Nexa Resources S.A.

INFORMATION RELATING TO MINERAL PROPERTIES

As of March 22, 2021

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NOTE TO READER REGARDING DISCLOSURE

This document contains certain disclosure relating to mineral properties of Nexa Resources S.A. ("Nexa Resources", "Nexa" or the "Company") that has been prepared in accordance with the requirements of Canadian securities laws. Unless otherwise indicated, all mineral reserve and mineral resource estimates included in this document have been prepared in accordance with the May 10, 2014 edition of the Canadian Institute of Mining, Metallurgy and Petroleum (or CIM) Definition Standards for Mineral Resources and Mineral Reserves ("2014 CIM Definition Standards") and disclosed in accordance with National Instrument 43-101 – Standards of Disclosure for Minerals Project ("NI 43-101").

Readers should understand that "inferred mineral resources" are subject to uncertainty as to their existence and as to their economic and legal feasibility. An inferred mineral resource has a lower level of confidence than that applying to an indicated mineral resource and must not be converted to a mineral reserve. It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

Descriptions in this document of our mineral properties were prepared in accordance with NI 43-101, as well as similar information provided by other issuers in accordance with NI-43101, and may not be comparable to similar information prepared in accordance with Sub-part 1300 of Regulation 1300that is present elsewere outside of this report.

Our mineral properties are comprised of: (a) material mineral properties, including three mines (Cerro Lindo, El Porvenir, and Vazante) and two material project (Aripuanã and Magistral); and (b) other mineral properties, including two mines (Atacocha and Morro Agudo) and a number of greenfield projects (Shalipayco, Hilarion, Pukaqaqa, Florida Canyon and Caçapava do Sul).

For the meanings of certain technical terms used in this document, see "Glossary of Certain Technical Terms".

For a table summarizing the mineral reserve and mineral resource estimates prepared in accordance with NI 43-101 for our mines and projects, see "Summary of Information Concerning Mineral Reserves and Mineral Resources".

For additional information regarding our mines and projects prepared in accordance with NI 43-101, see "Summary of Material Mineral Properties" and "Summary of Other Mineral Properties" below.

In light of the COVID-19 pandemic, Nexa created a Crisis Committee, which includes all executive officers of the Company, certain key general managers and personnel to carry out preventive procedures in its operations and offices. Nexa implemented several measures to help protect our employees, contractors and local communities and we are working in three main fronts: Health, Safety and People; Business Continuity and Stakeholders.

FORWARD-LOOKING STATEMENTS

This report includes statements that constitute estimates and forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or Securities Act, and Section 21E of the Securities Exchange Act, as amended, or Exchange Act. The words "believe," "will," "may," "may have," "would," "estimate," "continues," "anticipates," "intends," "plans," "expects," "budget," "scheduled," "forecasts" and similar words are intended to identify estimates and forward-looking statements. Estimates and forward-looking statements refer only to the date when they were made, and we do not undertake any obligation to update or revise any estimate or forward-looking statement due to new information, future events or otherwise, except as required by law. Estimates and forward-looking statements involve risks and uncertainties and do not guarantee future performance, as actual results or developments may be substantially different from the expectations described in the forward-looking statements.

These statements appear in a number of places in this report and include statements regarding our intent, belief or current expectations, and those of our officers and employees, with respect to, among other things: (i) our future financial or operating performance; (ii) our growth strategy; (iii) future trends that may affect our business and results of operations; (iv) the impact of competition and applicable laws and regulations on our results; (v) planned capital investments; (vi) future of zinc or other metal prices; (vii) estimation of mineral reserves; (viii) mine life; and (ix) our financial liquidity.

Forward-looking statements are not guarantees of future performance and involve risks and uncertainties. Actual results and developments may be substantially different from the expectations described in the forward-looking statements for a number of reasons, many of which are not under our control, among them the activities of our competition, the future global economic situation, weather conditions, market conditions, exchange rates, and operational and financial risks. The unexpected occurrence of one or more of the abovementioned events may significantly change the results of our operations on which we have based our estimates and forward-looking statements. Our estimates and forward-looking statements may be influenced by the following factors, including, among others:

- the cyclical and volatile prices of commodities;
- the changes in the expected level of supply and demand for commodities;
- the risks and uncertainties relating to economic and political conditions in the countries in which we operate;
- changes in global market conditions;
- outbreaks of contagious diseases or healh crises impacting overall economic activity regionally or globally;
- the duration and scope of and uncertainties associated with the coronavirus ("COVID-19") pandemic and the impact thereof on commodity prices, our business and the global economy and any related actions taken by government and businesses in response to the COVID-19 pandemic, as well as our ability to contain and mitigate the risk of spread or major outbreak of COVID-19 at our operating sites;
- severe natural disasters, such as, storms and earthquakes, disrupting our operations;
- operational risks, such as operator errors, mechanical failures and other accidents;

- the availability of materials, supplies, insurance coverage, equipment, required permits or approvals and financing;
- the implementation of our growth strategy and risks associated with related capital expenditures;
- failure to obtain financial assurance to meet closure and remediation obligations;
- the possible material differences between our estimates of mineral reserves and the mineral quantities we actually recover;
- the possibility that our concessions may be terminated or not renewed by governmental authorities in the countries in which we operate;
- labor disputes or disagreements with local communities;
- loss of reputation due to unanticipated operational failures or significant occupational incidents;
- the future impact of competition and changes in domestic and international governmental and regulatory policies that apply to our operations; and
- other factors.

In light of the risks and uncertainties described above, the events referred to in the estimates and forward-looking statements included in this report may or may not occur, and our business performance and results of operation may differ materially from those expressed in our estimates and forward-looking statements, due to factors that include but are not limited to those mentioned above.

These forward-looking statements are made as of the date of this report, and we assume no obligation to update them or revise them to reflect new events or circumstances. There can be no assurance that the forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements.

GLOSSARY OF CERTAIN TECHNICAL TERMS

C&F: cut-and-fill

concentration: The process by which crushed and ground ore is separated into metal concentrates and reject material through processes such as flotation.

D&F: drift-and-fill

development: The process of constructing a mining facility and the infrastructure to support the facility is known as mine development.

exploration: Activities associated with ascertaining the existence, location, extent or quality of a mineral deposit.

ha*: hectares*

km: kilometer

kt: thousand tonne

LOM: life of mine

m: meter

MASL: meters above sea level

mineralization: The process or processes by which a mineral or minerals are introduced into a rock, resulting in a potentially valuable or valuable deposit.

mine site: An economic unit comprised of an underground and/or open pit mine, a treatment plant and equipment and other facilities necessary to produce metals concentrates, in existence at a certain location.

Mt: million tonnes.

Mtpa: million tonnes per annum.

NSR: Net smelter return is the net revenue that the owner of a mining property receives from the sale of the mine's metal/nonmetal products less transportation and refining costs.

open pit: Surface mining in which the ore is extracted from a pit. The geometry of the pit may vary with the characteristics of the ore body.

ore: A mineral or aggregate of minerals from which metal can be economically mined or extracted.

ounces or oz.: Unit of weight. A troy ounce equals 31.1034 grams. All references to ounces in this document are to troy ounces unless otherwise specified.

R&P: room and pilar

reclamation: The process of stabilizing, contouring, maintaining, conditioning and/or reconstructing the surface of disturbed land (i.e., used or affected by the execution of mining activities) to a state of "equivalent land capability." Reclamation standards vary widely, but usually address issues of ground and surface water, topsoil, final slope gradients, overburden and revegetation.

refining: The process of purifying an impure metal; the purification of crude metallic substances.

skarn: Metamorphic zone developed in the contact area around igneous rock intrusions when carbonate sedimentary rocks are invaded by large amounts of silicon, aluminum, iron and magnesium. The minerals commonly present in a skarn include iron oxides, calc-silicates, andradite and grossularite garnet, epidote and calcite. Many skarns also include ore minerals. Several productive deposits of copper or other base metals have been found in and adjacent to skarns.

SLS: sublevel longhole stoping

tailings: Finely ground rock from which valuable minerals have been extracted by concentration.

tonne: A unit of weight. One metric tonne equals 2,204.6 pounds or 1,000 kilograms. One short tonne equals 2,000 pounds. Unless otherwise specified, all references to "tonnes" in this document refer to metric tonnes.

tpd: tonnes per day

VRM: vertical retreat mining

zinc oxide: A chemical compound that results from the sublimation of zinc (Zn-metal) by oxygen in the atmosphere. Zinc oxide is in the form of powder or fine grains that is insoluble in water but very soluble in acid solutions.

NI 43-101 and 2014 CIM Definition Standards:

Feasibility study: A comprehensive technical and economic study of the selected development option for a mineral project that includes appropriately detailed assessments of applicable modifying factors, together with any other relevant operational factors and detailed financial analysis that are necessary to demonstrate, at the time of reporting, that extraction is reasonably justified (economically mineable). The results of the study may reasonably serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. The confidence level of the study will be higher than that of a pre-feasibility study.

Inferred mineral resource: That part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. An inferred mineral resource has a lower level of confidence than that applying to an indicated mineral resource and must not be converted to a mineral reserve. It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

Indicated mineral resource: That part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate

application of technical and economic parameters to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed. An indicated mineral resource has a lower level of confidence than that applying to a measured mineral resource and may only be converted to a probable mineral reserve.

Measured mineral resource: That part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity. A measured mineral resource has a higher level of confidence than that applying to either an indicated mineral resource or an inferred mineral resource. It may be converted to a proven mineral reserve or to a probable mineral reserve.

Mineral reserve: A mineral reserve is the economically mineable part of a measured and/or indicated mineral resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at pre-feasibility or feasibility level as appropriate that include application of modifying factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which mineral reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. The public disclosure of a mineral reserve must be demonstrated by a pre-feasibility study or feasibility study.

Mineral resource: A mineral resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

Modifying factors: Considerations used to convert mineral resources to mineral reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social, and governmental factors.

Preliminary economic assessment: A study, other than a pre-feasibility or feasibility study, that includes an economic analysis of the potential viability of mineral resources.

Pre-feasibility study: A pre-feasibility study is a comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a preferred mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, is established and an effective method of mineral processing is determined. It includes a financial analysis based on reasonable assumptions on the modifying factors and the evaluation of any other relevant factors which are sufficient for a qualified person, acting reasonably, to determine if all or part of the mineral resource may be converted to a mineral reserve at the time of reporting. A pre-feasibility study is at a lower confidence level than a feasibility study.

Probable mineral reserve: The economically mineable part of an indicated, and in some circumstances, a measured mineral resource. The confidence in the modifying factors applied to a probable mineral reserve is lower than that applied to a proven mineral reserve.

Proven mineral reserve (proved mineral reserve): The economically minable part of a measured mineral resource. A proven mineral reserve implies a high degree of confidence in the modifying factors.

Qualified person: An individual who: (a) is an engineer or geoscientist with a university degree, or equivalent accreditation, in an area of geoscience or engineering, relating to mineral exploration or mining; (b) has at least five years of experience in mineral exploration, mine development or operation, or mineral project assessment, or any combination of these, that is relevant to his or her professional degree or area of practice; (c) has experience relevant to the subject matter of the mineral project and technical report; (d) is in good standing with a professional association; and (e) in the case of a professional association in a foreign jurisdiction, has a membership designation that (i) requires attainment of a position of responsibility in his or her profession that requires the exercise of independent judgment; and (ii) requires (A) a favorable confidential peer evaluation of the individual's character, professional judgement, experience, and ethical fitness; or (B) a recommendation for membership by at least two peers, and demonstrated prominence or expertise in the field of mineral exploration or mining.

SUMMARY OF INFORMATION CONCERNING MINERAL RESERVES AND RESOURCES

Mineral Reserves

The following table shows our estimates of Mineral Reserves prepared with an effective date of December 31, 2020 and in accordance with the 2014 CIM Definition Standards, whose definitions are incorporated by reference in NI 43-101, for the metals indicated per mine.

Interest [1]	Ownership (%)	Class	Tonnage	Grade					Contained Metal				
				Zinc	Copper	Silver	Lead	Gold	Zinc	Copper	Silver	Lead	Gold
			(Mt)	(%)	(%)	(g/t)	(%)	(g/t)	(kt)	(kt)	(koz)	(kt)	(koz)
Cerro Lindo Mine [2]	80.16%	Proven	29.37	1.71	0.60	20.9	0.23	-	501.5	177.3	19,702	66.1	-
		Probable	22.73	1.08	0.62	21.6	0.18	-	246.4	141.8	15,770	40.0	-
		Subtotal	**52.10**	**1.44**	**0.61**	**21.2**	**0.20**	-	**747.9**	**319.1**	**35,472**	**106.1**	-
Vazante Mine [3]	100%	**Proven**	8.44	8.40	-	15.2	0.24	-	708.8	-	4,125	20.6	-
		Probable	8.24	8.83	-	12.2	0.21	-	727.9	-	3,241	17.4	-
		Subtotal	**16.68**	**8.61**	**-**	**13.7**	**0.23**	**-**	**1,436.7**	**-**	**7,367**	**38.0**	**-**
El Porvenir Mine [4]	80.16%	Proven	3.76	3.76	0.25	62.9	0.98	-	141.3	9.5	7,602	36.9	-
		Probable	10.09	3.74	0.22	62.8	0.85	-	377.6	22.4	20,364	85.5	-
		Subtotal	**13.85**	**3.75**	**0.23**	**62.8**	**0.88**	-	**518.9**	**31.9**	**27,966**	**122.4**	-
Aripuanã Project [5]	100%	Proven	10.08	3.74	0.31	36.0	1.39	0.29	376.7	31.3	11,676	140.1	94.5
		Probable	13.42	3.60	0.21	32.9	1.33	0.33	483.1	28.4	14,211	178.9	141.5
		Subtotal	**23.51**	**3.66**	**0.25**	**34.3**	**1.36**	**0.31**	**859.8**	**59.7**	**25,887**	**319.0**	**236.1**
Total		**Proven**	**51.65**	**3.35**	**0.42**	**26.0**	**0.51**	**0.06**	**1,728.3**	**218.1**	**43,105**	**263.7**	**94.5**
		Probable	**54.49**	**3.37**	**0.35**	**30.6**	**0.59**	**0.08**	**1,835.1**	**192.6**	**53,586**	**321.8**	**141.5**
		Total	**106.14**	**3.36**	**0.39**	**28.3**	**0.55**	**0.07**	**3,563.4**	**410.8**	**96,691**	**585.5**	**236.1**

Notes: The estimation of Mineral Reserves involves assumptions as to future commodity prices and as to technical mining matters. Numbers and totals may not sum due to rounding. The qualified persons responsible for the Mineral Reserves estimates are not aware of any mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the mineral reserve estimate.

(1) The tonnage and content amounts presented in this table have not been adjusted to reflect our ownership interest. The information presented in this table includes 100% of the mineral resource estimates of our consolidated subsidiaries and of our joint ventures, certain of which are not wholly-owned, as set out in this ownership interests column.

(2) Cerro Lindo Mine

The qualified person for the Mineral Reserves estimate is Normand L. Lecuyer, P.Eng., a Roscoe Postle Associates Inc. (now a part of SLR Consulting Ltd), employee.
Bulk density varies depending on mineralization domain.
Mineral Reserves are estimated at NSR cut-off values of US$33.56/t processed for SLS and US$49.90/t processed for C&F stoping. A number of incremental stopes (down to US$26.16/t NSR value) are included in the estimate.
Mineral Reserves are estimated using average long term metal prices of Zn: US$2,494.90/t (US$1.13/lb); Pb: US$1,956.00/t (US$0.89/lb); Cu: US$6,457.90/t (US$2.93/lb); Ag: US$16.85/oz with all costs in US dollars.
A minimum mining width of 5.0 m and 4.0 m was used for SLS stopes and C&F stopes respectively.

(3) Vazante Mine

The qualified person for the Mineral Reserves estimate is Normand L. Lecuyer, P.Eng., a Roscoe Postle Associates Inc. (now a part of SLR Consulting Ltd), employee.
Mineral Reserves are estimated at a cut-off NSR value of US$47.49/t processed.
Average Bulk density of 3.1 t/m^3.
Mineral Reserves are estimated using average long term metal prices of Zn: US$2,494.90/t (US$1.13/lb); Pb: US$1,956.00/t (US$0.89/lb); and Ag: US$16.85/oz and a R$/US$ exchange rate of 4.84.
A minimum mining width of 4.0 m was applied.

(4) El Porvenir Mine

The qualified person for the Mineral Reserves estimate is Steve Blaho, P. Eng., Roscoe Postle Associate Inc. (now a part of SLR Consulting Ltd), employee.
Average Bulk density of 3.12 t/m^3.
NSR cut-off is calculated per zone and mining method. For C&F mining method, the values vary from US$59.75/t at Lower zone to US$63.37/t at Deepening zone. For SLS, the values vary from US$56.44/t at Lower zone to US$60.06/t at Deepening zone.
Mineral Reserves are estimated using average long term metal prices of Zn: US$2,494.90/t (US$1.13/lb); Pb: US$1,956.00/t (US$0.89/lb); Cu: US$6,457.90/t (US$2.93/lb); Ag: US$16.85/oz.
Minimum mining widths of 5.0 m were applied.

(5) Aripuanã Project

Mineral Reserves have an effective date as of September 30, 2020.
The qualified person for the Mineral Reserves estimate is Jason J. Cox, P.Eng., a Roscoe Postle Associates Inc. (now a part of SLR Consulting Ltd), employee.
Mineral Reserves are reported within engineered stope outlines assuming the following underground mining methods: Longitudinal longhole retreat (bench stoping) and Transverse longhole mining (VRM). Dilution and mining recovery are considered.
Mineral Reserves are estimated at a break-even cut-off NSR value of US$45.00/t processed. Some incremental material with values between US$40/t and US$45/t was included.
Mineral Reserves are estimated using average long term metal prices of Zn: US$2,494.90/t (US$1.13/lb); Pb: US$1,956.00/t (US$0.89/lb); Cu: US$6,457.90/t (US$2.93/lb); Ag: US$16.85/oz and Au: US$ 1,538/oz.
A minimum mining width of 4.0 m was applied.

Mineral Resources

The following table shows our estimates of Mineral Resources (exclusive of Mineral Reserves) prepared with an effective date of December 31, 2020 (unless otherwise indicated below) and in accordance with the 2014 CIM Definition Standards, whose definitions are incorporated by reference in NI 43-101, for operation mines.

	Ownership Interest[1] (%)	Class	Tonnage	Grade					Contained Metal				
				Zinc	Copper	Silver	Lead	Gold	Zinc	Copper	Silver	Lead	Gold
			(Mt)	(%)	(%)	(g/t)	(%)	(g/t)	(kt)	(kt)	(koz)	(kt)	(koz)
Cerro Lindo Mine[2]	80.16%	Measured	4.40	2.00	0.67	19.6	0.20	–	87.8	29.4	2,774	8.9	–
		Indicated	3.46	1.37	0.45	25.0	0.25	–	47.3	15.5	2,776	8.8	–
		Subtotal	**7.86**	**1.72**	**0.57**	**22.0**	**0.22**	–	**135.1**	**44.9**	**5,550**	**17.6**	–
		Inferred	8.71	1.28	0.33	31.2	0.35	–	111.1	29.1	8,748	30.6	–
Vazante Mine[3]	100.00%	Measured	3.40	6.91	–	8.4	0.18	–	235.1	–	918	6.2	–
		Indicated	2.88	6.84	–	5.6	0.14	–	197.3	–	523	4.0	–
		Subtotal	**6.28**	**6.88**	–	**7.1**	**0.16**	–	**432.3**	–	**1,441**	**10.2**	–
		Inferred	13.85	6.86	–	9.5	0.18	–	950.2	–	4,216	25.6	–
El Porvenir Mine[4]	80.16%	Measured	0.23	2.59	0.23	63.5	0.99	–	6.0	0.5	471	2.3	–
		Indicated	1.33	2.93	0.20	63.3	0.89	–	39.0	2.6	2,715	11.9	–
		Subtotal	**1.56**	**2.87**	**0.20**	**63.4**	**0.91**	–	**45.0**	**3.2**	**3,186**	**14.2**	–
		Inferred	8.47	3.60	0.23	78.4	0.95	–	305.0	19.8	21,345	80.8	–
Atacocha Mine (Underground)[5]	72.94%	Measured	3.47	4.83	–	100.0	1.97	–	167.2	–	11,141	68.4	–
		Indicated	4.04	4.13	–	73.4	1.39	–	166.8	–	9,527	56.0	–
		Subtotal	**7.50**	**4.45**	–	**85.7**	**1.66**	–	**334.1**	–	**20,669**	**124.3**	–
		Inferred	7.71	4.45	–	81.6	1.26	–	342.8	–	20,236	97.2	–
Atacocha Mine Open Pit)[6]	72.94%	Measured	4.34	1.17	–	30.0	0.87	0.22	50.6	–	4,191	37.7	31.2
		Indicated	5.53	1.03	–	30.0	0.89	0.21	57.2	–	5,336	49.4	36.7
		Subtotal	**9.87**	**1.09**	–	**30.0**	**0.88**	**0.21**	**107.9**	–	**9,527**	**87.2**	**67.8**
		Inferred	1.31	0.97	–	30.5	0.83	0.26	12.8	–	1,291	10.9	10.9
Morro Agudo Mine[7]	100.00%	Measured	–	–	–	–	–	–	–	–	–	–	–
		Indicated	17.28	3.25	–	–	0.64	–	561.7	–	–	111.1	–
		Subtotal	**17.28**	**3.25**	–	–	**0.64**	–	**561.7**	–	–	**111.1**	–
		Inferred	4.70	3.27	–	–	0.52	–	154.0	–	–	24.3	–
Total Zinc Mines		**Measured**	**15.84**	**3.45**	**0.19**	**38.3**	**0.78**	**0.06**	**546.7**	**29.9**	**19,496**	**123.4**	**31.2**
		Indicated	**34.52**	**3.10**	**0.05**	**18.8**	**0.70**	**0.03**	**1,069.4**	**18.2**	**20,877**	**241.2**	**36.7**
		Total	**50.35**	**3.21**	**0.10**	**24.9**	**0.72**	**0.04**	**1,616.1**	**48.1**	**40,373**	**364.6**	**67.9**
		Inferred	**44.75**	**4.19**	**0.11**	**38.8**	**0.60**	**0.01**	**1,875.9**	**48.9**	**55,836**	**269.3**	**10.9**

The following table shows our estimates of Mineral Resources (exclusive of Mineral Reserves) prepared with an effective date of December 31, 2020 (unless otherwise indicated below) and in accordance with the 2014 CIM Definition Standards, whose definitions are incorporated by reference in NI 43-101, for the zinc exploration projects.

	Ownership Interest[(1)] (%)	Class	Tonnage (Mt)	Grade Zinc (%)	Copper (%)	Silver (g/t)	Lead (%)	Gold (g/t)	Contained Metal Zinc (kt)	Copper (kt)	Silver (koz)	Lead (kt)	Gold (koz)
Aripuanã Project[(8)]	100.00%	Measured	2.92	2.50	0.38	29.8	0.93	0.29	72.9	11.1	2,795	27.3	27.4
		Indicated	5.17	1.86	0.27	18.2	0.63	0.43	96.3	13.9	3,021	32.4	71.0
		Subtotal	**8.09**	**2.09**	**0.31**	**22.4**	**0.74**	**0.38**	**169.2**	**25.1**	**5,816**	**59.7**	**98.4**
		Inferred	39.45	3.31	0.33	33.8	1.22	0.58	1,306.6	131.3	42,906	482.1	736.5
Shalipayco Project[(9)]	60.12%	Measured	3.78	4.18	—	28.9	0.46	—	158.0	—	3,512	17.4	—
		Indicated	5.69	4.61	—	32.6	0.50	—	262.3	—	5,955	28.5	—
		Subtotal	**9.47**	**4.44**	**—**	**31.1**	**0.48**	**—**	**420.3**	**—**	**9,467**	**45.8**	**—**
		Inferred	32.38	4.13	—	31.1	0.47	—	1,337.3	—	32,345	152.2	—
Hilarión Project[(10)]	74.87%	Measured	24.73	3.43	—	32.8	0.72	—	847.2	—	26,107	177.3	—
		Indicated	34.23	3.61	—	25.7	0.58	—	1,237.0	—	28,326	197.7	—
		Subtotal	**58.96**	**3.53**	**—**	**28.7**	**0.64**	**—**	**2,084.1**	**—**	**54,433**	**374.9**	**—**
		Inferred	25.34	3.52	—	28.4	0.69	—	891.2	—	23,144	174.3	—
Florida Canyon Project[(11)]	48.90%	Measured	0.81	11.32	—	15.4	1.40	—	91.7	—	402	11.3	—
		Indicated	1.63	10.28	—	14.9	1.31	—	167.6	—	779	21.4	—
		Subtotal	**2.44**	**10.63**	**—**	**15.1**	**1.34**	**—**	**259.4**	**—**	**1,181**	**32.7**	**—**
		Inferred	14.86	9.63	—	11.3	1.26	—	1,431.0	—	5,394	187.2	—
Caçapava do Sul Project[(12)]	56.00%	Measured	4.90	1.52	—	10.0	2.11	—	74.5	—	1,575	103.4	—
		Indicated	8.11	1.08	0.08	27.0	1.89	—	87.6	6.5	7,040	153.3	—
		Subtotal	**13.01**	**1.24**	**0.05**	**20.6**	**1.97**	**—**	**161.3**	**6.5**	**8,612**	**256.3**	**—**
		Inferred	13.25	0.86	0.12	21.0	1.94	—	114.0	15.9	8,946	257.1	—
Total Zinc Projects		**Measured**	**37.14**	**3.35**	**0.03**	**28.8**	**0.91**	**0.02**	**1,244.3**	**11.1**	**34,391**	**336.7**	**27.4**
		Indicated	**54.83**	**3.38**	**0.04**	**25.6**	**0.79**	**0.04**	**1,850.8**	**20.4**	**45,121**	**433.3**	**71.0**
		Total	**91.97**	**3.37**	**0.03**	**26.9**	**0.84**	**0.03**	**3,094.3**	**31.6**	**79,509**	**769.4**	**98.4**
		Inferred	**125.28**	**4.06**	**0.12**	**28.0**	**1.00**	**0.18**	**5,080.1**	**147.2**	**112,735**	**1,252.9**	**736.5**

The following table shows our estimates of Mineral Resources prepared with an effective date of December 31, 2020 (unless otherwise indicated below) and in accordance with the 2014 CIM Definition Standards, whose definitions are incorporated by reference in NI 43-101, for the copper exploration projects.

	Ownership Interest[(1)] (%)	Class	Tonnage (Mt)	Grade Zinc (%)	Copper (%)	Silver (g/t)	Lead (%)	Gold (g/t)	Contained Metal Zinc (kt)	Copper (kt)	Silver (koz)	Lead (kt)	Gold (koz)
Magistral Project[(13)]	80.16%	Measured	84.24	—	0.56	3.0	—	—	—	471.7	8,017	—	—
		Indicated	121.08	—	0.50	3.0	—	—	—	605.4	11,523	—	—
		Subtotal	**205.32**	—	**0.52**	**3.0**	—	—	—	**1,067.7**	**19,540**	—	—
		Inferred	50.57	—	0.43	2.6	—	—	—	217.5	4,178	—	—
Pukaqaqa Project[(14)]	80.16%	Measured	107.30	—	0.43	—	—	—	—	461.4	—	—	—
		Indicated	201.70	—	0.39	—	—	—	—	786.6	—	—	—
		Subtotal	**309.00**	—	**0.41**	—	—	—	—	**1,266.9**	—	—	—
		Inferred	40.10	—	0.34	—	—	—	—	136.3	—	—	—
Total		**Measured**	**244.52**	**0.73**	**0.40**	**7.9**	**0.19**	**0.01**	**1,791.0**	**974.2**	**61,906**	**460.1**	**59**
		Indicated	**412.12**	**0.71**	**0.35**	**5.9**	**0.16**	**0.01**	**2,920.1**	**1,430.6**	**77,520**	**674.4**	**108**
		Total	**656.64**	**0.72**	**0.37**	**6.6**	**0.17**	**0.01**	**4,711.2**	**2,404.8**	**139,425**	**1,134.4**	**166**
		Inferred	**260.71**	**2.67**	**0.21**	**20.6**	**0.58**	**0.09**	**6,956.0**	**549.9**	**172,749**	**1,522.2**	**747**

Notes: The estimation of mineral resources involves assumptions as to future commodity prices and as to technical mining matters. Numbers and totals may not sum due to rounding. Mineral Resources are reported exclusive of those Mineral Resources that were converted to Mineral Reserves, and Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

(1) The tonnage and content amounts presented in this table have not been adjusted to reflect our ownership interest. The information presented in this table includes 100% of the mineral resource estimates of our consolidated subsidiaries and of our joint ventures, certain of which are not wholly-owned, as set out in this ownership interests column.

