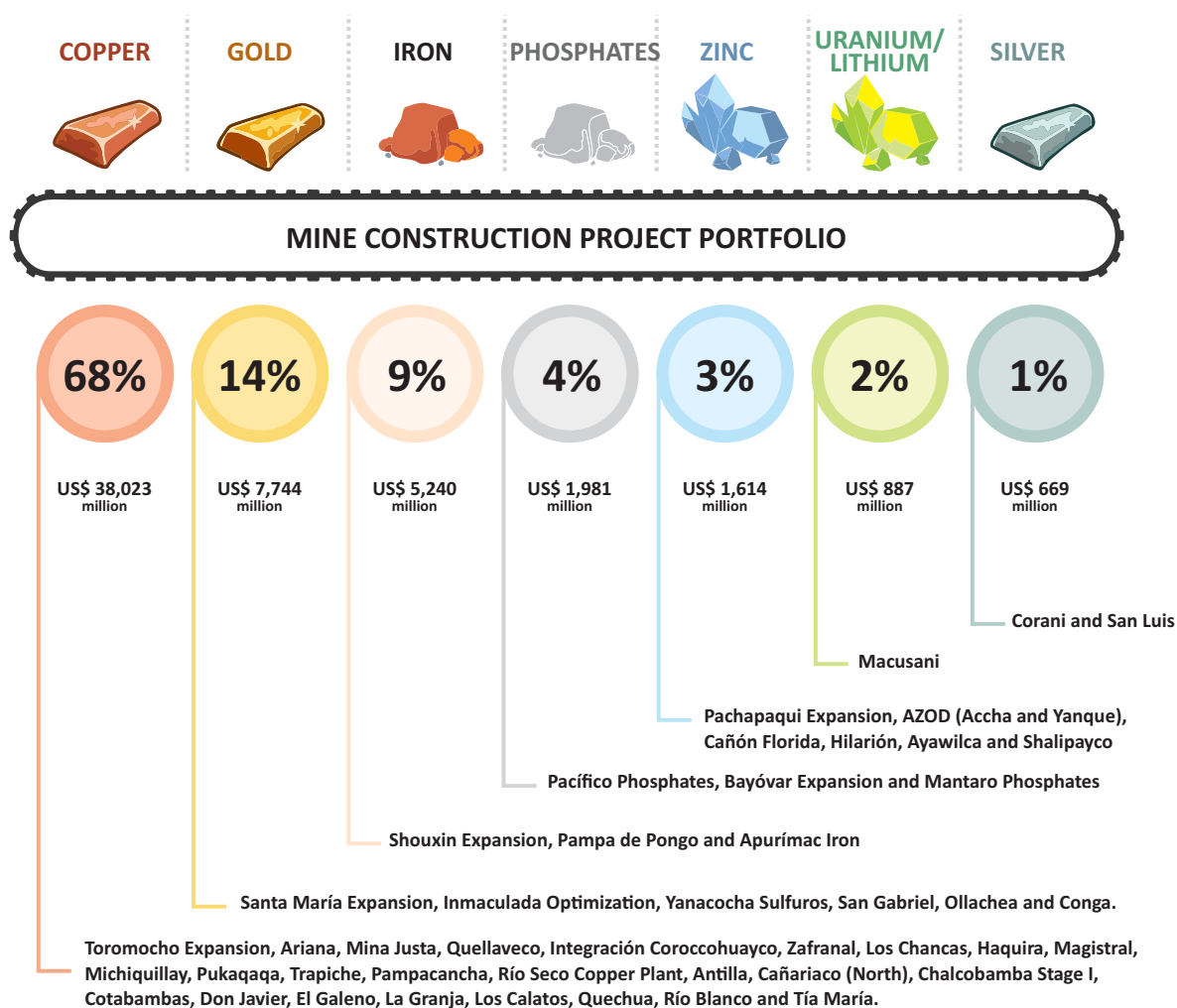
Therefore, this Portfolio contemplates the future extraction of 7 different main products; being Copper the mineral with greater presence (25 of the 46 projects), representing a joint investment of US\$ 38,023 million, which is translated in 67.7% of the Portfolio's global investment. Among the copper projects, Toromocho Expansion (additional 75,000 MTF), Justa (181,000 MTF) and Quellaveco (300,000 MTF) projects already started construction.

On the other hand, in the last 3 years there has been a reduction in Gold production, so it is important to note the presence of 6 Gold projects in the Portfolio with a joint investment of US\$ 7,744 million and representing 13.8% of the total. Yanacocha Sulfuros outstands from these projects with an estimated annual production of 500,000 Gold ounces, with which the current Gold operation should continue.

On the other hand, there are 3 Iron projects that together represent 9.3% of the global investment of the Portfolio, it is worth mentioning that in this edition there is one more Iron project than the previous edition due to the incorporation of the Shouxin Expansion project (additional 400,000 MTF), the other two are Hierro Apurimac (20 million MTF) and Pampa de Pongo (22.5 million MTF).

Regarding Phosphates extraction, there are 3 projects with a joint investment of US\$ 1,981 million and a 3.5% share of the total. Also, Zinc and Silver jointly represent 4.1% of the total investment with 8 projects in the portfolio and finally Macusani characterized for being the only Uranium/Lithium project in the Portfolio, representing 1.6% of the global investment.

Chart 08: Investment in mine construction projects by the main economic ore



III. REGISTERED CHANGES IN THE PORTFOLIO

In this section, a comparative analysis between the current and the prior edition of the portfolio will be carried out¹⁰, in order to show the dynamism and evolution of mining projects.

The total investment amount of this edition amounts US\$ 56,158 million, including 46 projects located in 17 regions of the country. This means a reduction of US\$ 1,614 million of the estimated global investment, compared to US\$ 57,772 million of the prior portfolio. This is mainly a consequence of the startup of projects and of four that were not considered in this edition; however, four new projects were included.

COMPARISON OF MINE PROJECTS PORTFOLIO (2019 AND 2020)

As follows, a list with the main changes found.

1. Quecher Main relocation project and Relaves B2 San Rafael reuse project finished their construction during the second semester 2019. Currently, they are both in operation and were excluded from this publication.
2. 4 projects were included in this edition. Shouxin Expansion, Chalcobamba Stage I, Pampacancha and Rio Seco Copper Plant, which have a global investment amount of US\$ 140 million, US\$ 130 million, US\$ 70 million and US\$ 350 million, accordingly.
3. Quicay II, Racaycocha Sur, Rondoní and Bayovar 12 are no longer considered since the development period of the projects is outside the timeline of the current portfolio.
4. Regarding the prior edition, there are 30 projects that maintain their investment amount in the current publication.
5. At the same time, there are 12 projects that submitted changes to their investment amounts, meaning an increase of US\$ 23 million. The main changes are:

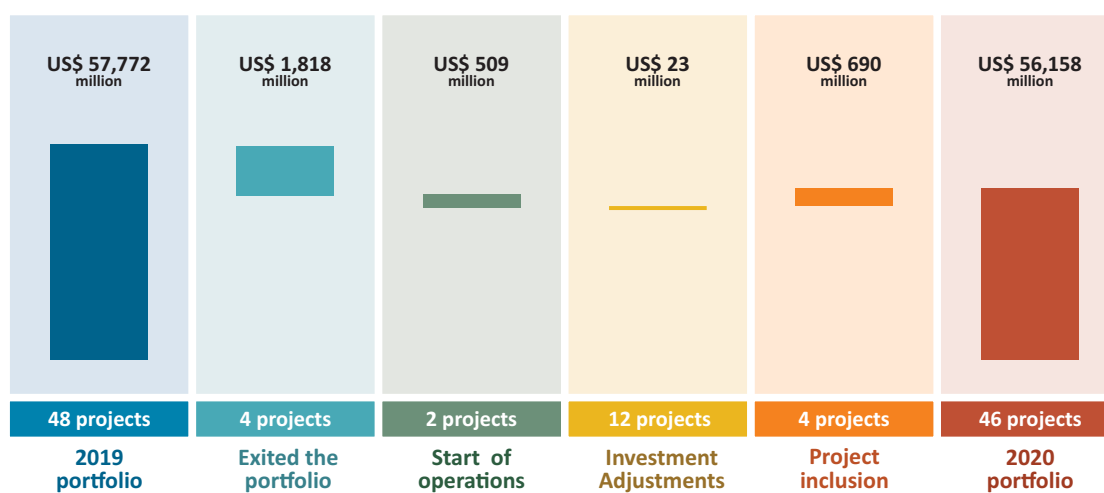
¹⁰ 2019 Mine Construction Projects Portfolio Published on September 01, 2020.

- Santa María Expansion project, which investment went from US\$ 110 million to US\$ 121 million, as a consequence of additional investments carried out in the expansion project by the company.
- Magistral project global investment increased from US\$ 480 to US\$ 490 million. This is due to the fact that on October 16, 2019, through the subscription of Addendum N°2 to the Mining Concession Transfer Agreement and other assets that make up the Magistral Mining Project with Activos Mineros S.A.C and the Private Investment Promotion Agency - Proinversión, the term for compliance with the Development Investment Commitment was modified and the CAPEX of the project was updated.
- Zafranal project had an update of its estimated global investment, changing from US\$ 1,157 million to US\$ 1,263 million, a product of the results obtained when completing the project feasibility study.
- This edition only considers Hilarión project and not the previously called El Padrino e Hilarión. This is because the project owner notified on March 05, 2020, that the project will solely consider, for now, the exploitation of ore resources from Hilarión and El Padrino will not be included. In this manner, CAPEX investment considered in the prior edition of US\$ 470 million was updated to US\$ 585 million according to the Preliminary Economic Assessment (PEA)
- The global investment of Corani project had a reduction of US\$ 585 to US\$ 579 million, as a consequence of the redefinition of some components of the project in order to make the project more appealing for investors, which was published on the new project technical report dated on December 17, 2019.
- Macusani project adjusted its global investment from US\$ 800 million to US\$ 887 million. Such variation, supported in the updating of the Preliminary Economic Assessment (PEA) of the 2 deposits of the project: Macusani (Uranium) and Falchani (Lithium), which individual investment amounts are estimated in US\$ 300 million and US\$ 587 million, accordingly.
- San Gabriel, Trapiche, Los Chancas, San Luis, Pukaqaqa and Cotabambas projects showed reductions in their estimated investment amounts after the project owners adjusted their technical studies.

Table 03: Main changes in the 202 Construction Project Portfolio

	QUANTITY OF PROJECTS ¹¹	2019 PORTFOLIO INVESTMENT (US\$ MILLIONS)	2020 PORTFOLIO INVESTMENT (US\$ MILLIONS)	DIFFERENCE IN INVESTMENT
NEW PROJECTS IN THE PORTFOLIO	4		690	690
PROJECTS THAT STARTED OPERATIONS	2	509		- 509
PROJECTS LEAVING THE PORTFOLIO	4	1,818		- 1,818
PROJECTS WITH CHANGES TO INVESTMENT	12	10,172	10,196	23
PROJECTS WITHOUT CHANGES TO INVESTMENT	30	45,273	45,273	-
TOTAL	46	57,772	56,158	- 1,614

Chart 09: Comparison between 2019 and 2020 Construction Project Portfolio



¹¹ Mining projects starting operation or exiting the portfolio are not considered in the final addition to the amount of projects in this edition.

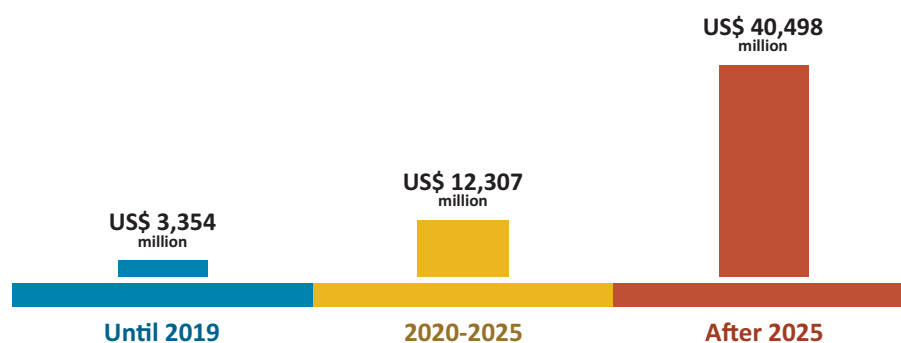
IV. ANNUAL INVESTMENT FORECAST

This chapter will detail the estimated investment forecast for projects in the portfolio. Out of the US\$ 56,158 million of the investment global amount of this portfolio, as of 2019, US\$ 3,354 million were executed, representing 6%, US\$ 52,804 million (94%) remain to be invested, which will be executed as from 2020.

Investment periods have been divided in three to be better analyzed:

- a) Investments executed as of 2019: US\$ 3,354 million (6.0% of the total investment amount)
- b) Investments to be executed between 2020 and 2025: US\$ 12,307 million (21.9% of the total investment amount)
- c) Investments to be executed after 2025: US\$ 40,498 million (72.1% of the total investment amount)

Chart 10: Investment forecast



4.1. INVESTMENTS EXECUTED AS OF 2019

At the end of 2019, the amount of investment executed amounted to US\$ 3,354 million, which represents 6% of the overall investment amount and corresponds to the progress of the Santa María Expansion, Toromocho Expansion, Quellaveco and Mina Justa projects. Mina Justa investment stands out with the highest execution percentage regarding its global investment thanks to the proximity of its start o operations, scheduled in the beginning of 2021.

Table 04: Investment executed as of 2019

PROJECT	GLOBAL INVESTMENT (US\$ MILLIONS)	INVESTMENT EXECUTED AS OF 2019 (US\$ MILLIONS)
SANTA MARÍA EXPANSION	121	60
TOROMOCHO EXPANSION	1,355	606
MINA JUSTA	1,600	1,055
QUELLAVECO	5,300	1,633
TOTAL	8,376	3,354

4.2. INVESTMENT FORECAST 2020-2025

The forecast of investments to be executed in the construction of projects for the period 2020-2025 amounts to US\$ 12,307 million, which represents 21.9% of the global investment amount estimated in this portfolio.

In 2020 a forecast US\$ 2,459 million investment will be made, which represents 16.4% of the total investment in 2020-2025. It is worth mentioning that this year was impacted by the COVID-19 Pandemic, which has modified investment schedules in most of mining projects Worldwide. In this manner, the current expected amount shows a reduction in 29.1% compared to the estimates from prior edition (US\$ 2.845 million) Also, it is important to note that the mining sector economic reactivation, which occurred in three stages¹², has allowed construction projects, such as Quellaveco, Mina Justa, Santa María Expansion and Toromocho Expansion to continue their work. The latter should soon start operations of Stage I of their expansion by December 2020.

Later, for 2021, a US\$ 2,459 million investment, representing 22.0% increase compared to the previous year is expected. This increase is increased based on higher disbursements expected by Quellaveco project and the second stage of Toromocho Expansion, as well as the start of construction of these projects: Shouxin Expansion, Corani, Yanacocha Sulfuros, Inmaculada Optimization, Chalcobamba Stage I, Pampacancha and San Gabriel. On the other hand, it is worth noting that during that period, the startup of Mina Justa project will be carried out, which construction started in 2018 and that will contribute with

¹² Official Letter 080-2020-PCM "Official Letter that approves the restart of economic activities in a gradual and progressive manner within the National Sanitary Emergency framework due to the critical circumstances impacting the life of the Nation due to COVID-19". Posted on May 3, 2020, on El Peruano official gazette.

Official Letter 101-2020-PCM "Official Letter that approves Tier-2 of restart of economic activities within the National Sanitary Emergency framework due to the critical circumstances impacting the life of the Nation due to COVID-19" and amends Official Letter N° 080-2020- PCM". Posted on June 4, 2020, on El Peruano official gazette.

Official Letter 117-2020-PCM "Official Letter that approves Tier-3 of restart of economic activities within the National Sanitary Emergency framework due to the critical circumstances impacting the life of the Nation due to COVID-19". Posted on June 30, 2020, on El Peruano official gazette.

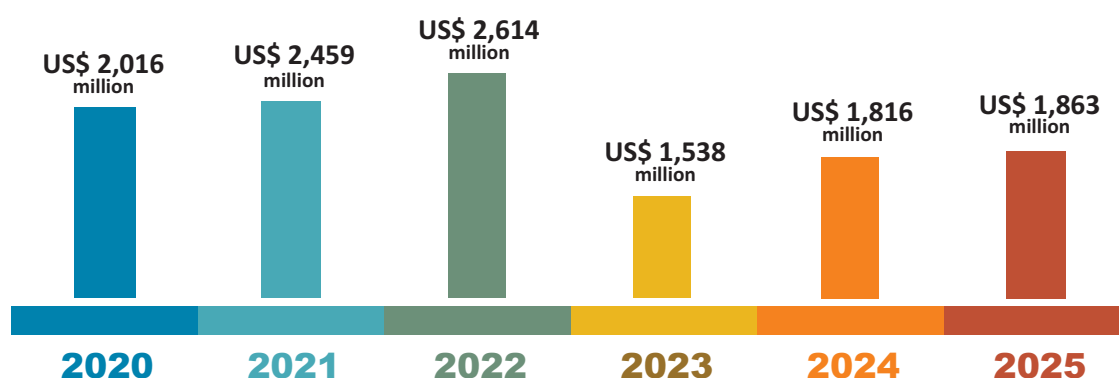
more than 180,000 annual fine metric tons of Copper during the 16 years of life of mine.

Similarly, in the year 2022 an investment of US\$ 2,614 million is projected, showing a growth of 6.3% with respect to the 2021 projection, essentially as a consequence of the beginning of the construction of Magistral and the Rio Seco Copper Plant with a joint investment of US\$ 840 million. Nevertheless, the end of the construction of six projects is expected. The outstanding one is Quellaveco, which global investment of US\$ 5,300 million is one of the highest historically registered in Peru. Also, in this year, the startup of Toromocho Expansion, Shouxin Expansion, Inmaculada Optimization, Chalcobamba Stage I and Pampacancha projects is expected.

In addition, a US\$ 1,538 million investment is estimated for 2023, which will mean a 41.1% reduction regarding 2022 estimation. During this year, the start of commercial production of one of the Gold projects is estimated: Santa María expansion and San Gabriel. Also, the start of Zafranal mining project construction is estimated. This project has a global investment amount higher than US\$ 1,000.

While, for 2024, a US\$ 1,816 million investment is estimated, registering an 18.1% growth compared to what was expected in 2023, a result of the start of construction of these Copper projects: Los Chancas and Trapiche, which hold a joint global investment of US\$ 3,573 million to be executed until 2027. It is worth mentioning that during this period the startup of Corani, Yanacocha Sulfuros and Rio Seco Copper Plant projects is expected.