(2) **Cerro Lindo Mine**

The Qualified Person for the Mineral Resources estimate is Rosmery J. Cárdenas Barzola, P.Eng., MAusIMM CP (Geo), a Roscoe Postle Associates Inc. (now a part of SLR Consulting Ltd), employee.
Mineral Resources are estimated at a NSR cut-off value of US$33.56/t for SLS and US$49.90/t for C&F.
Forecast long term metal prices used for the NSR calculation are: Zn: US$2,869.14/t (US$1.30/lb); Pb: US$ 2,249.40/t (US$1.02/lb); Cu: US$7,426.59/t (US$3.37/lb), and Ag: US$19.38/oz, and metallurgical recoveries are based on recovery curves derived from historical processing data.
A minimum mining width of 5.0 m and 4.0 m was used to create SLS and C&F resource shapes respectively.
Bulk density varies depending on mineralization domain.

(3) **Vazante Mine**

The Qualified Person for the Mineral Resources estimate is Reno Pressacco, P.Geo., a Roscoe Postle Associates Inc. (now a part of SLR Consulting Ltd) employee.
Mineral Resources are estimated at various NSR cut-off values appropriate to the mineralization style.

Forecast long term metal prices used for the NSR calculation are: Zn: US$2,869.14/t (US$1.30/lb); Pb: US$ 2,249.40/t (US$1.02/lb) and Ag: US$19.38/oz, and metallurgical recoveries are based on recovery curves derived from historical processing data. An average long-tern US$/BRL exchange rate of 4.84 was used.
Mineral Resources are reported within underground mining shapes with minimum mining width of 3.0 m for willemite mineralization.
Density was assigned based on rock type.

(4) **El Porvenir Mine**

The Qualified Person for the Mineral Resources estimate is Rosmery J. Cárdenas Barzola, P.Eng., MAusIMM CP (Geo), a Roscoe Postle Associates Inc. (now a part of SLR Consulting Ltd), employee.
Mineral Resources are estimated at NSR cut-off values of US$60.06/t for the Upper Zone, US$61.09/t for the Intermediate Zone, US$59.75/t for the Lower Zone, and US$63.37/t for the Mine Deepening Zone for C&F resource shapes.
Mineral Resources are estimated using an average long-term metal prices of Zn: US$2,869.14/t (US$1.30/lb); Pb: US$2,249.40/t (US$1.02/lb); Cu: US$7,426.59/t (US$3.37/lb); and Ag: US$19.38/oz, and metallurgical recoveries are based on recovery curves derived from historical processing data.
A minimum mining width of 4.0 m was used for C&F resource stopes.
Bulk density varies depending on mineralization domain.

(5) **Atacocha Mine (Underground)**

The qualified person for the mineral resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo , a Nexa Resources employee.
Mineral resources are estimated at a NSR cut-off value of US$ 55.05/t for C&F mining method.
Mineral resources are estimated using an average long-term metal prices of Zn: US$2,869.14/t (US$1.30/lb); Pb: US$2,249.40/t (US$1.02/lb); and Ag: US$19.38/oz, and metallurgical recoveries are based on recovery curves derived from historical processing data.
A minimum mining width of 4.0 m was used for C&F resource stopes.

(6) **Atacocha Mine (Open Pit)**

The Qualified Person for the mineral resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee.
Mineral Resources are reported within optimized pitshell.
Mineral Resources are estimated at a NSR cut-off of US$19.46/t processed.
Mineral Resources are estimated using an average long-term metal prices of Zn: US$2,869.14/t (US$1.30/lb); Pb: US$2,249.40/t (US$1.02/lb); Au: US$1,768/oz; and Ag: US$19.38/oz, and metallurgical recoveries are based on recovery curves derived from historical processing data.
Density was assigned based on rock type.

(7) **Morro Agudo Mine**

The Qualified Person for the Mineral Resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo , a Nexa Resources employee.
Mineral Resources are reported within underground mining shapes.
The NSR cut-offs are calculated based on the LOM costs for each mine. Morro Agudo: US$ 37.95/t and Bonsucesso: US$ 46.22/t.
Mineral Resources are estimated using an average long-term metal prices of Zn: US$2,869.14/t (US$1.30/lb) and Pb: US$2,249.40/t (US$1.02/lb); and metallurgical recoveries are based on historical processing data.
A minimum thickness of 3.0 m was applied for Bonsucesso and 4.5 m for Morro Agudo underground.
Density was assigned based on rock type.

(8) **Aripuanã Project**

The Qualified Person for the Mineral Resources estimate is Sean Horan, P. Geo., a Roscoe Postle Associates Inc. (now a part of SLR Consulting Ltd), employee.

Mineral Resources have effective date as of September 30, 2020.

Mineral Resources are reported using a US$45/t cut-off value for transverse longhole mining and longitudinal longhole retreat areas and US$55/t cut-off value for C&F areas.

Forecast long term metal prices used for the NSR calculation are: Zn: US$2,869/t (US$1.30/lb); Pb: US$ 2,249/t (US$1.02/lb); Cu: US$7,427/t (US$3.37/lb); Au: US$1,768/oz, and Ag: US$19.38/oz.

(9) **Shalipayco Project**

The Qualified Person for the Mineral Resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee.

Mineral Resources have an effective date as of December 31, 2018.

Mineral Resources are estimated at an NSR cut-off value of US$45 with metallurgical recovery of 88.0% for zinc and 77.5% for lead.

Mineral Resources are estimated using a long-term zinc price of US$3,034.28/t, lead price of US$2,529.54/t and silver price of US$21.58/oz.

A minimum mining width of 2.0 m was used.

(10) **Hilarion Project**

The Qualified Person for the Mineral Resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee.

Mineral Resources have an effective date as of December 31,2019.

Mineral Resources are estimated at a NSR cut-off value of US$35.00/t for SLS resource shapes for Hilarión deposit, and an NSR cut-off value of US$45.00/t for SLS resource shapes and US$50.00/t for Room and Pillar (R&P) resource shapes for El Padrino deposit.

Mineral Resources are estimated at average long-term metal prices of Zn: US$2,956.65/t (US$1.34/lb); Pb: US$2,303.14/t (US$1.04/lb); Cu: US$7,523.30/t (US$3.41/lb); and Ag: US$19.61/oz.

A minimum mining width of 3.0 m was used for Hilarión and El Padrino.

Bulk density varies depending on mineralization domain.

(11) **Florida Canyon Project**

The Qualified Person for the mineral resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee.

Mineral Resources have an effective date as of October 30, 2020.

Mineral Resources are reported using a cut-off values US$41.40/t NSR for SLS, US$42.93/t for C&F and US$40.61/t for R&P mine areas.

Forecast long term metal prices used for the NSR calculation are: Zn: US$2,816t (US$1.27/lb); Pb: US$ 2,249/t (US$1.02/lb) and Ag: US$19.40/oz.

(12) **Caçapava do Sul Project**

The Qualified Person for the Mineral Resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee.

Mineral Resources have effective date as March 17, 2017.

Mineral Resources are reported at a NSR cut-off value of US$13.25/t.

NSR metal price assumptions: Zn US$1.26/lb; Pb US$1.01/lb; Cu US$3.08/lb; and Ag US$21.78/oz.

A minimum thickness was not applied.

Mineral Resources are constrained by preliminary pit shells.

(13) **Magistral Project**

The Qualified Person for the Mineral Resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee.

Mineral Resources have an effective date as of June 30, 2017.

Mineral Resources are reported using a 0.2% Cu cut-off grade for the material inside the pit shell design.
Mineral Resources are estimated based on metal prices of US$2.68 per lb Cu and US$18.94 per ounce Ag.
Density was assigned based on rock type.

(14) **Pukaqaqa Project**

The Qualified Person for the Mineral Resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee.
Mineral Resources have an effective date as of July 31, 2017.
Mineral Resources were reported inside a preliminary Whittle pit using a 0.20% Cu block cut-off grade.
Mineral Resources are estimated using a copper price of US$2.59/lb and an exchange rate of US$0.80 to C$1.00.

SUMMARY OF MATERIAL MINERAL PROPERTIES

Mines

Cerro Lindo

*The most recent NI 43-101 technical report with respect to Cerro Lindo is the technical report titled "Technical Report on the Cerro Lindo Mine, Department of Ica, Peru" with an effective date of December 31, 2020 (the "**Cerro Lindo Technical Report**") prepared by RPA, now a part of SLR Consulting Ltd., in particular by: Rosmery J. Cardenas Barzola, P.Eng., Normand Lecuyer, P.Eng., Lance Engelbrecht, P.Eng., and Luis Vasquez, M.Sc., P.Eng. The Cerro Lindo Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com.*

Project Description, Location and Access

Project Setting

The Cerro Lindo Mine is located in the Chavín District, Chincha Province, Ica Department of Perú, approximately 268 km southeast of Lima and 60 km from the coast. The current access from Lima is via the paved Pan American Highway south to Chincha (208 km) and then via an unpaved road up the Topará River valley to the mine site (61 km). Internal roadways connect the various mine-site components. The approximate coordinates of the mine are 392,780m E and 8,554,165m N, using the UTM_WGS84 datum and the project site is located at an average elevation of 2,000 MASL.

Site Location Plan

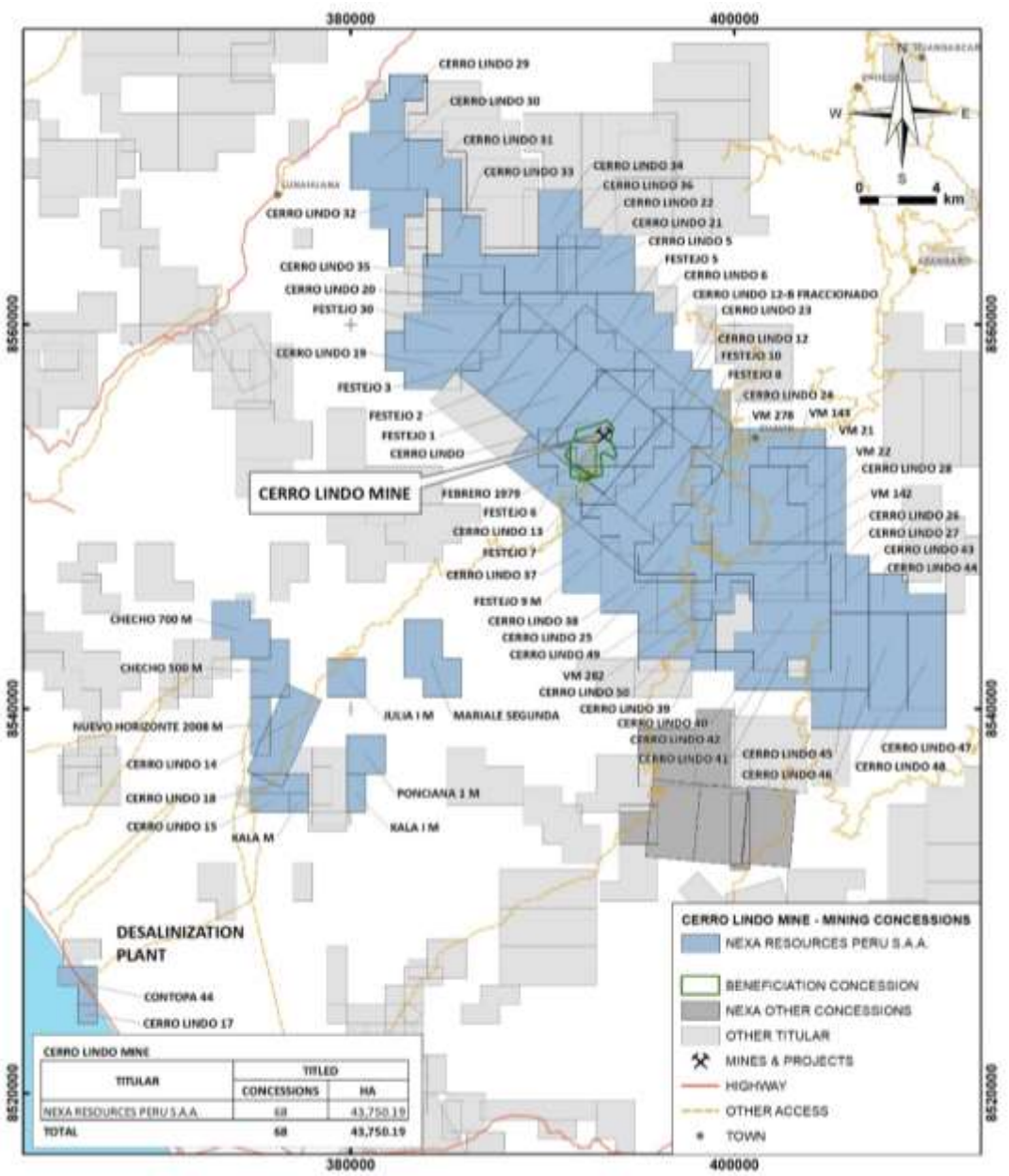
Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

All concessions are held by Nexa Resources Peru S.A.A. (Nexa Peru), a wholly-owned subsidiary of Nexa. As of December 31, 2020, Cerro Lindo consists of 68 mineral concessions covering an area of 43,750.19 ha, and one beneficiation concession covering an area of 518.78 ha. The concessions are located in the districts of Chavin, Lunahuana, San Juan de Yanac, Grocio Prado, Pueblo Nuevo and Pacaran, provinces of Chincha and Cañete, departments of Lima and Ica in Peru.

Nexa Peru currently holds surface rights or easements for the following infrastructure at Cerro Lindo: mine site, access road, power transmission line, and water pipeline for the mine, old and new power transmission lines to Cerro Lindo, desalination plant, water process plant, and the water pipeline from the desalination plant to the mine site. There is sufficient suitable land available within the mineral tenure held by Nexa Peru for tailings disposal, mine waste disposal and installations such as the process plant and related mine infrastructure.

As of December 31, 2020, Nexa Peru has a total of six water licenses, one for use of seawater, and the remaining five for ground water extraction. Cerro Lindo is not currently subject to third-party royalties.

Regional Mineral Tenure Plan



History

Artisanal-style mining of outcropping barite bodies for use by the oil industry began in the early 1960s. The Cerro Lindo deposit was discovered in 1967, during a colour anomaly reconnaissance program. Compañía Minera – Milpo S.A.A. (Milpo), a predecessor company to Nexa Peru, acquired the property in 1984. From 1984 to 2011, Milpo carried out geological mapping, geophysical surveys, geochemical sampling, drilling, and trenching over the property. In 2002, a feasibility study was completed and construction started in 2006. The Cerro Lindo Mine commenced production in 2007.

Since 2007, the Cerro Lindo Mine has produced a total of approximately 66.4 Mt of ore. The last three years mine production is shown in the table below:

Mine Production from Cerro Lindo (2018 - 2020)

	Unit	2018	2019	2020
Tonnage	Mt	6.91	6.80	5.48
Zn Grade	%	2.07	2.05	1.93
Cu Grade	%	0.64	0.64	0.59
Pb Grade	%	0.25	0.25	0.29
Ag Grade	oz/t	0.69	0.69	0.78
Ag Grade	g/t	21.42	21.60	24.14

Production in 2020 was significantly lower than in 2019 due to the effects of the COVID-19 pandemic and associated production interruptions. On March 15, 2020, the Peruvian Government declared a national emergency and imposed operating business restrictions including on the mining sector. The quarantine period was initially expected to last until the end of March 2020 but was subsequently extended up to May 10, 2020. In light of the imposed restrictions, Nexa suspended production at Cerro Lindo. During this period, mining activities were limited to critical operations with a minimum workforce to ensure appropriate maintenance, safety, and security. On May 6, 2020, the Peruvian Government announced the conditions for the resumption of operations for different sectors, including mining operations above 5,000 tpd. As a result, Cerro Lindo operations, which were suspended on March 18, 2020, restarted production on May 11, 2020, following the end of the quarantine period. After the resumption of operations, Cerro Lindo ramped up production to pre-pandemic levels by the end of 3Q20.

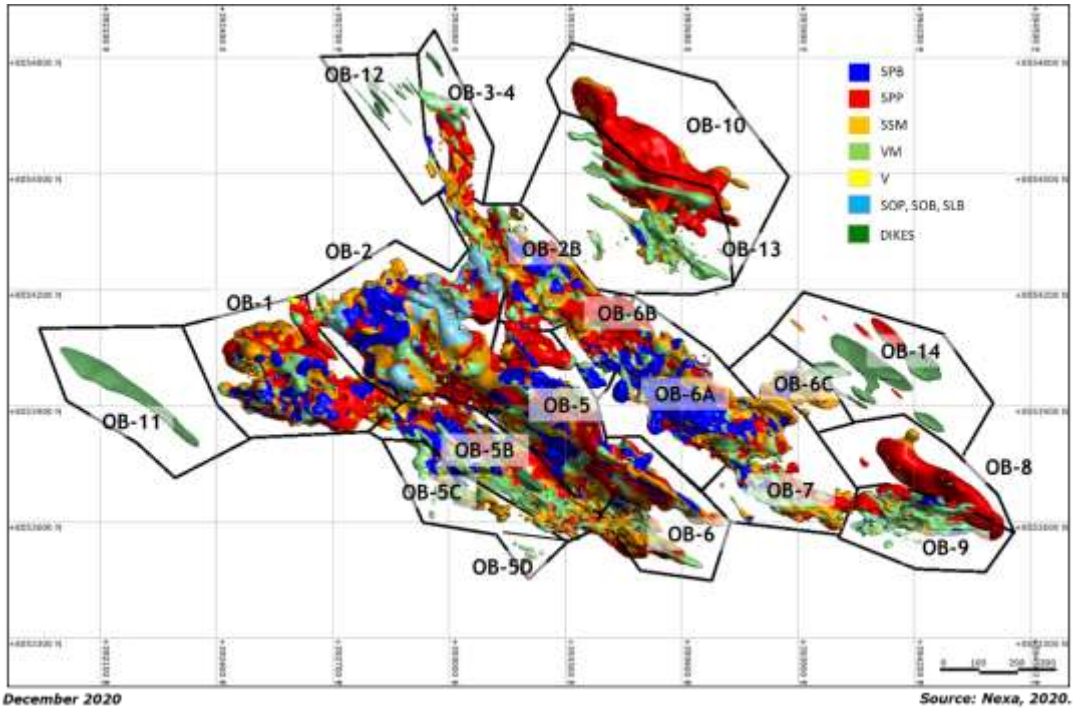
Geological Setting, Mineralization and Deposit Types

The Cerro Lindo deposit is located in a 30 km by 10 km northwest trending belt of marine volcano-sedimentary rocks of the Middle Albian to Senonian (mid-Cretaceous) Huaranguillo Formation, belonging to the Casma Group, which is located within Tertiary intrusions of the Coastal Batholith. The Huaranguillo Formation fills the Canete volcano-sedimentary basin, one of the several similar basins that form the Casma Metallotect at the western side of the Andean Cordillera Occidental. In addition to Cerro Lindo, the Casma Metallotect hosts a number of important volcanogenic massive sulphide (VMS) deposits, including Tambogrande, Perubar, Potrobayo, Totoral, Maria Teresa, Aurora Augusta, and Palma.

The Cerro Lindo deposit is a Kuroko-type VMS deposit. Mineralization is hosted in a pyroclastic unit composed of ash and lapilli-type polymictic tuffs of the Huaranguillo Formation. The deposit comprises lens-shaped, massive and stringer zones composed of pyrite, sphalerite, galena, chalcopyrite, and barite. The mineralization has characteristic zoning from zinc-rich to pyrite-rich and associated sericitic-pyritic alteration and consists of at least 10 discrete mineralized zones.

The mineralization has been divided into 19 mining production areas, which are termed OB-1, OB-2, OB-2B, OB-3-4, OB-5, OB-5B, OB-5C, OB-5D, OB-6, OB-6A, OB-6B, OB-6C, OB-7, OB-8, OB-9, OB-10, OB-11, OB-12, OB-13 and OB-14. The mineralized lenses exhibit an irregular elongated geometry, and their longest axis (nearly 500 m) has a northwest-southeast horizontal trend (azimuth 135°). The mineralized bodies are approximately 300 m thick and 100 m wide and generally dip to the southwest at 65° on average. The location of the known mineralized bodies with the mining production area shown in the figure below.

Mineralized Bodies



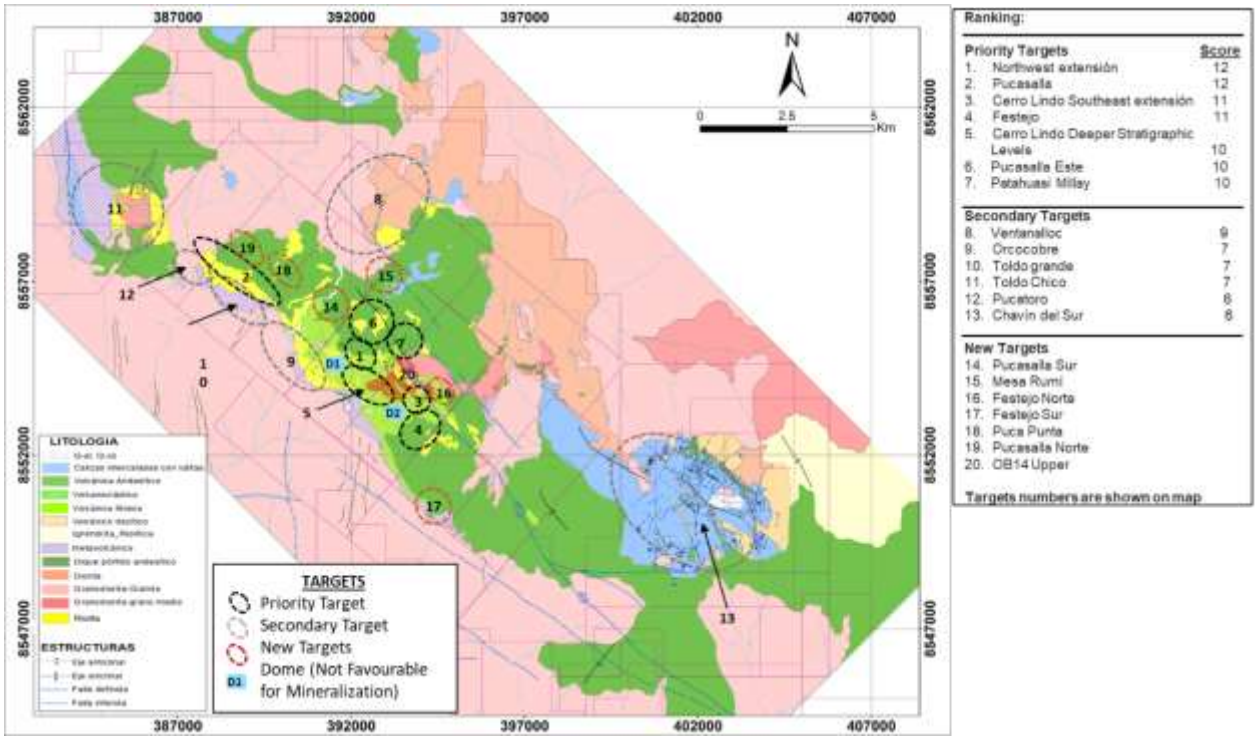
Exploration

Twenty exploration targets were identified from the integrated assessment of exploration data recorded to date. Targets have been ranked and prioritized using a variety of metrics comprising various geological attributes and modifying factors that have been customized for the mineralization styles most likely to be encountered on the property.

Exploration work was temporarily suspended from March to June 2020 due to the COVID-19 pandemic. After this period, the exploration program restarted and has been focused on the extensions of known orebodies and exploratory drilling to find new mineralized zones, primarily to the north and southeast of Cerro Lindo.

The 2020 exploration diamond drilling confirmed the continuity of OB-5B, OB-13 and, OB-14 (previously named OB-8A). Also in 2020, as a result of geophysical and geological data integration, a new regional litho-sctrutural model and a 3D geophysical model, highlighting the Cerro Lindo deposit as a conductivity and chargeability anomaly, allowed the definition of seven new targets. Interpretations and analysis of the models are continuously updated as new information is incorporated from new holes, and more discussion forums are held.

Regional Exploration Targets



In 2020, Nexa spent a total of US$4.1 million in exploration, primarily associated with diamond drilling, geochemistry analysis and geological research works. The budget for 2021 is estimated at US$7.1 million for mineral exploration activities.

The exploration activities planned for 2021 include 35,100 m of diamond core drilling focused on defining inferred mineral resources at six different targets. Work will also include an airborne geophysical VTEM survey, for all the exploration targets, 1:2,000 scale geological surface mapping for Pucasalla, Pucatoro, and Orcocobre over a total of 900 ha, and a geochemical gas sampling survey with 45 collectors, which aims to identify deeply buried mineral deposits, similar to Cerro Lindo, covered by volcanic rocks up to 300 m in depth.

Drilling

During 2020, although the drilling exploration activities were resumed along the period in which mandatory lockdown were in place due to the COVID-19 pandemic, the new social distancing measures at facilities and camps, the drilling activities restarted in mid-June and Nexa completed approximately 60.4 km of diamond drilling, divided between exploration and infill drilling. By the end of 2020, Nexa drilled 23.2 km in 62 drill holes from the exploratory program and the remaining focused in the infill drilling program. The brownfield drilling program confirmed the continuity of the northwest mineralization of OB-13 and the continuity of mineralization in the upper zones of northwest and southeast extensions of OB-5. In orebody OB-14, mineralization was confirmed between 1,800 and 1,900 mine levels showing continuity to the southeast. These bodies are located in the mineralized volcanic system and all of our newly discovered mineralization are located in the south of the Topará River.

During 2021, Nexa expects to complete a total of 35.1 km as part of its exploratory drilling program. The objective is to continue drilling towards the OB-14, OB-8, OB-9, OB-6 and OB-12 projections in order to define the continuity of the deposit and to start underground drilling at the Pucasalla Este and Patahuasi-Millay targets and the surface drilling at the Pucasalla target in March 2021.

In addition to the exploration program, the mining geology team plans to drill an additional 48 km with a goal of upgrading Inferred Mineral Resources to Indicated or Measured Resources (recategorization drilling) and

ultimately convert them into Probable Mineral Reserves or Proven Mineral Reserves, and for mine planning purposes (infill drilling).

Sampling, Analysis and Data Verification

Several sample types have been collected as part of the production cycle to form part of the database, including underground channel, longhole sampling, core sampling, density and geotechnical sampling. Drill-hole and channel sample spacing is considered adequate for the type of deposit. Sample collection and core handling are in accordance with industry standard practices.

Quality assurance (QA) consists of evidence to demonstrate that the assay data has precision and accuracy within generally accepted limits for the sampling and analytical method(s) used in order to have confidence in the resource estimation. Quality control (QC) consists of procedures used to ensure that an adequate level of quality is maintained in the process of sampling, preparing, and assaying the drill core samples. In general, QA/QC programs are designed to prevent or detect contamination and allow analytical precision and accuracy to be quantified. In addition, a QA/QC program can disclose the overall sampling – assaying variability of the sampling method itself.

At Cerro Lindo, QC samples have been inserted into the sample stream since 1996 and channel samples since 2012. The mine routinely sends in-house certified reference materials (CRMs), blanks, field (twin), coarse reject, and pulp duplicates, and external checks for analysis. Prior to Nexa's drilling campaigns, standard reference materials (SRM) were used, however, during 2017, Nexa replaced SRMs with CRMs. No SRMs or blanks were submitted during the 1999-2001 Phase 1 drilling campaign. In 2018, Nexa incorporated systematic external checks into the QA/QC program, and pulps have since been sent to external laboratories for analysis. Currently, Inspectorate Lima analyzes samples from infill drilling and Certimin and ALS Lima analyze samples from brownfield exploration drilling.

Mineral Processing and Metallurgical Testing

The current LOM plan continues to 2029. Test work on ore type, production blend and variability samples supported the plant designs, and included a full suite of comminution tests, flotation test work, and penalty element analysis.

Metallurgical parameters for the concentrator are well understood, and optimization and plant control is supported by ongoing research and development metallurgical testing on samples of ore mainly based on: hardness work index, mineral flotation kinetics, flotation reagent scheme evaluation, flotation kinetics, grind sensitivity, mineralogy and routine circuit evaluations.

Analysis of historical production shows that recoveries of Cu, Pb, and Zn are related to their head grades, while Ag recoveries to the copper and lead concentrates tend to follow the Cu and Pb head grades. Average LOM planned head grades of Cu, Pb, and Ag for the next three years are similar to those experienced from 2016 to 2020 at 0.60%, 0.21%, and 0.58 oz/t, respectively, while the planned head grades of Zn decrease steadily from 1.8% after 2020. Head grades towards the end of the LOM are anticipated to decrease, particularly those of zinc. Forecast recoveries and concentrate grades are initially in line with those of recent years, and then predicted to fall as head grades decrease.

The Cerro Lindo concentrates are relatively clean and high grade, and in general do not contain penalizable concentrations of deleterious elements. A small penalty does result from the lead and zinc in the copper concentrate, which since 2016 has contained lead and zinc in the approximate range of 4.8% to 5.6%. Silver in the feed is mostly recovered from the copper and lead concentrates, resulting in silver credits for these two concentrates.

Cerro Lindo Polymetallic Circuit, Metallurgical Performance (2018 - 2020)

	Unit	Item	2018	2019	2020
Production	tonnes		6,914,653	6,799,747	5,482,211
Mill Head Grade	g/t	Ag	21.60	21.60	21.14
	%	Cu	0.64	0.64	0.59
	%	Pb	0.25	0.25	0.29
	%	Zn	2.07	2.05	1.93
Cu Concentrate	%	Cu Recovery	86.72	86.78	85.66
	%	Cu Grade	26.32	26.06	25.95
	oz/t	Ag Grade	13.70	13.02	15.17
	%	Ag Recovery (to Cu)	42.59	40.38	39.09
Pb Concentrate	%	Pb Recovery	73.80	73.29	74.07
	%	Pb Grade	64.03	64.01	64.99
	oz/t	Ag Grade	67.61	71.48	73.60
	%	Ag Recovery (to Pb)	28.84	29.42	32.11
Zn Concentrate	%	Zn Recovery	90.92	90.51	90.16
	%	Zn Grade	58.98	58.25	57.79

Mineral Resource Estimate

The Mineral Resource estimate dated December 31, 2020 is reported using the 2014 CIM Definition Standards. The mineral resource estimate was completed using Datamine Studio RM and Leapfrog Geo software. Wireframes for geology and mineralization were constructed in Leapfrog Geo based on geology sections, assay results, lithological information, underground mapping, and structural data. Assays were capped to various levels based on exploratory data analysis and then composited to 2.5 m lengths. Wireframes were filled with blocks sub-celled at wireframe boundaries. Blocks were interpolated with grade using the ordinary kriging (OK) and inverse distance cubed (ID^3) interpolation algorithms. Block estimates were validated using industry standard validation techniques. Classification of blocks used distance-based and other criteria. The mineral resource estimate was reported using all the material within resource shapes generated in Deswik Stope Optimizer (DSO) software, satisfying the minimum mining size, continuity criteria, and using a NSR cut-off value of US$33.56/t for SLS resource shapes and US$49.90/t for C&F resource shapes. NSR cut-off values for the mineral resources are based on a zinc price of US$2,869.14/t (US$1.30/lb), a lead price of US$2,249.40/t (US$1.02/lb), a copper price of US$7,426.59/t (US$3.37/lb), and a silver price of US$19.38/oz.

Mineral Reserve Estimate

The Mineral Reserves estimate dated December 31, 2020 is reported using the 2014 CIM Definition Standards and was based on costs and modifying factors from the Cerro Lindo Mine. Mining methods include SLS for the majority of the mineral reserves, and some sill pillar recovery using C&F methods. Mineral reserves were reported using an NSR cut-off values of US$33.56/t processed and US$49.90/t processed for SLS and C&F, respectively. A number of incremental stopes (down to US$26.16/t NSR value) are included in the estimate, a minimum mining width of 5.0 and 4.0 meters, considering SLS and C&F methods respectively and, inclusive of recovery losses and dilution. The NSR cut-off value is determined using the mineral reserve metal prices, metal recoveries, concentrate transport, treatment, and refining costs, as well as mine operating cost. Metal prices used for mineral reserves are based on consensus, long term (ten years) forecastsand are in line with independent forecasts from banks, financial institutions, and other sources. Mineral reserves are estimated using average long-term metal prices of zinc: US$2,494.90/t (US$1.13/lb); lead: US$1,956.00/t (US$0.89 /lb); copper: US$6,457.90/t (US$2.93/lb) and silver: US$16.85/oz with all costs in dollars.

Mining Operations

Mining Methods

Cerro Lindo has been operating since July 2007, recently at rates exceeding 7 Mtpa. The main mining method utilized is sub-level longhole stoping with sub-level intervals of up to 30 m in height. The mine is mechanized, using rubber-tired equipment for all development and production operations. Mining is carried out in ten separate orebodies, using large longhole stoping methods, in a primary/secondary/tertiary sequence. Stopes are backfilled with a low-cement content paste fill made from flotation tailings.

The highest operating level is the 1,970 m level, the lowest operating level is the 1,550 m level, and the ultimate bottom level is planned to be the 1,490 m level. Mine access is through 15 portals servicing adits, drifts, and declines. The majority of the ore is delivered to grizzlies on the 1,830 m level that feed the jaw crusher installed on the 1,820 m level. Crushed ore is delivered to the surface stockpile via inclined conveyor through a portal at the 1,940 m level. From the surface stockpile, ore is delivered to the concentrator via a system of inclined overland conveyors.

The Cerro Lindo Mine does not produce any significant quantities of water and exploration drilling to date has not intersected any water-bearing structures that could introduce major inflows into the mine.

Processing and Recovery Operations

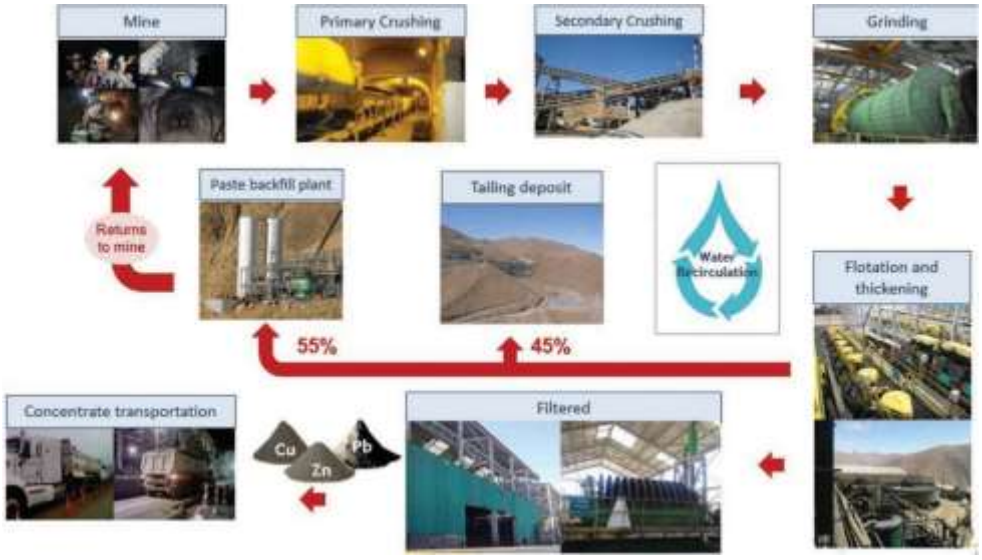
The Cerro Lindo processing plant is located on a ridge adjacent to the mine and is at an altitude of 2,100 to 2,200 MASL. The plant commenced operations in 2007 with a processing capacity of 5,000 tpd, however, has since been expanded to a name-plate capacity of 21,000 tpd. Processing consists of conventional crushing, grinding, and flotation to produce separate copper, lead, and zinc concentrates. The tailings are thickened and filtered for use as backfill or trucked to the dry stack tailings storage facility.

Filtered lead, copper and zinc concentrates are transported by road to the Port of Callao for sale in the case of lead and copper concentrates, and to Nexa Cajamarquilla's zinc refinery for the treatment of zinc concentrate.

Final tailings consist of zinc scavenger tails. The tails are directed to the tails thickener. The thickened underflow is divided, with a portion going to the paste-backfill plant, and the remainder going to the dry-stack tailings filtration plant. The split ratio between tailings to paste backfill and dry stack tailings is approximately 50:50.

Water is supplied from a desalination plant located at the coast, with a production capacity of 60 L/s, and is pumped 60 km to the mine site. This is sufficient to supply the requirements for make-up water and potable water (treated at the mine site). Most of the processed water required is recovered from tailings thickening and filtration and is returned to the three 3,600 m^3 water storage tanks. Approximately 90% of total tailings water is recovered and recycled to the plant as process water.

Cerro Lindo Simplified Overall Process Material Flow Diagram



Infrastructure, Permitting and Compliance Activities

Project Infrastructure

All key infrastructure required for mining and processing operations is constructed. This includes the underground mine, access roads, powerlines, water pipelines, desalination plant, offices and warehouses, accommodations, process plant/concentrator, conveyor systems, waste rock facilities, temporary ore stockpiles, paste-fill plant, and the dry-stack tailings storage facilities.

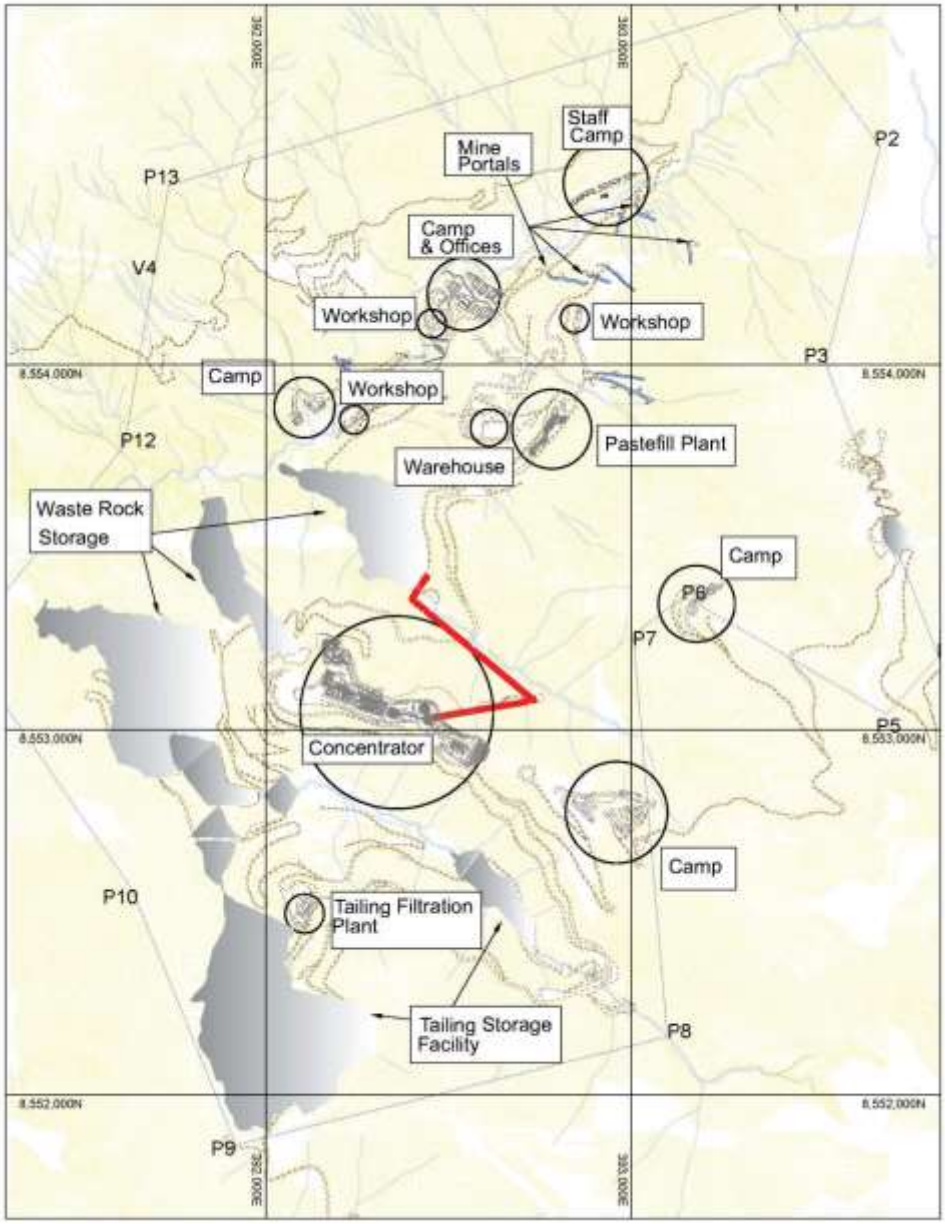
Access to the mine site is via paved highway to Chincha (180 km from Lima), followed by a 60 km unpaved road. The unpaved road covers a significant gain in elevation and has a number of narrow sections that restrict speeds for heavy haulage. Nexa maintains rest stops at wide areas and enforces safe speed limits on employees and contractors.

Electrical power is provided to the mine is supplied via the National Grid. The overall site demand to sustain a production rate of 20,800 tpd is approximately 36.5 MW. The mine has a backup generator to support the main ventilation system.

There is no fresh water withdrawal from natural water bodies at the Cerro Lindo Mine site, and the mine obtains very little water from the underground mine workings. Approximately 40% of total demand is extracted from five local groundwater wells/boreholes. The remaining 60% of industrial fresh water is supplied from a desalination plant located on the coast. The pumping system from the desalination plant is divided into three stages to transport the water approximately 45 km to an elevation of 2,200 m. Three pump stations are located along the six-inch pipeline route from the desalination plant to the mine site.

Service water is primarily used underground for drilling water, cooling, dust control, and concrete/shotcrete service. Service water is provided from a central plant-wide source and distributed underground via a system of pipelines to all working areas. Service water is collected and pumped to the surface where it is treated for re-use. The following figure is a site layout plan.

Site Layout Plan of Infrastructure



Environmental, Permitting and Social Considerations

The most recent modification of the Environmental Impact Assessment was approved by the Peruvian authorities in 2018 ("**2018 EIA**")_to grant authorization for a maximum production rate of 22,500 tpd. Cerro Lindo has an EMP, which addresses mitigation measures and monitoring programs for industrial and domestic effluent discharges, surface water quality and sediment, groundwater quality, surface flow, air quality (particulate matter and gas emissions), non ionizing radiation, noise, vibrations, soil quality, terrestrial and aquatic flora, and terrestrial and aquatic fauna. The most recent update of the environment plan was presented in the 2018 EIA.

Tailings from the process plant are thickened and then further dewatered in either the paste plant to be deposited underground, or to the filter plant to the south of the processing plant to be filtered and subsequently placed in two dry-stack storage facilities, Pahuaypite 1 and Pahuaypite 2. As much as 90% of the process water from dewatered tailings is recycled with industrial fresh water being supplied from a desalination plant at the coast to meet site and process water make-up requirements. The mine site operates with a zero-water discharge commitment.

A formal Mine Closure Plan was prepared in 2009 for the mine components within the context of the Peruvian legislation and has subsequently been amended or updated four times. The Mine Closure Plan addresses temporary, progressive and final closure actions, and post-closure inspection and monitoring.

Nexa adheres to international standards to provide best practices for public reporting on economic, environmental, and social impacts in order to help Nexa and its shareholders and stakeholders understand their corporate contribution to sustainable development. The Company has an integrated management system that establishes the guidelines that govern the conduct of the businesses, with a focus on quality management of environmental, health, and workplace safety and social responsibility issues. In addition, the Company follows applicable environmental laws and regulations pertaining to its business in each country where it operates.

Cerro Lindo holds a number of permits in support of the current operations. The permits are Directorial Resolutions issued by the Peruvian authorities upon approval of mining environmental management instruments filed by the mining companies. Nexa maintains an up to date record of the legal permits obtained to date. Nexa uses an ISO 14001 compliant environmental management system at Cerro Lindo to support environmental management, monitoring and compliance with applicable regulatory requirements during operation.

Vazante

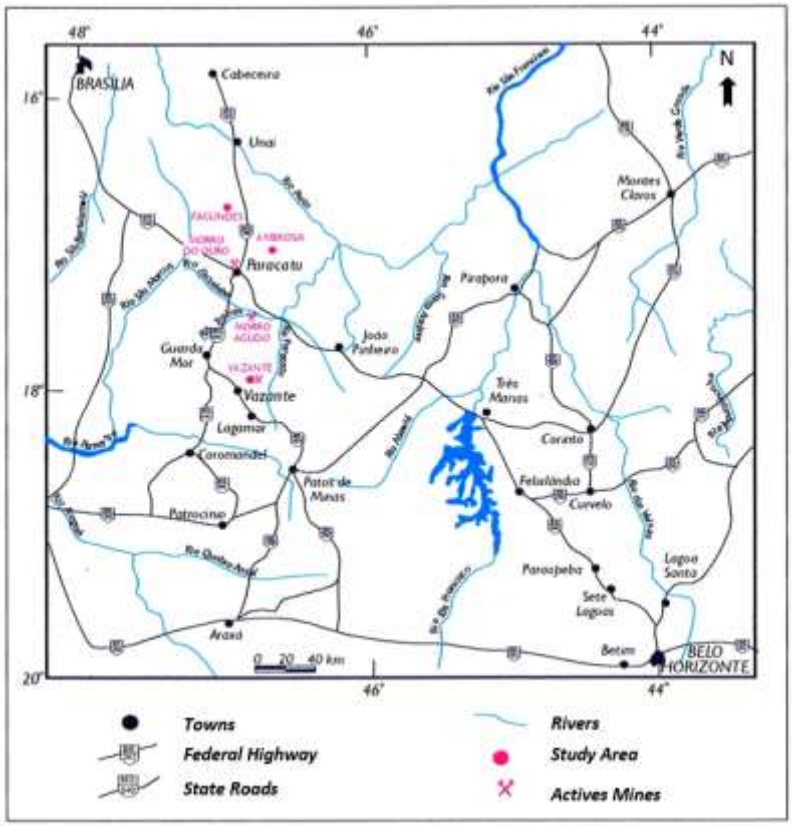
*The most recent NI 43-101 technical report with respect to Vazante is the technical report titled "Vazante Polymetallic Operations, Minas Gerais State, Brazil, NI 43-101 Technical Report on Operations" with an effective date of December 31, 2020 (the "**Vazante Technical Report**") prepared by RPA (now a part of SLR Consulting Ltd), and in particular: Reno Pressaco ,M.Sc. (A) P.Geo., Normand L. Lecuyer, P.Eng.,ing., Lance Engelbrecht, P.Eng., and Luis Vasquez, M.Sc.,P.Eng. The Vazante Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com.*

Project Description, Location and Access

Project Setting

The Vazante Operation is located in the western portion of the state of Minas Gerais, Brazil at a latitude of approximately 17 57' 33" S and a longitude of approximately 46° 49' 42" W, within Zone 23S of the Universal Transverse Mercator coordinate system (Corrego Alegre Datum) at approximately 306,000m E and 8,016,000m N. The Vazante Operation is located approximately 8.5 km east of the town of Vazante, 253 km southeast of Brasilia and 370 km northwest of Belo Horizonte.

Project Access Plan



Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

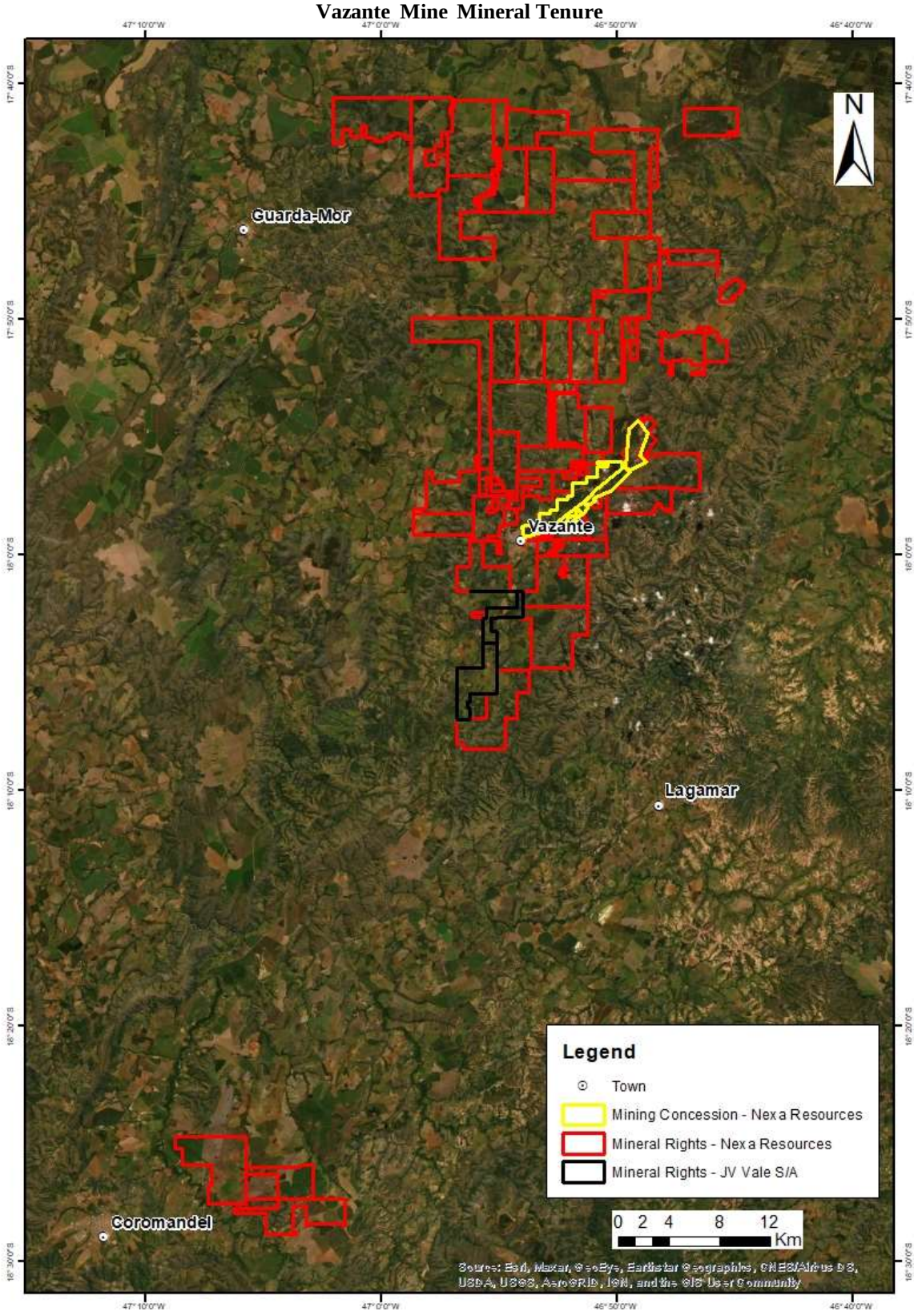
Nexa Recursos Minerais S.A. ("**Nexa Brazil**") and Mineração Soledade Ltda, a subsidiary of Nexa Brazil, own the Vazante project. There are two mineral rights held by Vale S.A., which are subject to a joint venture agreement. The mineral rights are divided into core tenements, where the known mineral deposits are located and mining operations are occurring, and the surrounding exploration areas.

The Company holds two mining concessions and one group of mine concessions in the core area that have a total area of 2.091,10 hectares. The group of mine concessions comprises six mining concessions, totalling an area of 819.54 hectares. The mineral resources and mineral reserves are located within the limits of seven mining concessions with an area of 1,864.6 hectares, which host the active mining operations. One mining concession (tenement # 14.840/1967), which is part of the group of mining concessions, has a potential to host zinc and lead mineralization, however, does not yet have any mineral resources and mineral reserves associated with it.

Nearby the main area, Nexa Brazil also holds 62 exploration licenses totalling 50,076.8 hectares, two right to apply for mining concession totalling 374.22 hectares, one mining application totalling 189.98 hectares and one mining concession totalling 52.5 hectares, in addition to the core tenements.

The Company holds surface rights sufficient to support the current operations. Some surface rights agreements require annual payments to the owners. Three easements have been granted in support of mining activities. There is sufficient suitable land available within the mineral tenure held by the Company for tailings disposal, mine waste disposal, and installations such as the process plant and related mine infrastructure.

Vazante Mine Mineral Tenure



Brazilian companies that hold Mining Concessions are subject to a royalty payment known as Financial Compensation for the Exploitation of Mineral Resources (Compensação Financeira pela Exploração de Recursos Minerais - CFEM), imposed by the National Mining Agency—ANM . Revenues from mining activities are subject to CFEM which is paid to the ANM. CFEM is a monthly royalty based on the sales value of minerals, net of taxes levied on the respective sale. When the produced minerals are used in its internal industrial processes, CFEM is determined based on the costs incurred to produce them or is determined by a reference price of the respective mineral to be

defined by the ANM. The applicable rate varies according to the mineral product (currently 2.0% for zinc and lead). The Vazante Mine is not subject to any royalties other than the CFEM and royalty payments to surface rights holders if mining occurs in their property equal to 50% of the related CFEM.

There is also a monthly inspection fee related to the transfer and commercialization of certain minerals in some Brazilian states, such as Minas Gerais, where the concessions are located (Taxa Estadual de Recursos Minerais - TFRM).

The Vazante Operation holds several permits in support of the current operations. The main instrument to regulate the Vazante Operation is a set of operating licences issued by the COPAM from the state of Minas Gerais. The licences are active, some of them under renewal process.

History

Mineralization in the Vazante Operation area was initially discovered by Angelo Solis in 1933 who acquired the first mineral titles to the area. The mineral rights to the Vazante Mine portion of the Vazante Operation land holdings were first acquired by Companhia Mineira de Metais (CMM) in 1956. CMM later became Votorantim Resources in 2005 and more recently Nexa Resources S.A. in 2014. The original land titles for the Vazante Operation were added and expanded over the years by means of direct land acquisition (claim staking) and various option agreements and purchases. The Extremo Norte Mine portion of the current Vazante Operation land holdings was acquired by purchase in 2007.

Mechanized open pit mining at the Vazante Operation commenced in 1969. The initial mining operations exploited the supergene calamine mineralization which was formed by a mixture of hemimorphite ($Zn_4(Si_2O_7)(OH)2.H_2O$) and smithsonite ($ZnCO_3$) that were derived from weathering of the primary willemite mineralization. Open pit mining operations of willemite mineralization were suspended in 2000, followed by the suspension of open pit production of calamine mineralization in 2008.

Development of the Vazante Operation underground mines began in 1983, with initial minor production of willemite mineralization taking place in 1984. The underground mines exploit the primary willemite mineralization (Zn2SiO4) along with minor to trace amounts of sphalerite. Production from the underground mines are ongoing.

Despite the pandemic situation in 2020, mining operation in Vazante remained normally with no impact on production levels.

Historical ore production and zinc grade figures are shown in the table below.

Production of Vazante (2018 - 2020)

	Unit	2018	2019	2020
Tonnage	Mt	1.37	1.41	1.62
Zn Grade	%	12.1	11.4	10.4
Pb Grade	%	0.34	0.31	0.36
Ag Grade	g/t	19.7	17.3	19.5

Geological Setting, Mineralization and Deposit Types

The geology of the Vazante Operation area consists of a sequence of pelitic carbonate rocks belonging to the Serra de Garrote and Serra do Poço Verde formations of the Vazante Group. The currently known mineralization has been traced along a strike length of approximately 10.5 km, extending from the southern end of the Vazante Mine to the northern limits of the Extremo Norte Mine.

The zinc-lead-silver mineralization at the Vazante Operation is hosted by the Vazante Shear Zone which has been traced by drilling and sampling along a strike length of approximately 12 km. The Vazante Shear Zone has a

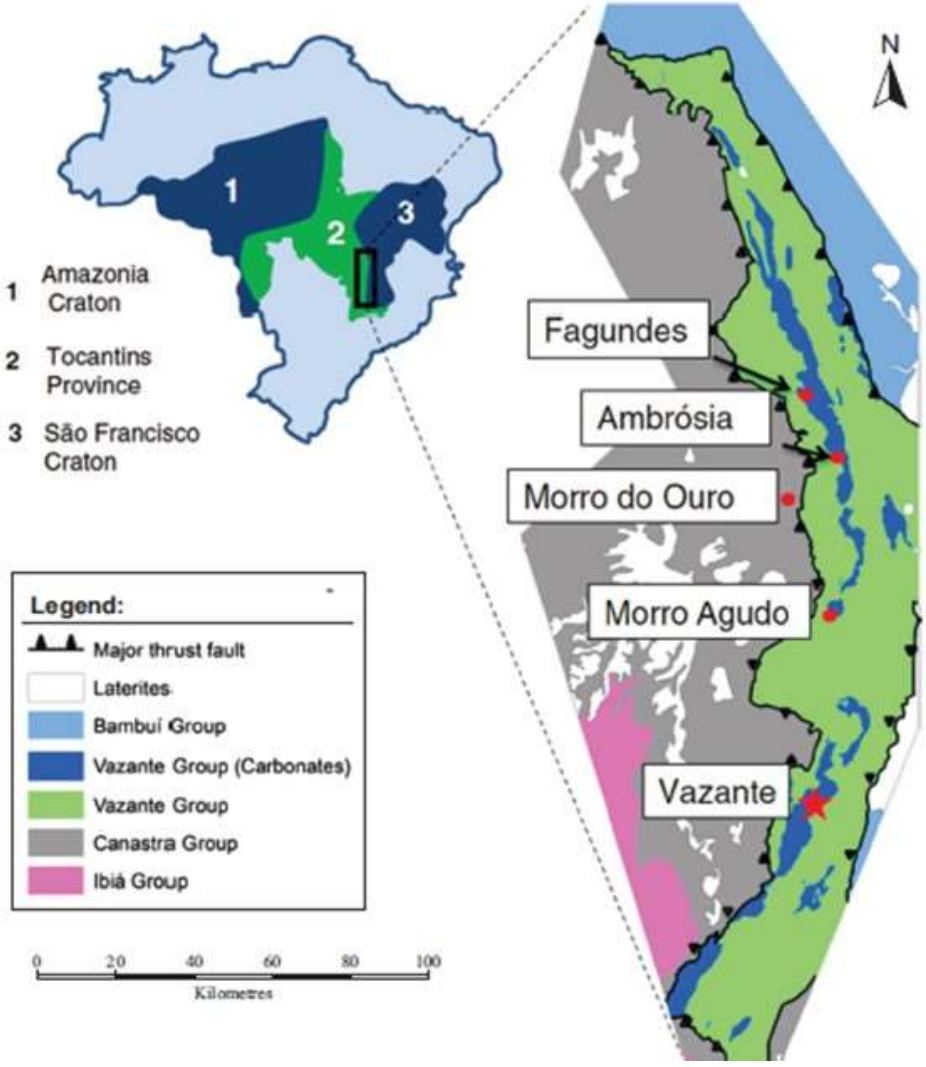
general strike of azimuth 50° and dips approximately 60° to the northwest at surface. The hanging wall lithologies of the Vazante Shear Zone are comprised of dolostone and sericitic phyllite, slates and marl units of the Serra do Poço Verde Formation while the footwall lithologies to the Vazante Shear Zone are dominated by dark grey dolostones of the Upper Morro do Pinheiro Member. Drilling information indicates that the dip of the zinc mineralized zone gradually decreases with depth in the southern portions of the structure.