Chart 11: Annual investment forecast 2020-2025



Finally, it is expected that by 2025, with the start of construction of the Michiquillay copper project, the investment executed in projects under construction will be US\$ 1,863 million, reporting an increase of 2.6% compared to 2024. Also, it is estimated that Magistral project will start commercial production in this period, contributing with an annual estimated production of 55,000 fine metric tons of Copper, approximately, during an 11-year-useful life.

In this manner, it is expected to have committed the investment of 13 projects that, added to the joint investment of projects under construction in 2020 (Toromocho Expansion, Mina Justa and Quellaveco), to the executed investment in projects that completed construction in 2018 (Toquepala Expansion, Marcona Expansion and Shahuindo Stage II Expansion) and 2019 (Quecher Main and Relaves B2 San Rafael), amounts to a global investment of more than US\$ 23,000 million as of 2025.

4.3 INVESTMENT FORECAST AFTER 2025

After 2025, investment estimate amounts to US\$ 40,498 million, representing 72.1% of the investment global amount.

During this time, the progress and definition of 29 projects is expected with a joint global investment amount of US\$ 36.029 million. Also, from this group La Granja with US\$ 5,000 million and Pampa de Pongo with US\$ 2,200 million are the most notable due to their investment amounts.

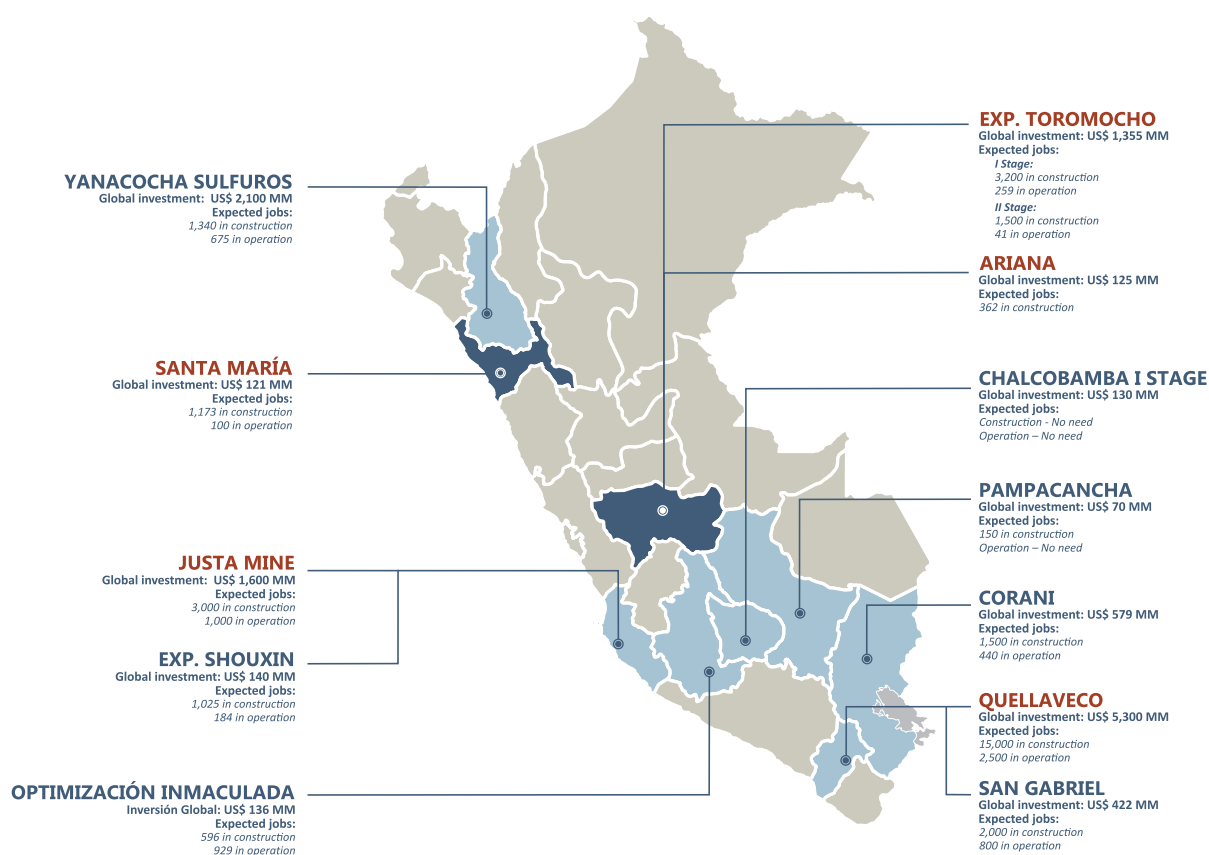
V. MACROECONOMIC IMPACT

As of this Portfolio edition, 4 projects are under construction, as mentioned throughout the document; unlike the previous edition, Relaves B2 San Rafael and Quecher Main have already completed this stage and are currently in operation. On the other hand, we are waiting for the Court ruling regarding Ariana project

The start of construction of 7 projects is expected for 2021. This is due to the fact that in 2020 investors modified their schedules in the face of the World context, so certain projects scheduled to start construction in 2020, have postponed it for 2021.

Within this context, towards 2025, 12 mining projects from the Portfolio would be in operation, which are in the next map:

Chart 12: Mining Projects under Construction and possible start in 2021.



13 See Registry: Ariana.

In 2018 and 2015, these projects will generate a total of 26,146 entirely new jobs in construction with an executed investment, within the same time, of more of US\$ 11,000. It should be noted the importance of these positive results before the national economic reactivation.

On the other hand, if the benefits of the implementation of the 12 projects as of 2025 are analyzed, there would be a significant increase in the country's copper and gold production, favoring Peru in the world rankings, an increase in the national GDP, the trade balance and foreign currency income; all this will be reflected in an increase in economic transfers to sub-national governments.

Taking 2019 Copper and Gold production as baseline, the start of operations of these 12 projects would greatly increase the production as of 2025, as the following table shows:

Table 05: Investment executed as of 2019

	2019	PRODUCTION 2025	VAR%
Cu (millions of TMF)	2.4	3.1	29%
Au (millions of fine g)	128.4	158.5	23%

VI. ANNEXES

6.1. ANNEX 1: METHODOLOGY

6.1.1. Scope

2020 Mine Construction Projects Portfolio includes mining projects which objectives include the construction of a mine or the modification or optimization of components to expand or support productive capacity. It is worth mentioning that all of these projects are owned by private companies from the general regime bracket (large and medium mining) and include both metallic and non-metallic ore production.

Likewise, the Portfolio has methodological criteria aimed at having a portfolio with sustainable and feasible projects within a specific amount of time. Some of these requirements are a) the global investment amount of the project must be equal or higher than 70 million US Dollars; b) it should be, as minimum, in pre-feasibility stage to ensure a higher certainty degree over ore resources; and c) the start of the mine construction should be considered in the next ten years.

It should be noted that investment amounts, construction start date, start of operation (implementation) and other data, have been collected from different sources and estimations carried out by the Mining Promotion Directorate from the Ministry of Energy and Mines. (See section 6.1.3 Sources of Information)

6.1.2. Projects characterization

6.1.2.1. Type of project

This characteristic offers information about the project productive purpose. As follows, several existing categories:

- **New projects:** Projects without prior productive mining activity within their mining concessions. Therefore, they need the settling in a new geographical area, as well as to establish links with nearby communities. In addition, they need to obtain all the necessary infrastructure permits. Because they use new geographical areas, resources and facilities, this type of projects is classified as greenfield.
- **Expansion projects:** Projects aiming at expanding the current productive capacity. They are developed in the same place and in parallel to the current productive process. Therefore, they are classified as brownfield.
- **Relocation projects:** Those projects attempting to maintain current productive capacity with new mining developments, due to a drop in grades or the exhaustion of ore reserves within the exploitation sectors. These projects are classified as brownfield.

6.1.2.2. Progress stage

The field allows to know the current situation of the project and the stage of development in which it is. As follows, several existing categories are described:

- **Pre-feasibility:** Category allocated to those projects with developing or completed pre-feasibility assessment or with the submittal of the Preliminary Economic Assessment (PEA) but that have not started feasibility stage yet. In this stage, projects already have a higher degree of certainty about ore resources.
- **Feasibility:** Category assigned to those projects with feasibility studies initiated or already completed, but which have not yet made the investment decision.
- **Detail Engineering:** Category assigned to those projects with investment approval and basic and detail engineering studies initiated.
- **Construction:** Category assigned to those projects with all the necessary permits and that have started construction or modification/upgrade of components until before the start up or start of operations.

6.1.2.3. Water consumption by supply sources

As part of the accompaniment and technical assistance provided through the management of CEPAL-BGR South-South cooperation, the joint initiative called "Mining Statistics, Methodological Transfers between Chile and Peru, which brought together professionals from both countries in a first meeting held in the city of Lima in Peru in 2019 and a second meeting in the city of Santiago in Chile, in the first quarter of 2020.

Based on the above, and in order to standardize the technical terminology used in this mine construction projects portfolio, the water supply sources scale, included in the "copper mining water consumption as of 2017" report prepared by the Copper Chilean Commission (COCHILCO) is used as reference.

6.1.2.4. Power

Similar to "Water consumption by supply source" (see section 6.1.2.3), the determination of electric power of the projects included in this Portfolio was given within the joint initiative called "Mining Statistics, Methodological Transfers between Chile and Peru". Therefore, the General Directorate of Mining Promotion and Sustainability (DGPSM) began collaborative work, first with the General Directorate of Energy Efficiency (DGEE) and later with the General Directorate of Electricity (DGE), with whom it shared technical information on the projects that make up the 2020 Construction Portfolio in order to standardize the energy consumption figures for each project, expressed in megawatts (MW). Also, data sent directly by consulted mining owners is included.

6.1.3. Sources of Information

Information included in the Portfolio is a collection from different sources carried out by the Directorate of Mining Promotion of the Ministry of Energy and Mines. If there are differences between the data from different sources, the data is taken from the most reliable official source, in the following order of priority:

- I. Environmental Impact Assessments, Mine Plan and Processing Concession Authorization.
- II. Technical Reports, pre-feasibility and feasibility studies.
- III. Report to shareholders, quarterly and annual reports, and financial statements.
- IV. Official presentations to MINEM by the project owner.
- V. Articles, magazines, websites and other specialized sources.

6.2. ANNEX 2: PROJECT TECHNICAL RECORDS

Technical Records of the projects within this Construction Portfolio are divided in three sections. So, the reader may easily visualize the different data comprising each record. As follows, data from each section is detailed:

- I. General Project Data:** This first section details the minimum required data to identify a mining project.
 - a. Name of the project
 - b. Name of the operator or mining holder of the project
 - c. Name of the investor or investors of the project
 - i. Includes the country of origin
 - d. Geographical location of the project: Region, province and district
 - i. Includes a brief description of meters above sea level or location distance from specific points of reference (cities, basins, among others).
 - e. Global investment (CAPEX)
 - f. Type of project deposit

- II. Project Main Information:** This section details technical information specific to each project
 - a. Start of Construction and Start of operation
 - b. Employment: in Construction and Operation
 - c. Power
 - d. Plant capacity
 - e. Type of project New, expansion or relocation
 - f. Type of mine: Open pit, underground, refinery, reuse of tailings or to be defined.
 - g. Project mineralization: Ore reserves or resources
 - h. Life of mine
 - i. Water source: Surface, underground, sea, mixed sources, to be defined and not available.
 - j. Estimated annual production

- III. Current Project Situation:** The stage of progress of the project is defined, as well as a brief description of its current situation. The following will be also detailed:
 - a. Environmental Management Instrument (EMI): Type of EMI (Main or amendments to Detailed Environmental Impact Assessment) of the project is stated.
 - i. EMI Status: Approved, initiated or not submitted
 - ii. Description: Support of the stated status of the EMI
 - b. Start of exploitation activities (Mine plan)
 - i. Mine Plan Status Approved, under assessment, not applicable or not submitted
 - ii. Description: Support of the Mine plan status
 - c. Processing Concession
 - i. Status of the Processing Concession Approved, under assessment, or not submitted
 - ii. Description: Support of the Processing Concession Status

Table 06: Project Technical Records

Pages	Project
35	Bayóvar Expansion
36	Pachapaqui Expansion
37	Santa María Expansion
38	Shouxin Expansion
39	Toromocho Expansion
40	Antilla
41	Ariana
42	Ayawilca
43	AZOD (Accha and Yanque)
44	Cañariaco (North)
45	Cañón Florida
46	Chalcobamba Stage I
47	Conga
48	Corani
49	Cotabambas
50	Don Javier
51	El Galeno
52	Mantaro phosphates
53	Pacífico Phosphates
54	Haquira
55	Hierro Apurímac
56	Hilarión
57	Coroccohuayco Integration
58	La Granja
59	Los Calatos
60	Los Chancas
61	Macusani
62	Magistral
63	Michiquillay
64	Mina Justa
65	Ollachea
66	Inmaculada Optimization
67	Pampa de Pongo
68	Pampacancha
69	Rio Seco Copper Plant
70	Pukaqaqa
71	Quechua
72	Quellaveco
73	Río Blanco
74	San Gabriel
75	San Luis
76	Shalipayco
77	Tía María
78	Trapiche
79	Yanacocha Sulfuros
80	Zafranal

Bayóvar Expansion

Operator

Compañía Minera Miski Mayo S.R.L.

Investor¹

75%: The Mosaic Company (USA);
25%: Mitsui & Co (Japan)

Region

Piura

Province

Sechura

District

Sechura

Global investment²

US\$ 300 million

Type of deposit³

Brine deposit

Project location

Project is located in the North of Peru, 1000 km from Lima city, 110 km South from Piura and 30 km from the Pacific Ocean.

Map

PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	Expansion
Start of operation	TBD	Type of mine ³	Open pit
Jobs in construction ³	1,300	Ore reserves ³	597 Mt @ 16.7% P ₂ O ₅
Jobs in operation ³	144	Life of mine ³	31 years
Power	38 MW	Water source ³	Sea and surface waters
Plant capacity ⁴	81,079 tons per day	Estimated annual production ⁵	1million of Metric Tons of phosphate concentrate (additional)

CURRENT PROJECT SITUATION: FEASIBILITY

Bayóvar is one of the largest phosphate deposits in the World. Phosphate rocks, diatomite, brines, among others are found in the project. Currently, Bayóvar mine site is in operation since 2010. Bayóvar project prioritizes local labor. In this sense, in 2020, 55% of manpower is reported from Sechura and la Unión province; as well as, 76% corresponds to Piura region. On the other hand, as part of the company's commitment to the region, many activities have been developed in areas such as education, health, local economy, environmental management, among others.	
Environmental Management Instrument (EMI): 2da MEIA-d	
Status	The project has a Second Amendment to its Environmental Impact <i>Assessment</i> (2nd MEIA-d) for exploitation activities, approved by Directive Order N° 182-2015-EM/DGAAM dated on April 28, 2015. Likewise, on September 18, 2020, the company requested the approval of the 2nd Supported Technical Report (ITS) of the 2nd MEIA-d which proposes to determine a humidity percentage above 8% and the optimization of seawater use. That document is under review.
APPROVED	
Start of exploitation activities (Mine plan)	
Status	The current mining operation holds an Authorization to Start Exploitation Activities (Mine Plan) approved on September 24, 2009 by Directive Order N°184-2009/MEM/DGM. However, a new Authorization to Start Exploitation Activities (Mine Plan) to develop the expansion is required.
FAILED TO SUBMIT IT	
Processing Concession	
Status	Processing Concession approved for an installed capacity of 81,079 MT/day by Directive Order N°0519-2017-MEM-DGM/V dated on June 6, 2017.
APPROVED	

¹Compañía Minera Miski Mayo Summary Miski Mayo Social Responsibility executed in 2019 [Submitted to Ministry of Energy and Mines]. January 24, 2020.

² Sociedad Nacional de Minería, Petróleo y Energía (SNMPE): *Bi-weekly report - Bayóvar Project*. October 2010

³ Compañía Minera Miski Mayo S.R.L.: *Second ammendment to the Environmental Impact Assessment of Bayóvar Phosphates mine site* Approved by Directive Order N°182-2015-EM/DGAAM dated on April 28, 2015.

⁴ Compañía Minera Miski Mayo S.R.L.: *Project to modify the Benefit Concession “Bayóvar I and II”* Approved by Directive Order 0519-2017-MEM-DGM/V dated on June 06, 2017

⁵ Compañía Minera Miski Mayo S.R.L.: *Ammendment to the Environmental Impact Assessment of Bayóvar Phosphates Project* Approved by Directive Order N° 070-2013-MEM-AAM dated on March 07, 2013

Pachapaqui Expansion

Operator

ICM Pachapaqui S.A.C.

Investor⁶

100%: Korea Zinc Company (Korea)

Region

Ancash

Province

Bolognesi

District

Aquia

Project is located at approximately 3800 to 4800 masl.

Global investment⁷

US\$ 116.5 million

Type of deposit⁷

Polymetallic deposit of Zinc (Zn), Lead (Pb), Silver (Ag) and Copper (Cu)



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	Expansion
Start of operation	TBD	Type of mine ⁷	Underground
Jobs in construction ⁷	304	Ore reserves ⁷	9.1 Mt @ 3.40% Zn, 1.42% Pb, 55.58 g/t Ag, 0.44% Cu
Jobs in operation ⁷	481	Life of mine ⁷	11 years
Power	No changes	Water source ⁷	Surface waters
Plan capacity ⁷	Expansion from 800 to 3300 tons per day	Estimated annual production	29,750 TMF of Zn (additional) 12,400 TMF of Pb (additional) 1.56 millions of ounces Ag (additional) 3,850 TMF of Cu (additional)

CURRENT PROJECT SITUATION: FEASIBILITY

The company is carrying out awareness campaigns with Aquia community in order to renew the Framework Agreement. Also, within the framework of its social responsibility commitment, ICM Pachapaqui S.A.C has considered as necessary to execute thee project “Water Strengthening of Desagüe Ravine to include Agricultural Areas in the Aquia Peasant Community”, which has a main component the water system of the Torregaga Dam and is under assessment by the National Service of Environmental Certification for Sustainable Investments (SENACE)		
Environmental Management Instrument (EMI):		MEIA-d
Description		
Status	The project has a Second Amendment to its Detailed Environmental Impact Assessment (MEIA-d) for exploitation activities, approved by Directive Order N° 023 2017-SENACE-JEF-DEAR dated on December 01, 2017.	
APPROVED		
Start of exploitation activities (Mine plan)		Description
Status	The project does not consider a new authorization to start exploitation and the approval of Mine Plan.	
APPROVED		
Processing Concession		Description
Status	Processing Concession approved for an 800 MT/day plant by Directive Order N° 350-2013-MEM-DGM/V dated on September 03, 2013. However, the owner does not have the Processing Concession approved for an expansion of 3,300 MT/day	
FAILED TO SUBMIT IT		

⁶ Standard and Poor’s (S&P Global): *Pachapaqui Expansion – Ownership Information [Market Intelligence from Official Website]*. Date of consultation: November 05, 2020

⁷ ICM Pachapaqui: *Ammdement of the detailed Environmental Impact Assessment (EIA-d) drom Expansion Project of 3300 MTD U.M. Pachapaqui* Approved by Directive Order N° 023-2017-SENACE-JEF/DEAR, on December 01, 2017.