The zinc mineralization at the Vazante and Extremo Norte mines is composed largely of hypogene zones that are composed mainly of willemite (Zn_2SiO_4) veins, veinlets, and stockworks that are hosted by sphalerite-rich carbonate. The mineralization typically contains willemite (50% to 70%), dolomite (10% to 30%), siderite (10% to 20%), quartz (10% to 15%), hematite (5% to 10%), zinc-rich chlorite (5% to 10%), barite (<5%), franklinite (<5%), and zincite (<5%), with subordinate concentrations of magnetite and apatite (Monteiro et. al., 2006). Lead and silver are also recovered from the hypogene mineralization is produced from the Vazante Operation. While no detailed studies regarding the specific lead and silver bearing minerals have been carried out on samples of the hypogene mineralization, several detailed mineralogical studies have been conducted using concentrate samples. It is remarkable that the majority of the lead mineralization in the concentrates has been found to be related to galena (PbS), with lesser amounts of lead being contained in cerussite ($Pb(CO_3)$). Mineralogical studies have indicated that the silver values are contained in the minerals acanthite (Ag_2S) and jalpaite (Ag_2CuS_2).

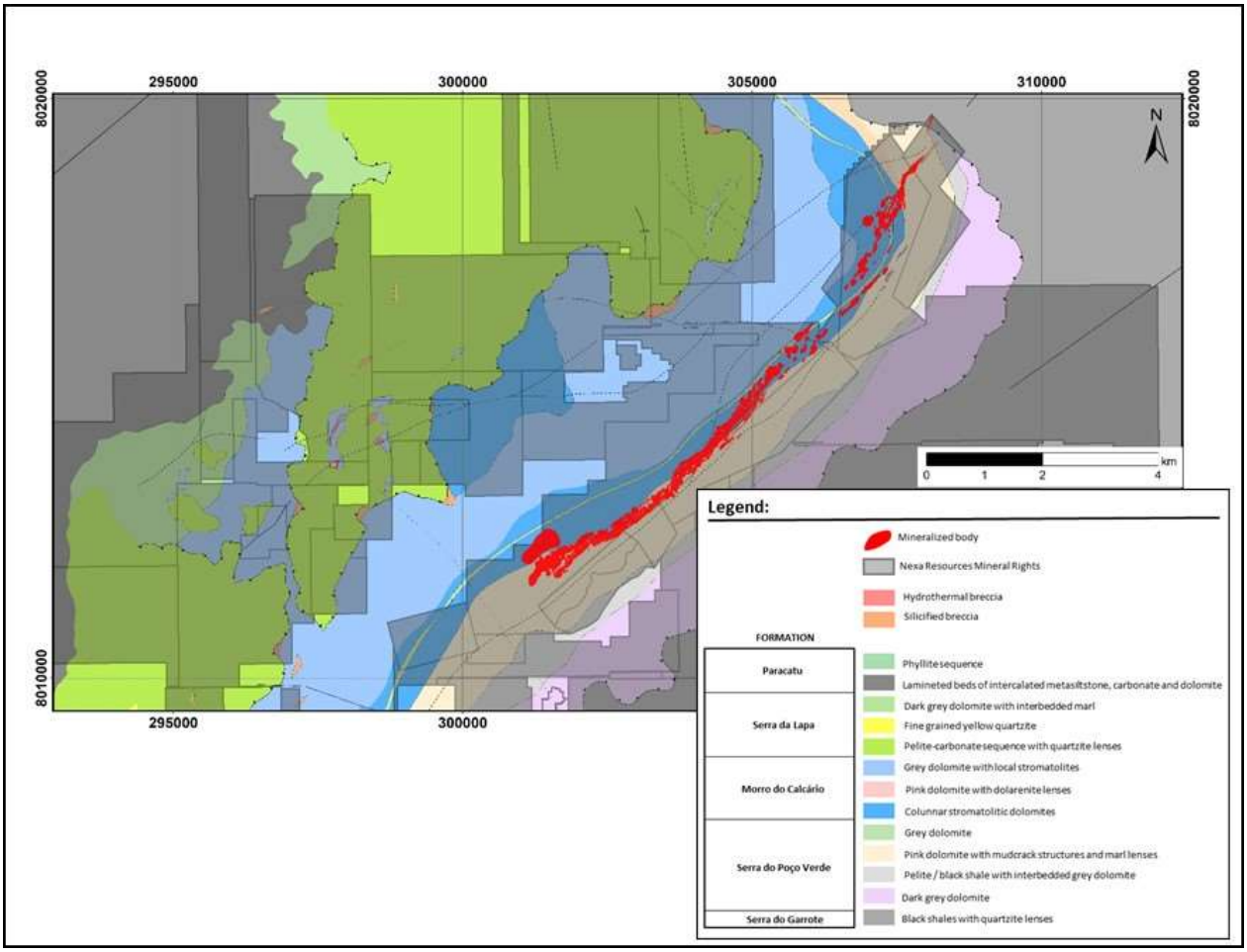
Supergene zones of zinc-rich mineralization have been developed in the near-surface portions of the hypogene mineralized zones. These supergene zones are referred to as the calamine zones at the Vazante Operation. The calamine mineralization is composed principally of smithsonite ($ZnCO_3$) that includes subordinate amounts of hemimorphite ($Zn_4(Si_2O_7)(OH)_2.H_2O$) and quartz. The calamine mineralized zones were derived from weathering of the primary willemite mineralization.

The figure below shows the geological setting of the Vazante area. The subsequent figure is a local geology plan of the mine area.

Geological Map of the Brasilia Fold Belt



Local Geology Plan, Vazante to Extremo Norte Mines



Exploration

Zinc was first discovered at the Vazante Operation in 1951 when areas of gossan and calamine mineralization were discovered in surface outcrops. Since 1951, exploration has largely consisted of geological mapping and geophysical surveying, with minor amounts of geochemical sampling programs being carried out to locate outcropping mineralized zones. In the Vazante Operation area, exploration programs (including drilling) have strategically been carried out in support of extensions of mining operations, including the possibility of deepening of the mine infrastructure.

The Nexa geological team has continued to conduct exploration activities in the immediate environs of the Vazante Mine as well as in the neighbouring regions. The regional exploration programs have discovered several occurrences of zinc mineralization including Vazante Norte, Carrapato, Vazante Sul, and Sugem.

In 2020, Nexa spent US$0.8 million on brownfield projects for life of mine extension, including exploration project maintenance and geological activities. Also, 13 exploration drill holes, totaling 4.6 km were carried out. The forecast budget for 2021 is US$1.7 million to perform 10.5 km of drilling.

Drilling

In 2020, exploration activities were reduced due COVID-19 pandemic and its entirely only in 3Q20 after implamentation of several safety and health measures. By the end of 2020, Nexa completed approximately 4.6 km of

diamond drilling, divided between exploratory and brownfield drilling. The focus were in the extension of the Vazante Mine ore bodies, targets at Lumiadeira, Extremo Norte and shallow calamine mineralization in the Extremo Norte area. Also, drilling activity confirmed the presence of Pink Dolomite, typical host rock of Vazante Ore and Sungem Target in Vazante Sul Target. Exploratory drill holes intersected occurrences of sphalerite in a hydrothermal breccia with white dolomite.

Nexa also performed 324 diamond drill holes, totaling 46 km aimed mineral resources classification in the Vazante Mine. The focus of this campaign was north of Extremo Norte and south of Lumiadeira.

Sampling, Analysis and Data Verification

Sample collection and core handling are in accordance with industry standard practices. Procedures to limit potential sample losses and sampling biases are in place. Sample intervals are consistent with the type of mineralization. Underground channel samples range from 0.5-1.5 m long, and respect lithological, alteration, mineralization, and other natural boundaries.

Prior to 2014, mine samples were analyzed by the Vazante laboratory on the mine site. The exploration samples were analyzed by an external laboratory. Samples were prepared using the mine laboratory machinery. This laboratory was not accredited. ALS, an independent laboratory, has been the primary laboratory for preparation of exploration and production samples since 2014. Samples are prepared and analyzed at either of the ALS laboratories located in Vespasiano, Minas Gerais and Goiaˆnia, Goia´s. Both laboratories are ISO 9001:2008 certified, and independent of the Company. ALS Lima performs the sample analytical step. This laboratory is independent of the Company, and holds ISO 9001:2008 and ISO 17025 accreditation.

Sample analysis at the mine laboratory and ALS Lima is performed using standard procedures that are widely used in the industry. In both cases, analytical procedures are adequate to support mineral resource and mineralized material estimation and mine planning.

Company-wide QA/QC protocols were implemented in 2009, and have improved over time. The current program includes submission of twin, coarse and pulp duplicates, or CRMs, external controls, and coarse blank samples. Nexa considers the data to be adequately accurate and precise to support mineral resource and mineralized material estimation and mine planning.

All data that are stored in the Vazante Mine database are verified by Nexa staff via software verification before final entry into the database. These routines are aimed at preventing entry of extraneous data such as incorrect lithology codes or overlapping assay intervals into the database. Additional internal checks are made to assure that information used for mineral resource and mineralized material estimation and mine planning is reliable and suitably error free.

Nexa staff periodically prepare reviews on sampling procedures, geological logging procedures, core drilling and core handling procedures, and QA/QC procedures. Current procedures are considered acceptable to support mineral resource, mineralized material and mineral reserve estimates. Sample data collected adequately reflect the deposit dimensions, true widths of mineralization, and the style of the deposits.

Mineral Processing and Metallurgical Testing

Zinc is the primary metal of economic importance, with minor quantities of lead as galena and associated silver minerals allowing for the production of relatively small amounts of lead concentrate as well. Due to the ore mineralogy, zinc concentrate produced at the Vazante Operation is elevated in silica, as well as calcium, magnesium, and carbonates resulting from carbonate gangue presence (predominantly dolomite). Nexa's Três Marias zinc smelter includes a circuit specifically configured to process the zinc silicate concentrate produced at the Vazante Operation and as a result all of the concentrate produced at the Vazante Operation is exclusively processed at the Três Marias smelter where zinc metal is produced.

Metallurgical studies have been completed since plant operations began in 1969. Studies incorporated mineralogy, grinding characteristics, and flotation separation testing. Much of the testwork has been completed in the

Votorantim laboratory at the Vazante Operations. Studies have been supported by universities including the Federal University of Minas Gerais (UFMG) and the University of Sao Paulo. Most studies have focused on factors affecting zinc recovery.

Recent test work has focussed on the reprocessing of historical tailings and improving recovery from calamine material (versus historical recovery) to support calamine resource evaluation. The Aroeira TSF contains both willemite and calamine tailings, with the willemite tailings generally deposited on top of the calamine tailings. The Vazante Operation currently processes tailings reclaimed by truck and front end loader (FEL) from the Aroeira TSF. Aroeira tailings comprise a small portion of the feed to the processing plants. The most recent test work performed for Aroeira Tailing was conducte by SGS GEOSOL aimed at the production of a concentrate with 39% Zn and a minimum recovery of 55%. Preliminary test work was completed on calamine samples by Nexa at the Vazante Operation with the objective of improving on the historical recovery from calamine ore (approximately 50%), with bench scale tests completed in 2017, followed by pilot tests in 2018.

Typical deleterious elements or compounds of zinc concentrates sourced from Vazante that could negatively affect the refining process include carbonates, magnesium oxide (MgO), and fluorine. Vazante Operation concentrate contains levels of carbonates, MgO, and fluorine close to but under the specifications. The lead concentrate grade is approximately 20% Pb to 28% Pb and does not contain penalty levels of deleterious elements. Silver content ranges from approximately 2,000 g/t Ag to 3,000 g/t Ag.

Vazante Operation concentrate production for the past three years is summarized in following table.

Vazante Circuit Metallurgical Performance (2018 -2020)

	Unit	Item	2018	2019	2020
Production	tonnes		1,374,380	1,407,199	1,622,927
Mill Head Grade	%	Pb	0.34	0.31	0.36
	%	Zn	12.1	11.4	10.4
Pb Concentrate	%	Pb Recovery	28.7	21.5	22.5
	%	Pb Grade	26.4	23.2	26.3
	ppm	Ag Grade	2,635	2,709	2,329
	%	Ag Recovery (to Pb)	50.84	42.13	37.30
Zn Concentrate	%	Zn Recovery	84.5	86.2	87.5
	%	Zn Grade	39.4	39.3	39.8

Mineral Resources Estimate

The Mineral Resources estimate dated December 31, 2020 is reported using the 2014 CIM Definition Standards. The mineral resource estimate was completed using Datamine Studio RM and Leapfrog Geo software. The Mineral Resources comprise three styles of mineralization. The first style of mineralization is represented by the hypogene (willemite) mineralized zones that are found in the underground portions of the Vazante and Extremo Norte deposits. The second style of mineralization is represented by the supergene (calamine) mineralized zones found in the Cava 3A, Matas dos Paulistas, and Braquiara areas of the Extremo Norte and Vazante deposits. This supergene (calamine) mineralization is referred to at the Vazante Operation as calamine mineralization and comprises a mixture of smithsonite and hemimorphite minerals. The third type of mineralization comprises tailings that are contained within the Aroeira TSF. The material found in the Aroeira tailings comprise a mixture of hypogene (willemite) and supergene (calamine) minerals. The Mineral Resources are exclusive of Mineral Reserves.

The Mineral Resource statements for the underground hypogene (willemite) mineralization are prepared within reporting panels prepared using the native functions and workflows available through the Deswik mine modelling software package considering spatial continuity, a minimum width of 3.0 meters, a NSR cut-off value of US$47.49/t for SLS and US$74.96/t for R&P. The Mineral Resource statements for the supergene (calamine) mineralization are prepared using an open pit shell that was created in consideration of appropriate metal prices, mining costs, metallurgical recoveries, and geotechnical considerations. The Mineral Resources are estimated at an NSR cut-off value of US$20.16/t for soil and US$20.02/t for fresh rock and transition material. The Mineral Resource

statements for the tailings are reported considering the material with an NSR value of greater than US$20.62/t which lies above the original topographic surface. All NSR cut-off values for the mineral resources are based on a zinc price of US$2,869.14/t (US$1.30/lb) , a lead price of US$2,249.40/t (US$1.02/lb), and a silver price of US$19.38/oz.

Mineral Reserves Estimate

The Mineral Reserves estimate dated December 31, 2020 is reported using the 2014 CIM Definition Standards and has been established based on actual costs and modifying factors from the Vazante Mine, and on operational level mine planning and budgeting. The dilution that has been applied is related to the selected mining method. The two main mining methods are SLS and VRM. The NSR cut-off value was determined using the mineral reserve metal prices, metal recoveries, transport, treatment, and refining costs, as well as mine operating cost. A minimum mining width of 4.0 m was applied and average bulk density of 3.1 t/$m^{3.}$ Mineral Reserves are estimated using average long-term metal prices of zinc: US$2,494.90/t (US$1.13/lb); lead: US$1,956.00/t (US$0.89/lb); silver: US$16.85/oz (using an average long term U.S. dollar to Brazilian real exchange rate of 4.84), and metallurgical recoveries are based on recovery curves derived from historical processing data. Long-term metal prices used for Mineral Reserves are based on consensus and long term forecasts from banks, financial institutions and other sources.

Mining Operations

Mining Methods

The Vazante Operation consists of two mechanized underground mines, the Vazante Mine and Extremo Norte Mine, currently operating at a rate of approximately 1.5 Mtpa. The mineralized zones dip between 45° and 70° and the mine extends over a strike length of five kilometres. With the addition of the North Extension, this will increase to approximately 10 km.

The Vazante Mine currently extends over a vertical depth of 300 m from surface to the 326 level. The Vazante Mine is being deepened by 186 m to the planned 140 level. There are former open pits along portions of the strike of the Vazante deposit. There are two access ramps to the Vazante Mine and one to the Extremo Norte Mine. Mine headings range from four metre by four metre ore drives to six metre high by five metre wide main ramps.

The Vazante Operation is designed based upon mechanized longitudinal longhole stoping for areas with a dip greater than 45°. Longhole stopes are developed with footwall access drives parallel to the orebody. Crosscuts are driven from the footwall drive and then the ore is developed along strike. Sublevels are typically 30 m apart though the distance varies depending on the orebody. Long holes are often a combination of downholes or VRM and uppers or sublevel longhole open stopes (SLOS). Both longhole methods employ a retreat sequence along strike. The SLOS stopes are not backfilled where the VRM stopes are backfilled.

The Vazante Operation has a fleet of mobile equipment to enable development and production activities to be completed in an efficient manner while meeting all mine regulatory requirements for underground mining operations.

Dewatering at the Vazante Operation is a critical aspect of the mine operation as a high rate of dewatering is required to enable mining to be carried out in a safe and efficient manner on a continual basis. A significant amount of water is pumped to surface for discharge. The total pumping system has a capacity of 16,000 m³/h plus a secondary 2-stage pumping station (PS300-PS500) with total capacity of 3,500 m³/h. The two pumping stations combined have a total capacity of about 19,500m³/h.

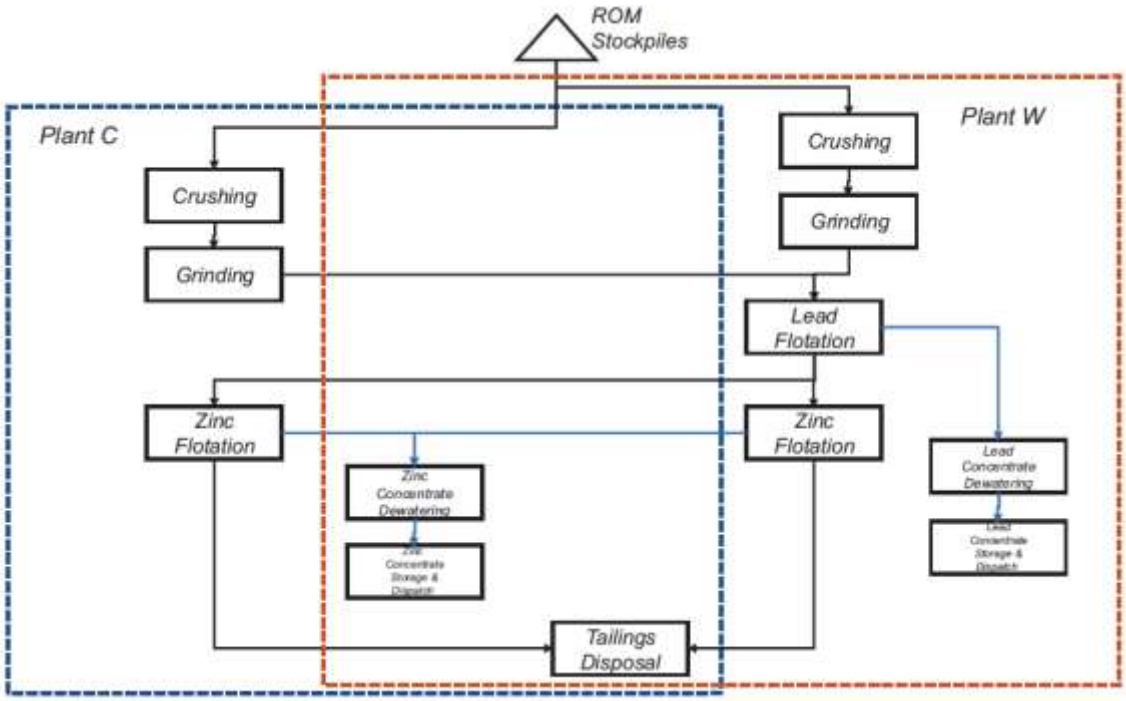
Processing and Recovery Operations

The Vazante Operation processing facilities have a nominal design processing capacity of approximately 4,400 tpd or 1.6 Mtpa at 96% utilization and produce approximately 350,000 tonnes per annum (tpa) to 370,000 tpa of zinc concentrate and approximately 4,000 tpa to 5,000 tpa of lead concentrate that contains small amounts of silver. They consist of two adjacent plants, Plant C and Plant W, that are interconnected at various points.

Processing at the Vazante Operation comprises conventional crushing, grinding, flotation, concentrate dewatering, and tailings disposal. The main differences between the two plants is that Plant W incorporates a sulphide flotation stage for the recovery of a lead–silver concentrate. Both plants include crushing, grinding, and zinc flotation. Combined Plant W and Plant C tailings are thickened and filtered prior to disposal in the Pilha Garrote dry stack TSF (DSTSF).

Zinc concentrates are trucked in bulk approximately 250 km to Nexa's Tres Marias smelter while lead—silver concentrates are exported.

Simplified Flowsheet of the Current Vazante Processing Facilities



Infrastructure, Permitting and Compliance Activities

Project Infrastructure

The Vazante Operation is immediately adjacent to a public highway and situated approximately 8.5 km from the town of Vazante. Site access is via paved roads to the mine office. All infrastructure required for the current mining and processing operations has been constructed and is operational. This includes the underground mines, access roads, powerlines, water pipelines, offices and warehouses, process plant/concentrator, conveyor systems, waste rock facilities, temporary ore stockpiles, paste-fill plants, and tailings storage facilities.

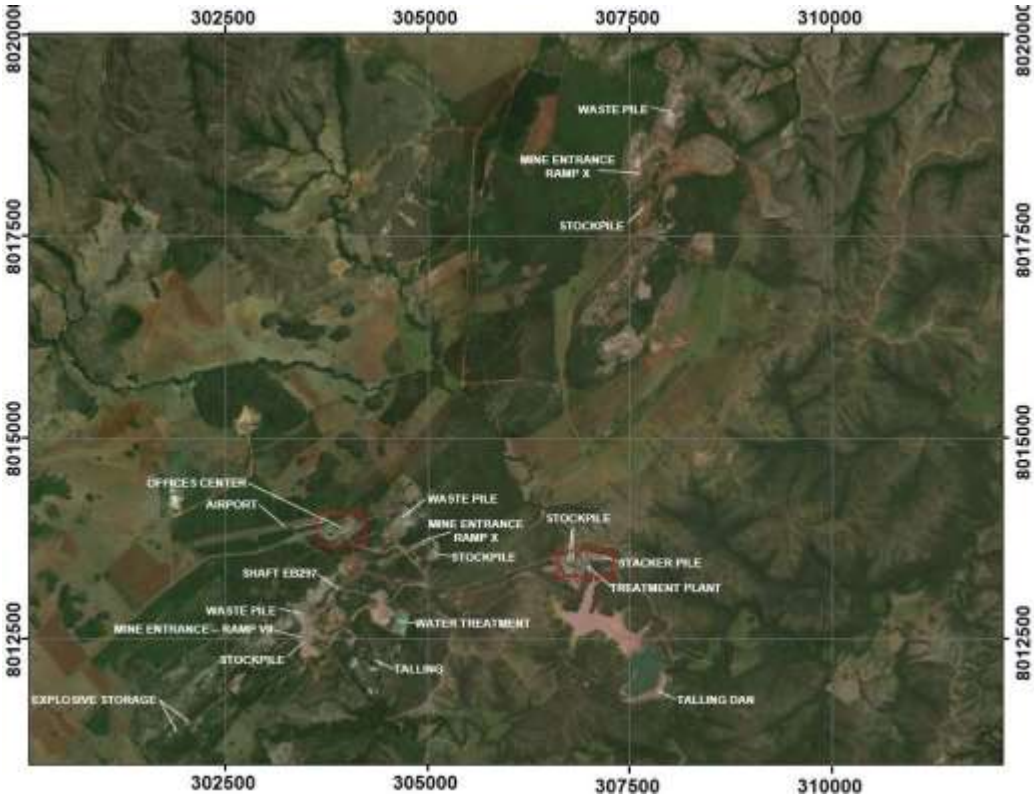
The surface and underground infrastructure of the Vazante Operation include:

- Seven open pit mines that have exploited the near-surface calamine mineralization.
- Two underground mines (Vazante and Extremo Norte) that together extend for a strike length of approximately nine kilometres and to a depth of approximately 550 m fromsurface.
- An ore blending and reclaim facility.

- Two processing plants, Plant W and Plant C. Plant W has a nominal throughputcapacity of 1.2 Mtpa and Plant C has a nominal throughput capacity of 0.4 Mtpa.
- Several TSFs (two active).
- A core logging and sampling facility.
- Warehousing.
- An assay laboratory.
- A millwright and electrical shop.
- An administrative building.
- A first aid station.

The power supply to the Vazante Operation is provided by two independent 138 kV transmission lines that feed the site and that can provide up to 55 MW.

Site Layout Plan



Environmental, Permitting and Social Considerations

The Vazante Operation has a net positive water balance that results in surplus water collected onsite being discharged to the receiving environment. Industrial effluents from the Vazante Operation are directed to the Aroeira TSF, together with surface runoff from the crushing area, chemical laboratory area, and channel network for surface water collection. Underground mine dewatering is pumped to surface and conveyed via gravity to the Aroeira TSF tailings pond through a concrete channel. Water is pumped from the Aroeira TSF to offset make up water requirements for ore processing. Excess water collected in the Aroeira TSF is released to the Santa Catarina River. Dewatering from the Extremo Norte Mine is pumped to a sediment sump prior to release to the Ouro Podre stream.

Tailings are currently disposed in the Pilha Garrote DSTSF as filtered tailings, and at the Aroeira TSF as a slurry. The Pilha Garrote DSTSF is the primary TSF. Waste rock is used for backfilling or disposed of at surface in mined-out open pits.

Six Environmental Impact Assessments (EIAs) complemented with other studies have been developed since 2000 to identify potential environmental effects resulting from project activities for the construction, operation, and closure stages. The mitigation measures are mostly addressed through a number of environmental control programs (including environmental monitoring) presented in the EIAs.

The Vazante Operation holds several permits in support of the current operations. The main instrument to regulate the Vazante Operation is a set of operating licences issued by the COPAM from the state of Minas Gerais. The licences are active, some of them under renewal process.

Two annual environmental reports (one for the Vazante Mine and one for the Extremo Norte Mine) were prepared by Nexa in 2020 and submitted to the authority (Regional Environment Superintendence SUPRAM-NOR) in compliance with Condition 01 of the Operation Licences.

The closest community is the municipality of Vazante, located 8.5 km from the Vazante Operation with a population of approximately 19,300 residents. The closest major urban centre is Brasilia, approximately five hours away via roadways, with a population of approximately 4.7 million residents.

The most recent Mine Closure Plan was prepared in 2018. The Mine Closure Plan has been designed to address remediation of the operational areas, and to meet Brazilian engineering requirements for such plans at a conceptual level. The plan identifies three key phases: preclosure, closure, and post-closure. Most facilities will be dismantled, and equipment removed from the site. Underground openings will be sealed, and groundwater levels allowed to stabilize.

Vazante Operation is a positive contribution to sustainability and community well being. Nexa has established and continues to implement its various corporate policies, procedures, and practices in a manner consistent with relevant IFC PSs. Nexa has, and continues to make, a positive contribution to the communities most affected by the site operations and has done a thorough job in documenting potential effects on stakeholders and protecting the rights, health, and safety of its employees.

El Porvenir

*The most recent NI 43-101 technical report with respect to El Porvenir is the technical report titled " Technical Report on the El Porvenir Mine, Department of Pasco, Peru" with an effective date of December 31, 2020 (the "**El Porvenir Technical Report**") prepared by RPA (now a part of SLR Consulting Ltd), in particular by: Rosmery J. Cardenas Barzola, P.Eng., Stephan R. Blaho, P.Eng., Lance Engelbrecht, P.Eng., and Luis Vasquez, M.Sc., P.Eng. The El Porvenir Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com.*

Project Description, Location and Access

Project Setting

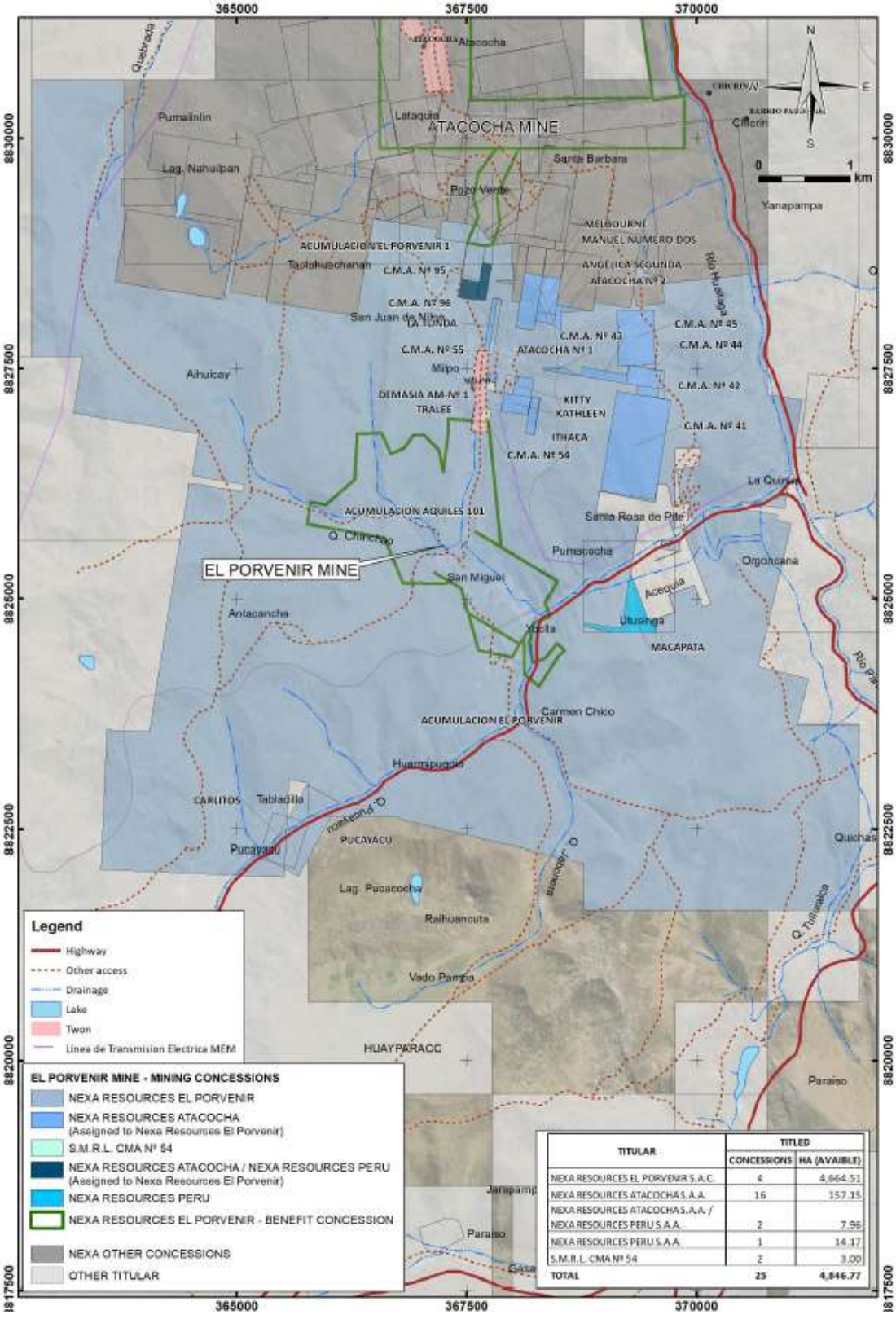
The El Porvenir Mine is located in the district of San Francisco de As´ıs de Yarusyaca´n, in the province of Pasco, Peru. The property is located in the central Andes mountains region of Peru, at an approximate elevation of 4,200 MASL. The mine is situated at kilometer 340 of the Carretera Central Highway (Lima—Hua´nuco route), 13 km from the city of Cerro de Pasco. Geographically, the mine is located in the zone of the Central Cordillera which contains the communities of Para´n, Lacsanga and Santo Domingo de Apache.

Site Location Plan

Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

The El Porvenir Mine is owned by Milpo Andina Peru, S.A.C., a subsidiary of Nexa Peru in which Nexa Peru has a 99.99% equity interest. The El Porvenir Mine has a total of 25 concessions covering approximately 4,846.77 hectares, as well as a beneficiation plant "Acumulacion Aquiles 101". With respect to the surface property at the El Porvenir Mine, there is a mining site of 450.8 hectares, where the mining concession is located, as well as additional surface property where tailings dams/ponds, camps sites and other ancillary infrastructure are located.

El Porvenir Mineral Rights



TITULAR	TITLED	
	CONCESSIONS	HA (AVAIBLE)
NEXA RESOURCES EL PORVENIR S.A.C.	4	4,664.51
NEXA RESOURCES ATACOCHA S.A.A.	16	157.15
NEXA RESOURCES ATACOCHA S.A.A. / NEXA RESOURCES PERU S.A.A.	2	7.96
NEXA RESOURCES PERU S.A.A.	1	14.17
S.M.R.L. CMA Nº 54	2	3.00
TOTAL	25	4,846.77

History

The El Porvenir Mine has a long history in the Peruvian mining sector, extending back over 70 years. It began operating as a small scale artisanal mine in 1949, and Compañía Minera Milpo S.A. (Milpo) was incorporated the same year to operate the mine. A gravity separation plant was built at the site in 1953, and a flotation plant was completed in 1979. The mine's output increased steadily over the decades, attaining its current production rate of approximately 5,600 tpd in 2014. Milpo acquired the adjacent Atacocha Mina in 2008. In 2010, Nexa (then Grupo Votorantim) gained control of Milpo and its assets, including El Porvenir. In 2014, the Company began integrating the El Porvenir and Atacocha operations, including administration, the TSFs and the electrical power supply. El Porvenir's operations were interrupted from March 10 to May 15, 2020, due to the COVID-19 pandemic.

Thus far, three stages of integration, including administration, tailings disposal and energy supply to operations have been completed. Integration and optimization of El Porvenir and Atacocha mines' ore streams to the process plants is currently being evaluated for strategic and financial benefits.

Mine Production from El Porvenir (2018 - 2020)

	Unit	2018	2019	2020
Tonnage	Mt	2.15	2.12	1.50
Zn Grade	%	3.04	2.92	2.65
Cu Grade	%	0.15	0.15	0.17
Pb Grade	%	0.98	1.01	0.93
Ag Grade	oz/t	1.92	2.08	2.00
Ag Grade	g/t	59.68	64.64	62.28

Geological Setting, Mineralization and Deposit Types

El Porvenir is situated in the Pasco region of the Western Cordillera of the Andes, within the Eocene-Miocene Polymetallic and Miocene Au-Ag Epithermal Belts. Within the property area, the stratigraphic units of primary interest are the Pucará and the Goyllarisquizga groups. The Goyllarisquizga Group outcrops in the area of the deposit comprising quartz rich sandstone, corresponding to the Goyllarisquizga Formation. Sandstones may vary from quartz arenite to arkose. The matrix is argillaceous to siliceous. Above the 4,000 level, the lithology and stratification are well defined and easy to recognize. Below the 4,000 level, strong alteration has obliterated the original rock intensity forming siliceous breccias and massive silica where it is still possible to recognize quartz grains and in few places the stratification.

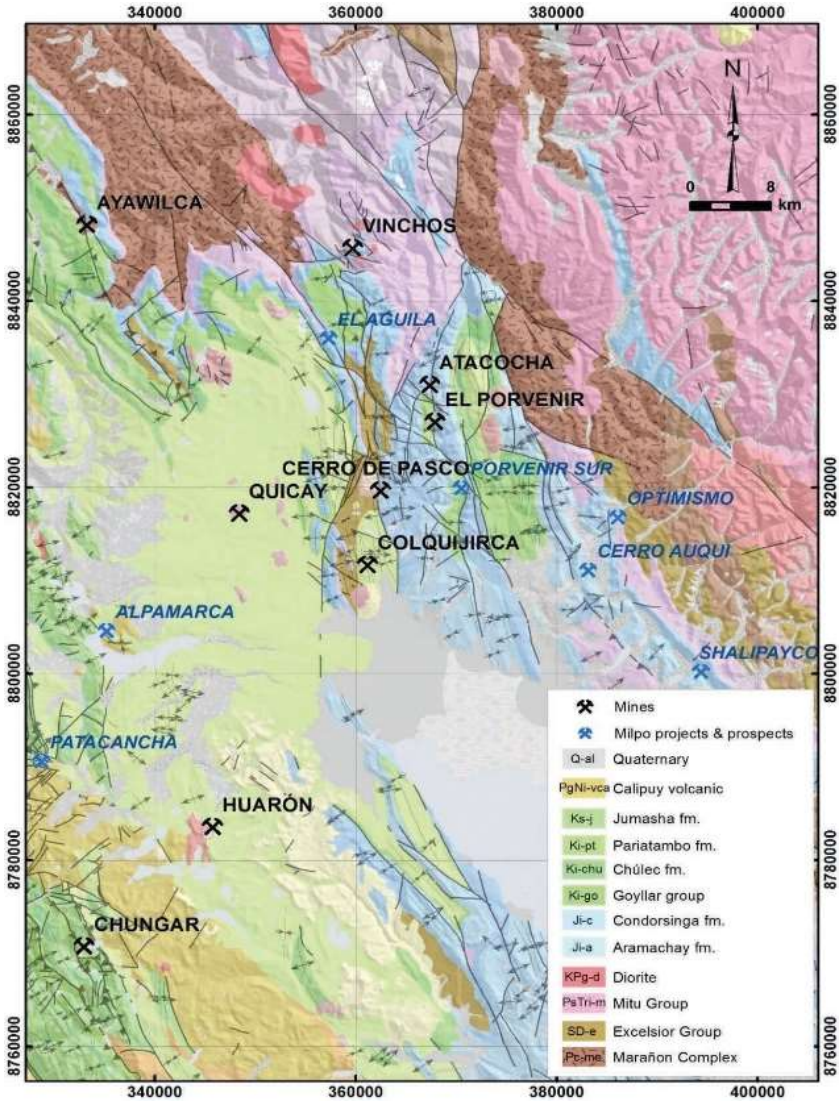
Intrusive rocks within the property are variably porphyritic dacite to quartz diorite with hornblende and biotite phenocrysts. The Milpo-Atacocha fault is a major structural feature in the region, which can be traced for nearly 15 km from Yarusyacán in the north to Carmen Chico in the south.

Mineralization is characterized as a skarn, intermediate sulphidation epithermal vein/breccia-style, or stratabound mineralization in the Goyllarisquizga Formation:

- Skarn-related mineralization is commonly associated with the garnet and silica-skarn-chlorite assemblages, comprising pyrite, chalcopyrite, sphalerite, galena and minor pyrrhotite, pyrite, bornite, covellite, orpiment, and realgar within the Pucará Group sediments around the Milpo stock.
- The silica breccia consists of sub-rounded to sub-angular white to milky grey opaline silica clasts, millimetres to centimetres in size, and to a lesser extent, sandstone and limestone clasts. The silica breccia clasts are cemented by white granular silica, with occasional cross-cutting veins of white silica. Breccias include massive (siliceous) breccias, granular (siliceous) breccias, and Ag-Pb-Zn breccias sub-divided into calcareous, polymictic-monomictic, and karst (collapse). Breccia clasts include limestone, marble, silica (massive), and skarn; the composition of the clasts indicates that brecciation occurred later than skarn development.

- The stratabound Pb-Ag-Zn mineralization occurs in the sandstone strata (mantos) at the base of the Goyllarizquisga Formation (near the contact with the Pucará Group). Several disseminated sulphide mantos have recently been identified at Sara and Porvenir 2W within the quartz sandstone, generally in contact with layers of silt and microconglomerates. The minerals include galena with silver content, sphalerite, and pyrite. Gold is also present.

Regional Geology of the El Porvenir Area



Exploration

The exploration program is based on an integrated strategy of geological and structural interpretation, combined with remote sensing for alteration and magnetic patterns and anomalies. The exploration work planned for 2021 involves a budget of US$3.1 million, and includes 18,000 m of diamond drilling, focused on defining new inferred and potential areas in the "Sara" corridor that involves the eastern part of the Milpo syncline in the Goyllarisquizga Formation and the Integration Zone at the 3,300 level of the mine.

Drilling

In 2020, in response to COVID-19 pandemic, exploration activities were temporarly suspended due to and the exploration drilling was resume June. By the end of the year, Nexa completed approximately 37.57 km of diamond drilling, divided between exploratory and infill drilling. The 2020 exploration program at El Porvenir was directed to increasing Mineral Resources, drilling the high-altitude zones of the mine (above 3,700 meter level) and looking for new mineralized zones. The exploration program identified silver, lead, zinc and gold mineralization along the strike, based on the surface and underground drilling program in the target Sara, which is open for expansion.

Nexa spent approximately US$2.68 million on the El Porvenir brownfield project in 2020, including in exploration project maintenance and geological activities. In 2020, we drilled 42 drill holes totaling 16.13 km at El Porvenir. We have budgeted US$3.1 million for the project during 2021 and we expect to drill 18.0 km.

Sampling, Analysis and Data Verification

Sampling was completed by Nexa geologists following standard operating procedures. The samples are collected from drillholes and channels are sent to several independent laboratories including Inspectorate (at the mine, referred to subsequently as Inspectorate EP), SGS (at the mine), ALS (Lima), and Certimin (Lima). Testing protocols among these laboratories differ in their detection limits and methods applied. El Porvenir has a contract with Inspectorate, which began its operations in 2011, and with ALS in 2018. SGS served as the mine laboratory from 2006 to 2009. Exploration samples were sent to Certimin in 2017 and 2018.

Inspectorate is an independent and commercial laboratory, and is part of the Bureau Veritas, which is a global leader in testing, inspection, and certification. Certimin Lima holds ISO 9001 and NTP-ISO/IEC 17025 and 17021 certifications and is accredited by the Organismo Peruano de Acreditación (INACAL). ALS geochemical laboratories are accredited to ISO/IEC 17025:2005 for specific analytical procedures. Both Certimin and ALS laboratories are independent of Nexa.

Exploration drilling samples are sent to ALS Lima, and mine drilling samples are sent to the El Porvenir Inspectorate EP for preparation and analysis. Prepared samples are assayed principally for a suite of seven elements: Zn, Pb, Cu, Ag, Au, Bi, and Mn. Samples are initially coded and dried at 105°C to a maximum of 120°C. Following drying, the samples are crushed to a minimum of 70% passing minus two millimetres. The crushed samples are then reduced in size by passing the entire sample through a riffle splitter until 200 g to 250 g is obtained. The split samples are then pulverized to a minimum of 85% passing 75µm. The pulverized samples are subsequently analyzed using an aqua regia digestion and atomic absorption spectroscopy (AAS).

El Porvenir has historical data and information up to February 15, 2020, the cut-off date for the resource database, and has implemented a quality assurance/quality control (QA/QC) program. These processes comply with current industry best practices which involve appropriate procedures and routine insertion of certified reference materials (CRM), standards, blanks, and duplicates to monitor the sampling, sample preparation, and analytical processes. Analysis of QA/QC data is performed to assess the reliability of all sample assay data and the confidence in the data used for resource estimation.

Quality control samples have been inserted into the sample stream since 2014 and channel samples since 2012. El Porvenir routinely sends in-house CRMs, blanks, field, reject (preparation), and pulp (laboratory) duplicates. During 2018, Nexa incorporated systematic external checks into the QA/QC program. Check assay programs were also carried out prior to 2018. Pulps were sent to external laboratories for analysis. Currently, the Inspectorate mine laboratory and ALS analyze samples from infill drilling and brownfield exploration drilling, respectively. During the 2006 to 2009 drilling campaign, samples were sent to SGS for analysis. From 2010 to present, underground infill drilling samples are sent to Inspectorate. If Inspectorate is running out of capacity, samples are delivered to Certimin and/or ALS laboratories.

Mineral Processing and Metallurgical Testing

Nexa began developing a geometallurgical model for El Porvenir in 2017. The objectives of the work were to develop a geometallurgical model able to predict the recovery of lead, zinc, copper, arsenic, and manganese, concentrate grades, as well as abrasiveness (abrasion index (Ai)) and hardness (Bond ball mill work index (Bwi)), and therefore throughput based on ore source within the deposit. The aim of the development work included:

- Maximization of operational value of the El Porvenir mining unit.
- Reduction of risks to production related to plant throughput, grinding media consumption, recovery of valuable minerals and concentrate quality.
- Identification of flaws in the quality and interpretation of the available information.
- Identification of opportunities for improvement and to reduce risk.
- Definition and validation of geometallurgical domains from metallurgical test results.
- Evaluation of contaminants in the deposit.

Since the begin of the program, three phases of test works were performed (2018, 2019 and 2020 respectively) with the assistance of Transmin Metallurgical Consultants (Transmin).

Production in 2020 was significantly lower than in 2019 due to the effects of the COVID-19 pandemic and associated production interruptions. On March 15, 2020, the Peruvian Government declared a national emergency and imposed operating business restrictions including on the mining sector. The quarantine period was initially expected to last until the end of March 2020 but was subsequently extended up to May 10, 2020. In light of the imposed restrictions, Nexa suspended production at El Porvenir. During this period, mining activities were limited to critical operations with a minimum workforce to ensure appropriate maintenance, safety, and security. On May 6, 2020, the Peruvian Government announced the conditions for the resumption of operations for different sectors, including mining operations above 5,000 tpd. As a result, El Porvenir operations, which were suspended on March 18, 2020, restarted production on May 11, 2020, following the end of the quarantine period. After the resumption of operations, El Porvenir ramped up production to pre-pandemic levels by June 2020.

El Porvenir Polymetallic Circuit, Metallurgical Performance (2018 - 2020)

	Unit	Item	2018	2019	2020
Production	tonnes		2,149,927	2,120,765	1,502,618
Mill Head Grade	g/t	Ag	59.68	64.64	62.28
	%	Cu	0.15	0.15	0.17
	%	Pb	0.98	1.01	0.93
	%	Zn	3.04	2.92	2.65
Cu Concentrate	%	Cu Recovery	17.99	14.66	12.72
	%	Cu Grade	20.99	21.29	19.49
	oz/t	Ag Grade	55.43	81.49	89.94
	%	Ag Recovery (to Cu)	3.70	4.12	5.11
Pb Concentrate	%	Pb recovery	79.13	78.98	77.79
	%	Pb Grade	52.56	51.23	51.18
	oz/t	Ag Grade	75.30	78.41	80.70
	%	Ag Recovery (to Pb)	57.84	58.77	56.90
Zn Concentrate	%	Zn Recovery	88.72	88.21	87.70
	%	Zn Grade	50.21	49.73	49.89

Mineral Resource Estimate

The Mineral Resource estimate dated December 31, 2020 is reported using the 2014 CIM Definition Standards and it was completed using Datamine Studio RM and Leapfrog Geo software. Wireframes for geology and mineralization were constructed in Leapfrog Geo based on geology sections, assay results, lithological information,

underground mapping, and structural data. Assays were capped to various levels based on exploratory data analysis and then composited to 2.0 m lengths. Wireframes were filled with blocks and sub-celling at wireframe boundaries. Blocks were interpolated with grade using ordinary kriging (OK) and inverse distance cubed (ID^3) interpolation algorithms. Block estimates were validated using industry standard validation techniques. Classification of blocks used distance-based and mineralization continuity criteria. The Mineral Resources in El Porvenir are contained in four zones: Zona Alta (Upper Zone), Zona Intermedia (Intermediate Zone), Zona Baja (Lower Zone), and Profundizacion Zona (Mine Deepening Zone). Mineral Resources at Porvenir underground are reported using all the material within resource shapes generated in Deswik Stope Optimizer (DSO) software, satisfying minimum mining size, NSR cut-off values of US$60.06/t for the Upper Zone, US$61.09/t for the Intermediate Zone, US$59.75/t for the Lower Zone, and US$63.37/t for the Mine Deepening Zone for C&F resource shapes, and continuity criteria. NSR cut-off values for the mineral resources are based on a zinc price of US$2,869.14/t (US$1.30/lb), a lead price of US$2,249.40/t (US$1.02/lb), a copper price of US$7,427.59/t (US$3.37/lb), and a silver price of US$19.38/oz.

Mineral Reserve Estimate

The mineral reserve estimate dated December 31, 2020 is reported using the 2014 CIM Definition Standards. The mineral reserve estimate was prepared using Deswik Stope Optimizer, mine design and scheduling software. Mining methods used are C&F mining using unconsolidated rock fill and hydraulic backfill and SLS using unconsolidated rock fill. NSR values were calculated using mineral reserve metal prices, metallurgical recovery, and consideration of smelter terms, including revenue from payable metals, price participation, penalties, smelter losses, transportation, treatment, refining, and sales charges. Production stope shapes for C&F and SLS mining methods use only measured and indicated mineral resources, satisfy a minimum mining widths of 5m independent of the mining method, and NSR cut-off per zone and mining method. For C&F mining method the values varies from US$59.75/t at Lower zone to US$63.37/t at Deepening zone. For SLS the values varies from US$56.44/t at Lower zone to US$60.06/t at Deepening zone. Mineral reserves were estimated as measured and indicated mineral resources contained within stope shapes and development design, and are reported inclusive of extraction losses and dilution. Mineral reserves are estimated using average long-term metal prices of zinc: US$2,494.90/t (US$1.13/lb); lead: US$1,956.00/t (US$0.89/lb); copper: US$6,457.90/t (US$2.93/lb) and silver: US$16.85/oz, and metallurgical recoveries are based on recovery curves derived from historical processing data.

Mining Operations

Mining Methods

El Porvenir uses two mining methods: mechanized overhand C&F and SLS. C&F is the predominant method, accounting for over 80% of the mine's production. El Porvenir uses a version of SLS called Avoca, also referred to as longitudinal longhole retreat mining. C&F and SLS have similar development requirements as they both involve dividing a mining zone into horizons between sublevels and excavating the ore in an ascending fashion. The sublevels are typically spaced at a vertical interval of 20 m and accessed via a spiral ramp. The development on each sublevel includes an access drift, a footwall drive, and crosscuts or attack ramps, which provide access to the orebody. For SLS, the footwall drives can be as close as 15 m from a footwall contact, whereas, for C&F, they have to be offset from it by 60 m to provide sufficient distance for fanning the attack ramps. The geotechnical conditions at El Porvenir result from the rock mass's characteristics and the mine's depth. The host rock and the mineralized zones are generally classified as fair to good, with rock mass ratings (RMR) ranging from 40 to 60. El Porvenir is one of South America's deepest mines, extending more than 1,800 m below the main access level. Its depth contributes to the occurrence of seismic events, including rock bursts.

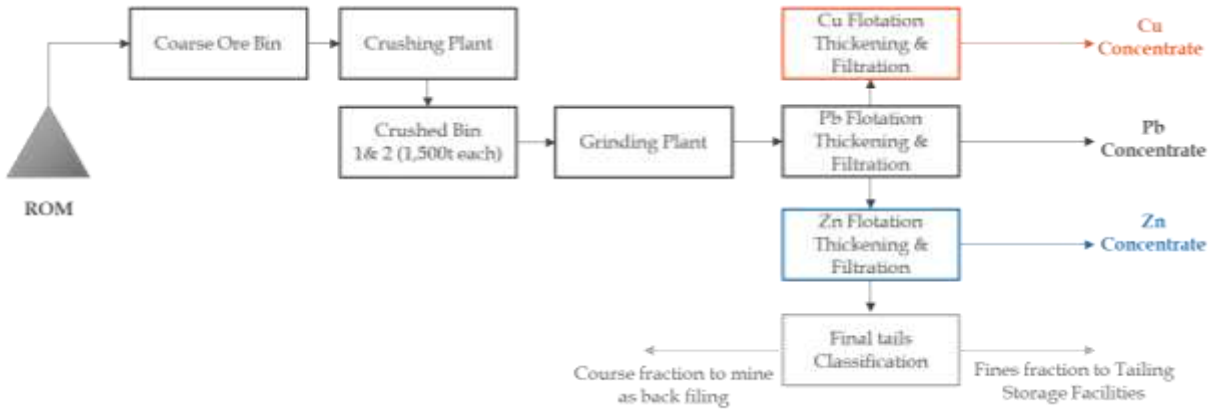
Processing and Recovery Operations

The concentrator has an ore processing capacity of approximately 2.2 Mtpa. The copper and lead concentrates are sold to traders and delivered by road and rail to Callao for shipping overseas, while the zinc concentrate is transported by road and rail to Nexa's Cajamarquilla zinc refinery east of Lima. The current LOM plan continues to 2029. Processing consists of conventional crushing, grinding, and flotation to produce separate copper,

lead, and zinc concentrates. Tailings and the coarse fraction is used for mine backfill, which constitutes approximately 50% of tailings produced. Water from tailings dewatering is returned to the process. Overflow from the cyclones containing the fine tailings is deposited in the conventional TSF adjacent to the mine and processing plant. Tailings can be discharged at various points in the TSF by means of valved discharge points on the tailings line. Clarified water discharged from the TSF joins natural water flows. Make-up water is supplied from various streams around the TSF, as well as the Carmen Chico River, approximately 3.2 km south of the process facility.

El Porvenir lead and zinc concentrates are generally clean and do not attract penalty charges for deleterious elements. The copper concentrate attracts penalties due to elevated lead and zinc content (approximately 15% to 20% combined). The penalty charges are approximately US$17.00/t.

Process Flowchart



Infrastructure, Permitting and Compliance Activities

Project Infrastructure

The El Porvenir infrastructure consists of the following facilities:

- Approximately 6,000 tpd underground mine
- A 2.28 Mtpa processing plant with associated laboratory and maintenance facilities
- Power plant
- Access roads
- Offices and warehouses
- Accommodations
- Waste rock facilities
- Temporary ore stockpiles
- Hydraulic backfill plant
- Tailings storage facility (TSF)

The power supply for the mine comes from two sources, the national power grid and the Candelaria hydroelectric power plant.

Raw water is sourced from Tingovado Creek, as well as from other creeks around the TSF. Fresh water supply is obtained from the Carmen Chico River, approximately 3.2 km south of the process facility.

The EL Porvenir TSF receives tailings generated by both El Porvenir and Atacocha concentrator plants. A portion of tailings is used for hydraulic backfill at the El Porvenir Mine. The TSF was originally constructed in the 1970s. The current elevation of the dam crest is 4,060 MASL and the dam height is 140 m.

Waste rock from the underground operations is either used as backfill underground or stockpiled on surface. If waste rock is brought to surface in the future, it will be deposited in a designated area near the secondary TSF embankment southwest of the concentrator plant area.

Environmental, Permitting and Social Considerations

The El Porvenir mine has a net positive water balance that results in surplus water collected on-site being discharged from the TSF to the receiving environment through a decant structure. Clean (non-contact) surface runoff water is managed through upstream diversion ditches that prevent their entrance to the TSF, and convey it downstream to the Lloclla River, a tributary of the Huallaga River. Contact water collected in the tailings pond is recycled via a decant pumping system to the concentrator plant for use in the process. A lined seepage collection monitoring pond is located at the downstream toe of the main embankment of the TSF.

The El Porvenir TSF (originally constructed in the 1970s) receives tailings generated by both Atacocha and El Porvenir concentrator plants. A portion of tailings is used for hydraulic backfill at the El Porvenir Mine. The tailings disposal is performed in subaerial conditions which allows a beach with a gentle slope towards the water or supernatant pond (settling pond). The tailings discharge locations allow for the settling pond to be centrally located within the TSF and a tailings beach to form in front of the main embankment.

Various Environmental Impact Assessments (EIA) and supporting Technical Reports have been submitted and approved between 2001 and 2020 to identify potential environmental effects resulting from project activities for the construction, operation, and closure stages. The most recent modification of the EIA was approved by the Peruvian authorities in 2012 to grant authorization for a maximum production rate of 7,500 tpd. The most recent update of the environment management plan was presented in the sixth supporting Technical Report issued in 2020. The monitoring program implemented at the mine includes meteorology, air quality, non-ionizing radiation, noise, surface water quality, springs water quality, effluent discharges, fauna and flora, and physical stability of the tailings dam. The results of the monitoring program for air quality, ambient noise, non-ionizing radiations, and water quality are reported to the Peruvian authorities quarterly.

The El Porvenir mine holds a number of permits in support of the current operations. The permits are Directorial Resolutions issued by the Peruvian authorities upon approval of mining environmental management instruments filed by the mining companies. Nexa maintains an up to date record of the legal permits obtained to date.

The communities located within the area of influence of the mine are:

- Comunidad de San Francisco de Asís de Yarusyacán (20 Anexos)
- Comunidad de Titaclayán
- Comunidad de Cajamarquilla
- Comunidad de Malauchaca
- Comunidad Santa Rosa de Pitic
- Comunidad San Miguel
- Comunidad La Candelaria
- Centro Poblado La Quinua
- Comunidad 30 de Agosto
- Comunidad San Juan de Yanacachi
- Comunidad San Juan de Jarapampa
- Cooperativa Pucayacu

Nexa adheres to international standards to provide best practices for public reporting on economic, environmental, and social impacts in order to help Nexa and its shareholders and stakeholders understand their corporate contribution to sustainable development. Corporately, Nexa has made several commitments to improve community health and safety as well as the overall well-being of community members.

A conceptual Mine Closure Plan was prepared in 2007 for the mine components within the context of the Peruvian legislation and has subsequently been amended or updated four times. The Mine Closure Plan addresses temporary, progressive, and final closure actions, and post-closure inspection and monitoring. A closure cost estimate was developed and included in the Mine Closure Plan. The total financial assurance for progressive closure, final closure and post-closure is calculated by Nexa according to the Peruvian regulations (Supreme Decree D.S. N° 262-2012-MEM/DM).