Santa María Expansion

Operator	Compañía Minera Poderosa S.A.	Investor ⁸	100%: Grupo Arias (Peru)
		Region	La Libertad
		Province	Patate
		District	Patate
		The project is located in the Hualanga-Francés ravine basin between 1200 and 4350 masl.	
		Global investment ⁹	US\$ 121 million
		Type of deposit ¹⁰	Gold (Au) Deposit

PROJECT MAIN INFORMATION

Start of the construction	2019	Type of project	Expansion
Start of operation	2022	Type of mine ¹⁰	Underground
Jobs in construction ¹¹	1,173	Ore reserves ¹²	1.3 Mt @ 17.5 g/t Au
Jobs in operation ¹¹	100	Life of mine ¹¹	22 years
Power	Unavailable	Water source ¹¹	Surface waters
Plan capacity ¹¹	Expansion from 600 to 100 tons per day	Estimated annual production	36,000 fine ounces of gold (additional)

CURRENT PROJECT SITUATION: CONSTRUCTION

In May this year, the company completed the first expansion stage of the processing plant, which increased its capacity from 600 to 800 tons/day. The second stage includes the required activities to expand the plant capacity to 1000 tons a day. In this sense, the company has considered the need to implement a new Processing Plant in Chunturco. Also, its planning to assemble an X-ray “Dual Energy” (XRT) transfer ore separator, technology known as “ore sorting” to add economic value from segregating submarginal ores.			
Environmental Management Instrument (EMI):		MEIA-d	Description
Status	The project has an Amendment to its detailed Environmental Impact Assessment (MEIA-d) for exploitation activities, approved by Directive Order N° 011-2017-SENACE-JEF/DEAR dated on November 24, 2017. Also, on July 22, 2020, the company presented the specific reference terms before SENACE for the second amendment of the Integrated Environmental Impact Assessment of Santa María Production Unit. It is under assessment.		
APPROVED			
Start of exploitation activities (Mine plan)		Description	
Status	Not applicable		
NOT APPLICABLE			
Processing Concession		Description	
Status	Processing Concession approved for an installed capacity of 1000 MT/day by Directive Order N° 0542-2018-MEM-DGM/V dated on June 15, 2018.		
APPROVED			

⁸ Standard and Poor's (S&P Global): Santa María Expansion – Ownership Information [Market Intelligence from Official Website]. Date of Consultation: October 19, 2020.

⁹ Compañía Minera Poderosa: “Santa María Project” [Corporate Presentation]. October 08, 2020.

¹⁰ Compañía Minera Poderosa: Second amendment of the integrated Environmental Impact Assessment (EIA) of Santa María production unit (2MEIA-I UP Santa María). July 2020.

¹¹ Compañía Minera Poderosa: Ammendment of the Environmental Impact Assessment (EIA) to expand the operation and Santa María I processing plant from 600 to 100 MTD. Approved on November 24, 2017.

¹² Compañía Minera Poderosa: Poderosa 2019 Annual Sustainability Report Supplementary Information - Ore Resources and Proven and Probable Reserves

Shouxin Expansion

Operator

Minera Shouxin S.A.

Investor¹³

51%: Baiyin Nonferrouse Group Co Ltd. (China)
49%: Shougang Hierro Peru S.A.A. (China)

Region

Ica

Province

Nazca

District

Marcona


Project is located at approximately 100 masl.

Global investment¹⁴

US\$ 140 million

Type of deposit

Tailings with Copper (Cu) and Iron (Fe) high grade.



PROJECT MAIN INFORMATION

Start of the construction	2021	Type of project	Expansion
Start of operation	2022	Type of mine	Reuse of tailings
Jobs in construction ¹⁴	1,025	Ore reserves ¹³	36.53 Mt @ 0.3% - 0.5% Cu, 0.8% - 1.0% Zn
Jobs in operation ¹⁴	184	Life of mine ¹⁴	16 years
Power	25.7 MW	Water source	Ocean waters
Plant capacity ¹⁵	Expansion from 24,242 to 48,484 tons per day	Estimated annual production ¹⁶	400,000 TMF of Fe (additional) 18,000 TMF of Cu (additional) 10,000 TMF of Zn (additional)

CURRENT PROJECT SITUATION: DETAIL ENGINEERING

The Company is obtaining the latest permits and authorizations to start the project construction. The project includes the expansion of the processing plant by 100% that will process iron tailings with usable contents of copper, which will enter to operations plant to obtain concentrates. The processing plant of Minera Shouxin Perú with this modification, updates the life of mine in 16 years until 2037.			
Environmental Management Instrument (EMI):		MEIA-d	Description
Status	The project has an Amendment to its detailed Environmental Impact Assessment (MEIA-d) for exploitation activities, approved by Directive Order N° 010-2017-SENACE-JEF/DEAR dated on January 16, 2020.		
APPROVED			
Start of exploitation activities (Mine plan)		Description	
Status	Not applicable		
NOT APPLICABLE			
Processing Concession		Description	
Status	Processing Concession approved for an installed capacity from 24,242 to 48,484 TM/day by Directive Order N° 292-2020-MINEM-DGM/V dated on October 23, 2020.		
APPROVED			


¹³ Wood Mackenzie: “Shouxin Tailing copper mine project” [Asset report]. March, 2020

¹⁴ Minera Shouxin Perú S.A.: *Amendment of the Detailed Environmental Impact Assessment* [Executive Summary]. November 2019

¹⁵ Minera Shouxin Perú S.A.: *Amendment of Processing Concession* January, 2020

¹⁶ Official Website of the Ministry of Energy and Mines [Intranet] - Monthly Statistical Statement (ESTAMIN): “Estimation based on current production reported by Minera Shouxin Perú S.A on its Monthly Statistical Statement and the Amendment of the detailed Environmental Impact Assessment approved on January 16, 2020”.

Toromocho Expansion

Operator	Minera Chinalco Perú S.A.	Investor ¹⁷	100%: Aluminum Corporation of China Overseas Holdings Limited. (China)
		Region	Junín
		Province	Yauli
		District	Morococha
		Project is located at approximately 4500 to 5000 masl.	
		Global investment ¹⁸	US\$ 1,355 million
		Type of deposit ²⁰	Copper (Cu) Porphyry

PROJECT MAIN INFORMATION

Start of the construction	2018	Type of project	Expansion
Start of operation	2022	Type of mine ¹⁹	Open pit
Jobs in construction ¹⁹	Stage I: 3,200 Stage II: 1,500	Ore reserves ¹⁹	1,412 Mt@ 0.463% Cu, 0.015% Mo, 5.78 g/t Ag
Jobs in operation ¹⁹	Stage I: 259 Stage II: 41	Life of mine ²⁰	25 years
Power	80 MW	Water source ²⁰	Surface and underground waters
Plan capacity ¹⁹	Stage I: Expansion from 117,200 to 140,640 tons per day Stage II: Expansion from 140,640 to 170,000 tons per day	Estimated annual production ¹⁹	75,000 TMF of Copper (additional)

CURRENT PROJECT SITUATION: CONSTRUCTION

On June 01, 2018, the company started building the Stage I of the project, which will start operations in December 2020. The beginning of Stage II is estimated for the first quarter 2021, which will be developed in 16 months, based on the schedule.		
Environmental Management Instrument (EMI): EIA-d		Description
Status	The project has a Detailed Environmental Impact Assessment (MEIA-d) for exploitation activities, approved by Directive Order N° 411-2010-MEM/AAM dated on December 14, 2020. Also, considering the project development in stages, on December 29, 2012, the second Supported Technical Report (ITS) of the EIA-d was approved by Directive Order 504-2015-MEM-DGAAM, which considers the Stage I of the project. Regarding the development of Stage II, on March 05, 2020, the owner requested SENACE the “Amendment of the detailed Environmental Impact Assessment for the Expansion Project of Toromocho Mining Unit to 170,000 TPD”, which is under review.	
APPROVED		
Start of exploitation activities (Mine plan)		Description
Status	The project has Mine Plan approved by Directive Order N ° 088-2013-MEM/DGM on March 27, 2013.	
APPROVED		
Processing Concession		Description
Status	Processing Concession approved for an installed capacity from 117,200 to 140,640 TM/day by Directive Order N° 252-2011-MEM-DGM/V dated on July 26, 2011. For Stage II of the project a new Processing Concession will be needed after the approval of the Amendment of the Environmental Impact Assessment of the project.	
APPROVED		

¹⁷ Minera Chinalco Perú S.A.: *Chinalco - Our Story*. [Company's Official Website]. Date of Consultation: October 19, 2020.
¹⁸ TV Perú (channel #7): “Head of State announces the expansion of Toromocho project with US\$ 1,355 million of investment”. [Issuance] October 01, 2018.
¹⁹ Minera Chinalco Perú S.A.: “Presentation of the mining owner to the Ministry of Energy and Mines (MINEM) October 22, 2020.
²⁰ Minera Chinalco Perú S.A.: “EIA Amendment for the expansion project for Toromocho to 170,000 TPD”. Approved on March 23, 2018.

Antilla

Operator

Panoro Apurímac S.A.

Investor²¹

100%: Panoro Minerals Ltd. (Canada)

Region

Apurímac

Province

Antabamba

District

Sabaino


Project is located at 3400 to 4100 masl, approximately 140 km SW from Cusco and 500 kilometers SE from Lima.

Global investment²²

US\$ 250 million

Type of deposit²¹

Copper Porphyry (Cu) and Molybdenum (Mo)



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ²¹	Open pit
Jobs in construction	TBD	Ore Resources ²¹	291.8 Mt @ 0.34% Cu, 0.01% Mo
Jobs in operation	TBD	Life of mine ²¹	17 years
Power	13 MW	Water source ²¹	Surface waters
Plan capacity ²¹	20,000 tons per day	Estimated annual production ²¹	Year 1 to 4: 30,000 TMF of Cu cathodes Year 5 to 12: 15,000 TMF of Cu cathodes Year 13 to 16: 25,000 TMF of Cu cathodes Year 17: 4,700 TMF of Cu cathodes

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

The project has a Technical Report of Resources Estimation on December 16, 2013. Additionally, the project has a Preliminary Economic Assessment (EEP) optimized as of June 11, 2018. Antilla project has a low capital cost with regards to copper projects, since a wide range of strategical and funding approaches is enabled. In 2019, the Company was carrying out the necessary transactions to transfer the project to a commercial operator.		
Environmental Management Instrument (EMI):		EIA-d
Description		
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, the project has a Semi-detailed Environmental Impact Assessment (MEIA-d) for exploitation activities, approved by Directive Order N° 411-2010-MEM/AAM dated on December 14, 2020.	
FAILED TO SUBMIT IT		
Start of exploitation activities (Mine plan)		Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

²¹ Panoro Minerals LTD.: “Technical report on the EEP for the Antilla Copper Project heap leach and sx/ew operation” [Technical report]. June 11, 2018

²² Panoro Minerals LTD.: “Potential copper development in Peru” August 2019.

Ariana

Operator	Ariana Operaciones Mineras S.A.C	Investor ²³	100%: Southern Peaks Mining LP. (United Kingdom)
		Region	Junín
		Province	Yauli
		District	Marcapomacocha
		Project in at the West side of La Viuda Western Mountain Range in the central Andes of Peru, at 4700 masl.	
		Global investment ²³	US\$ 125 million
		Type of deposit ²⁶	Intermediate to low sulphuration distal Copper (Cu) and Zinc (Zn) Skarn

PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ²⁶	Underground
Jobs in construction ²⁴	362	Ore reserves ²⁵	6.2 Mt @ 1.14% Cu, 18.04 g/t Ag, 0.84 g/t Au, 1.79% Zn
Jobs in operation	TBD	Life of mine ²⁶	10 years
Power	10 MW	Water source ²⁴	Underground water
Plan capacity ²⁵	2,000 tons per day	Estimated annual production ²⁷	70,000 TMF of Copper 10,000 TMF of Zinc

CURRENT PROJECT SITUATION: CONSTRUCTION

The company started the construction of the project in 2018. However, on April 25, 2019, a citizen's group comprised by former congresswomen Marisa Glave and Katia Gilvonio, CooperAcción, with the legal sponsorship from the Instituto de Defensa Legal (Legal Defense Institute - IDL), filed before the Sixth Constitutional Court of the Superior Court of Lima, an action of protection demanding the interruption of the project for an alleged threat of contamination to water sources within its area of influence. The demand challenges the permits used to approve the Environmental Impact Assessment (EIA) for the exploitation stage of Ariana Project, the Ariana exploitation project Mine Plan was authorized and the approval was giving to start the construction of the metallurgical process plant, tailings deposit and ancillary facilities. On August 27, 2020, Ariana mining company representatives attended the second hearing of the protection process, where the mining project suspension was assessed. To this date, the dossier is ready to receive sentence.			
Environmental Management Instrument (EMI):		EIA-d	Description
Status	The project has a Detailed Environmental Impact Assessment (EIA-d) approved by Directive Order N° 127-2016-MEM/DGAAM dated on April 29, 2016.		
APPROVED			
Start of exploitation activities (Mine plan)		Description	
Status	The project has Mine Plan approved by Directive Order N °0137-2018-MEM-DGM on May 31, 2018.		
APPROVED			
Processing Concession		Description	
Status	Processing Concession approved for an installed capacity of 2000 MT/day by Directive Order N° 0602-2018-MEM-FGM/V dated on July 10, 2018.		
APPROVED			

²³ Rumbo Minero: “Between 2019 and 2020, Ariana will start its commercial production”. Issue N° 104 July 2017.

²⁴ Ariana Operaciones Mineras S.A.C.: “Monthly job average from January to June 2019” Monthly Statistical Statement (ESTAMIN)

²⁵ Ariana Operaciones Mineras S.A.C.: Detailed Mine Plan Approved on May 31, 2018.

²⁶ Ariana Operaciones Mineras S.A.C.: Detailed Environmental Impact Assessment Approved on April 29, 2016.

²⁷ Revista Energiminas: “Southern Peaks Mining started pre-construction works for its project Ariana comenzó trabajos de preconstrucción para su proyecto Ariana in Junín” [Posted on the Web]. October 23, 2018.

Ayawilca

Operator	Tinka Resources S.A.C	Investor ²⁸	100%:Tinka Resources Limited (Canada)
		Region	Pasco
		Province	Daniel Alcides Carrión
		District	Yanahuanca and San Pedro de Pillao
		Project is located at 3800 to 4300 masl.	
		Global investment ²⁹	US\$ 262 million
		Type of deposit ²⁹	Limestone Deposit of Zn-Ag-Pb

PROJECT MAIN INFORMATION


Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ³⁰	Underground
Jobs in construction	TBD	Ore Resources ³¹	56.7 Mt @ 6.25% Zn, 0.2% Pb, 16 g/t Ag
Jobs in operation	TBD	Life of mine ²⁸	21 years
Power	Unavailable	Water source	TBD
Plan capacity ²⁸	5,000 tons per day	Estimated annual production ²⁸	101,000 TMF of Zinc 900,000 ounces of Silver

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

On October 08, 2020, Tinka Resources announced the start of a 7000-meter drilling program that comprises 20 diamond drilling in order to turn inferred resources into indicated ones in the mineralization areas of the project. In addition, it is important to note that since January 13, 2020, Compañía de Minas Buenaventura S.A.A acquired 19.3% of the shares of Tinka Resources Limited.	
Environmental Management Instrument (EMI):	EIA-d
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. The project has a Second Amendment to its detailed Environmental Impact Assessment (2nd MEIA-sd) for exploitation activities, approved by Directive Order N° 201-2019-MINEM-DGAAM dated on November 19, 2019.
FAILED TO SUBMIT IT	
Start of exploitation activities (Mine plan)	Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)
FAILED TO SUBMIT IT	
Processing Concession	Description
Status	The owner does not have the approval for the Processing Concession for this project.
FAILED TO SUBMIT IT	

²⁸ Tinka Resources Limited.: "Ayawilca" [Official Website] - <https://www.tinkaresources.com>.
²⁹ Tinka Resources Limited: "Tinka Resources - Advancing the Ayawilca Project in Central Perú" [Corporate Presentation]. July 2020.
³⁰ Tinka Resources Limited: "Tinka reports positive EEP for the Ayawilca Zinc Project" [Press Release]. July 02, 2019
³¹ Tinka Resources Limited: "Tinka to recommence exploration at Ayawilca in Perú" [Press Release]. June 2020.

AZOD (Accha and Yanque)

Operator	Exploraciones Collasuyo S.A.C.	Investor ³²	100%:Zincore Metals Inc. (Canada)
		Region	Cusco
		Province	Paruro
		District	Accha
		Project is located at 3500 to 4300 masl.	
		Global investment ³³	US\$ 345.5 million
		Type of deposit ³⁴	Zinc (Zn) Supergen Deposit

PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ³⁴	Open pit and underground
Jobs in construction ³⁴	Unavailable	Ore reserves ³⁴	Accha: Base case: 1.223 Mt @ 8.03 % Zn, 0.68% Pb (Open pit); 1.011 Mt @ 10.36% Zn, 1.39% Pb (Underground) Yanque: Base case: 8,338 Mt @ 3.97 % Zn, 2.6% Pb
Jobs in operation ³⁴	231	Life of mine ³⁴	Accha: 6 years Yanque: 8 years
Power	10 MW	Water source ³⁴	Underground water
Plan capacity ³⁴	Accha: Base case: 1250 tons per day Yanque: Base case: 2650 tons per day	Estimated annual production ³⁴	Accha: Base case: Open pit 16,329 TMF of Zn and 1,361 TMF of Pb. Yanque: Base case: 38,465 TMF of Zn and 30,844 TMF of Pb.

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

The company, according to 2013 Feasibility Study proposes two project scenarios for the project: 1) Base case: Focused in the production of oxide of zinc-lead, which would be transported to be refined in high grade zinc bars. 2) Alternative case (Fume): Considers the zinc-lead oxide production for direct sale. Zincore Metals Inc, considers an additional assessment of the planned refinery at Ilo port and the option of finding a strategical partner to develop the refinery.	
Environmental Management Instrument (EMI):	EIA-d
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, the project has a Semi-detailed Environmental Impact Assessment (MEIA-d) for exploitation activities, approved by Directive Order N° 125-2011-MEM/AAM dated on April 26, 2011.
FAILED TO SUBMIT IT	
Start of exploitation activities (Mine plan)	Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)
FAILED TO SUBMIT IT	
Processing Concession	Description
Status	The owner does not have the approval for the Processing Concession for this project.
FAILED TO SUBMIT IT	

³² Standard and Poor's (S&P Global): *Accha Zinc Oxide District – Ownership Information*. [Official Website]. Date of consultation: November 6, 2020

³³ Zincore Metals Inc.: *“An underappreciated zinc asset”* [Corporate Presentation]. January, 2018

³⁴ Zincore Metals Inc: *Feasibility Technical Report*. August 6, 2013


Cañariaco (North)

Operator

Cañariaco Copper Perú S.A.