Projects

Aripuanã

*The most recent NI 43-101 technical report with respect to Aripuanã is the technical report titled "Technical Report on Aripuanã Zinc Project, State of Mato Grosso, Brazil", with an effective date of November 17, 2020 as amended February 9, 2021 (the "**Aripuanã Technical Report**") prepared by RPA (now a part of SLR Consulting Ltd), and in particular: Jason J. Cox, P.Eng., Sean D. Horan, P.Geo., Brenna J. Y. Scholey, P.Eng., and Luis Vasquez, P.Eng.. The Aripuanã Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com.*

Project Description, Location and Access

The Aripuanã Project is located in Mato Grosso State, western Brazil, 1,200 km northwest of Brasilia, the capital city. The property is located at approximately 226,000 mE and 8,888,000 mN UTM 21L zone (South American 1969 datum).

The Aripuanã Project is comprised of 871 km² (87,063 hectares) of concessions with characteristics of Volcanogenic Massive Sulfide (or VMS) deposits. The Aripuanã region contains polymetallic VMS deposits with zinc, lead and copper, as well as small amounts of gold and silver, present in the form of massive mantles and veins, located in volcano sedimentary sequences belonging to the Roosevelt Group of Proterozoic age.

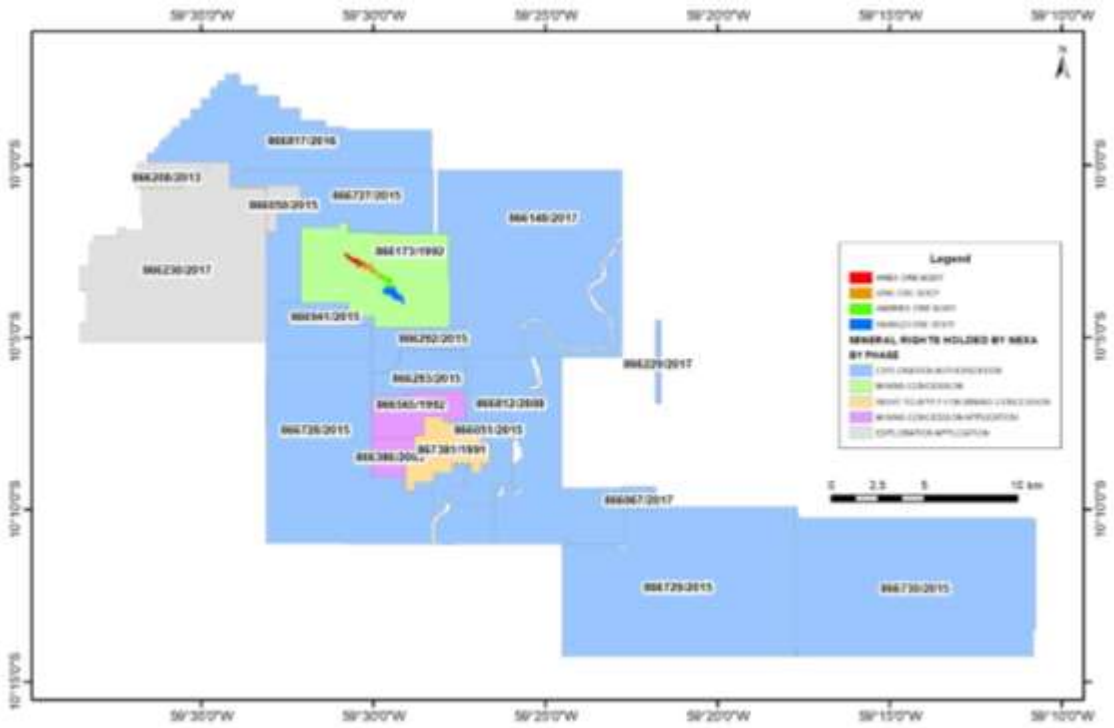
Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

Mineração Dardanelos Ltda. ("**Mineração Dardanelos**"), a wholly-owned subsidiary of Nexa Brazil, owns 100% of the Aripuanã Project. The mineral rights are divided into core tenements, where the known mineral deposits are located, and the surrounding exploration areas.

The Company holds one Mining Concession in the core area that have a total area of 3,639.88 hectares, two Mining Concession Applications (1,387.2 hectares), one Right to Apply for Mining Concession (1,000.0 hectares), 13 Exploration Licenses (52,104.83 hectares) and three Exploration Applications (8,196.23 hectares), totaling 66,328.04 hectares.

The Company holds surface rights sufficient to support the future operations. There is sufficient suitable land available within the mineral rights held by the Company for tailings disposal, mine waste disposal, and installations such as the process plant and related mine infrastructure.

Aripuanã Project Mineral Rights



Brazilian companies that hold Mining Concessions are subject to a royalty payment known as Financial Compensation for the Exploitation of Mineral Resources (*Compensação Financeira pela Exploração de Recursos Minerais)*(“**CFEM**”), imposed by the National Mining Agency - ANM . Revenues from mining activities are subject to CFEM which is paid to the ANM. CFEM is a monthly royalty based on the sales value of minerals, net of taxes levied on the respective sale. When the produced minerals are used in its internal industrial processes, CFEM is determined based on the costs incurred to produce them or is determined by a reference price of the respective mineral to be defined by the ANM. The applicable rate varies according to the mineral product (currently [2.0]% for zinc, copper and lead). The Aripuanã Projectis not subject to any royalties other than the CFEM and royalty payments to surface rights holders if mining occurs in their property equal to 50% of the related CFEM.

History

Gold mineralization was discovered in the area during the 1700s by prospectors. Although no formal records exist, the area was likely prospected sporadically over the years. Anglo American Brasil Ltda (“**Anglo American**”) began exploration over the property in 1995. At the time, a small area including Expedito’s Pit, now part of the project, was held by Madison do Brasil (now Thistle Mining Inc.) and optioned to Ambrex Mining Corporation (now Karmin Exploration Inc. (“**Karmin**”)).

Dardanelos was created in 2000 to represent a joint venture, or “contract of association,” between Karmin and Anglo American, with the intent of exploring for base and precious metals in areas adjacent to the town of Aripuanã. Anglo American and Karmin held 70% and 28.5% of Dardanelos, respectively, with remaining interest (1.5%) owned by SGV Merchant Bank.

In 2004, the initial agreement between Karmin and Anglo American was amended to allow VM Holding S.A.'s ("VMH") participation. VMH subsequently acquired 100% of Anglo American's interest in the project. In 2007, Karmin purchased SGV Merchant Bank's interests, raising its participation to 30%. In 2016, VMH increased its share holdings in Milpo (now Nexa Peru), acquiring 80% of its shares. In 2017, VMH rebranded to become Nexa Resources, and listed its common shares on the New York and Toronto stock exchanges.

In 2018, the beginning of the construction of the Aripuanã Project was approved, and in 2019 the construction phase of the project was launched, and progress has been made with respect to developing the mine plan, underground development, building the project infrastructure, procurement and training, among others. Up until 2019, Dardanelos was a joint venture between subsidiaries of Nexa (70%) and Karmin (30%), with Nexa acting as the operator. In 2019, Nexa purchased Karmin's interest and became the sole owner of the project. As a result of this acquisition, and following the transfer of the Dardanelos 30% interest in the Aripuanã project from Nexa Peru to Nexa Brazil, Nexa Brazil became the owner of 100% of the Aripuanã project in June 2020.

On October 6, 2020, Nexa published an update on the Aripuanã project. The total capital costs has increased to US$547 million, compared to the US$392 million set out in the Aripuanã feasibility study published in 2018, based on a detailed review and update of the project. The project timeline was also affected and mechanical completion is expected in 4Q21.

Geological Setting, Mineralization and Deposit Types

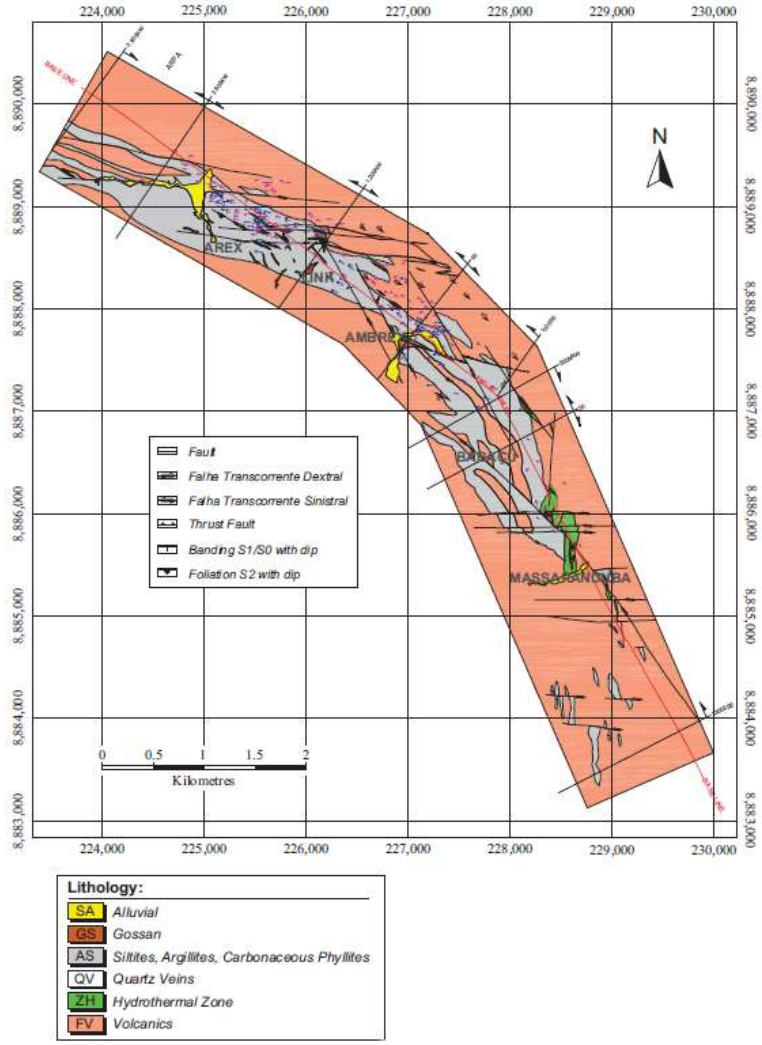
The Aripuanã deposits are located within the central-southern portion of the Amazonian Craton, in which Paleoproterozoic and Mesoproterozoic lithostratigraphic units of the Rio Negro-Juruena province (1.80 Ga to 1.55 Ga) predominate.

The Aripuanã polymetallic deposits are typical VMS deposits associated with felsic bimodal volcanism. Four main elongate mineralized zones (Arex, Link, Ambrex, and Babaçú) have been defined in the central portion of the project. Limited exploration has identified additional mineralized bodies including Massaranduba to the south and Arpa to the north.

The individual mineralized bodies have complex shapes due to intense tectonic activity. Stratabound mineralized bodies tend to follow the local folds, however, local-scale, tight isoclinal folds are frequently observed, usually with axes parallel to major reverse faults, causing rapid variations in the dips.

Massive, stratabound sulphide mineralization as well as vein and stockwork-type discordant mineralization have been described on the property. The stratabound bodies, consisting of disseminated to massive pyrite and pyrrhotite, with well-developed sphalerite and galena mineralization, are commonly associated with the contact between the middle volcanic and the upper sedimentary units. Discordant stringer bodies of pyrrhotite-pyrite-chalcopyrite mineralization are generally located in the underlying volcanic units or intersect the massive sulphide lenses and have been interpreted as representing feeder zones.

Property Geology of Aripuanã Project



Exploration

Between 2004 and 2007, the Company carried out geological, geochemical, and geophysical surveys over the Aripuanã Project area to allow a more complete interpretation of the regional and local geology and identification of local exploration targets.

Drilling on the property was carried out from 2004 to 2008, in 2012, and from 2014 to present. The purpose of the drill program from 2004 to 2008 was to explore and delineate mineralization on the property, and in 2012, to improve confidence and classification of the mineral resources of the Arex and Ambrex deposits. The Link deposit, an area of mineralization connecting the Arex and Ambrex deposits, and included in the Mineral Resource summary for Ambrex, was discovered in 2014 and delineated in 2015.

Since 2018, the exploration program focused on the potential of the Babaçu area, the filling diamond drilling program carried out in 2019 confirmed its polymetallic mineralization. The drilling campaign confirmed the previously estimated geometry for the body and a possible connection between the Babaçu and Ambrex bodies in depth.

The 2021 program is focused on extending the potential body northwest of Babaçu and converting it into Inferred Resources. Additionally, the exploration activities have resulted in increased resources in deep areas of

known bodies (Ambrex, Link, and Arex) and the initiation of an exploration program in new potential bodies (Massaranduba).

Drilling

Drilling on the Aripuanã property has been conducted in phases by several companies since 1993. Total drilling at the main deposits (Ambrex, Link, Arex, and Babaçu) consists of 718 diamond drill holes totaling approximately 229.6 km. Drilling at the other prospects on the property consists of 35 diamond drill holes totaling 13.8 km.

Nexa drilled a total of 614 diamond drill holes totalling 203.5 km at Aripuanã from 2004 to March 2020, including 30 metallurgical drill holes totalling 5.6 km. Many drill holes were pre-collared using RC drill rigs, with diamond drill rigs used for drilling in mineralized zones.

In 2020, the drilling campaign at Aripuanã focused on the Babaçu mineralized zones and confirmed the presence of mineralization 1.3 km along the strike. The total investment in 2020 in terms of exploration of Aripuanã was US$1.39 million, which included maintenance and geological activities. In 2020, due to the COVID-19 pandemic, exploration activities were suspended from April to July 2020 and the drilling program was reduced for a total of 7 drill holes, including Aripuanã brownfield and regional targets, totaling 4.22 km.

For 2021, the Company expects to invest an additional of US$2.16 million in the brownfield exploration program, for a total of 11.4 km in drilling.

Sampling, Analysis and Data Verification

Core is sampled 10 m above and below visible mineralization. Samples respect geological contacts and vary from 0.5 m to 1.5 m in length depending on core recovery, length of the lithological unit, and mineralization. Geologists mark the samples using a felt pen on the core boxes and staple a sample tag wrapped in plastic to the box at the start of the sample. Core is marked with red and blue lines to indicate where it is to be sampled and which half is to be assayed. Lines are drawn respecting the geological features such as layering to help minimize sampling bias. Prior to sampling, sample numbers are recorded in the Fusion data management system and cross-referenced with the interval depth downhole and the depth recorded in the database. Sample core is cut into two halves by technicians with a diamond saw, returning half of the split core to the core box and submitting the other half for sample preparation and analysis.

Each sample booklet contains four tags for each sample. One sample tag is stapled to the clear plastic sample bag and an additional sample is placed within the bag. One tag is attached to the core box while the remaining tag is left in the booklet for record keeping. Samples are separated into batches of up to 250 samples from the same drill hole.

Database management is performed by a dedicated onsite geologist supervising the project. Digital logging sheets prepared by the geologist are uploaded to the Fusion database management system. Original drill logs, structural logs, geotechnical logs, details of chain of custody, site reclamation, and drilling analisys results are stored on site in a folder, specific to a single drill hole. Folders are clearly labelled and stored in a cabinet in the office, which is locked during off hours. Assay certificates of exploration and mine drill holes are mailed to the site by ALS Global and emailed to Nexa employees. Certificates are reviewed by Nexa personnel prior to being uploaded to Fusion.

Sample preparation was performed by the ACME preparation facility in Goiania, Brazil, from 2004 to 2007, and from 2007 on, by ALS Global. Both laboratories followed the same preparation procedure, described below. The sample was logged in the tracking system, weighed, dried, and finally crushed to better than 70.0% passing a 2 mm screen. A split of up to 250 g was taken and pulverized to better than 85.0% passing a 75 micron screen. This sample preparation package was coded PUL -31 by ALS Global. Following preparation, samples were shipped to the sample analysis facility in Lima, Peru. ALS Global's preparation facility in Goiania is accredited to the International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) 9001:2008 standards and ALS Global is accredited to ISO 9001:2008 (expires 2018) and ISO/IEC 17025:2005 (expires 2018), for all relevant procedures. Both laboratories are independent of Nexa.

Nexa has implemented an analytical QC and assurance program to ensure the reliability of exploration data. The program comprises of the insertion of certified reference material (CRMs or standards), blanks samples, and different types of duplicate samples into the sample stream. Standards were inserted in the overall sample stream of drill core at a rate of approximately one standard for every 30 drill core samples. Prior to 2012, blank material was river sand and sandstone sourced from the Aripuanã property. Subsequent to 2012, only coarsely crushed sandstone was used.

Mineral Processing and Metallurgical Testing

Numerous studies were carried out from 2005 to 2013 for the Aripuanã Project to identify the best processing option. The evolution of the key studies and the process technologies under consideration were documented (VMH, 2015) and previously reported (RPA, 2017). The optimum processing route was defined through metallurgical test work and it was determined that sequential flotation (Cu-Pb-Zn) presented better economics due to higher recoveries and concentrate grades than bulk flotation into a single concentrate.

Additional test work on drill core from the Aripuanã Project was conducted by SGS GEOSOL from May 2016 to January 2017 to provide experimental data to support engineering studies. Information on sample validation and additional metallurgical testing has largely been provided by Validaçao das Amostras Selecionadas para Teste Metalurgico (LCASSIS Consultoria em Recursos Minerais (LCASSIS), 2017), the SGS GEOSOL 2017 Report (SGS GEOSOL, 2017), and the Metallurgical Testwork Report (Worley Parsons, 2017a).

Locked cycle test work was also conducted in November 2017 by SGS GEOSOL to provide experimental data on the treatment of various types of mineralization and the final results of the test work were used to define the process route selection. Pilot studies were undertaken by SGS GEOSOL on Aripuanã mineralization and the results were reported in the 2018 Pilot Study (SGS GEOSOL, 2018). Metallurgical data obtained from testing were integrated into the Feasibility Study (FEL3) process design by SNC Lavalin.

During 2020, pilot plant flotation test work has been developed using bulk samples at Nexa's Vazante Mine pilot facility located in Mina Gerais State, Brazil. In addition, grinding and flotation test work was completed by SGS GEOSOL in 2020 (SGS GEOSOL, 2020) on composites representing the first 11 quarters of processing plant feed. The 2020 test work utilized samples of blended ore (stringer and stratabound) based on a revised strategy of processing combined ore types rather than campaigning stratabound and stringer ores through the plant separately as had been previously planned. Independently, an evaluation of the grinding circuit included in the process design was completed by Mineral Processing Solutions (MinPro) in April 2020 (MinPro, 2020).

Based on the metallurgical test work program completed to date, the Aripuanã process flowsheet has been developed using conventional technologies for treatment and the recovery of copper, lead, and zinc as separate concentrates. Plant throughput is forecast to average 2.214 Mtpa of ROM ore over the LOM supplied from the Arex, Link, and Ambrex underground mines. Two main ore types are present at Aripuanã, stratabound and stringer, that have different hardnesses and therefore different throughput rates. Stratabound material, however, will make up the majority of the ore to be processed (approximately 89%) and the feed blend to the plant is expected to peak at 21% stringer material. Estimated processing rates for the two ore types individually based on hardness are approximately 5,000 tpd (dry basis) for stringer material and 6,300 tpd (dry basis) for stratabound material. Throughput for the blended ore is estimated as a weighted average of the throughputs of the two ore types.

Mineral Resources Estimate

The Mineral Resource estimate for the Aripuanã Project was completed by Nexa in two separetes block models, dated as of January 10 and May 19, 2020 for Babaçu and Arex, Ambrex and Link, respectively, and both are reported as of September 30, 2020 using the 2014 CIM Definition.

The block models were completed by Nexa personnel using Datamine Studio RM (Datamine Studio) and Seequent's Leapfrog Geo (Leapfrog). Wireframes for geology and mineralization were constructed in Leapfrog based on geology sections, assay results, lithological information, and structural data. Assays were capped to various levels based on exploratory data analysis and then composited to one metre lengths. Wireframes were filled with blocks measuring 5 m by 5 m by 5 m for Arex, Link, and Ambrex, and 10 m by 5 m by 5 m for Babaçú with sub-celling at

wireframe boundaries. Blocks were interpolated with grade using ordinary kriging (OK) and inverse distance cubed (ID^3). Block estimates were validated using industry standard validation techniques. Classification of blocks was based on distance based criteria.

Underground Mineral Resources are reported exclusive of Mineral Reserves within potentially mineable shapes generated using the Deswik Stope Optimizer (DSO), envisaging bulk longhole stoping and cut and fill mining method. The Mineral Resources are reported using a US$45/t cut-off value for transverse longhole mining and longitudinal longhole retreat areas and US$55/t cut-off value for cut and fill areas. The NSR was calculated based on the forecast long term metal prices from zinc of US$2,869/t (US$1.30/lb), lead of US$ 2,249/t (US$1.02/lb), cooper of US$7,427/t (US$3.37/lb), gold of US$1,768/oz, and silver of US$19.38/oz.

Mineral Reserves Estimate

The Mineral Reserves estimate dated as of November 17, 2020 is reported using the 2014 CIM Definition Standards and has been established based on modifying factors from three main orebodies of the Aripuanã Project (Arex, Link, and Ambrex). The main commodities produced are zinc, lead, copper, silver, and gold.

The dilution that has been applied is related to the selected mining method. The two main mining methods used at Aripuanã are longitudinal longhole retreat (bench stoping) and transverse longhole mining (vertical retreat mining or VRM) with primary and secondary stope extraction. Dilution is applied on a percentage basis, with no grade applied to the diluting material.

The NSR cut-off value was determined using the mineral reserve metal prices, metal recoveries, transport, treatment, and refining costs, as well as mine operating cost. Metal prices are based on Nexa's projections. Nexa's long term price model uses multiple variables including supply (mine and refined), demand, cost drivers, capital cost, and other key elements. The long-term prices derived are in line with the consensus forecasts from banks and independent institutions.

The two main types of mineralization in the deposit are stratabound and stringer. These two types of mineralization have different processing characteristics, and as a result, different parameters are used to calculate their respective NSR value. The break even NSR cut-off value is approximately US$34.35/t. First-pass mine design used a cut-off value of $US45/t, to allow for uncertainty around exchange rates (break-even cut-off NSR plus a US$10/t margin). Upon review of the results, a limited number of stopes with NSR values down to US$40.00/t were included for continuity. The Mineral Reserves are estimated using an average long term price of zinc US$2,494.90/t (US$1.13/lb), lead price of US$1,956.00/t (US$0.89/lb), cooper price of Cu: US$6,457.90/t (US$2.93/lb), silver price of US$16.85/oz and gold price of US$ 1,538/oz.

Mining Operations

Mining Methods

As mentioned above, the Aripuanã Project targets the mining of three elongate mineralized zones: Arex, Link, and Ambrex. All the targets are separate VMS deposits with differing mineral compositions in stratabound and stringer forms and complex geometric shapes. The deposit geometry is amenable to a number of underground mechanized mining techniques including cut and fill and bulk stoping methods. A nominal production target of 6,065 tpd (2.2 Mtpa) has been used as the basis for the mine production schedule.

Mining will be undertaken using conventional mechanized underground mobile mining equipment via a network of declines, access drifts, and ore drives. Access to the Arex, Link, and Ambrex deposits will be via separate portals from the most favourable topographic locations.

Processing and Recovery Operations

Based on the metallurgical test program completed to date, the Aripuanã process flowsheet has been developed by considering conventional technologies for treatment and the recovery of copper, lead, and zinc as separate concentrates. Plant throughput is forecast to average 2.214 Mtpa of ROM ore over the LOM supplied from the Arex, Link, and Ambrex underground mines. The plant will treat blended mineralization at up to 6,300 tpd (dry basis), with the maximum achievable throughput being for ore consisting mainly of stratabound material. Key elements of the process flowsheet include primary crushing, SAG and ball milling with pebble crushing (SABC), talc pre-flotation, followed by sequential flotation of copper, lead, and zinc.

Infrastructure, Permitting and Compliance Activities

Project Infrastructure

The planned infrastructure at the Aripuanã Project includes: dry stack tailings storage facility (TSF), power supply, water storage dam, access and site road, maintenance shops and fuel storage.

The current waste management strategy includes the following aspects: production of tailings generated by the processing of zinc, lead, and copper from underground mining at the project; adoption of dry stack (filtered) tailings disposal on surface and tailings disposal as cemented paste backfill underground; tailings production for surface disposal over 13 years is estimated at a total of 6.34 cubic metres (Mm^3) with 4.49 Mm^3 in the dry season and 1.87 Mm^3 in the wet season; waste rock production for surface disposal of 1.33 Mm^3 over 13 years; a double lined tailings management facility (TMF) with associated surface runoff collection ponds and access roads; A double lined waste rock storage facility and associated surface runoff collection ponds and access roads.

Due to the high flow rates and expected low concentrations of dissolved metals, water collection and treatment will be carried out using engineered wetlands. Separate facilities will be developed for process water recovered from the plant and for runoff from stockpiles (ore, waste, and dry stacked tailings) and access roads.

Electrical power will be provided to the Aripuanã Project by SE Juina (National Energy System) through private installations of UHE Dardanelos, where the connection to the Nexa bay will be at 230kV. A 20 km long transmission line will connect the Dardanelos substation to the Project's main substation at the mine site. Nexa obtained authorization for the connection from the Ministry of Mines and Energy, and in 2019 obtained the access permit provided by Operador Nacional do Sistema Elétrico (ONS), and subsequently obtained authorization to connect to the national grid from the Agência Nacional de Energia Elétrica (ANEEL).

The Aripuanã Project water balance requires a top-up fresh water supply of approximately 150m^3/h. Nexa has undertaken a water supply engineering study based on the construction of a water dam and creation of a fresh water lake in a valley adjacent to the Aripuanã Project site. Nexa Resources has obtained authorization from the regional authority to construct the dam and to draw up to 378 m^3/h of fresh water from the dam to supply the Aripuanã Project.

Environmental, Permitting and Social Considerations

The Project EIA was finalized in 2017 and the Project holds installation and operating approvals. The 2017 EIA concludes that the most significant Project impacts are those that will directly and indirectly affect, synergistically and cumulatively, vegetation cover and soils in the Permanent Preservation Areas and water resources, as well as changes in fauna communities, both terrestrial and aquatic, highlighting the relevance of local biodiversity, with species of flora and fauna of the Amazon biome, including endangered species. The EIA developed management and monitoring plans to address and monitor key indicators for the identified impacts. A key mitigation measure with regard to encroachment on the Permanent Preservation Areas will be the implementation of a compensation plan and programs aimed at connectivity of habitat.

The 2017 EIA described two Indigenous villages located approximately 10 km to 12 km from the Project: Arara do Rio Branco with an area of approximately 114,842 ha and Aripuanã with an area of approximately 750,649

ha. Consultation with Indigenous Peoples regarding Project impacts and mitigation were undertaken under the tutelage and consent of National Historical and Artistic Heritage Institute (IPHAN) with National Indian Foundation (FUNAI) during the preparation of the 2017 EIA. In 2018, Nexa commissioned a study on the Indigenous Component of the Indigenous Lands Aripuanã and Arara do Rio Branco. The study methods were developed based on a Terms of Reference issued by FUNAI and through consultation with the Indigenous Communities. The report identified and assessed potential impacts on the Indigenous Communities and their lands, considered the perspectives of the Indigenous Communities on the potential impacts, and developed management plans to mitigate these impacts.

A Conceptual Mine Closure Plan has been developed for the Project. The main objective of the plan is to present proposals and solutions to be implemented before, during, and after mine closure in order to avoid, eliminate, or minimize long-term environmental liabilities and possible future obligations. The plan currently considers four alternatives for final land use. The first option is for the whole area to become a Conservation Unit. The other options would allow some of the area to become a Conservation Unit while the remaining areas will be used for (a) a technical school for biodiversity conservation and the development of local communities (b) industrial use and a technical school, and (c) agro-industrial use and an agricultural technical school.

Nexa adheres to international standards to provide best practices for public reporting on economic, environmental, and social impacts in order to help Nexa's shareholders and stakeholders understand Nexa's corporate contribution to sustainable development. Corporately, Nexa has made several commitments to improve community health and safety as well as the overall well-being of community members.

Magistral

*The most recent NI 43-101 technical report with respect to Magistral is the technical report titled "Technical Report on the Preliminary Economic Assessment of the Magistral Project, Ancash Region, Peru" with an effective date of August 2, 2017 (the "**Magistral Technical Report**") prepared by RPA and in particular: Ian Weir, P.Eng., Rosmery J. Cardenas Barzola, P.Eng., Philip Geusebroek, P.Geo., Kathleen A. Altman, Ph.D., P.E., and Stephan Theben, Dipl.-Ing. The Magistral Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com.*

Certain of the scientific and technical information set out herein with respect to Magistral is based on information presented in the Magistral Technical Report. The mineral resources for the Magistral Project have been estimated by Nexa as of June 30, 2017 and reviewed by a qualified person. The qualified person for the mineral resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee. José Antonio Lopes has also reviewed and approved certain information set out herein that has been updated since the date of the Magistral Technical Report.