Investor³⁵

100%: Candente Copper Corp. (Canada)



Region

Lambayeque

Province

Ferreñafe

District

Cañaris

Project is located at 2760 masl.

Global investment³⁶

US\$ 1,437 million

Type of deposit³⁷

Porphyry of Copper (Cu), Gold (Au) and Silver (Ag)

PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ³⁷	Open pit
Jobs in construction	Unavailable	Ore Resources ³⁶	752.4 Mt @ 0.45% Cu, 0.07 g/t Au, 1.9 g/t Ag
Jobs in operation ³⁶	600	Life of mine ³⁶	22 years
Power	86 MW	Water source ³⁶	Surface waters
Plant capacity ³⁷	95,000 tons per day	Estimated annual production ³⁶	119,000 TMF of Copper 37,000 ounces of Gold 850,000 ounces of Silver

CURRENT PROJECT SITUATION: FEASIBILITY

In 2011, the project Pre-Feasibility Study finished, with which positive results were obtained in the best estimation of measured resources. In 2019, exploration and development activities were focused in engineering reviews to identify the potential of a startup operation of the highest grade at Cañariaco Norte. The project has approximately 50% of progress of the feasibility study.		
Environmental Management Instrument (EMI):		EIA-d
Description		
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, the project has the First Amendment of the Semi-detailed Environmental Impact Assessment (1st MEIA-d) for exploitation activities, approved by Directive Order N° 462-2014-MEM/DGAAM dated on September 09, 2014.	
FAILED TO SUBMIT IT		
Start of exploitation activities (Mine plan)		Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

³⁵ Candente Copper Corp.:” Leverage with Large Resource and Exploration Upside” [Corporate Presentation]. February 2020

³⁶ Candente Copper Corp.: “2019 Annual Information Form” March 30, 2020

³⁷ Candente Copper Corp.: “Annual Information form” [Annual Report 2018]. March 31, 2019.

Cañón Florida

Operator

Nexa Resources Perú. S.A.A.

Investor³⁸

61%: Nexa Resources S.A. (Brazil);
39%: Solitario Zinc Corp. (USA)

Region

Amazonas

Province

Bongará

District

Florida and Yambrasbamba


Project is located at 2400 to 2800 masl.

Global investment³⁹

US\$ 214 million

Type of deposit³⁹

Zinc (Zn) and Lead (Pb) Deposit



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁴⁰	Underground
Jobs in construction	TBD	Ore Resources ⁴¹	3.26 Mt @ 12.2% Zn, 1.53% Pb, 18.50 g/t Ag
Jobs in operation	TBD	Life of mine ³⁹	12.5 years
Power	6 MW	Water source ³⁹	Surface and underground waters
Plan capacity ³⁹	2,500 tons per day	Estimated annual production ³⁹	60,000 TMF of Zinc 6,000 TMF of Lead 200,000 ounces of Silver

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

Bongará project was renamed as Cañón Florida in 2017. With the approval of the 4th Amendment of the EIA-sd by Directive Order N° 137-2018-MINEM/DGAAM on July 19, 2018, the drilling program was developed in the Cañón Florida project during 2018 and 2019. Currently, the company is updating the resources model based on drilling results from 2018 and 2019 and pretends to develop the necessary environmental permits to give continuity with the resources expansion plan.		
Environmental Management Instrument (EMI): EIA-d		Description
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, the project has a 4th Amendment of the Semi-detailed Environmental Impact Assessment (4th MEIA-sd) for exploitation activities, approved by Directive Order N°137-2018-MEM/DGAAM dated on July 19, 2018.	
FAILED TO SUBMIT IT		
Start of exploitation activities (Mine plan)		Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

³⁸ Nexa Resources S.A.: “Earnings Release - 2Q20”. July 30, 2020

³⁹ Nexa Resources S.A.: “Technical Report Preliminary Economic Assessment Florida Canyon Zinc Project”. August 03, 2017.

⁴⁰ Nexa Resources S.A.: “Information presented by the mining owner to the Ministry of Energy and Mines (MINEM) October 08, 2020.

⁴¹ Nexa Resources Perú S.A.A.: “Annual 2019 Report”. February 19, 2020

Chalcobamba Stage I

Operator	Minera Las Bambas S.A.C.
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Investor ⁴²	62.5%: MMG limited (China) 22.5% : Guoxin International Investment Co (China) 15.0%: Citic Metal Company Limited (China)
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Region	Apurímac
Province	Cotabambas / Grau
District	Challhuahuacho, Tambobamba and Coyllurqui / Progreso

Project is located between the basins of Vilcabamba and Santo Tomás rivers, at approximately 3685 to 4660 masl.

Global investment ⁴²	US\$ 130 million
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Type of deposit ⁴³	Copper (Cu) skarn Deposit
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PROJECT MAIN INFORMATION

Start of the construction	2021	Type of project	Replenishment
Start of operation	2022	Type of mine ⁴⁴	Open pit
Jobs in construction ⁴⁵	No extra labor is needed.	Ore reserves ⁴⁶	176.4 Mt @ 0.67% Cu, 134.96 ppm Mo, 2.50 g/t Ag
Jobs in operation ⁴⁵	No extra labor is needed.	Life of mine ⁴⁶	8 years
Power ⁴⁵	Without changes in its power consumption	Water source ⁴⁶	Surface waters
Plan capacity ⁴⁶	145,000 tons per day (without changes)	Estimated annual production ⁴⁵	Without changes in their estimated annual production level

CURRENT PROJECT SITUATION: FEASIBILITY

The project is in the stage of Prior Consultation. Currently, at Las Bambas mining unit, exploitation mining activities of Ferrobamba deposit are being developed and then, ore extraction activities at Chalcobamba and Sulfobamba deposits will be carried out. This in order to maintain production levels. Chalcobamba pit exploitation will be in two stages. For the first stage, Southern and Central sectors of Chalcobamba pit will be considered.

Environmental Management Instrument (EMI): 3rd MEIA-d		Description
Status	The project has a Third Amendment to its Environmental Impact Assessment (3rd MEIA-d) for exploitation activities, approved by Directive Order N° 016-2018-SENACE-PE-DEAR dated on October 05, 2018. In addition, on February 11, 2019 the first ITS of the 3rd MEIA-d was approved by Directive Order N° 030-2019-SENACE-PE/DEAR.	
APPROVED		

Start of exploitation activities (Mine plan)		Description
Status	On February 27, 2019, the project owner submitted the request for an Authorization to Start Exploitation Activities of Chalcobamba Pit Stage I	
UNDER ASSESSMENT		

Processing Concession		Description
Status	Processing Concession approved for a capacity installed of 145000 MT/day by Directive Order N° 2536-2015-MEM/DGM on November 30, 2015, later amended by Directive Order N° 1070-2017-MEM-DGM/V. Such plant in operation will be used to process the extracted ore from Chalcobamba pit.	
APPROVED		

⁴² Minera Las Bambas S.A.C.: “Presentation of the mining owner to the Ministry of Energy and Mines (MINEM)”. September, 2020.
⁴³ MMG Limited. “First Quarter Production Report”. April 2020
⁴⁴ Official Website from Ministry of Energy and Mines [Intranet] - “Authorization Request of Exploitation Activities”. February 27, 2019.
⁴⁵ Regarding the current operation of Las Bambas Mining Unit.
⁴⁶ Minera Las Bambas S.A.C.: “Authorization of the Exploitation Activities of Chalcobamba pit, Stage I” [Technical Report].

Conga

Operator

Minera Yanacocha S.R.L.

Investor⁴⁷

51.35%: Newmont Goldcorp Corp. (USA);
43.65%: Grupo Buenaventura (Peru);
5.00%: Sumitomo Corporation (Japan)

Region

Cajamarca

Province

Celendín and Cajamarca

District

Sorochuco, Huasmin and La Encañada

Project is located at 3700 to 4300 masl.

Global investment⁴⁸

US\$ 4,800 million

Type of deposit⁴⁹

Copper (Cu) porphyry with Gold (Au) content.



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁵¹	Open pit
Jobs in construction ⁵⁰	8,700	Ore reserves ⁴⁷	504 Mt @ 0.28% Cu, 0.72 g/t Au
Jobs in operation ⁵⁰	1,660	Life of mine ⁵⁰	19 years
Power	Unavailable	Water source ⁵⁰	Surface waters
Plant capacity ⁵¹	92,000 tons per day	Estimated annual production ⁴⁸	580,000- 680,000 ounces of fine Gold 70,307 – 106,594 TMF of Copper

CURRENT PROJECT SITUATION: FEASIBILITY

The Project includes the exploitation of porphyry deposits Perol and Chaihuagon. Currently, the project is paralyzed in a suspended feasibility stage, due to social and environmental conflicts in the direct and indirect areas of influence.	
Environmental Management Instrument (EMI): 2da MEIA-d	Description
<div>Status</div> <div>APPROVED</div>	The project has a Second Amendment to its detailed Environmental Impact Assessment (MEIA-d) for exploitation activities, approved by Directive Order N° 228-2015-MEM/DGAAM dated on May 29, 2015.
Start of exploitation activities (Mine plan)	Description
<div>Status</div> <div>APPROVED</div>	The project has Mine Plan approved by Directive Order N° 035-2012-MEM-DGM on March 09, 2012.
Processing Concession	Description
<div>Status</div> <div>APPROVED</div>	Processing Concession approved for an installed capacity of 92000 MT/day by Directive Order N° 078-2012-MEM-FGM/V dated on March 1, 2012.

⁴⁷ Minera Yanacocha S.R.L.: “Conga Facts Sheet” June 2013
⁴⁸ Minera Yanacocha S.R.L.: “Newmont Board approved Conga Project in Peru” [Press Release]. Company’s Official WebsiteDate of consultation: November 09, 2020
⁴⁹ Minera Yanacocha S.R.L.: “Authorization to start exploitation activities in mining concessions”. March, 2011
⁵⁰ Minera Yanacocha S.R.L.: Second Amendment of the Environmental Impact Assessment of Conga Project. May 29, 2015.
⁵¹ Minera Yanacocha S.R.L.: Conga project Mine Plan Approved on March 09, 2012.

Corani

Operator

Bear Creek Mining S.A.C.

Investor⁵²

100%: Bear Creek Mining Corporation (Canada)

Region

Puno

Province

Carabaya

District

Corani


Project is located at 4800 to 5200 masl.

Global investment⁵²

US\$ 579 million

Type of deposit⁵⁵

Sulphuration epithermal of low to intermediate grade of Silver (Ag), Lead (Pb) and Zinc (Zn).



PROJECT MAIN INFORMATION

Start of the construction	2021	Type of project	New
Start of operation	2024	Type of mine ⁵⁵	Open pit
Jobs in construction ⁵³	1,500	Ore reserves ⁵⁴	139.1 Mt @ 50.3 g/t Ag, 0.90% Pb, 0.59% Zn
Jobs in operation ⁵³	440	Life of mine ⁵²	15 years
Power	36 MW	Water source ⁵²	Surface and underground waters
Plan capacity ⁵²	22,500 tons per day	Estimated annual production ⁵⁵	110,000 TMF of Lead and Silver 80,000 TMF of Zinc and Silver

CURRENT PROJECT SITUATION: DETAIL ENGINEERING

On September 04 2018, Bear Creek Mining notified the Ministry of Energy and Mines about the start of early works (Stage I - Early works). Likewise, the company posted on December 17, 2019, a new technical report of the project NI 43-101, in which some components are changed to make it more attractive for investors.		
Environmental Management Instrument (EMI): EIA-d		Description
Status	The project has a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities, approved by Directive Order N° 355-2013-MEM/AAM dated on September 20, 2013. Likewise, on November 02, 2017, the Second Supporting Technical Report (2nd ITS) was approved by Directive Order N° 340-2017-SENACE-DCA, which includes changes in the open pit design, resettlement of the components of processing facilities, change in the waste dump engineering design, among others.	
APPROVED		
Start of exploitation activities (Mine plan)		Description
Status	The project has Mine Plan approved by Directive Order N °0119-2018-MEM-DGM on May 09, 2018.	
APPROVED		
Processing Concession		Description
Status	Processing Concession approved for an installed capacity of 22500 MT/day by Directive Order N° 570-2018-MEM-DGM/V dated on June 25, 2018.	
APPROVED		

⁵² Bear Creek Mining Corporation: “Corani NI43-101 project Report” [Technical Report]. December 17, 2019.
⁵³ Bear Creek Mining Company: “Executive Summary of the Environmental Impact Assessment of Corani Project” February 2013
⁵⁴ Bear Creek Mining Corporation: “Investor Presentation”. July 22, 020.
⁵⁵ Bear Creek Mining Corporation: “Detail Engineering Report Stage 1” [Technical Report]. September, 2017.

Cotabambas

Operator

Panoro Apurímac S.A.

Investor⁵⁶

100%: Panoro Minerals Ltd. (Canada)

Region

Apurímac

Province

Cotabambas

District

Cotabambas

Project location

Project is located 545 km SW from Lima and 50 km SW from Cusco, at approximately 3000 to 4000 masl.


Global investment⁵⁷

US\$ 1,530 million

Type of deposit⁵⁶

Copper (Cu) and Gold (Au) Porphyry

Map



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁵⁶	Open pit
Jobs in construction	TBD	Ore Resources ⁵⁸	117.1 Mt @ 0.42% Cu, 0.23 g/t Au, 2.74g/t Ag, 0.0013% Mo
Jobs in operation ⁵⁸	454	Life of mine ⁵⁸	20 years
Power	120 MW	Water source ⁵⁸	Surface waters
Plan capacity ⁵⁸	80,000 tons per day	Estimated annual production ⁵⁸	270,000 TMF of Copper

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

The project has a Technical Report of Ore Resources Estimation on July 24, 2012. In addition, on April 09, 2015, the company submitted a Technical Report of the Preliminary Economic Assessment (EEP), which was updated on September 22, 2015. On February 22, 2018, Panoro Minerals restarted the drilling program which, as of July 2019, showed a high grade of mineralization for both, Chaupec Target and Guacile Target. Currently, Panoro Minerals Ltd. aims at optimizing the project based on its growth potential, supported by positive international quote prices for Copper and Gold.			
Environmental Management Instrument (EMI):		EIA-d	Description
Status	The company is drafting the Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. The project has a Second Amendment to its detailed semi-detailed of the Environmental Impact Assessment (2nd MEIA-sd) for exploitation activities, approved by Directive Order N° 147-2018-MEM/DGAAM dated on August 02, 2019.		
DRAFTING STAGE			
Start of exploitation activities (Mine plan)		Description	
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)		
FAILED TO SUBMIT IT			
Processing Concession		Description	
Status	The owner does not have the approval for the Processing Concession for this project.		
FAILED TO SUBMIT IT			

⁵⁶ Panoro Minerals Ltd.: “Technical report on the EEP for the Antilla Copper Project heap leach and sx/ew operation” [Technical report]. June 11, 2018

⁵⁷ Panoro Minerals Limited: “Panoro Minerals Update on Exploration Plans at Cotabambas Project, Peru” [Press Release]. July 13, 2020.

⁵⁸ Panoro Minerals Limited: “NI 43-101 Technical Report on Updated Preliminary Economic Assessment” [Technical Report]. September 22, 2015.

Don Javier

Operator

Junefield Group S.A.

Investor⁵⁹

100%: Junefield Mineral Resources Holding Limited (China)

Region

Arequipa

Province

Arequipa

District

Yarabamba

Project is located at 2400 to 2900 masl.

Global investment⁶³

US\$ 600 million

Type of deposit⁶⁰

Copper Porphyry (Cu) and Molybdenum (Mo)



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁶¹	Open pit
Jobs in construction	TBD	Ore reserves ⁶²	182 Mt @ 0.45% Cu, 212 ppm Mo, 3.0 ppm Ag
Jobs in operation	TBD	Life of mine	Unavailable
Power	Unavailable	Water source	Unavailable
Plant capacity	Unavailable	Estimated annual production ⁶³	34,425 TMF of Copper

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

Junefield Group has been exploring in the project area as part of the pre-feasibility stage in order to obtain information regarding project geological characteristics.	
Environmental Management Instrument (EMI):	EIA-d
Description	
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, the project has the conformity of the 2nd Supporting Technical Report (2nd ITS) of the 2nd MEIA-sd for exploration activities by Directive Order N° 054-2019-MEM-DGAAM on April 16, 2019, with the main objective to differentiate the execution of the final closure and post-closure measures of some components.
FAILED TO SUBMIT IT	
Start of exploitation activities (Mine plan)	Description
Status	
FAILED TO SUBMIT IT	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)
Processing Concession	Description
Status	
FAILED TO SUBMIT IT	The owner does not have the approval for the Processing Concession for this project.

⁵⁹ Energiminas: “Arequipa: Hongkonesa Junefield Group submits ITS to continue exploring Don Javier 79”, November 15, 2018.
⁶⁰ Junefield Group S.A.: “2nd Supporting Technical Report for project Don Javier 79”. February 2019
⁶¹ Junefield Mineral Resources Holding Limited: “Mining Method” [Company’s Official Website]. Date of consultation: November 06, 2020
⁶² Junefield Group S.A.: “Technical Report” [Prepared by AMC Consultants Ltd.]. November 15, 2013.
⁶³ Rumbo Minero: “Assess measures for Don Javier close stage of Don Javier” [Web Publication]. December 10, 2018.

El Galeno

Operator	Lumina Copper S.A.C.	Investor ⁶⁴	60%: China Minmetals Corporation (China); 40%: Jiangxi Copper Ltd. (China)
		Region	Cajamarca
		Province	Celendín and Cajamarca
		District	Sorochuco and La Encañada
		Project is located at 3800 to 4200 masl.	
		Global investment ⁶⁵	US\$ 3,500 million
		Type of deposit ⁶⁶	Porphyry of Copper (Cu), Gold (Au) and Silver (Ag)

PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁶⁶	Open pit
Jobs in construction	Unavailable	Ore reserves ⁶⁴	803 Mt @ 0.48% Cu, 0.014% Mo, 0.11 g/t Au, 2.6 g/t Ag
Jobs in operation	Unavailable	Life of mine ⁶⁶	20.4 years
Power	Unavailable	Water source	Unavailable
Plant capacity ⁶⁶	90,000 tons per day	Estimated annual production ⁶⁶	144,353 TMF of Copper 82,324 ounces of Gold 2,021,254 ounces of Silver 2,277 TMF of Molybdenum

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

The company developed the pre-feasibility study in February 2007, which was reviewed on April 30, 2007. On the other hand, the company assessed the possibility to develop a mine cluster together with adjacent mining units.		
Environmental Management Instrument (EMI): EIA-d		Description
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, the project has a Fifth Amendment of its EIA-sd (5th MEIAsd) for exploration activities, approved by Directive Order N° 094-2019-MINEM/DGAAM dated on June 18, 2019.	
FAILED TO SUBMIT IT		
Start of exploitation activities (Mine plan)		Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

⁶⁴ Standard and Poor's (S&P) Global: Lumina Copper S.A.C. [Market Intelligence from Official Website]. Date of consultation: October 20, 2020. <https://platform.marketintelligence.spglobal.com/web/client?auth=inherit#metalsAndMiningProperty/profile?id=30611>.

⁶⁵ Official Website of the Ministry of Energy and Mines [Intranet] "Monthly Statistical Statement (ESTAMIN)" August 02, 2019.

⁶⁶ Northern Peru Copper Corp.: "Pre-feasibility Study" [Technical Report]. February 19, 2007.

Mantaro phosphates

Operator

Mantaro Perú S.A.C.

Investor⁶⁷

100%: ITAFOS (United Kingdom)

Region

Junín

Province

Concepción

District

Aco


The Project is 250 km East from Lima, 4.7km NE from Aco settlement, measured in straight line.

Global investment

US\$ 850 million

Type of deposit⁶⁸

Marine Sedimentary Deposit



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁶⁸	Open pit
Jobs in construction	TBD	Ore Resources ⁶⁸	39.5 Mt @ 10% P ₂ O ₅
Jobs in operation	TBD	Life of mine	TBD
Power	TBD	Water source ⁶⁸	Surface and underground waters
Plant capacity	Unavailable	Estimated annual production	TBD

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

Based on price fluctuation and time lapse of the latest report (it is worth to note that the pre-feasibility study was completed in February 2010). It is updating the technical report to confirm the estimations of reserves and resources. It is currently focusing in keeping the integrity of the concession and is assessing strategic alternatives for a better decision-making process. On the other hand, it is expected to sell the estimated production to fertilizers manufacturers.	
Environmental Management Instrument (EMI):	EIA-d
Description	
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. Nevertheless, the project has an Environmental Impact Statement (EIS) for exploration activities, approved by Directive Order N°089-2010-MEM-AAM on December 22, 2010.
FAILED TO SUBMIT IT	
Start of exploitation activities (Mine plan)	Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)
FAILED TO SUBMIT IT	
Processing Concession	Description
Status	The owner does not have the approval for the Processing Concession for this project.
FAILED TO SUBMIT IT	

⁶⁷ ITAFOS Official Website [Investor]. Date of consultation: October 20, 2020. <https://www.itafos.com/projects/itafos-mantaro/>.
⁶⁸ Mantaro Perú S.A.C.: "Technical report on Mantaro phosphate deposit Junín district, Perú" [Technical Report]. March 16, 2010.

Pacífico Phosphates

Operator

Fosfatos del Pacífico S.A.

Investor⁶⁹

70%: Fossal S.A.A. (Peru);
30%: Mitsubishi Corporation (Japan)

Region

Piura

Province

Sechura

District

Sechura

Project description

Project is within the desertic strip in Peru in Sechura desert, 1000 km North to the capital of Lima and approximately at 0 to 05 masl.


Global investment⁷⁰

US\$ 831.1 million

Type of deposit⁷¹

Marine Sedimentary Deposit

Map



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁷¹	Open pit
Jobs in construction ⁷¹	2,437	Ore reserves ⁷¹	108.1 Mt @ 17.8% P ₂ O ₅
Jobs in operation ⁷¹	482	Life of mine ⁷¹	20 years
Power	Unavailable	Water source ⁷²	Ocean waters
Plant capacity ⁷³	18,790 tons per day	Estimated annual production ⁷³	2.5 millions of Metric Tons of phosphate concentrate

CURRENT PROJECT SITUATION: FEASIBILITY

The Company completed the project feasibility study at the end of 2015. Likewise, through its Annual 2019 Report, management from Fosfatos del Pacífico S.A. company announced that is assessing market conditions to determine the best moment to develop the project.	
Environmental Management Instrument (EMI): 1st MEIA-d	Description
Status	The project has a First Amendment to its detailed Environmental Impact Assessment (EIA-d) for exploitation activities, approved by Directive Order N° 269-2016-EM/DGAAM dated on September 09, 2016. Also, on August 03, 2018 by Directive Order N° 112-2018-SENACE-JEF/DEAR the First Supporting Technical Report (1st ITS) of the 1st MEIA-d was approved, which aims at confirming new reserves at Bayóvar N° 9 concession and modify the programs to monitor the quality of air, soil and environmental noise.
APPROVED	
Start of exploitation activities (Mine plan)	Description
Status	The project has Mine Plan approved by Directive Order N° 676-2011-MEM-DGM on June 06, 2011.
APPROVED	
Processing Concession	Description
Status	The owner does not have the approval for the Processing Concession. However, in 2015, the Processing Concession application was submitted and observed. Finally, they stopped the proceedings.
FAILED TO SUBMIT IT	

⁶⁹ Fosfatos del pacifico S.A.: "2019 Report". March 24, 2020.

⁷⁰ Fosfatos del pacifico S.A.: "Efficient and cost-Effective Production Process/Construction Capex" [Corporate Presentation]. December 31, 2016.

⁷¹ Fosfatos del pacifico S.A.: "Environmental Impact Assessment" - Phosphate Project EIA July 2013.

⁷² Fosfatos del Pacífico S.A.: "First Supporting Technical Report of the Amendment of the Environmental Impact Assessment of Phosphates Project to confirm reserves" approved on August 03, 2018.

⁷³ Fosfatos del Pacífico S.A.: "First ammendment of the EIA of the Phosphate Project" approved on September 09, 2016.

Haquira

Operator

Minera Antares Perú S.A.C.

Investor⁷⁴

100%: First Quantum Minerals Ltd. (Canada)

Region

Apurímac

Province

Cotabambas / Grau

District

Challhuahuacho and Progreso


Project is in the South of Peru on the western side of Peruvian Andes, approximately 3850 to 4400 masl.

Global investment⁷⁵

US\$ 1,860 million

Type of deposit⁷⁵

Copper Porphyry (Cu) and Molybdenum (Mo)



PROJECT MAIN INFORMATION


Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁷⁵	Open pit and underground
Jobs in construction	TBD	Ore Resources ⁷⁶	569 Mt @ 0.56% Cu
Jobs in operation	TBD	Life of mine ⁷⁶	20 years
Power	Unavailable	Water source ⁷⁶	Surface waters
Plan capacity ⁷⁶	30,000 tons a day by leaching method 100,000 tons a day by flotation method	Estimated annual production ⁷⁶	337,790 pounds of Copper 6,742 pounds of Molybdenum 1,199 ounces of Silver

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

In 2019, the Company started awareness workshop to purchase land, management that continues in 2020.		
Environmental Management Instrument (EMI): EIA-d		Description
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, the project has the 2nd ITS of the 2nd MEIA-sd for exploration activities approved by Directive Order N°141-2019/MINEM/DGAAM dated on September 13, 2019.	
FAILED TO SUBMIT IT		
Start of exploitation activities (Mine plan)		Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

⁷⁴Standard and Poor's (S&P) Global: Minera Antares Perú S.A.C. [Market Intelligence from Official Website].
⁷⁵ Antares Minerals Inc.: "Preliminary Economic Evaluation Update NI 43-101 Technical Report" [Technical Report]. September 02, 2010.
⁷⁶ First Quantum Minerals Ltd.: "A Great Time to Be Building New Mines" [Corporate Presentation]. May 2010

Hierro Apurímac

Operator	Apurímac Ferrum S.A.	Investor ⁷⁷	100%: Strike Resources Limited. (Australia)
		Region	Apurímac
		Province	Andahuaylas
		District	Andahuaylas
		Project is located at approximately 3500 masl, 20 km from the city of Andahuaylas, with a total area of concessions of 7500 ha.	
		Global investment ⁷⁸	US\$ 2,900 million
		Type of deposit ⁷⁸	Iron (Fe) oxide deposit

PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁷⁸	Open pit
Jobs in construction	TBD	Ore reserves ⁷⁹	142 Mt @ 57.84% Fe
Jobs in operation	TBD	Life of mine ⁷⁸	20 years
Power ⁷⁸	125 MW	Water source ⁷⁸	Surface waters
Plant capacity	Unavailable	Estimated annual production ⁸⁰	20 million TMF of Iron

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

In 2008, the company completed the Project Pre-feasibility Study (PFS). However, in 2010, Strike Resources Limited asked Ausenco Sandwell and SRK Consulting to update a PFS. Therefore, new results confirmed that Hierro Apurimac hosts world class ore reserves with competitive capital costs and low operation costs.			
Environmental Management Instrument (EMI):		EIA-d	Description
Status		The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, the project has a Semi-detailed Environmental Impact Assessment (EIA-d), approved by Directive Order N° 119-2008-MEM/AAM dated on May 22, 2008.	
FAILED TO SUBMIT IT			
Start of exploitation activities (Mine plan)		Description	
Status		The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT			
Processing Concession		Description	
Status		The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT			

⁷⁷ Strike Resources Limited: “Full Year Report: director’s report” [Financial Report]. June 30, 2019.

⁷⁸ Strike Resources Limited: “Pre-feasibility results confirm world class prospects for Apurímac Project in Peru” [Market Announcement]. July 23, 2008.

⁷⁹ Strike Resources Limited: “Quarter Report”. June 30, 2020.

⁸⁰ Strike Resources Limited: “Peru Government Plans Railway Linking Strike’s Apurímac Iron Ore Project to Port”. [Market Announcement]. February 08, 2008.

Hilarión

Operator

Nexa Resources Perú. S.A.A.

Investor⁸¹

80.16%: Nexa Resources S.A. (Brazil);
19.84%: Other shareholders

Region

Ancash

Province

Bolognesi

District

Huallanca

Project is located at 4000 to 4800 masl.

Global investment⁸²

US\$ 585 million

Type of deposit⁸³

Polymetallic Skarn of Zinc, with lower content of Silver and Lead



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁸²	Underground
Jobs in construction	TBD	Ore Resources ⁸²	58 Mt @ 3.52% Zn, 0.64% Pb, 28.6 gr/t Ag
Jobs in operation	TBD	Life of mine ⁸²	16 years
Power ⁸⁴	22 MW	Water source	Unavailable
Plan capacity ⁸³	10,000 tons per day	Estimated annual production ⁸²	130,000 TMF of Zinc 21,420 TMF of Lead 3 million ounces of Silver

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

In 2019, the company carried out a drilling campaign and finished the Hilarión Preliminary Economic Assessment. Currently, Nexa is exploring the Northern area of Hilarión, mainly in the sector Azulmina (Target Mia and Eureka) in order to increase the resources and reinforce to the North the well-known resources; likewise, a magnetometry geophysical study is scheduled with drones and sampling for the metallurgical study (Metallurgical test at Hilarión)	
Environmental Management Instrument (EMI):	EIA-d
Description	
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, on June 31, 2019, the company presented the assessment request for the 5th Amendment of the Environmental Impact Assessment (5th MEIA-sd), for exploration activities, it is currently under review.
FAILED TO SUBMIT IT	
Start of exploitation activities (Mine plan)	Description
Status	
FAILED TO SUBMIT IT	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)
Processing Concession	Description
Status	
FAILED TO SUBMIT IT	The owner does not have the approval for the Processing Concession for this project.


⁸¹ Nexa Resources S.A.: “Earnings Release - 2Q20”. July 30, 2020

⁸² Nexa Resources S.A.: “Nexa announces EEP for potential annual production of 150kt of zinc equivalent - Hilarión project”. [Press Release]. March 5, 2020.

⁸³ Nexa Resources S.A.: Fifth Amendment of the semi-detailed Environmental Impact Assessment (5th MEIA-sd) June 2020

⁸⁴ Nexa Resources S.A.: “Presentation of the mining owner to the Ministry of Energy and Mines (MINEM)”. October 2020

Coroccohuayco Integration

Operator	Compañía Minera Antapaccay S.A.	Investor ⁸⁵	100%: Glencore PLC (Switzerland)
		Region	Cusco
		Province	Espinar
		District	Espinar
		Project is located at approximately 4,150 masl.	
		Global investment ⁸⁶	US\$ 590 million
		Type of deposit ⁸⁷	Copper (Cu) and Gold (Au) Skarn

PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	Replenishment
Start of operation	TBD	Type of mine ⁸⁷	Open pit
Jobs in construction ⁸⁸	1,871	Ore reserves ⁸⁷	63 Mt @ 0.63% Cu, 0.07 g/t Au, 1.98 g/t Ag
Jobs in operation ⁸⁸	1,092	Life of mine ⁸⁹	25 years
Power	39 MW	Water source ⁸⁸	Underground water
Plan capacity ⁸⁹	19,400 tons per day	Estimated annual production ⁹⁰	105,000 TMF of Copper

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

The company has decided to reformulate the project by going back to the pre-feasibility stage.	
Environmental Management Instrument (EMI):	MEIA-d
Description	
Status	The project has an Amendment to its Detailed Environmental Impact Assessment (MEIA-d) for exploitation activities, approved by Directive Order N° 196-2019-SENACE-PE/DEAR dated on December 17, 2019.
APPROVED	
Start of exploitation activities (Mine plan)	Description
Status	The project owner has withdrew the submitted request in February 2020, due to project reformulation. This is why the project still does not have an Authorization to Start Exploitation Activities (Mine Plan)
FAILED TO SUBMIT IT	
Processing Concession	Description
Status	Processing Concession approved for a capacity of 19400 MT/day of Tintaya concession by Directive Order N° 148-2008-MEM/DGM dated on May 9, 2005.
APPROVED	

⁸⁵ Standard and Poor's (S&P Global): Antapaccay – Ownership Information [Market Intelligence from Official Website]. Date of Consultation: October 19, 2020.

⁸⁶ Official Website of the Ministry of Energy and Mines [Intranet] – Online Environmental Assessment Sytem (SEAL): “Amendment of the Environmental Impact Assessment (EIA) Antapaccay Expansion Tintaya – Coroccohuayco Integration Project”. Date of consultation: August 28, 2019

⁸⁷ Glencore Plc.: Report of Resources and Reserves. December 31, 2017.

⁸⁸ Glencore Plc.: [Corporate Presentation]. September, 2018.

⁸⁹ Glencore Plc.: “Antapaccay from project to operation”. [Corporate Presentation]. Year 2013.

⁹⁰ Glencore Plc.: “Antapaccay Expansion Tintaya/Coroccohuayco – relevant topics” [Corporate Presentation]. June 2019

La Granja

Operator

Rio Tinto Minera Perú Limitada S.A.C.

Investor⁹¹

100%: Rio Tinto Plc. (United Kingdom)

Region

Cajamarca

Province

Chota

District

Querocoto

Project is located at 2000 to 2800 masl.

Global investment⁹²

US\$ 5,000 million

Type of deposit⁹⁵

Epithermal of High Sulphuration with Copper (Cu) content

PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁹¹	Open pit
Jobs in construction	TBD	Ore Resources ⁹³	4,320 Mt @ 0.51% Cu
Jobs in operation	TBD	Life of mine ⁹⁴	40 years
Power	TBD	Water source ⁹⁵	Surface waters
Plant capacity	Unavailable	Estimated annual production ⁹⁴	500,000 TMF of Copper

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

Tinka Resources has been exploring in the project area as part of the pre-feasibility stage in order to obtain information regarding project geological characteristics. It is worth mentioning that explorative activities were expanded until 2022 by the agreement of the 1st Supporting Technical Report of the 12th Amendment of the semi-detailed Environmental Impact Assessment (1st ITS, 12th MEIAsd).	
Environmental Management Instrument (EMI):	EIA-d
Description	
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. Nevertheless, the project has the approval of the First Supporting Technical Report of the 12th Amendment to the Semi-detailed Environmental Impact Assessment approved (1st ITS 12th MEIA-sd) for exploration activities, approved by Directive Order N° 015-2019/MEM-DGAAM, dated on February 4, 2019.
FAILED TO SUBMIT IT	
Start of exploitation activities (Mine plan)	Description
Status	
FAILED TO SUBMIT IT	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)
Processing Concession	Description
Status	
FAILED TO SUBMIT IT	The owner does not have the approval for the Processing Concession for this project.

⁹¹ Standard and Poor's (S&P Global): *La Granja – General Comments*. [Official Website]. Date of Consultation: October 19, 2020.

⁹² Rumbo Minero: *“La Granja mining Project, the largest copper deposit in Cajamarca”*. Rio Tinto]. [Interview to representatives from Rio Tinto company]. Issue N° 129 August 2020.

⁹³ Rio Tinto Minera Perú Limitada S.A.C.: *“2019 Annual Rio Tinto Report”*.

⁹⁴ Rio Tinto Plc.: *“La Granja project is one of the largest undeveloped greenfield copper projects in Latin America”*. [Corporate Presentation].

⁹⁵ Rio Tinto Plc.: *“Technical Report of the Granja Nueva Early Stage Exploration Project Department of Cajamarca”*. [Technical Report]. January, 2012

Los Calatos

Operator

Minera Hampton Perú S.A.C

Investor⁹⁶

100%: CD Capital Natural Resources Fund III (United Kingdom)

Region

Moquegua

Province

Mariscal Nieto

District

Moquegua and Torata

Project description

Project is between 2800 and 3500 masl, among Los Calatos mountains, which provide the project name.

Global investment⁹⁷

US\$ 655 million

Type of deposit⁹⁸

Copper Porphyry (Cu) and Molybdenum (Mo)

Map

PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ⁹⁸	Underground
Jobs in construction	TBD	Ore reserves ⁹⁷	136.5 Mt @ 0.73% Cu, 434 ppm Mo
Jobs in operation	TBD	Life of mine ⁹⁸	22 years
Power	60 MW	Water source ⁹⁸	Ocean waters
Plant capacity	Unavailable	Estimated annual production ⁹⁸	50,000 TMF of Copper

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

The company is exploring the project area based on the Second Amendment of its semi-detailed Environmental Impact Assessment (EIA-sd)			
Environmental Management Instrument (EMI):		EIA-d	Description
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, on January 23, 2020, the company requested the review of the Third Amendment to the Environmental Impact Assessment (3rd MEIA-sd) for exploration activities, which is aimed at improving technical knowledge of the deposit to facilitate its exploitation and also define the location of future components.		
FAILED TO SUBMIT IT			
Start of exploitation activities (Mine plan)		Description	
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)		
FAILED TO SUBMIT IT			
Processing Concession		Description	
Status	The owner does not have the approval for the Processing Concession for this project.		
FAILED TO SUBMIT IT			

⁹⁶ Metminco Limited: “Annual Report for the Year ended”. December 31, 2016.
⁹⁷ Metminco Limited: *Director’s Report* [Press release]. June 27, 2017.
⁹⁸ Metminco Limited: “Los Calatos: High Grade Development Option”. [Presentation to investors]. September, 2015.