Project Description, Location and Access

Project Setting

The Magistral Project is located in the Ancash Region, approximately 450 km north northwest of the capital of Lima and approximately 140 km east of the port city of Trujillo. The center of the Magistral Project is approximately at Universal Transverse Mercator (or UTM) co-ordinates 9,090,500 mN and 194,300 mE (WGS 84, Zone 18S). The Magistral property can be reached by vehicle by driving a total of 272 km from Trujillo, much of which consists of secondary, poorly maintained roads that traverse steep topography.

Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

The Magistral Project consists of a large, irregularly shaped block of contiguous concessions and two smaller, non-contiguous single concessions. The Magistral Project comprises 36 granted concessions, totaling 16,282.49 hectares.

In 2011, Nexa Peru was awarded a contract to develop Magistral, which was amended from time to time. Nexa made an initial payment of US$8.02 million to acquire the Magistral concessions, subject to a 2.0% NSR royalty upon production. Under the terms of the contract, Nexa exercised the option by committing to perform investments in the Magistral Project until September, 2024. Nexa Peru currently holds a 100.0% interest in 13 of the 36 concessions comprising the Magistral Project. Nexa holds 21 concessions by way of a lease agreement entered into with Compañía Magistral S.A.C. and Compañía Minera Atacocha S.A.A., a company also controlled by Nexa Peru, holds a 100.0% interest in two concessions.

History

The Pasto Bueno—Conchucos district, of which Magistral is a part, was known early in the colonial era as a gold-silver producing district. Early records report the production of 22,000 ounces of gold and 44,000 ounces of silver between 1644 and 1647. The first modern records of exploitation date to 1915 when the Garagorri Mining Company built a small smelting furnace to exploit high-grade surface ores from shallow workings in the Arizona and El Indio outcrops. This operation continued until 1919. In 1920, Cerro de Pasco Corporation (or Cerro de Pasco) conducted a thorough study of the deposit area, which included topographic and geologic mapping. A total of 854m of underground workings were accessible in 1920.

Cerro de Pasco purchased the Magistral concessions in 1950, but no significant work was done until 1969. From 1969 to 1973, Minera Magistral conducted a surface and underground exploration program. Buenaventura Ingenieros S.A. conducted a thorough evaluation of the Magistral deposit in 1980-1981. In 1997, Minero Peru S.A. (Minero Peru) began the process to privatize Magistral by inviting open bidding. An option to purchase the titles to the five Magistral mining concessions was awarded to Inca Pacific Resources Inc. (Inca Pacific) on February 18, 1999. In November 2000, Inca Pacific and Minera Anaconda Peru S.A. (Anaconda Peru) formed Ancash Cobre, as a holding company to carry out exploration and development at Magistral. From 1999 to 2001, Anaconda Peru completed 76 drill holes totaling 24,639.58 m. In March 2004, Inca Pacific acquired Anaconda Peru's 51.0% interest in Ancash Cobre for US$2.1 million, thus restoring its 100.0% interest in Magistral.

In 2004, Ancash Cobre completed a 7,984.85 m, 34-hole, diamond drill hole program, a geotechnical review, and initiated environmental baseline studies. In 2005, Inca Peru entered into a joint venture with Quadra Mining (Quadra). In 2005 Ancash Cobre (funded by Quadra) drilled 14,349.35 m in 60 holes. In October 2005, Quadra withdrew from the joint venture and retained no interest. In 2006 Ancash Cobre completed a 7,073.5 m, 49-hole, diamond drilling program, and a positive preliminary feasibility study was issued by SRK in October 2006. In 2007, Ancash Cobre drilled 18,222.35 m in 116 drill holes, prepared a new mineral resource estimate, and completed a final feasibility study. In December 2009, the Peruvian government agency responsible for administering the Magistral contract with Ancash Cobre announced that it was terminating the contract.

In December 2009, the Peruvian government agency responsible for administering the contract to develop the Magistral property with Ancash Cobre announced that it was terminating the contract. In April 2011, Milpo was awarded the contract to develop Magistral by making an initial US$8.02 million payment. Milpo's interest in the project is subject to a 2% NSR royalty upon production.

Magistral engineering studies (FEL3) continue to progress. In 2021, we expect to advance further detailed engineering and optimization opportunitis to mitigate the risk of project execution, before consideration of project approval.

Geological Setting, Mineralization and Deposit Types

The western continental margin of the South American Plate developed at least since Neoproterozoic to Early Paleozoic times and constitutes a convergent margin, along which eastward subduction of Pacific oceanic plates beneath the South American Plate takes place. Through this process, the Andean Chain, the highest non-collisional mountain range in the world, developed.

The Central Andes developed as a typical Andean-type orogen through subduction of oceanic crust and volcanic arc activity. The Central Andes includes an ensialic crust and can be subdivided into three main sections which reveal different subduction-geometry as well as different uplift mechanisms. The Northern Sector of the Central

Andes, which hosts the Magistral Project, developed through extensional tectonics and subduction during early Mesozoic times. The sector was uplifted due to compression and deformation towards the foreland. In the last 5Ma a flat-slab subduction developed (Peruvian Flat Slab Segment).

The Magistral property is near the northeastern end of the Cordillera Blanca, a region that is underlain predominantly by Cretaceous carbonate and clastic sequences. These units strike north to northwest and are folded into a series of anticlines and synclines with northwest-trending axes.

The Cretaceous sedimentary rocks are bounded to the east by an early Paleozoic metamorphic terrane composed mainly of micaceous schist, gneissic granitoid and slate. The Cretaceous sedimentary sequence unconformably overlies these metamorphic rocks. The Cretaceous rocks are structurally overlain by black shale and sandstone of the Upper Jurassic Chicama Formation that were thrust eastwards along a prominent regional structure. The Chicama Formation was intruded by granodiorite and quartz diorite related to the extensive Cordillera Blanca batholith, which has been dated at 8.2 +/- 0.2 Ma.

Several major structural features are evident in the Cretaceous sedimentary rocks in the Magistral region, including anticlines, synclines, and thrust faults. The trend of the fold axes and the strike of the faults changes from northwest to north near Magistral.

Exploration

Since acquiring the Magistral Project in 2011, the Company has initiated a comprehensive exploration program consisting of geological mapping, prospecting and sampling, ground geophysical surveying, and diamond drilling. Geological mapping at a scale of 1:2,000 was completed in the Ancapata area and the area north-northeast of Magistral over an area of 386.50 hectares. The objective was to verify and supplement the information available from Ancash Cobre's exploration.

From October 2012 to January 2014, Arce Geofisico SAC was contracted to complete ground magnetic and Induced Polarization (IP) surveying over an area of 520 hectares covering the Magistral deposit and the adjoining Ancapata area. The objective was to characterize the geophysical signature of the Magistral deposit and to survey the Ancapata area. Work was completed on 100 m spaced lines oriented at N125°W. An initial 30 line-km survey was expanded to 55.1 line-km of IP and 57.25 line-km of ground magnetics in order to delineate chargeability and resistivity anomalies. Drilling ceased on the property in 2015.

No exploration work was carried out on the project during 2020.

Drilling

Through the end of 2015, a total of approximately 101,900m of surface diamond drilling have been completed in 486 drill holes. In addition, 14 short underground diamond holes were drilled for a total of 1,298.8 m, in the San Ernesto, Arizona, and Sara zones between 1969 and 1973. In 1999, 2000, and 2001, Anaconda drilled 76 diamond drill holes totaling 24,640 m. All surface drilling from 2000 onward was carried out on northeast (035º) and northwest (305º) oriented sections. In 2004, Ancash Cobre (or Inca Pacific) completed 34 drill holes, totaling 7,985 m, and in 2005 Ancash Cobre (or Quadra) drilled 14,349 m in 60 holes. Milpo's drilling in 2012 was contracted to Redrilsa Drilling S.A. (or Redrilsa). Since 2012, the drilling has been contracted to Geotecnia Peruana S.R. Ltda. (or Geotecnia Peruana).

Of the 71 holes drilled in 2013, six were drilled to gain geotechnical information and the remainder were infill holes. Drilling in 2014 consisted of a combination of infill, geotechnical, and metallurgical holes. The 2015 drilling consisted entirely of infill holes.

No drilling program was carried out on the project during 2020.

Sampling, Analysis and Data Verification

Surface drill hole collars were spotted using a handheld GPS instrument. The azimuth and dip of the holes were established using a compass and inclinometer. The attitude of the holes with depth was determined using a variety of tools over time with readings taken by the drillers. During the 2012 and 2013 drilling programs, the attitude of the holes was surveyed with a Reflex Maxibor instrument; in 2014, a Devico Deviflex instrument was used; and in 2015, a Reflex Gyro instrument was used. The interval between readings varied from 2 m to 5 m, depending on the year in which the holes were drilled. Upon completion of the surface holes, casings were pulled, PVC pipe was inserted, and the collar filled with concrete. Hole locations were surveyed. Drill core is placed sequentially in plastic core boxes at the drill by the drillers. The core is delivered to the Company's secure logging facility by the drilling contractor on a daily basis where depth markers and core box numbers are checked and the core is cleaned and reconstructed. The core is logged geotechnically, including the calculation of the core recovery, core loss, and rock quality designation (or RQD). The fracture type and density are recorded. Core recovery is generally very good in fresh rock, typically in the 90.0% to 100.0% range. RQD is generally good to very good, typically 75.0% or better. The core is descriptively logged and marked for sampling by company geologists with particular attention to lithologies, structure, alteration, and mineralization. Logging is initially on paper and entered into a spreadsheet-based template for integration into the Magistral Project digital database later. The core is photographed wet with a digital camera after logging but before sampling.

Samples for bulk density determination are taken regularly. Samples of representative material of approximately 10cm length are selected for testing using the water immersion method. Porous samples are oven dried, weighed, and covered with a thin layer of paraffin prior to weighing again both in air and water. Core samples are taken by sawing the core in half length-wise where indicated by the logging geologist. Samples are typically two meters long in mineralized intervals. A two metre long sample is commonly taken at 10 m intervals in barren intervals. Samples typically do not cross geological boundaries. Half the sampled core was returned to the box and the other half was placed in plastic bags. Split core samples are tracked using three-part ticket books. One tag is stapled into the core box at the beginning of the sample interval, one tag is placed in the sample bag with the sample, and the last tag is kept with the geologist's records. Core boxes are stored on racks at the core logging facility for later retrieval if required. Company personnel deliver the split core samples to Trujillo on a regular basis where they are transported by a bonded carrier to Lima for analysis.

From the drill site to the sample preparation facility, the following protocol was followed: drill core was collected from the drill platform and transported by vehicle to the Magistral camp; lithology, structure, mineralogy, alteration was logged graphically onto gridded paper by company geologists and sample intervals were marked on the core. QA/QC sampling is also marked onto the core at this stage. RQD, structural, and fracture logging is also performed at the logging stage; sample length is generally from 0.5 m to 2.0 m, except when hard, geological boundaries were reached, the sample might be slightly less, or slightly more, than two meters long; core photos are taken with a digital camera; core was sawed lengthwise, down the core axis, by a diamond saw. One half is put in plastic sample bags and labeled with the sample number assigned by the geologist. Bagged split samples are then packed in larger bags and then sent to the assay laboratory; sample lots were transported by vehicle to the sample preparation facility and to the laboratory; and sample rejects (i.e. greater than 10 mesh fraction) were stored at the laboratory.

For samples analyzed at Certimin/CIMM, batches of samples are dried in stainless steel trays in an oven at either 60°C or 100°C until humidity reaches a desired level. They are then crushed in a jaw crusher using quartz flushes and compressed air to clean the equipment between samples. Secondary crushing is then performed with a roller crusher which is cleaned in the same manner. Secondary crushed samples are then run three times through a Jones riffle splitter to homogenize and the split positions switched before selection of the subsample for pulverisation. Pulverizers use a ring and bowl design. Compressed air and occasionally quartz flushes are used to prevent sample contamination and industrial alcohol is added to prevent samples from adhering to the bowl walls. Pulps are run through a secondary splitter and reject pulp duplicates are packed and stored for future usage. For samples analyzed at ALS Global, the sample was logged in the tracking system, weighed, dried, and finally crushed to greater than 70.0% passing a 2 mm screen. A split of up to 250 g was taken and pulverized to more than 85% passing a 75 micron screen. This sample preparation package was coded PUL -31 by ALS Global. Following preparation, samples were ready for analysis at the same facility in Lima, Peru. ALS Global is accredited to ISO/IEC 17025 for all relevant procedures. These laboratories are independent of the Company.

Assays were processed by ALS Global's facilities in Lima, which are accredited to ISO/IEC 17025 (ALS, 2012) and Acme Analytical Laboratories Ltd.'s (or Acme) facilities in Vancouver, British Columbia, Canada, which are accredited to ISO9001. These laboratories are independent of the Company. Database management is carried out by a dedicated onsite geologist under the supervision of the project geologist. Logging sheets prepared by the geologist

are transcribed to the database management system GeoExplo. Original drill logs, structural logs, geotechnical logs, and details related to the hole are stored on site in a folder, specific to each drill hole. Folders are clearly labelled and stored in a cabinet in the office. Assay certificates are mailed to the site by ALS Global and emailed to appropriate Company employees. Certificates are reviewed by geologists prior to uploading to GeoExplo. The QA/QC program as designed and implemented by the Company is adequate and the assay results within the database are suitable for use in a mineral resource estimate.

Mineral Processing and Metallurgical Testing

Metallurgical test work was completed using samples from the Magistral Project starting in 2000. The early test work was reported in a number of technical reports that were completed for Inca Pacific Resources. The work indicated that the mineralization was amenable to sulphide flotation, excellent recoveries were achieved for both copper and molybdenum, and it was possible to separate the molybdenum and the copper from the bulk flotation concentrate into individual concentrates using standard flotation conditions and reagents. The difficulty with the early test work was that the resulting flotation concentrates contained elevated levels of arsenic and antimony that would result in high smelter penalties or may possibly make it difficult to market the concentrates. Therefore, when Milpo initiated metallurgical test work in 2012, the emphasis was to utilize more selective flotation reagents in order to minimize the arsenic and antimony that reported to the flotation concentrates while maintaining the concentrate grades and metal recovery. The recent test work results in copper recovery just over 90.0% and molybdenum recovery just under 90.0% with marketable concentrate grades. The copper concentrate contains approximately 0.3% As and 0.2% Sb.

The conceptual plant designed for Magistral will process 30,000 tpd using: primary crusher; semi-autogenous grinding (or AG) mill; ball mill; bulk sulphide flotation circuit to recover copper and molybdenum; bulk concentrate regrind mill; copper—molybdenum separation flotation circuit; molybdenum concentrate regrind mill; molybdenum flotation circuit; thickening for tailings; thickening and filtration for the copper and molybdenum concentrates; drying and bagging for the molybdenum concentrate; and support systems.

Mineral Resources Estimate

The Mineral Resource estimate dated June 30, 2017 is reported using the 2014 CIM Definition Standards and was completed using MineSight, Leapfrog Geo, and Supervisor software. Wireframes for geology and mineralization were constructed in Leapfrog Geo based on geology sections, assay results, lithological information, and structural data. Assays were composited to five metre lengths, then interpolated using a high yield restriction for anomalously high grades instead of capping. Grade was interpolated into a 10 m by 10 m by 10 m regular block model. Blocks were interpolated with grade using Ordinary Kriging (OK) and checked using Inverse Distance Squared (ID2) and Nearest Neighbour (NN) methods. Block estimates were validated using industry standard validation techniques. Classification of blocks was based on distance-based criteria. Mineral resources are based on a 0.2% Cu cut-off grade inside an optimized pit shell. The forecast long term metal prices used for the NSR calculation are: Cu: US$5,908/t; Mo: US$16,094/t and Ag: US$18.94 /oz.

Mineral Reserves Estimate

There are no Mineral Reserves at the Magistral Project.

Mining Operations

Open pit mining is proposed to be carried out by a contractor as a conventional truck and shovel operation. The Company is currently studying the option to mine using owner-owned equipment but the trade-off analysis was not available at the time of the Magistral Technical Report. The mining contractor would undertake the following activities: drilling performed by conventional hydraulic production drills; blasting using ANFO (ammonium-nitrate

fuel oil) and a down-hole delay initiation system; and loading and hauling operations performed with hydraulic excavators, and 40t 8x4 haulage trucks.

The production equipment would be supported by bulldozers, graders, and water trucks. The Company would supervise the overall mining operation with its own employees including mining engineers, geologists, surveyors, and support staff. Mineralized material will be fed directly into a primary crusher located adjacent to the open pit. Material from the crusher will be transported to the processing facility using a system of conveyors. Topsoil stripping will be required to gain access to mineral and waste rock below. The volume is estimated to be approximately 2.2 Mm^3, which will be stored to the northeast of the pit. Waste rock will be sent to either the Valley Waste Dump (located west of the pit) or the North Waste Dump (located to the northeast of the pit). Studies at the preliminary economic assessment level typically include inferred mineral resources; however, the Company has used only measured and indicated mineral resources in the Whittle optimization and no inferred mineral resources are included in either the mine plan or cash flow analysis.

Processing and Recovery Operations

The conceptual plant designed for Magistral will process 30,000 tpd using:

- Primary crusher
- Semi-autogenous grinding (SAG) mill
- Ball mill
- Bulk sulphide flotation circuit to recover copper and molybdenum
- Bulk concentrate regrind mill
- Copper—molybdenum separation flotation circuit
- Molybdenum concentrate regrind mill
- Molybdenum flotation circuit
- Dewatering
- Support systems

ROM mineralization will be delivered to a primary gyratory crusher that is located adjacent to the mine. Crushed mineralization will be transported by a series of overland conveyor belts to a crushed ore stockpile that is located near the processing plant. Vibrating feeders will draw mineralization from the stockpile and transfer it to a conveyor belt that feeds the SAG mill. In the SAG mill the mineralization is mixed with water to form a slurry. Slurry from the SAG mill will discharge onto a vibrating screen. Oversize from the screen is returned to the SAG mill for further size reduction. The design includes sufficient space that a pebble crusher may be added to the circuit at a future date if it is determined that the pebbles reach a critical size that cannot be reduced by the SAG mill alone. Undersize from the screen will be pumped to a series of high frequency vibrating screens that are designed to classify the mineralization to a particle size of 80% passing (P80) 150 µm. Undersize from the screens flows to one of two ball mills while oversize from the screens is the final product from the comminution circuit. Undersize from the high frequency screens will be pumped to a conditioning tank where reagents are added to the slurry. The bulk flotation circuit includes rougher and scavenger flotation circuits to recover bulk sulphide flotation concentrate that contains the copper and the molybdenum. The bulk rougher and scavenger tailings are the final tailings from the plant. The bulk concentrate is reground in a ball mill that is operated in closed circuit with cyclones to produce a product size of P80 45 µm. The ground concentrate is processed in three stages of bulk cleaner flotation. The final bulk cleaner flotation concentrate will flow by gravity to a bulk concentrate thickener where it is dewatered to a slurry density of approximately 55% solids by weight.

The thickener underflow will be processed in a rougher—scavenger flotation circuit to separate the molybdenum from the copper. Tailings from the rougher—scavenger circuits are the final copper concentrate. The concentrate from the rougher—scavenger circuit flows by gravity to the molybdenum flotation circuit and regrind circuit. The molybdenum concentrate is reground in a ball mill that is operated in closed circuit with cyclones. Overflow from the cyclones is processed in three stages of molybdenum cleaner flotation. Concentrate from the third

molybdenum cleaner flotation circuit is the final molybdenum concentrate. High rate thickeners are used for both the bulk flotation concentrate and for the copper concentrate. The copper concentrate is dewatered to a slurry density of approximately 70% solids by weight. The thickener underflow slurry is sent to a horizontal plate and frame filter press for further dewatering of the copper concentrate. The dewatered copper concentrate discharges into a storage area where it is loaded onto trucks for transport. Molybdenum concentrate is dewatered in a similar, smaller circuit. It is dewatered in a thickener and horizontal plate and frame filter press. The discharge from the molybdenum filter press discharges to a dryer. The dried concentrate is processed in a bagging system where it is loaded into bags for shipment.

Tailings will also be dewatered in a high-density thickener to produce a slurry density of 70% solids by weight prior to pumping to the Tailings Storage Facility. The water from all of the thickener overflows is recycled to the various processing circuits. The conceptual design includes reagent mixing and storage facilities, automation and instrumentation, water supply and distribution, and air supply and distribution.

Infrastructure, Permitting and Compliance Activities

Project Infrastructure

Local resources are minimal. The closest electric power substation connected to the national grid is at Pallasca (69 kV/22.9 kV), a distance of approximately 60 km from the Magistral property. The Magistral Project infrastructure was evaluated by Golder Associates Inc. (or Golder) in its 2016 feasibility study (or Golder 2016 FS). The facilities and infrastructure for the Magistral Project were grouped into two large areas: the first area is the internal infrastructure (or On-Site Infrastructure) and the second area is the external infrastructure (or Off-Site Infrastructure).

The On-Site Infrastructure comprises the following key components:

- Auxiliary concentrator plant infrastructure which includes: reagent plant, located at 4,440 meters above sea level and occupies an area of 600 m2; reagent storehouse located at 4,458 MASL and the compressor house located on a platform adjacent to the concentrator plant and occupies an area of 550 m^2;
- Internal mine operation roads, which will connect the different facilities of the Magistral Project.
- The road design has been developed taking into account the regulations established by the Ministry of Transport and Communications (or MTC) in 2013 and the Occupational Safety and Health Regulations (or OSHR);
- The electrical distribution system of the Magistral Project, which will supply power to all facilities of the concentrator plant, services and infrastructure plant and mine;
- The supply of fresh water for the Magistral Project will be abstracted from the La Esperanza Lake, which is located in the upper part of the Toldobamba micro basin;
- Two camps are envisaged for the Magistral Project: a concentrator plant camp and a mine camp;
- The fuel storage and dispatch station are located at 4,057 MASL on a 7,100 m2 platform;
- Five warehouses and two workshops are planned within the mine infrastructure; and
- Fire suppression system covering the following areas: concentrator and mine camps, central warehouse, processing and concentrate storage areas, mine and concentrator offices, concentrator plant workshops, and the mine maintenance areas.

The Off-Site Infrastructure comprises the following key components:

- the supply of electrical energy for the Magistral Project will be provided by third parties and requires a new 69 kV transmission line between the existing Ramada electrical substation and the projected Magistral electrical substation. The transmission line to the site will be approximately 60 km;
- the main access road to the Magistral Project will be used for external access and transport of concentrates to the port of Salaverry. This route will consist mainly of National Route PE-3N from Trujillo-Huamachuco with a diversion near the La Arena mine, passing through the populated centers of Alto de

Tamboras and Pampa El Co´ndor, and finally passing Pelagatos Lake, before reaching the Magistral Project; and

- the transport of concentrates is envisaged to be outsourced through a specialized company hired by Nexa. The service includes the transport of copper and molybdenum concentrate, from the Magistral Project, via Huamachuco, to the port of Salaverry for the copper concentrate and to;
- the port of Callao for the molybdenum concentrate. The port logistics of concentrate handling and shipment would be carried out by a logistics operator hired by Nexa.

Environmental, Permitting and Social Considerations

An EIA had been submitted in 2008 and was approved in 2009, however, the approval was revoked in 2010 due to the fact that social concerns by the community of Conchucos had not been resolved. A new EIA was submitted in 2016 and was approved in September 2016. The EIA submitted in 2016 included a full description of baseline conditions, however, this chapter of the EIA was not available for the preparation of the Magistral Technical Report. Since the EIA was approved in 2016, it is assumed that the information provided in the EIA was considered adequate by the responsible Peruvian authorities. The Magistral Project does not overlap with any recognized protected or sensitive areas.

Magistral has taken a proactive approach to community engagement. The Magistral office in Conchucos is equipped with several copies of past engineering reports, including the full 2016 EIA, as well as maps and demonstrative tools to educate the public about the Magistral Project. Consultation sessions are open to the public and discussions are held at the offices. The Company has actively consulted on the effects of the Magistral Project and has responded to and considered stakeholder concerns and comments as part of the final EIA. The Company reports that the population of Conchucos is supportive of the Magistral Project and expects to benefit from an increase in economic activity and employment in the area. There have been some issues with the adjacent Pampas community relating to a dispute over land rights between the Pampas and Conchucos communities.

The EIA was renewed in 2019 and is valid for a period of two years (until September 2021). A modification on the Environmental Impact Assessment is being worked on and has yet to be submitted to the Peruvian authority (SENACE). This modification is being developt by an independent environmental consulting company.

SUMMARY OF OTHER MINERAL PROPERTIES

Mines

Nexa has two mines operations, Atacocha and Morro Agudo, that does not currently have any estimates Mineral Reserves and both are not condidered material propertie for the 43-101 purposes. For more information see "—Mining opetarions" included in the Company's Form 20-F

Atacocha

*The most recent NI 43-101 technical report with respect to Atacocha is the technical report titled "Technical Report on The Atacocha Mine, Pasco Province, Central Peru" dated March 22, 2019 (the "**Atacocha Technical Report**") prepared by RPA (now a part of SLR Consulting Ltd), and in particular: Scott Ladd, P.Eng., Rosmery Cardenas, P.Eng., Avakash Patel, P.Eng. and Luis Vasquez, M.Sc., P.Eng. The Atacocha Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com.*

Certain of the scientific and technical information set out herein with respect to Atacocha is based on information presented in the Atacocha Technical Report. The mineral resources for the Atacocha Mine have been estimated by Nexa as of December 31, 2020. The qualified person for the mineral resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee. José Antonio Lopes has also reviewed and approved certain information set out herein that has been updated since the date of the Atacocha Technical Report.

Project Description, Location and Access

Project Setting

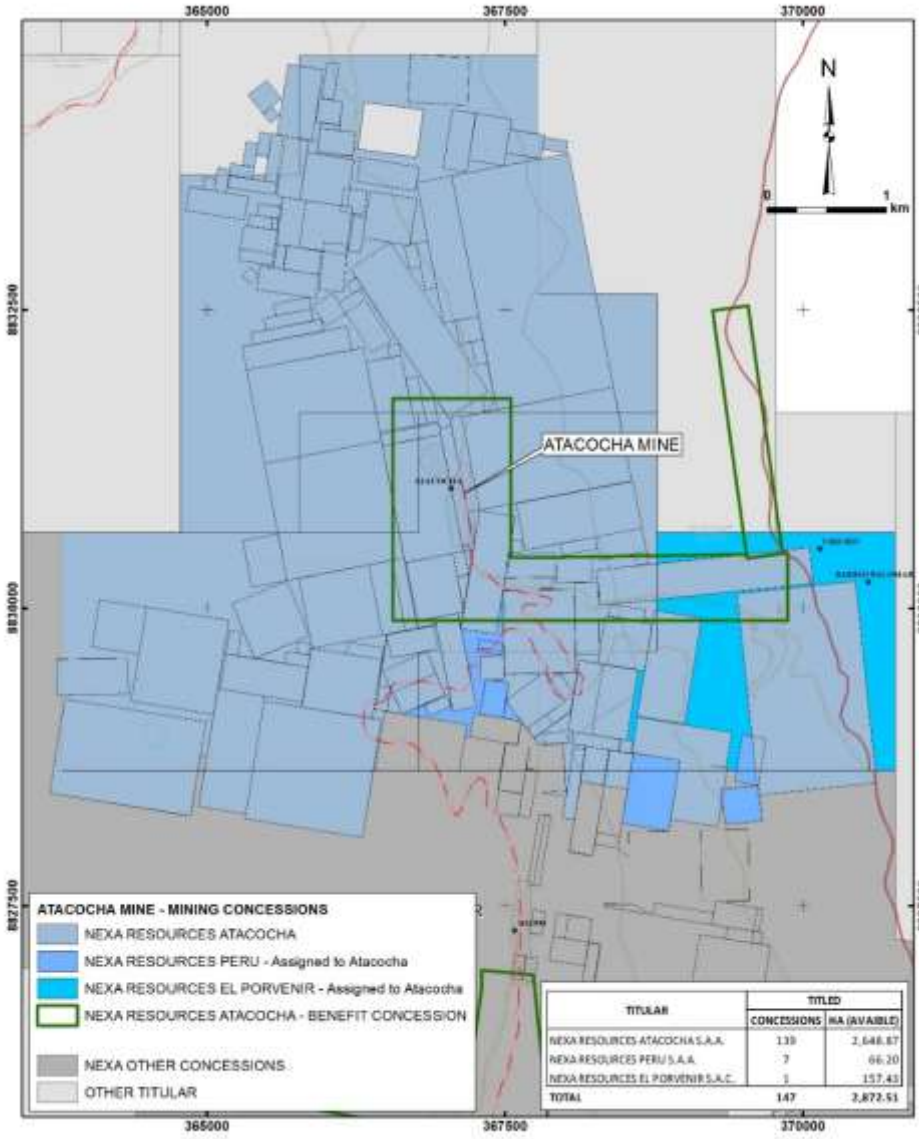
The Atacocha property is located in the district of San Francisco de Asís de Yarusyacán, in the province of Pasco, Peru. The property is located in the central Andes mountains region of Peru, at an approximate elevation of 3,600 meters above sea level. The mine is situated at kilometer 324 of the Carretera Central Highway (Lima—Huánuco route), 16km from the city of Cerro de Pasco. The processing plant is located near the Huallaga River valley. Cerro de Pasco and Huánuco cities are connected to the mine area by a paved road with heavy traffic. Atacocha has mine camps near the plant. The light equipment fuel, maintenance and storage facilities are located on site. Basic supplies are available in the city of Chicrin, and most major items and equipment are provided from Lima.