Los Chancas

Operator

Southern Perú Copper Corporation, Peru Branch

Investor⁹⁹

88.9%: Grupo México S.A.B. de C.V. (Mexico);
11.1%: Other shareholders

Region

Apurímac

Province

Aymaraes

District

Tapairihua and Pochuanca


Project is located at approximately 3600 to 3800 masl approximately 910 km from Lima.

Global investment¹⁰⁰

US\$ 2,600 million

Type of deposit¹⁰¹

Copper Porphyry (Cu) and Molybdenum (Mo)



PROJECT MAIN INFORMATION

Start of the construction	2024	Type of project	
Start of operation	2027	Type of mine ¹⁰⁰	Open pit
Jobs in construction	TBD	Ore reserves ¹⁰⁰	545 Mt @ 0.59% Cu, 0.04% Mo, 0.039 g/t Au
Jobs in operation	TBD	Life of mine ¹⁰⁰	18 years
Power	95 MW	Water source	Unavailable
Plan capacity ¹⁰⁰	110,000 tons per day (estimated)	Estimated annual production ¹⁰⁰	130,000 TMF of Copper 7,500 TMF of Molybdenum

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

The company is developing supplementary explorations to complete the Environmental Impact Assessment (EIA-d) by the end of 2021. The project will use a combined ESDE, which is a latest generation technology with the highest international environmental standards. Also, the company plans to continue the development of social and environmental improvements for local communities.	
Environmental Management Instrument (EMI):	EIA-d
Description	
Status	The company is in the supporting process of the National Service of Environmental Certification for Sustainable Investments (SENACE) within the process of drafting the Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, the project has an Amendment to its semi-detailed of the Environmental Impact Assessment (MEIA-sd) for exploitation activities, approved by Directive Order N° 344-2010-MEM-AAM dated on October 20, 2010.
DRAFTING STAGE	
Start of exploitation activities (Mine plan)	Description
Status	
FAILED TO SUBMIT IT	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)
Processing Concession	Description
Status	
FAILED TO SUBMIT IT	The owner does not have the approval for the Processing Concession for this project.

⁹⁹ Southern Perú Copper Corporation: “2020 Second quarter Results”. July 28, 2020.
¹⁰⁰ Southern Perú Copper Corporation: “Information presented by the mining owner to the Ministry of Energy and Mines (MINEM) October 08, 2020.
¹⁰¹ Southern Perú Cooper Corporation: “Independent shareholders’ Statement”. December 31, 2018.

Macusani

Operator

Macusani Yellowcake S.A.C.

Investor¹⁰²

99.5 %: Plateau Energy Metals Inc. (Canada);
0.5%: Other investors

Region

Puno

Province

Carabaya

District

Corani and Macusani


Project is located at approximately 4150 to 5200 masl.

Global investment¹⁰²

US\$ 887 million

Type of deposit¹⁰³

Uranium and Lithium Deposit



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine	TBD
Jobs in construction	TBD	Ore Resources ¹⁰²	Uranium (U) Deposit 23,995 TM U ₃ O ₈ (248ppm) Lithium (Li) Deposit 60.92 Mt @ 2954 ppm Li
Jobs in operation	TBD	Life of mine ¹⁰²	Uranium (U) Deposit: 10 years Lithium (Li) Deposit: 26 years
Power	Unavailable	Water source	Unavailable
Plant capacity	Unavailable	Estimated annual production ¹⁰²	2,721.5 MT of de Triuranium Octaoxide (U ₃ O ₈); 23,000 MT of Lithium carbonate (Li ₂ CO ₃)


CURRENT PROJECT SITUATION: PRE-FEASIBILITY

On February 04, 2020, Falchani economic assessment results were published, which states that the company continues with prospection activities in the Villa and Quelcaya mountain area, where two important outcrops of Lithium-rich rocks were discovered. Also, on March 31, 2020, the company reported that is planning a specific exploration drilling campaign to test high priority areas among existing Uranium deposits in Macusani, subjects to optimization results. In addition, a baseline environmental study is being carried out which aims at including each of the areas of Falchani Lithium project and Macusani Uranium project.		
Environmental Management Instrument (EMI):		EIA-d
		Description
Status	The company is developing the baseline environmental assessment to draft a Detailed Environmental Impact Assessment. However, the project has the 1st Amendment to the Semi-detailed Environmental Impact Assessment (1st MEIA-sd) for exploitation activities, approved by Directive Order N° 154-2011-MEM/AAM dated on May 18, 2011.	
DRAFTING STAGE		
Start of exploitation activities (Mine plan)		Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

¹⁰² Plateau Energy Metals: "Steering Committee Discussion and analysis". [Corporate Presentation]. March 31, 2020.

¹⁰³ Plateau Energy Metals Inc.: "Mineral Resource Estimates for the Chilcuno Chico, Quebrada Blanca, Tantamaco and Isivilla deposits in the Puno District of Peru, updated to include lithium and potassium.". [Prepared by Mineral Corporation Consultancy Pty Ltd]. September 06, 2018.

Magistral

Operator	Nexa Resources Perú. S.A.A.	Investor ¹⁰⁴	80.16%: Nexa Resources S.A. (Brazil); 19.84%: Other shareholders
		Region	Ancash
		Province	Pallasca
		District	Conchucos
		Project is approximately at 4100 to 4300 masl, about 450 km NW from the city of Lima.	
		Global investment ¹⁰⁵	US\$ 490 million
		Type of deposit ¹⁰⁶	Copper (Cu) skarn and Porphyry; and Molybdenum (Mo)

PROJECT MAIN INFORMATION

Start of the construction	2022	Type of project	New
Start of operation	2025	Type of mine ¹⁰⁶	Open pit
Jobs in construction ¹⁰⁷	1,170	Ore Resources ¹⁰⁸	205.3Mt @0.52% Cu, 0.05% Mo, 2.96 g/t Ag
Jobs in operation ⁹²	235	Life of mine ¹⁰⁵	11 years
Power	38 MW	Water source ¹⁰⁶	Underground water
Plan capacity ¹⁰⁶	30,000 MT/day.	Estimated annual production ¹⁰⁵	55,000 TMF of Copper 5,000 TMF of Molybdenum 1,000 ounces of Silver

CURRENT PROJECT SITUATION: FEASIBILITY

On August 02, 2017 the Project Preliminary Economic Assessment (EEP) was published. Then, pre-feasibility studies were completed in the second quarter of 2019 and amendments to Feasibility Study were completed in August 2020.		
Environmental Management Instrument (EMI):		MEIA-d
		Description
Status	The company is drafting an amendment to the current Detailed Environmental Impact Assessment, such current EIA-d was approved by Directive Order N° 278-2016-MEM-DGAAM on September 15, 2016. Likewise, the project currently has a Third Supporting Technical Report (3rd ITS) of the EIA-d, which was approved by Directive Order N° 185-2019-SENACE-PE/DEAR on November 21, 2019.	
DRAFTING STAGE		
Start of exploitation activities (Mine plan)		Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

¹⁰⁴ Nexa Resources Perú S.A.A.: “Earnings Release”. 2019 Second Quarter

¹⁰⁵ Nexa Resources Perú S.A.A.: “Ammendment N° 2 to the Mining Concessions Transfer and other assets belonging to Magistral Mining Project”. October 16, 2019.

¹⁰⁶ Compañía Minera Milpo S.A.A. (Now Nexa Resources Perú S.A.A.): 2017 Annual Report Published on February 22, 2018.

¹⁰⁷ Nexa Resources Perú S.A.A.: “Project Technical Data Sheet sent to MINEM”. October 08, 2020

¹⁰⁸ Nexa Resources Perú S.A.A.: 2019 Annual Report Published on February 19, 2020.

Michiquillay

Operator

Southern Perú Copper Corporation, Peru Branch

Investor¹⁰⁹

88.9%: Grupo México S.A.B. de C.V. (Mexico);
11.1%: Other investors

Region

Cajamarca

Province

Cajamarca

District

La Encañada


Global investment¹¹⁰

US\$ 2,500 million

Type of deposit¹⁰³

Porphyry Copper

Project is located at 3275 to 4000 masl.



PROJECT MAIN INFORMATION

Start of the construction	2025	Type of project	New
Start of operation	2028	Type of mine ¹⁰³	Open pit
Jobs in construction	TBD	Ore Resources ¹⁰³	1,150 Mt @ 0.63% Cu
Jobs in operation	TBD	Life of mine ¹⁰³	25 years
Power	189 MW	Water source	Unavailable
Plan capacity ¹⁰³	120,000 tons per day	Estimated annual production ¹⁰³	225,000 TMF of Copper

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

As of August 2020, the company finished field works of the project including citizen participation mechanisms. Also, the company has started drafting the semi-detailed Environmental Impact Assessment (EIA-sd) which should be finished by the end of 2020.	
Environmental Management Instrument (EMI):	EIA-d
Description	
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, in 2020, the company started drafting a semi-detailed Environmental Impact Assessment (EIA-sd) in order to start a diamond drill campaign of 40,000 meters in 2021 to verify and update the mineralized materials estimated in the project.
FAILED TO SUBMIT IT	
Start of exploitation activities (Mine plan)	Description
Status	
FAILED TO SUBMIT IT	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)
Processing Concession	Description
Status	
FAILED TO SUBMIT IT	The owner does not have the approval for the Processing Concession for this project.

¹⁰⁹ Southern Perú Copper Corporation: “2020 Second quarter Results”. July 28, 2020.
¹¹⁰ Southern Perú Copper Corporation: “Information presented by the mining owner to the Ministry of Energy and Mines (MINEM) October 8, 2020.

Mina Justa

Operator

Marcobre S.A.C.

Investor¹¹¹

60%: Grupo Breca (Peru)
40%: Empresas COPEC S.A. (Chile)

Region

Ica

Province

Nazca

District

San Juan de Marcona

Global investment¹¹²

US\$ 1,600 million

Type of deposit¹¹⁶

Copper (Cu) Deposit

Project is located at approximately 600 to 800 masl.



PROJECT MAIN INFORMATION

Start of the construction	2018	Type of project	New
Start of operation	2021	Type of mine ¹¹³	Open pit
Jobs in construction ¹¹⁴	3,000	Ore reserves ¹¹³	171.5 Mt of Cu oxides, 93.9 Mt of Cu sulphides
Jobs in operation ¹¹⁵	1,000	Life of mine ¹¹⁶	16 years
Power	72 MW	Water source ¹¹⁷	Ocean waters
Plant capacity ¹¹⁸	56,678 tons per day	Estimated annual production ¹¹¹	181,000 TMF of Copper

CURRENT PROJECT SITUATION: CONSTRUCTION

As of September 2020, the project construction shows 91.8 % progress. Construction is expected to be completed in the first quarter of 2021 and commercial production to start in the second quarter of 2021.	
Environmental Management Instrument (EMI): 1st MEIA-d	Description
Status	The project has a Detailed Environmental Impact Assessment (EIA-d) and a later Amendment (MEIA-d) approved in September 2017. Likewise, on December 14, 2018, the Third Supporting Technical Report (3rd ITS) was approved by Directive Order N°059-2018-SENACE-PE/DEAR to modify, add and expand a main component and ancillary components of the project.
APPROVED	
Start of exploitation activities (Mine plan)	Description
Status	The project has Mine Plan approved by Directive Order N° 0149-2015-MEM-DGM/V on April 16, 2015.
APPROVED	
Processing Concession	Description
Status	Processing Concession approved for an installed capacity of 56678 MT/day by Directive Order N° 0795-2018-MEM-DGM/V dated on October 22, 2018.
APPROVED	

¹¹¹ Minsur S.A.: “Fact of importance” [Shareholders’ Report to the Superintendence of Stock Exchange]. May 31, 2018.
¹¹² Minsur S.A.: “Independent Financial Statements as of December 31, 2019 and 2018, together with the opinion from independent auditors”. July 31, 2020.
¹¹³ Marcobre S.A.C.: First Supporting Technical Report of Mina Justa Project Approved on December 12, 2017.
¹¹⁴ Official Website of the Ministry of Energy and Mines [Intranet] - Monthly Statistical Statement (ESTAMIN): “Monthly job average from January 2018 to June 2019”
¹¹⁵ Marcobre S.A.C.: [Corporate Presentation]. February 17, 2017.
¹¹⁶ Marcobre S.A.C.: Amendment of the Environmental Impact Assessment for Mina Justa Approved on September 01, 2017.
¹¹⁷ Marcobre S.A.C.: Third Supporting Technical Report of the 1st MEIA of Mina Justa Project Approved on December 14, 2018.
¹¹⁸ Marcobre S.A.C.: “Processing Concession Request called ‘Oxide Plant and Sulphide Plant’ for a capacity installed of 56,678 MT/day”. Aproved on October 22 2018.

Ollachea

Operator

Minera Kuri Kullu S.A.

Investor¹¹⁹

100%: Minera IRL Limited (Australia)

Region

Puno

Province

Carabaya

District

Ollachea


Project is located South from Puno, at approximately 2900 to 3850 masl.

Global investment¹²⁰

US\$ 164.7 million

Type of deposit¹²¹

Orogenic auriferous (Au) hosted in the shearing zone



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ¹²²	Underground
Jobs in construction	TBD	Ore reserves ¹²¹	9.2 Mt @ 3.4 g/t Au
Jobs in operation ¹²³	364	Life of mine ¹²⁰	9 years
Power	Unavailable	Water source ¹²¹	Underground water
Plant capacity ¹²⁴	3,000 tons per day	Estimated annual production ¹²⁰	100,000 fine ounces of Gold

CURRENT PROJECT SITUATION: FEASIBILITY

The company has completed an optimization of post-final feasibility study. On September 16, 2019, the arbitration decision ordered the payment of US\$ 32.6 million by COFIDE to the company, as well as the refund of the bridge credit. In December 2019, Minera IRL and COFIDE signed a Memorandum of Understanding valid until March 31, 2020. Then and due to COVID-19 emergency, on June 30, 2020 the first amendment was carried out to the agreement of understanding which stated the extension of the term to 90 calendar days. Currently, it is expected that both parties shall reach an agreement regarding the settlements ordered by the Arbitration Court.			
Environmental Management Instrument (EMI):		EIA-d	Description
Status		The project has a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities, approved by Directive Order N° 363-2013-MEM-AAM dated on September 25, 2013. Then, in 2014, the Supporting Technical Report (ITS) was approved which aimed at analyzing, assessing and offering the necessary environmental measures to guarantee the project sustainability.	
APPROVED			
Start of exploitation activities (Mine plan)		Description	
Status		On April 28, 2017, the company requested the Authorization to Start Exploitation Activities. Later, on March 26, 2018, the project owner requested an extension to the term for the Authorization to Start Exploitation Activities in order to resolve observations, since the CIRA authorization is being processed by the Ministry of Culture.	
UNDER ASSESSMENT			
Processing Concession		Description	
Status		Processing Concession approved for an installed capacity of 3000 MT/day by Directive Order N° 0235-2014-MEM-DGM/V dated on June 25, 2014.	
APPROVED			

¹¹⁹Official Website of the Ministry of Energy and Mines [Intranet]- “Consolidated Annual Statement (DAC)”. September 24, 2020.

¹²⁰ Minera IRL Limited: “Ollachea geology, exploration and Post-DFS”. Date of consultation: August 07, 2019

¹²¹ Minera IRL Limited: “Annual Information Form” March 28, 2018

¹²² Minera Kuri Kullu S.A.: “Ollachea Gold Project – Peru, NI 43-101 Technical Report on feasibility Study [Technical Report]. November 29, 2012.

¹²³ Compañía Minera Kuri Kullu S.A.: A Detailed Environmental Impact Assessment (EIA-d) for exploitation and mining benefit “Ollachea”. Approved on September 25, 2013.

¹²⁴ Compañía Minera Kuri Kullu S.A.: Processing Concession Project. “Ollachea processing plant” Approved on June 25, 2014.

Inmaculada Optimization

Operator

Compañía Minera Ares S.A.C

Investor¹²⁵

100%: Hochschild Plc (United Kingdom)

Region

Ayacucho

Province

Paucar del Sara Sara
Parinacochas

District

Oyolo , San Javier de Alpabamba
San Francisco de Ravacayco and Pacapausa


Project is located at approximately 4,669 masl.

Global investment¹²⁶

US\$ 136 million

Type of deposit¹²⁶

Gold (Au) and Silver (Ag) Deposit



PROJECT MAIN INFORMATION

Start of the construction	2021	Type of project	Replenishment
Start of operation	2022	Type of mine ¹²⁵	Underground
Jobs in construction ¹²⁵	596	Ore reserves ¹²⁵	4 Mt @6.5 g/t Au
Jobs in operation ¹²⁵	929	Life of mine ¹²⁶	20 years
Power	Unavailable	Water source ¹²⁶	Underground water
Plan capacity ¹²⁵	4,200 tons per day	Estimated annual production ¹²⁵	250,000 ounces of Gold

CURRENT PROJECT SITUATION: FEASIBILITY

The Inmaculada mining unit is already in operation. However, in order to increase mining production and extend the life of the operation, the approval of the 2nd MEIA is requested. It is estimated the implementation of an ore sorting system before the processing plant. The plan will have 4 main components: crushing, washing, sieving and sorting equipment.	
Environmental Management Instrument (EMI): 2da MEIA-d	Description
Status	The company is in the supporting process of the National Service of Environmental Certification for Sustainable Investments (SENACE) within the process of drafting the Second Amendment to the Detailed Environmental Impact Assessment (MEIA-d). The project has a First Amendment to its detailed Environmental Impact Assessment (1st MEIA-d) for exploitation activities, approved by Directive Order N° 322-2015-EM/DGAAM dated on August 18, 2015.
DRAFTING STAGE	
Start of exploitation activities (Mine plan)	Description
Status	The project has an Amendment of its Mine Plan approved by Directive Order N° 0295-2019-MEM-DGM/V on June 18, 2019.
APPROVED	
Processing Concession	Description
Status	Processing Concession approved for an installed capacity from 3500 MT/day to 4200 MT/day by Directive Order N°207–2016-MEM-DGAAM dated on June 30, 2016.
APPROVED	

¹²⁵ Hochschild Plc.: “Inmaculada Site visit”. [Corporate Presentation]. July 02, 2019.

¹²⁶ Compañía Minera Ares: Preliminary Environmental Assessment - 2nd MEIA of the Inmaculada Operative Unit

Pampa de Pongo

Operator

Jinzhao Mining Perú S.A.

Investor¹²⁷

49% Zhongrong Xinda Group Co. Ltd. (China)
51% Jiangtong Group (China)

Region

Arequipa

Province

Caravelí

District

Bella Unión and Lomas

Global investment¹²⁸

US\$ 2,200 million

Type of deposit¹³⁰

Iron (Fe) magnesian Skarn



Project is located at approximately 320 to 460 masl.

PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ¹²⁸	Open pit
Jobs in construction ¹²⁹	3,294	Ore reserves ¹³⁰	910.5 Mt @ 38.6 % Fe, 0.06 ppm Au, 0.1% Cu
Jobs in operation	TBD	Life of mine ¹³¹	23
Power	222MW	Water source ¹³²	Ocean waters
Plant capacity	Unavailable	Estimated annual production ¹³¹	22.5 million of TMF of Iron

CURRENT PROJECT SITUATION: FEASIBILITY

The owner is reassessing the project technical designs in order to carry out new metallurgical tests that allow to determine a better manner way to recover the valuable ore. In August 2020, Zhongrong company entered into a framework agreement with HBIS Resources Co. Ltd. subsidiary of HBIS Group Co. Ltd of China, as part of its funding acquisition process for the project.		
Environmental Management Instrument (EMI):		EIA-d
		Description
Status	The project has a Detailed Environmental Impact Assessment (EIA-d) approved by Directive Order N° 044-2015-MEM-DGAAM dated on January 22, 2015. Also, on January 06, 2020 the Second Supporting Technical Report (2nd ITS EIA-d) by Directive Order N°00003-2020-SENACE-PE/DEAR.	
APPROVED		
Start of exploitation activities (Mine plan)		Description
Status	The project has Mine Plan approved by Directive Order N° 0084-2018-MEM-DGM on March 26, 2018. However, on September 02, 2019, Jinzhao submitted the amendment request for the Authorization to Start Exploitation Activities (Mine Plan), which is still under assessment.	
APPROVED		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

¹²⁷ Standard and Poor's [S&P Global]: *Pampa de Pongo – General Comments*. [Official Website]. Date of consultation: August 07, 2019

¹²⁸ Jinzhao Mining Perú S.A.: *Pampa de Pongo Project*. [Corporate Presentation to the Ministry of Energy and Mines]. September 24, 2018.

¹²⁹ Jinzhao Mining Perú S.A.: *Environmental Impact Assessment of the “Pampa del Pongo Mining Exploitation and Processing” project*. Approved on January 22, 2015.

¹³⁰ Jinzhao Mining Perú S.A.: *Stage I Mine Plan*. February 2018

¹³¹ Jinzhao Mining Perú S.A.: *Summary submitted to the Ministry of Energy and Mines (MINEM) September 18, 2020*.

¹³² Jinzhao Mining Perú S.A.: *Citizen Participation Mechanisms Implementation - Stage before the Start of drafting the MEIA*. March, 2018

Pampacancha

Operator	Hudbay Peru S.A.C.
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Investor ¹³³	100%: Hudbay Minerals Inc. (Canada)
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Region	Cusco
Province	Chumbivilcas
District	Velille, Chamaca and Livitaca

The project is located approximately 600 km SE from Lima at 4,000 to 4,500 masl

Global investment ¹³³	US\$ 70 million
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Type of deposit ¹³³	Copper (Cu) skarn metasomatic Deposit
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PROJECT MAIN INFORMATION

Start of the construction	2021	Type of project	Replenishment
Start of operation	2022	Type of mine ¹³⁴	Open pit
Jobs in construction ¹³⁵	150	Ore reserves ¹³⁶	39.9 @ Mt 0.60% Cu, 177 (g/t) Mo
Jobs in operation	No extra labor is needed.	Life of mine ¹³⁵	5 years
Power	96 MW	Water source ¹³⁵	Surface and underground waters
Plan capacity ¹³⁵	81,900 tons per day (without changes)	Estimated annual production ¹³⁵	59,000 TMF of Copper

CURRENT PROJECT SITUATION: FEASIBILITY

Pampacancha pit is within Constancia mining unit. Currently the project is in prior consultation stage, by which an agreement with surrounding communities was looked for in order to develop the project and improve the population’s wellbeing.


Environmental Management Instrument (EMI): 2da MEIA-d	Description
Status	The project has a Second Amendment to its Detailed Environmental Impact Assessment (2nd MEIA-d) approved by Directive Order N° 168-2015-MEM/DGAAM dated on April 17, 2015.
APPROVED	

Start of exploitation activities (Mine plan)	Description
Status	On February 19, 2020, the project owner submitted the request for an Authorization to Start Exploitation Activities (Mine Plan)
UNDER ASSESSMENT	

Processing Concession	Description
Status	Processing Concession approved for a current installed capacity approved by Directive Order N° 0315-2014-MEM-DGM on December 22, 2014.
APPROVED	

¹³³ Hudbay Minerals Inc.: “Annual Information form for the year ended December 31, 2019”. March 29, 2020.
¹³⁴ Hudbay Minerals Inc.: “Gold forum Americas 2020” [Shareholders’ Presentation]. September, 2020.
¹³⁵ Hudbay Peru S.A.C.: “Exploitation Update of Pampacancha Pit [Technical Dossier]. February, 2020.
¹³⁶ Hudbay Minerals Inc.: Mineral Reserve and Resource Estimates. January 01, 2020.

Rio Seco Copper Plant

Operator	Procesadora Industrial Río Seco S.A.	Investor ¹³⁷	100%: Grupo Buenaventura (Peru)
		Region	Lima
		Province	Huaral
		District	Huaral
		The project is located North from Lima, 102 km from the city of Lima	
		Global investment ¹³⁸	US\$ 350 million
		Type of deposit	Not applicable

PROJECT MAIN INFORMATION

Start of the construction	2022	Type of project	New
Start of operation	2024	Type of mine ¹³⁷	Refinery
Jobs in construction ¹³⁸	2,000	Ore reserves ¹³⁹	It will process Cu-As concentrates from Brocal
Jobs in operation ¹³⁸	200	Life of mine ¹³⁸	15 years
Power	Unavailable	Water source	Unavailable
Plan capacity ¹³⁹	40,000 tons per day	Estimated annual production ¹⁴⁰	40,000 TMF of Copper in cathodes

CURRENT PROJECT SITUATION: FEASIBILITY

The project entails start the operation of a new plant to treat complex concentrates, able to remove arsenic from copper concentrates from El Brocal mine site in the beginning, but with the possibility of receiving concentrates from other mine sites.	
Environmental Management Instrument (EMI):	EIA-d
Description	
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, on June 24, 2020, the company Procesadora Industrial Río Seco S.A submitted its “Citizen’s Participation to the National Service of Environmental Certification for Sustainable Investments (SENACE) within the framework to draft the Rio Seco Copper Plant project EIA-d”, which is under assessment as part of the supporting process.
DRAFTING STAGE	
Start of exploitation activities (Mine plan)	Description
Status	
NOT APPLICABLE	Not applicable
Processing Concession	Description
Status	
FAILED TO SUBMIT IT	The owner does not have the approval for the Processing Concession for this project.

¹³⁷ Compañía de Minas Buenaventura S.A.A.: 2019 Annual Report

¹³⁸ Compañía de Minas Buenaventura S.A.A.: “Information presented by the mining owner to the Ministry of Energy and Mines (MINEM) October 06, 2020.

¹³⁹ Compañía de Minas Buenaventura S.A.A.: Presentation of the “Buenaventura projects portfolio” to the Ministry of Energy and Mines (MINEM) August 2020.

¹⁴⁰ Compañía de Minas Buenaventura S.A.A.: “Information presented by the mining owner to the Ministry of Energy and Mines (MINEM)” October 23, 2020

Pukaqaga

Operator

Nexa Resources Perú. S.A.A.

Investor¹⁴¹

80.16%: Nexa Resources S.A. (Brazil);
19.84%: Other shareholders

Region

Huancavelica

Province

Huancavelica

District

Huando, Ascensión and Huancavelica


Project is located at approximately 4200 to 4860 masl.

Global investment¹⁴²

US\$ 654.9 million

Type of deposit¹⁴³

Copper (Cu) and Gold (Au) Skarn



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ¹⁴¹	Open pit
Jobs in construction ¹⁴⁴	2,500	Ore Resources ¹⁴⁵	309 Mt @ 0.41 Cu
Jobs in operation ¹⁴⁴	300	Life of mine ¹⁴⁴	17 years
Power	38 MW	Water source	Surface waters
Plan capacity ¹⁴⁴	30,000 tons per day	Estimated annual production ¹⁴⁴	5,000 TMF of Copper

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

In 2019, the first stage of the Front-End Loading (FEL) 2A pre-feasibility study was completed and metallurgical tests continued. In addition, the closure and environmental remediation of the accesses and platform for the drilling campaign were developed. The company has been entering into agreements with the communities of the influence area in order to obtain the rights to use the surface area.		
Environmental Management Instrument (EMI):		EIA-d
		Description
Status	The project has a Detailed Environmental Impact Assessment (EIA-d) approved by Directive Order N° 130-2015-MEM/DGAAM dated on March 09, 2015. In addition, it has the 3rd Supporting Technical Report (3rd ITS) to enable the main components of Pukaqaga mining unit, which was authorized on February 17, 2020 by Directive Order N° 32-2020-SENACE-PE/DEAR.	
APPROVED		
Start of exploitation activities (Mine plan)		Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

¹⁴¹ Nexa Resources S.A.: “Earnings Release - 2Q20”. July 30, 2020

¹⁴² Nexa Resources Perú. S.A.A. “Project Technical Data Sheet sent to MINEM”. October 08, 2020

¹⁴³ Nexa Resources S.A.: 2017 Annual Report

¹⁴⁴ Compañía Minera Milpo S.A.A. (Now Nexa Resources Perú S.A.A.): Semi-detailed Environmental Impact Assessment (EIA-sd) of Pukaqaga Mining Project, approved on March 09, 2015.

¹⁴⁵ Nexa Resources Perú S.A.A.: “Annual 2019 Report”. February 19, 2020

Quechua

Operator

Compañía Minera Quechua S.A.

Investor¹⁴⁶

67.8%: JX Nippon Mining Holdings (Japan)
32.2%: Mitsui Mining & Smelting Co. (Japan)

Region

Cusco

Province

Espinar

District

Espinar

Project is located at approximately 3900 to 4300 masl.

Global investment¹⁴⁷

US\$ 1,290 million

Type of deposit¹⁴⁸

Copper Porphyry (Cu) and Molybdenum (Mo)



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ¹⁴⁸	Open pit
Jobs in construction	TBD	Ore Resources ¹⁴⁸	680 Mt @ 0.38% Cu
Jobs in operation	TBD	Life of mine ¹⁴⁸	17 years
Power	74 MW	Water source	Unavailable
Plant capacity	Unavailable	Estimated annual production ¹⁴⁸	76,000 TMF of Copper

CURRENT PROJECT SITUATION: FEASIBILITY

The company, as of August 2020, has been developing a stable social situation with Huisa and Hancollahua communities. Also, a social investment is being carrying out to develop skills, fisheries, education, health and social support activities. Quechua project is located in the Copper Belt of Los Andes mountain range (medium ocean belt - early oligocene), the place of the highest copper productivity at the Andean Mountain range. Other deposits, such as Los Chancas and Las Bambas, are located in that area.		
Environmental Management Instrument (EMI):		EIA-d
Description		
Status	The project still does not have a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. However, the project has the 2nd Amendment to the Semi-detailed Environmental Impact Assessment (2nd MEIA-sd) for exploitation activities, approved by Directive Order N° 075-2010-MEM/AAM dated on March 03, 2010.	
FAILED TO SUBMIT IT		
Start of exploitation activities (Mine plan)		Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

¹⁴⁶ Pan Pacific Copper Co.: [Press Release]. February 12, 2020.
¹⁴⁷ Official Website of the Ministry of Energy and Mines [Intranet] - Monthly Statistical Statement (ESTAMIN): *Investment Program* Date of consultation: September 10, 2018.
¹⁴⁸ Pan Pacific Copper Co.: “Pan Pacific Copper gears up to feasibility study phase in development project of Quechua Copper”. [Press release]. November 30, 2009.

Quellaveco

Operator

Anglo American Quellaveco S.A.

Investor¹⁴⁹

60%: Anglo American plc (United Kingdom);
40%: Mitsubishi Coporation (Japan)

Region

Moquegua

Province

Mariscal Nieto

District

Torata

Project is located at 3500 masl and will cover 39,279.42 hectares, approximately.

Global investment¹⁴⁹

US\$ 5,300 million

Type of deposit¹⁴⁹

Copper Porphyry (Cu) and Molybdenum (Mo)



PROJECT MAIN INFORMATION

Start of the construction	2018	Type of project	New
Start of operation	2022	Type of mine ¹⁵²	Open pit
Jobs in construction ¹⁴⁹	15,000	Ore reserves ¹⁵⁰	1,333.4 Mt @ 0.57% Cu, 0.022% Mo
Jobs in operation ¹⁴⁹	2,500	Life of mine ¹⁵¹	34 years
Power	139 MW	Water source ¹⁵²	Surface waters
Plan capacity ¹⁵²	127,500 tons per day	Estimated annual production ¹⁴⁹	Year 1 to 5: 330,000 TMF of Copper Year 6 to 10: 300,000 TMF of Copper Year 11 and forward 240,000 TMF of Copper Year 1 to 10: 6,000 TMF of Molybdenum

CURRENT PROJECT SITUATION: CONSTRUCTION

The company’s Board approved the start of construction stage on July 26, 2018, which will last 41 months, approximately. Currently, the project has 50% of progress. The copper concentrate obtained during the operation stage will be transported to Ilo port.	
Environmental Management Instrument (EMI): 4th MEIA-d	Description
Status	The project has a Detailed Environmental Impact Assessment (EIA-d) approved by Directive Order N° 266-2000-EM-DGAAM dated on December 19, 2000. Also, it has the Fourth Amendment (4th MEIA) approved by Directive Order N°339-2015-MEM-DGAAM on August 28, 2015, which includes the increase of the capacity to process ore from 85,000 to 127,500 tons per day, expanding the useful life of the concentrator plant from 32 to 34 years. In addition, on July 24, 2020, SENACE granted the conformity to the Seventh Supporting Technical Report (7th ITS 4th MEIA-d) by Directive Order N°084-2020-SENACE-PE/DEAR.
APPROVED	
Start of exploitation activities (Mine plan)	Description
Status	The project has a Second Amendment of its Mine Plan approved by Directive Order N° 212-2020-MINEM-DGM/V on August 06, 2020.
APPROVED	
Processing Concession	Description
Status	Processing Concession approved by Directive Order N° 0029-2015-MEM-DGM/V on January 20, 2015 and later modified for a capacity of 127500 MT/day by Directive Order N° 018-2016-MEM-DGM/V on January 20, 2016.
APPROVED	

¹⁴⁹ Anglo American Plc.: “Interim Results 2020”. [Shareholder’s Presentation]. July 30, 2020.

¹⁵⁰ Anglo American Plc: Ore Reserves and Mineral Resources Report 2018. December 31, 2018.

Anglo American Quellaveco S.A. Fourth Amendment to the Environmental Impact Assessment of “Quellaveco” project. Approved by Directive Order N° 339-2015-MEM/DGAAM. August 28, 2015.

¹⁵² Anglo American Plc.: “Anglo American approves the start of Quellaveco Project”. [Press release]. July 26, 2018.

Río Blanco

Operator

Río Blanco Copper S.A.

Investor¹⁵³

51%: Zijin Mining Group Co. Ltd. (China);
35%: Tongling Non-Ferrous Metals Group Holding Co. Ltd. (China);
14%: Xiamen C&D Co. Ltd. (China)

Region

Piura

Province

Huancabamba

District

El Carmen de la Frontera


Project is located at Henry hill, at the border between Peru and Ecuador, at 2200 to 2800 masl.

Global investment¹⁵³

US\$ 2,500 million

Type of deposit¹⁵⁴

Copper Porphyry (Cu) and Molybdenum (Mo)



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ¹⁵³	Open pit
Jobs in construction ¹⁵³	5,000	Ore reserves ¹⁵⁵	500 Mt @ 0.63 % Cu
Jobs in operation ¹⁵³	1,200	Life of mine ¹⁵³	20 years
Power	75 MW	Water source ¹⁵⁶	Surface waters
Plant capacity	Unavailable	Estimated annual production ¹⁵³	200,000 TMF of Copper 3,000 TMF of Molybdenum

CURRENT PROJECT SITUATION: FEASIBILITY

The company is updating the feasibility study and the drafting process of the detailed Environmental Impact Assessment (EIA-d). Also, it has been working in building the relationship with communities.		
Environmental Management Instrument (EMI):		EIA-d
		Description
Status	The company is drafting the Detailed Environmental Impact Assessment (EIA-d) for exploitation activities. Nevertheless, it has a semi-detailed Environmental Impact Assessment (EIA-sd) approved by Directive Order N° 487-2003-EM/DGAA on November 28, 2003 and the Amendment of the Update of the project Rehabilitation Plan, approved by Directive Order N° 274-2016-MEM-DGAAM on September 14, 2016.	
DRAFTING STAGE		
Start of exploitation activities (Mine plan)		Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

¹⁵³ Río Blanco Copper S.A.: “Information presented by the mining owner to the Ministry of Energy and Mines (MINEM)” [Corporate Presentation]. September 23, 2020

¹⁵⁴ Río Blanco Copper S.A.: “Río Blanco Copper Mining Project” [Technical Sheet]. Date of consultation: July 2018.

¹⁵⁵ Río Blanco Copper S.A.: “Río Blanco Project”. [Company’s Official Website]. Date of Consultation: October 19, 2020.

¹⁵⁶ Río Blanco Copper S.A.: “Water Management” [Company’s Official Website]. Date of Consultation: October 19, 2020.

San Gabriel

Operator

Compañía de Minas Buenaventura S.A.A.

Investor¹⁵⁷

100%: Grupo Buenaventura (Peru)

Region

Moquegua

Province

Sánchez Cerro

District

Ichuña


Project is approximately at 4450 to 5000 masl, about 837 km from the city of Lima and 115.5 km from the city of Moquegua.

Global investment¹⁵⁸

US\$ 422 million

Type of deposit¹⁵⁷

Epithermal of intermediate sulphuration with Gold (Au), Copper (Cu) and Silver (Ag) metallic content.



PROJECT MAIN INFORMATION

Start of the construction	2021	Type of project	New
Start of operation	2023	Type of mine ¹⁵⁸	Underground
Jobs in construction ¹⁵⁹	2,000	Ore reserves ¹⁶⁰	10.8 Mt @ 4.7 g/t (1.7 Moz Au)
Jobs in operation ¹⁵⁹	800	Life of mine ¹⁵⁸	10 years
Power	14 MW	Water source ¹⁶¹	Underground water
Plant capacity ¹⁶²	3,000 tons per day	Estimated annual production ¹⁶⁰	120,000 to 150,000 fine ounces of Gold.

CURRENT PROJECT SITUATION: FEASIBILITY

The project pre-feasibility study was completed in 2019, which lead to an update of the reserves. Currently, the company is developing its feasibility study, which is at 30% of completion. Likewise, the study should be finished by the end of 2020.

Environmental Management Instrument (EMI): EIA-d		Description
Status	The project has a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities, approved by Directive Order N° 099-2017-MEM/DGAAM dated on March 31, 2017. Also, the owner submitted to SENACE the Second Supporting Technical Report (2nd ITS EIA-d) which was approved by Directive Order N° 129-2020-SENACE-PE/DEAR on October 27, 2020.	
APPROVED		
Start of exploitation activities (Mine plan)		Description
Status	On October 02, 2017, the project owner submitted the request for an Authorization to Start Exploitation Activities (Mine Plan) Currently, the project is under Prior Consultation process.	
UNDER ASSESSMENT		
Processing Concession		Description
Status	On July 14, 2020, the owner of the project submitted its request to approve the Concession and Benefit Authorization.	
UNDER ASSESSMENT		

¹⁵⁷ Compañía de Minas Buenaventura S.A.A.: 2019 Annual Report

¹⁵⁸ Compañía de Minas Buenaventura S.A.A.: "Presentation of the "Buenaventura projects portfolio" to the Ministry of Energy and Mines (MINEM) August 2020.

¹⁵⁹ Compañía de Minas Buenaventura S.A.A.: "Information presented by the mining owner to the Ministry of Energy and Mines (MINEM) October 06, 2020.

¹⁶⁰ Compañía de Minas Buenaventura S.A.A.: "2Q2020 Corporate Presentation". August 12, 2020.

¹⁶¹ Compañía de Minas Buenaventura S.A.A.: "Project Highlights - Advanced Stage". March 13, 2018.

¹⁶² Compañía de Minas Buenaventura S.A.A.: "Authorization Request of the Processing Concession". July 14, 2020.

San Luis

Operator

Reliant Ventures S.A.C.

Investor¹⁶³

100%: SRR Mining Inc. (Canada)

Region

Ancash

Province

Yungay

District

Shupluy


Project is located at 3600 to 4850 masl.

Global investment¹⁶⁴

US\$ 90 million

Type of deposit¹⁶⁵

Epithermal Deposit of Silver (Ag) and Gold (Au)



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ¹⁶⁶	Underground
Jobs in construction	TBD	Ore Resources ¹⁶⁷	0.484 Mt @ 22.4 g/t Au, 578.1 g/t Ag
Jobs in operation	TBD	Life of mine ¹⁶⁷	3.5 years
Power ¹⁶⁵	3.4 MW	Water source ¹⁶⁸	Surface waters
Plan capacity ¹⁶⁷	400 tons per day	Estimated annual production ¹⁶⁸	1.86 million ounces of Silver 78,000 ounces of Gold

CURRENT PROJECT SITUATION: FEASIBILITY

As of 2020, the company has been developing activities to deliver information about the San Luis Project to the community members of the Rural Community of Ecash, which covers the districts of Shupluy, Cascapara, Ataquero, Carhuaz, Marcará and Anta, in the provinces of Yungay and Carhuaz in the department of Ancash. Also, virtual meetings are held to strengthen their relationship with the community in order to obtain the permit to build the mine, also geological and environmental activities are being carried out. To this date, they are about to draft a Social Baseline Study in the 34 sectors of the community and development of informative meetings. In addition, the owner attends the Directive Council of the Social Investment Fund with Cochabamba community.

Environmental Management Instrument (EMI):	EIA-d	Description
Status	The project has a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities, approved by Directive Order N° 289-2012-MEM/AAM dated on September 10, 2012.	
APPROVED		
Start of exploitation activities (Mine plan)	Description	
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession	Description	
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

¹⁶³ SRR Mining Inc.: “Annual Report”. December 31, 2019.

¹⁶⁴ Reliant Ventures S.A.C.: “Information presented by the mining owner to the Ministry of Energy and Mines (MINEM) October 09, 2020.

¹⁶⁵ Reliant Ventures S.A.C.: Feasibility Technical Report June 2010

¹⁶⁶ Reliant Ventures S.A.C.: San Luis Project [Company’s Official Website]. Date of Consultation: October 27, 2020.

¹⁶⁷ SRR Mining Inc.: “Denver Gold Forum” September, 2020.

¹⁶⁸ Reliant Ventures S.A.C.: Environmental Impact Assessment (EIA) of the “Ayelen Vein Exploitation Project and San Luis Gold and Silver Processing”. Approved on September 10, 2012.

Shalipayco

Operator	Nexa Resources Perú. S.A.A.	Investor ¹⁶⁹	75%: Nexa Resources S.A. (Brazil); 25%: Pan American Silver Peru (Canada)
		Region	Junín
		Province	Junín
		District	Carhuamayo
		The project is at 4,000 to 4,800 masl, the closest settlement to the project is the city of Carhuamayo, located at 11 km.	
		Global investment ¹⁷⁰	US\$ 91 million
		Type of deposit ¹⁶⁹	Zinc (Zn), Lead (Pb) and Silver (Ag) Deposit

PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ¹⁶⁹	Underground
Jobs in construction	TBD	Ore Resources ¹⁷¹	9.47 Mt @ 4.44%Zn, 0.48%Pb, 31.09 g/t Ag
Jobs in operation	TBD	Life of mine ¹⁷⁰	15 years
Power	Unavailable	Water source	Unavailable
Plan capacity ¹⁷⁰	3,000 tons per day	Estimated annual production ¹⁷²	1,100,000 ounces of Silver (760,000 oz in the first 5 years) 4,000 TMF of Lead 45,000 TMF of Zinc

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

The project has a Preliminary Economic Assessment (EEP) published on July 26, 2017. Currently, the company is developing the project pre-feasibility stage, mainly, carrying out the engineering study of such stage. In 2019, Nexa was focused on consolidating a positive social climate in Carhuamayo community to resume Front End Loading (FEL) exploration and pre-feasibility studies. In this 2020, constant information meetings will be held about the project with inhabitants of the area, as well as an approach with local leaders.		
Environmental Management Instrument (EMI): EIA-d		Description
Status	Currently, the company is receiving follow-up and monitoring from the National Service of Environmental Certification for Sustainable Investments (SENACE) to draft a Detailed Environmental Impact Assessment (EIA-d). However, the project has the 2nd Amendment to the Semi-detailed Environmental Impact Assessment (2nd MEIA-sd) for exploitation activities, approved by Directive Order N° N°020-2019-MEM/DGAAM dated on February 08, 2019.	
DRAFTING STAGE		
Start of exploitation activities (Mine plan)		Description
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession		Description
Status	The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT		

¹⁶⁹ Nexa Resources S.A.: “Earnings Release - 2Q20”. July 30, 2020

¹⁷⁰ Nexa Resources S.A.: “Technical Report NI 43-101” [Technical Report]. July 26, 2017

¹⁷¹ Nexa Resources Perú S.A.A.: “Annual 2019 Report”. February 19, 2020

¹⁷² Nexa Resources Perú S.A.A.: “Presentation of the mining owner to the Ministry of Energy and Mines (MINEM)”. September, 2020.

Tía María

Operator

Southern Perú Copper Corporation, Peru Branch

Investor¹⁷³

88.9%: Grupo México S.A.B. de C.V. (Mexico);
11.1%: Other investors

Region

Arequipa

Province

Islay

District

Cocachacra, Mejía and Dean Valdivia

Project is located at 2760 masl.

Global investment¹⁷⁴

US\$ 1,400 million

Type of deposit¹⁷⁴

Copper Porphyry (Cu) and Molybdenum (Mo)



PROJECT MAIN INFORMATION

Start of the construction	TBD	Type of project	New
Start of operation	TBD	Type of mine ¹⁷⁵	Open pit
Jobs in construction ¹⁷⁶	3,600 direct jobs	Ore reserves ¹⁷⁷	La Tapada pit: 425.338 Mt @ 0.43% Cu Tía María Pit: 225.34 Mt 0.29% Cu
Jobs in operation ¹⁷⁶	600 direct jobs	Life of mine ¹⁷⁴	20 years
Power	88 MW	Water source ¹⁷⁴	Ocean waters
Plan capacity ¹⁷⁴	100,000 tons per day	Estimated annual production ¹⁷⁴	120,000 TMF of Copper

CURRENT PROJECT SITUATION: DETAIL ENGINEERING

The company finished its engineering studies and has the approved Environmental Impact Assessment, also, on October 30, 2019, the Mining Council ratified the Authorization of the Processing Concession. The company will use desalinated seawater for its operations, supply transport and copper production. It will also build a 32-km industrial train and an access road at a safe distance from Valle de Tambo. Also, the project will use latest generation SX-EW technology since SX-EW installations do not require a smeltery process and, therefore, do not issue emissions to the atmosphere.		
Environmental Management Instrument (EMI):	EIA-d	Description
Status	The project has a Detailed Environmental Impact Assessment (EIA-d) for exploitation activities, approved by Directive Order N° 392-2014-MEM/DGAAM dated on August 01, 2014. Likewise, the project has a First Supporting Technical Report (1st ITS) of the EIA-d, which was approved by Directive Order N° 030-2018-SENACE-JEF/DEAR on February 19, 2018.	
APPROVED		
Start of exploitation activities (Mine plan)	Description	
Status	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT		
Processing Concession	Description	
Status	Processing Concession approved by Directive Order N° 0328-2019-MINEM-DGM/V on July 08, 2019.	
APPROVED		

¹⁷³ Southern Perú Copper Corporation: “2020 Second quarter Results”. July 28, 2020.

¹⁷⁴ Southern Perú Copper Corporation: “Information presented by the mining owner to the Ministry of Energy and Mines (MINEM) October 08, 2020.

¹⁷⁵ Peruvian Institute of Mining Engineers (IIMP): “Challenges of a responsible mining and Tía María project” [Official Website]. Date of Publication: June 26, 2018.

¹⁷⁶ Southern Perú Copper Corporation: Tía María Project Presentation at MINPRO 2019, [Raúl Jacob, Finance VP and CFO of Southern Peru]. Date of the event: June 26, 2019.

¹⁷⁷ Southern Perú Copper Corporation: Environmental Impact Assessment of the “Tía María” Mining Exploitation and Processing project. Approved on August 01, 2014.

Trapiche

The map displays the Apurímac region in Peru, highlighted in light blue. The region is bordered by Cusco to the north, Arequipa to the south, and Ayacucho to the west. The Apurímac river is shown flowing through the region. The location of the Trápiche archaeological site is marked with a red dot and labeled in red text. Other locations marked include Pukaqaca, Hierro Apurímac, Cotabambas, Los Chancas, Antilla, Haquira, Chalcobamba, AZOD, Fase I, Corani, Ollachea, Machu, Pampacancha, Quechua, Integración, Corocochaucyo, San Gabriel, and Zafrañal. An inset map in the bottom left corner shows the location of Apurímac within the borders of Peru.

PROJECT MAIN INFORMATION

Start of the construction	2024	Type of project	New
Start of operation	2026	Type of mine ¹⁷⁹	Open pit
Jobs in construction ¹⁷⁹	3,700	Ore reserves ¹⁷⁹	283.2 Mt @ 0.51% Cu
Jobs in operation ¹⁷⁹	1,630	Life of mine ¹⁷⁹	18 years
Power	54 MW	Water source	Unavailable
Plan capacity ¹⁷⁸	45,000 tons per day	Estimated annual production ¹⁸⁰	50,000 to 70,000 TMF of Copper

CURRENT PROJECT SITUATION: PRE-FEASIBILITY

In 2019, M3, Mining Plus and KCB developed and completed the pre-feasibility study. That study defined open pit mining operation at 45,000 tpd, the ore will be processed in a crushing-leach pad-SX/EW plant to produce copper cathodes. Also, resources and reserves were updated.	
Environmental Management Instrument (EMI):	EIA-d
Status	Description
DRAFTING STAGE	The company is drafting a Detailed Environmental Impact Assessment (EIA-d) of the project, which should be soon submitted to have the EIA-d approved by the end of 2021. However, it has a 5th MEIA-sd for exploration activities, approved by Directive Order 148-2019-MINEM/DGAAM on August 20, 2019 and the 1st ITS of the 5th MEIA-sd with conformity by Directive Order 128-2020/MINEM-DGAAM on September 28, 2020.
Start of exploitation activities (Mine plan)	Description
Status	
FAILED TO SUBMIT IT	The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)
Processing Concession	Description
Status	
FAILED TO SUBMIT IT	The owner does not have the approval for the Processing Concession for this project.

¹⁷⁹ Compañía de Minas Buenaventura S.A.A.: *2019 Annual Report*
¹⁸⁰ Compañía de Minas Buenaventura S.A.A.: *Presentation of the “Buenaventura projects portfolio” to the Ministry of Energy and Mines (MINEM) August 2020.*
¹⁸⁰ Compañía de Minas Buenaventura S.A.A.: *Results of the second 2020 Quarter [Corporate Presentation].*

Yanacocha Sulfuros

Operator

Minera Yanacocha S.R.L.

Investor¹⁸¹

51.35%: Newmont Goldcorp Corp. (USA);
43.65%: Grupo Buenaventura (Peru);
5.00%: Sumitomo Corporation (Japan)

Region

Cajamarca

Province

Cajamarca

District

Cajamarca, La Encañada and Los Baños del Inca

Project location

Project are located at a distance approximately 20 km North from the city of Cajamarca and 583 km from the city of Lima, at 3600 to 4200 masl.

Global investment¹⁸²

US\$ 2,100 million

Type of deposit¹⁸³

Copper (Cu) and Gold (Au) Porphyry



PROJECT MAIN INFORMATION

Start of the construction	2021	Type of project	Replenishment
Start of operation	2024	Type of mine ¹⁸³	Open pit and underground
Jobs in construction ¹⁸³	1,340	Ore reserves ¹⁸²	2,903 Mt @ 2.94 g/t Au
Jobs in operation ¹⁸³	675	Life of mine ¹⁸²	22 years
Power	Unavailable	Water source ¹⁸⁴	Underground water
Plant capacity	Unavailable	Estimated annual production ¹⁸⁵	500,000 equivalent ounces of gold

CURRENT PROJECT SITUATION: DETAIL ENGINEERING

Yanacocha Sulfuros project is within the current operation area and includes the processing of sulphide ores to produce Copper and Gold, with which the life of mine will be substantially expanded. The project is waiting the decision of investment from the Board that will be held in 2021.	
Environmental Management Instrument (EMI): 1st MEIA-d	Description
Status	The project has a First Amendment to its Detailed Environmental Impact Assessment (1st MEIA-d) for exploitation activities, approved by Directive Order N° 00049-2019-SENACE-PE/DEAR dated on March 07, 2019. Likewise, the Second Amendment to the Detailed Environmental Impact Assessment (2nd MEIA-d) is currently under assessment for Yanacocha Project. Its objective is to include in the planning of Yanacocha mining complex operations, the expansion, modification or relocation of existing main components and ancillary facilities (previously approved). On the other hand, the study objective is to integrate in a single Environmental Management Instrument (IGA), the three metallic operative sectors (Yanacocha Este, Yanacocha Oeste and Cerro Negro).
APPROVED	
Start of exploitation activities (Mine plan)	Description
Status	The project has Mine Plan for “Chaquicocha 3 and 4”, approved by Directive Order N° 077-2018-MEM-DGM on March 08, 2018.
APPROVED	
Processing Concession	Description
Status	Processing Concession “Yanacocha Leaching Plant” approved by Directive Order N° 0793-2017-MEM-DGM/V on September 8, 2017.
APPROVED	

¹⁸¹ Standard and Poor’s (S&P Global): *Yanacocha Sulfuros* – Ownership Information [Market Intelligence from Official Website]. Date of Consultation: October 19, 2020.

¹⁸² Minera Yanacocha S.R.L.: *Amendment of the Environmental Impact Assessment for Yanacocha May 2018*

¹⁸³ Minera Yanacocha S.R.L.: *“Second Amendment of the Environmental Impact Assessment for Yanacocha”. January 20, 2020.*

¹⁸⁴ Minera Yanacocha S.R.L. [Company’s Official Website] <http://www.yanacocha.com/agua/>

¹⁸⁵ Minera Yanacocha S.R.L.: *“Yanacocha District – Development in sulphurs”*. [Company’s Official Website]. Date of consultation: November 6, 2020

Zafranal

Operator

Compañía Minera Zafranal S.A.C.

Investor¹⁸⁶

80%: Teck Resources Copper (Canada);
20%: Mitsubishi Materials Corporation (Japan)

Region

Arequipa

Province

Castilla and Caylloma

District

Huancarqui, Lluta and Majes

Project location details

Project is located at 1400 to 2900 masl, more than 20 km from the closest settlement. Approximately 166 km by road NW from Arequipa city.


Global investment¹⁸⁶

US\$ 1,263 million

Type of deposit¹⁸⁷

Copper (Cu) Porphyry

Map



PROJECT MAIN INFORMATION

Start of the construction	2023	Type of project	New
Start of operation	2026	Type of mine ¹⁸⁸	Open pit and underground
Jobs in construction ¹⁸⁶	2,900	Ore reserves ¹⁸⁶	440.7 Mt@ 0.38% Cu, 0.07 g/t Au.
Jobs in operation ¹⁸⁶	1,900	Life of mine ¹⁸⁶	19 years
Power	87 MW	Water source ¹⁸⁶	Underground water
Plan capacity ¹⁸⁶	64,000 tons per day	Estimated annual production ¹⁸⁶	76,000 TMF of Cu 29,000 fine ounces of Gold

CURRENT PROJECT SITUATION: FEASIBILITY

The company completed the feasibility study in the first quarter of 2019, showing competitive investment returns. The project proposes the exploitation of two pits (Zafranal and Victoria) from where Copper sulphides will be extracted. A conveyor belt installed within a tunnel shall carry the ore from the primary crusher to the crushed ore stockpile. The mian water source of the project will be a salty aquifer locatedunder Pampa de Majes irrigation that is not suitable for human consumption nor for agriculture.			
Environmental Management Instrument (EMI):		EIA-d	Description
Status		The company has carried out citizen participation workshops with the population involved in the areas of influence of the mining project, as part of the participative workshops. Later on, the owner will have to submit to SENACE the Environmental Impact Assessment to be admitted for evaluation.	
DRAFTING STAGE			
Start of exploitation activities (Mine plan)		Description	
Status		The project owner has not requested the Authorization to Start Exploitation Activities (Mine Plan)	
FAILED TO SUBMIT IT			
Processing Concession		Description	
Status		The owner does not have the approval for the Processing Concession for this project.	
FAILED TO SUBMIT IT			

¹⁸⁶ Compañía Minera Zafranal S.A.C.: “Information presented by the mining owner to the Ministry of Energy and Mines (MINEM)” September, 2020.

¹⁸⁷ Compañía AQM Copper Inc.: “Pre-feasibility Technical Report”. June 10, 2016.

¹⁸⁸ AQM Copper INC (Teck Resources Limited from the purchase agreement from November 21, 2016): Technical Report and Updated Preliminary Assessment of the Zafranal Project, Peru” [Technical Report]. October 04, 2013.