Project Setting

Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

The Atacocha Mine is owned by Nexa Resources Atacocha S.A.A. ("**Nexa Resources Atacocha**"), which is controlled by Nexa Peru. The Atacocha Mine has a total of 147 concessions covering approximately 2,872.51 hectares, as well as a beneficiation plant, "Chicrin No 2". With respect to the surface property at the Atacocha project, there is a mining site of 1,343 hectares, where the mining concession is located, as well as additional surface property where tailings dams/ponds, camps sites and other ancillary infrastructure are located. There are royalties payable in respect of mining operations at the Atacocha project for the mining concessions held by Nexa Resources Atacocha.

Land Tenure Map of Atacocha



History

The Atacocha mining unit began operating in the first decade of the 20th century with a production of lead, silver, zinc and copper ores. In 1925 J.H. Fleming, H Rally, J.D. Torbert, T.N. Brown and Carlos Gomez Sanchez established the Pucayacu Mining Company that exploited Atacocha until the company was liquidated after Mr. Fleming's death. The property was declared abandoned. Subsequently, the "Casa Gallo Hermanos" enterprise claimed the Atacocha mines, and began working the property in 1928. In 1935, Francisco Jose Gallo Diez, with the collaboration of Eulogio E. Fernandini, German Aguirre and Gino Salocchi, established Atacocha S.A. On February 8, 1936, Compan˜´ıa Minera Atacocha S.A.A. was established to develop exploration and exploitation of mining sites, to produce lead, zinc and copper concentrates. Atacocha reserves were approximately 85,000 mt in 1937.

In the first year of operations, the activities focused on levelling and widening of the San Ramon tunnel at the 4,000 level to prepare it to be used as a mine extraction level. The exploitation work developed in veins from the 4,000 level verified that these veins represented the limits of a unique mineralized body. In the next two years (1938), the "Marcopampa" hydroelectric central and the Concentrate Plant No 1 in Chicr´ın were completed. In 1952, the construction of the 3,600 level, with a length of 2,700 m was completed, which allowed a new main level of access and transportation to underground work, while facilitating the extraction and transportation of the minerals to the new concentrate plant No. 2 located also in Chicr´ın. In 1953, the Chapr´ın Hydroelectric Plant began operating.

Thus far, three stages of integration, including administration, tailings disposal and energy supply to operations have been completed. Integration and optimization of El Porvenir and Atacocha Mines' ore streams to the process plants is currently being evaluated for strategic and financial benefits.

Production in 2020 was significantly lower than in 2019 due to the effects of the COVID-19 pandemic and associated production interruptions from March 2020 to June 2020. On June 8, 2020, following the Peruvian government's decree allowing medium-sized mines to restart operations, we announced that Atacocha would resume operations at the San Gerardo open pit mine in mid-June. However, in light of the current macroeconomic environment and the uncertain time for recovery from effects of the COVID-19 pandemic, in June 2020 we decided that the higher-cost Atacocha underground mine would remain suspended due to our efforts to reduce costs and improve our operational efficiency, placing it under care and maintenance. We have not yet defined how long the underground mine's suspension will last and the decision will depend on an improvement in the mine's economic viability.

Mine Production from Atacocha (2018 - 2020)

	Unit	2018	2019	2020
Tonnage	Mt	1.55	1.51	1.07
Zn Grade	%	1.43	1.43	1.20
Cu Grade	%	0.10	0.08	0.05
Pb Grade	%	1.18	1.30	1.15
Ag Grade	oz/t	1.42	1.52	1.39
Ag Grade	g/t	44.04	47.42	43.21
Au Grade	oz/t	0.02	0.01	0.01
Au Grade	g/t	0.47	0.38	0.20

Geological Setting, Mineralization and Deposit Types

The Atacocha property is situated in the Pasco region of the Western Cordillera of the Andes mountain range in central Peru´, within the Eocene-Miocene Polymetallic, and Miocene Au-Ag Epithermal Belts. The Pasco region is a prolific mineral district. The oldest known mine in the region is the Polymetallic Cerro de Pasco Mine that has been in production for more than 100 years, which is located 15 km SW of our El Porvenir Mine, and was operated by Cerro de Pasco Copper Corporation, Centromin Peru and the last 15 years, by Volcan Mining Company. This deposit is an overprint of High Sulfidation System (Cu-Ag-Au) and Intermediate Sulfidation System (Polymetallic rich). The Colquijirca Mine is located 12 km south of Cerro de Pasco. It has been mined for 90 years by Compan˜´ıa Minera El Brocal SA. The geology varies from a Dome center that hosts precious metals of high sulfidation system (Marcapunta) and intermediate sulfidation limestone replacement polymetallic mineralization at the edges to the north (Tinyahuarco) and south (San Gregorio).There are many other polymetallic mines in the region such as Atacocha and Vinchos to the north; Chungar, and Huaron to the south; and a high sulfidation mine such as Quicay that is associated to a hidden Cu-Mo porphyry deposit located 15 km west from Cerro de Pasco. Also, there are many exploration projects at different stages of development such as Shalipayco (Zn-Pb-Ag), Ayahuilca (Zn-Pb-Ag), Alpamarca (Zn-Pb-Ag-Cu-Au), Cero Auqui (Zn-Pb-Ag), Optimismo (Zn-Pb-Ag) and Patacancha (Zn-Pb-Ag-Cu-Au).

Within the property area the stratigraphic units of primary interest are the Chambara´ Aramachay and Condorsinga formations, as well as other undifferentiated limestone units of the Pucara´ Group, the Goyllarisquizga formation, and stratigraphically overlying basalt layers. Intrusive rocks within the property are variably porphyritic dacite to quartz diorite with hornblende and biotite phenocrysts. Dacitic dikes are sub-divided into 2 units: porphyritic with feldspar phenocrysts and little quartz restricted to the groundmass; and porphyritic with abundant quartz phenocrysts, with minor biotite and hornblende. These dacitic dikes generally trend north-south, and are observed in 3 areas: Santa Ba´rbara/central, south along/parallel to the Atacocha Fault, and south of Section 3. The intrusive suite is part of the Milpo-Atacocha-Vinchos, age dated to 29-26 Ma. The Santa Ba´rbara and San Gerardo stocks are two principal intrusive units within the property.

At Atacocha, mineralization is characterized as either a skarn-, replacement- or hydrothermal vein/breccia-style mineralization. Skarn-related mineralization generally spatially associated with either the Santa Barbara stock or San Gerardo stock is paragenetically earlier, followed by the hydrothermal mineralization. Garnet-skarn related

mineralization is associated with Zn, Pb, Ag, and Bi occurring within the Pucara Group sediments around the Santa Ba´rbara stock. Replacement-style mineralization as well as low-temperature hydrothermal veins and polymitic breccias comprising a Ag, Pb, Zn mineral assemblage, occurs between the San Gerardo stock and Fault (or Falla) 1, which are also characterized by Mn-skarn, and silica-sericite-halloysite alteration.

Skarn-related mineralization is characterized by pyrite, chalcopyrite, sphalerite, galena, with lesser bismuthinite and a variety of sulfosalts (Bi-bearing) and pyrrhotite, bornite, and covellite at lower elevation. Molybdenite may occur proximal to the skarn-related mineralization. Elevated Bi and Au are reported to be associated with skarn-related mineralization. Veins and veinlets with pyrite, chalcopyrite, sphalerite, galena, with quartz and carbonate occur within marble units, and are spatially associated with skarn bodies. Replacement bodies comprising of pyrite, sphalerite, galena, chalcopyrite, and possibly other fine undistinguished sulfides occur within garnet-skarn, marble, and silicified zones. Breccias have been grouped in to either Ag-Pb-Zn hydrothermal breccias or siliceous breccias based on their mineralogical assemblages, and textural characteristics.

Three types of mineral deposits are recognized at Atacocha, described as either: Skarn (Exo and Endo Skarn); Replacement (Lithological and structurally controlled); or Hydrothermal veins (and collapse breccias).

Exploration

Nexa Peru has been conducting exploration and development work at Atacocha since 1949. Most exploration is generally conducted simultaneously with underground development, which involves diamond core drilling, and channel sampling following underground drifting. Prior to 1997, minor and sporadic drilling was completed; and no channel sampling is documented before 2001. Systematic underground geological mapping is completed at scale of either 1:500 or 1:250, following underground development on all levels and sub-levels. Several underground levels have been developed at Atacocha being 2,890 m, the last one, with additional development on sub-levels. Geological mapping is completed by the mine/ production geologists drawn on paper in the field, and subsequently digitized with the help of a modelling assistant. The geological level plan maps are updated and incorporated in a 3D geological model daily to aid future exploration and mine development planning.

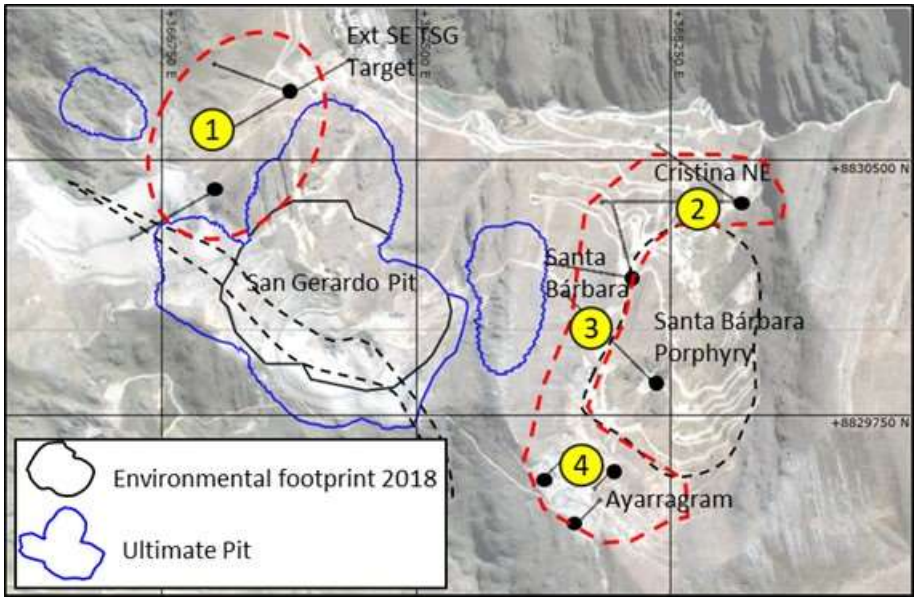
The 2020 exploration program at Atacocha was focused on increasing Mineral Resources in the high and low-altitude zones of the mine (at the 3,300 meter level) and finding new mineralized zones. The drilling program identified zinc, lead, copper, silver, and gold mineralization along the strike of the Veta 27 extension, which is open for expansion. Approximately US$0.91 million was spent on the Atacocha brownfield project in 2020, including exploration project maintenance and geological activities.

Drilling

In 2020, due to the COVID-19 pandemic, exploration activities were temporarly suspended so there was no progress in the second, third and fourth quarter. During the first quarter Nexa completed approximately 20.9 km of diamond drilling, divided between exploratory and infill drilling focused on the project.

By the end of 2020, 9 drill holes were performed at Atacocha, totaling 3.35 km. The budget for 2021 is US$0.51 million with an expectation that we will carry out 3 km of diamond drilling focussed on 4 main targets: (1) San Gerardo Extension SE in epithermal veins; (2) Cristina NE; (3) Santa Barbara, and (4) Ayarragram zone in skarn border, all of which are located in brownfield areas.

Regional Exploration Targets



Sampling, Analysis and Data Verification

Sample collection and core handling are in accordance with industry standard practices. Procedures to limit potential sample losses and sampling biases are in place.

The samples from core and channels are sent to several independent laboratories including Inspectorate (at the mine site and Lima), SGS (Lima), ALS (Lima) and Certimin (Lima). Testing protocols among these laboratories differ in their detection limit and methods applied. The Atacocha Mine has a contract with Inspectorate, which began its operations mid-2011 and with ALS in mid-2017. The samples were collected from drill holes and channels. Samples were bagged and sent to Atacocha Inspectorate Laboratory for preparation and assay.

Since 2013, Nexa has used various laboratories such as ALS, Atacocha Mine, Shalipayco Project and Certimin, for the testing of density samples. Sampling was carried out by Milpo mine geologist staff at Atacocha. A total of 1,157 samples were collected from mineralized zones and a total of 2,002 samples were collected from waste rocks.

The Atacocha project has implemented a QA/QC program, which complies with current industry best practices and involves establishing appropriate procedures and the routine insertion of CRMs, blanks, and duplicates to monitor the sampling, sample preparation and analytical process. Analysis of QC data is performed to assess the reliability of sample assay data and the confidence in the data used for the estimation. QC samples have been inserted into the drill core samples since 2014 and channel samples since 2012. The Atacocha Mine routinely sends certified standards, blanks, field, preparation (coarse reject) and laboratory (pulp) duplicates to the Atacocha Inspectorate laboratory. The Atacocha Inspectorate laboratory has been the primary laboratory for assaying drill core and channel samples since the middle of 2011 with the results of the inserted QC samples detailed below. The samples were sent to SGS from 2006 to 2008. Currently, when Atacocha laboratory is too busy, the samples are delivered to ALS, Certimin, Inspectorate Lima and Inspectorate El Porvenir laboratories.

Mineral Processing and Metallurgical Testing

In addition to the production at the mining operationsbeing significantly lower in 2020 than in 2019 due to the effects of the COVID-19 pandemic and associated production interruptions from March 18 to May 10, 2020.

Zinc concentrate production also decreased in 2020 compared with 2019 production, due to lower plant throughput. The quality of zinc concentrate increased compared with 2019 to an average grade of 50.55% of zinc in 2020.

Lead concentrate production also dropped in 2020, compared with 2019 production. The quality of lead concentrate had a n average grade of 53.59% of lead with silver recovery in the lead concentrate of 76.42% in 2020. Gold recovery to the lead concentrate was of 54.03% in 2020.

Historically, copper concentrate represents a very small percentage of the production and consequentelly, revenue due to low copper head grade. Based on the representativeness of it and on studies carried on by Nexa staff, the company made a decision of temporally suspending the copper concentrate production in the metallurgical plant, maintaining the production of zinc and lead concentrate.

The following table shows a summary of last three years production from 2018 to 2020.

Atacocha Polymetallic Circuit Metallurgical Performance (2018 - 2020)

	Unit	Item	2018	2019	2020
Production	Tonnes		1,551,472	1,505,428	1,065,363
Mill Head Grade	g/t	Ag	44.04	47.42	43.21
	g/t	Au	0.47	0.38	0.20
	%	Cu	0.10	0.08	0.05
	%	Pb	1.18	1.30	1.15
	%	Zn	1.43	1.43	1.20
Cu Concentrate	%	Cu Recovery	9.61	5.99	-
	%	Cu Grade	20.74	18.53	-
	oz/t	Ag Grade	108.25	109.66	-
	%	Ag Recovery (to Cu)	3.49	2.18	-
	oz/t	Au Grade	0.39	0.36	-
	%	Au Recovery (to Cu)	1.18	0.89	-
Pb Concentrate	%	Pb Recovery	85.25	84.00	83.03
	%	Pb Grade	55.32	53.71	53.52
	oz/t	Ag Grade	57.25	57.04	59.29
	%	Ag Recovery (to Pb)	73.62	76.09	76.42
	oz/t	Au Grade	0.54	0.30	0.33
	%	Au Recovery (to Cu)	63.56	49.54	54.03
Zn Concentrate	%	Zn Recovery	77.87	77.52	75.30
	%	Zn Grade	49.99	48.98	50.55

Nexa is in the process of developing geometallurgical models for the Atacocha underground mine and the San Gerardo open pit mine. Test work includes mineralogy, hardness testing (Bond ball mill work index and abrasion index), and flotation testing (variability tests, locked cycle tests, and grind size evaluation).

Mineral Resource Estimate

The Mineral Resource estimate dated December 31, 2020 is reported following the 2014 CIM Definition Standards and was completed by Nexa personnel using Leapfrog Geo, Datamine Studio RM, Supervisor and Deswik softwares.

The Atacocha underground mine Mineral Resource estimates were performed for all mineralization wireframes. Unsampled intervals within wireframes were assigned with detection limit values in the database prior to

grade composite creation. High zinc, lead, copper, and silver two metre composite grades were capped. A sub-blocked model with a minimum sub-cell size of 0.5 m by 0.5 m by 0.5 m with parent blocks measuring 4 m by 4 m by 4 m for the mineralization wireframes was generated. Blocks were interpolated for zinc, lead, copper, and silver using ordinary kriging (OK) and inverse distance cubed (ID3), and a three-pass search strategy. Bulk density values were estimated to vary from 3.15 g/cm3 to 3.83 g/cm3 in the mineralized domains, and the average density used for the wall rock zones was 2.80 g/cm3. Block estimates were validated using industry standard validation techniques. Blocks were classified as measured, indicated, and inferred based on number of holes and distances determined by variogram ranges. Mineral resources at the Atacocha underground mine are reported within resource stopes generated in Deswik Stope Optimizer software, satisfying minimum mining size, NSR cut-off values of US$55.05/t for resource stopes, and continuity criteria.

The Mineral Resource estimates for Atacocha's San Gerardo open pit are based on 103 mineralization wireframes. Unsampled intervals within wireframes were assigned with detection limit values in the database prior to grade composite creation High zinc, lead, copper, silver and gold two metre composite grades were capped. A sub-blocked model with a minimum sub-cell size of 0.5 m by 0.5 m by 0.5 m with parent blocks measuring 4m by 4m by 6m for the mineralization wireframes was generated. Blocks were interpolated for zinc, lead, copper, silver, and gold using ordinary kriging (OK) and inverse distance cubed (ID3). Bulk density values vary from 2.63 g/cm3 to 2.99 g/cm3 in the mineralized domains, and average 2.68 g/cm3 for the walk rock zones. The 0.5 m by 0.5 m by 0.5 m were re-blocked into the final resource model, which has 4 m by 4 m by 6 m blocks. The re-blocked grades were assigned based on tonnage weighting the original block grades and the geology and other codes were assigned based on majority rules. Block estimates were validated using industry standard validation techniques. Blocks were classified as measured, indicated, and inferred based on number of holes and distances determined by variogram ranges. Mineral Resources at the San Gerardo open pit are reported within a preliminary pit shell generated in NPV Scheduler software package from Datamine, at a reporting NSR cut-off value of US$19.46/t. The NSR cut-off values for the mineral resources are based on a zinc price of US$2,869.14/t (US$1.30/lb), a lead price of US$ 2,249.40/t (US$1.02/lb), a cooper price of US$7,427/t (US$3.37/lb), a gold price of US$1,768/oz, and a silver price of US$19.38/oz.

Mineral Reserve Estimate

In 2020, Nexa has performed a Reserves Test for the Atacocha Mine and based on current technical assumptions, exogenous factors such as commodity prices and economical scenario and, the assessments done, Mineral Reserves did not present economic viability to be disclosed under NI-43 101.

Mining Methods

The Atacocha underground mine is mined by the overhand C&F and SLS mining methods. C&F stopes are 20 m high consisting of 4 m high cuts and a minimum mining width of 4 m. C&F stopes are located 55 m from the main ramps and accessed by stope access ramps with grades varying from -15% to +15%. Production is achieved by horizontal drill and blast, and backfilled using unconsolidated waste fill or hydraulic backfill. The SLS mining method has demonstrated increased productivities and reduced unit costs as compared to the C&F mining method. SLS stopes are located a minimum of 40m from infrastructure, are 20 m high, 30 m long and have a minimum mining width of 4 m. Production is achieved by vertical blastholes, and backfilled using unconsolidated waste fill.

San Gerardo is an open pit operation located at the top of mineralized zone, and is mined by 6 m high benches. Since the temporally suspension of Atacocha underground mine, the open pit production is responsible by the metallurgical plant feed. Operations are carried out by contractor with a mining fleet that allows selectivity in the loading process.

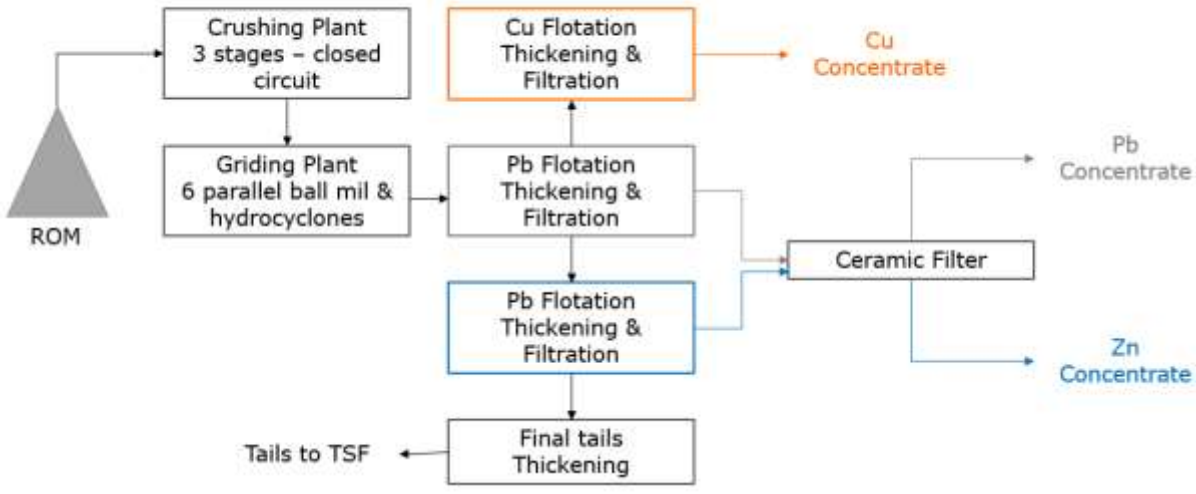
Processing and Recovery Operations

The Atacocha concentrator utilizes a conventional crushing, grinding, and sequential flotation scheme to produce lead and zinc concentrates with an average daily processing rate of approximately 4,200 tonnes. A flash-

flotation step is included in the grinding circuit that recovers lead at a grade sufficiently high to report directly to the final lead concentrate. The majority of gold and silver report are into the lead concentrate. Despite the plant having capacity to produce copper concentrate, the circuit of the plant has been disabled and the Atacocha metallurgical plant produces only zinc and lead concentrates.

The zinc concentrate is transported to Nexa Cajamarquilla's zinc refinery in Peru, while the lead concentrate is sold to concentrate traders.

Atacocha Block Flow Diagram



Infrastructure, Permitting and Compliance Activities

Project Infrastructure

The Atacocha site includes the underground mine, the San Gerardo open pit mine, historical tailings storage facilities, waste rock stockpiles, a beneficiation plant with associated laboratory and maintenance facilities, and maintenance buildings for underground and surface equipment. Facilities and structures supporting operations include warehouses and laydown areas, offices, dry facilities, hydroelectric generating station, power lines and substation, fuel storage tanks, and accommodations camp. The site has well developed systems in place for water supply and distribution, including fresh water and fire suppression water, sewage collection and disposal, and communications. A network of site roads that are approximately six metres wide and total 15 km in length are used by authorized mine personnel and equipment, including ore and waste haul trucks, concentrate haul trucks, support and light duty vehicles to provide access to onsite infrastructure.

Waste rock from the San Gerardo open pit mine is disposed of in the Atacocha Waste Dump, which is adjacent to and downstream of the Atacocha TSF. The Atacocha processing plant currently pumps tailings to the El Porvenir TSF, and both the Atacocha and El Porvenir TSFs have capacity for expansion to accommodate tailings production over the LOM.

The electrical power supply for the project comes from two sources: connection to the SEIN national power grid by a main substation 50⁄13.8kV, located near the site, and the Candelaria Hydro, which consists of 3 turbines (500KVA, 1,200KVA y and 3.5MVA) that is connected to the project through the main substation by a 4.6 km 50kV transmission line of 4.6 km. The installed initial generating capacity of Candelaria is 4,660kV. All other loads of the project are fed at 13.8kV from the main substation through overhead power lines. These power lines are used to deliver power to various locations to support activities during operation of the mine.

Environmental, Permitting and Social Considerations

Atacocha has met all applicable permitting requirements under Peruvian law. These permits include tailings dam and waste rock dump, mine, process plant as well as water usage and effluents.

At Atacocha, the Company promotes the implementation of high environmental standards, highlighting the principles of prevention, mitigation, and control of possible environmental impacts caused by its operations. There is a comprehensive Environmental Management Plan in place, which includes a complete monitoring program for physical and biological components. The Company's practices are based on an Environmental Management System (EMS), which makes it possible to identify critical environmental risks (CERs) at the operations. The CER audit matrix includes the evaluation of legal requirement audit results, monitoring activities and environmental incidents.

A closure plan has been developed for Atacocha at feasibility level for all its components within the context of Peruvian legislation. This closure plan is periodically updated over the life of the mine. The closure plan addresses temporary, progressive and final closure actions, and post-closure inspection and monitoring. Two years before final closure, a detailed version of the mine closure plan will have to be prepared and submitted to the Peruvian Ministry of Energy and Mines for review and approval.

Nexa has developed a robust set of policies, protocols and operational procedures and practices that aim to address various aspects of its Social Responsibility with regards to its mining operations. Atacocha's management system is based on an overarching corporate policy defining the environmental and social objectives and principles that will guide the operation to achieve sound environmental and social performance. At Atacocha, Nexa aims to work in an environment of mutual respect, transparency and collaboration with the local population, which contributes to the company's objectives and short and medium term local development.

Morro Agudo

*The most recent NI 43-101 technical report with respect to Morro Agudo is the technical report titled "Morro Agudo Project, Minas Gerais State, Brazil, NI 43-101 Technical Report on Preliminary Economic Assessment" with an effective date of July 25, 2017 (the "**Morro Agudo Technical Report**") prepared by Amec Foster Wheeler and in particular: Bill Bagnell, P.Eng., Dr. Ted Eggleston, RM SME, Douglas Reid, P.Eng., Laurie Reemeyer, P.Eng., Dr. Peter Cepuritis, MAusIMM(CP), Juleen Brown, MAusIMM(CP), and Dr. Bing Wang, P.Eng. The Morro Agudo Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com.*

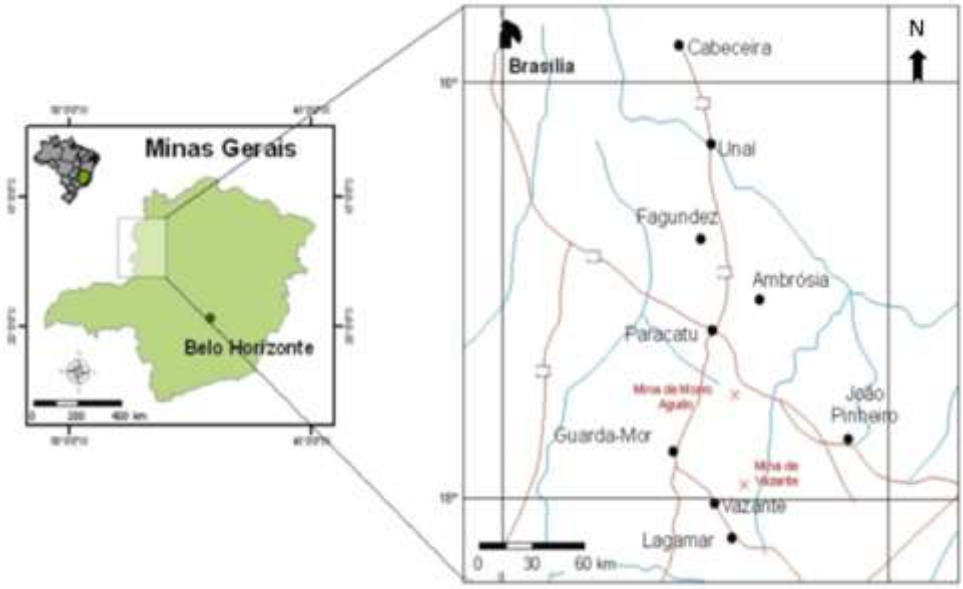
Certain of the scientific and technical information set out herein with respect to Morro Agudo is based on information presented in the Morro Agudo Technical Report. The mineral resources of the Morro Agudo Mine and, Bonsucesso deposit have been estimated by Nexa as of December 31, 2020. The qualified person for the mineral resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee. José Antonio Lopes has also reviewed and approved certain information set out herein that has been updated since the date of the Morro Agudo Technical Report.

Project Description, Location and Access

Project Setting

The Morro Agudo project comprises the Morro Agudo Mine, and three deposits along what is known as the Ambrosia Trend (Ambrosia Sul, Ambrosia Norte, and Bonsucesso). The Morro Agudo Mine site is situated on Tra´ıras Farm, about 45 km south of the municipality of Paracatu, Brazil. The mine access from Paracatu is via the sealed BR-040 highway, to highway marker km 68, a distance of about 29 km, then 16 km via unsealed roads to the mine itself. The Ambrosia Trend deposits are situated about 15 to 20 km northeast of Paracatu. Access is via MG-188 to the village of Santo Antonio, and thence via unsealed road to Rancho Alegre or Ambrosia Farm. The figure below shows the location of the Morro Agudo project.

Project Location

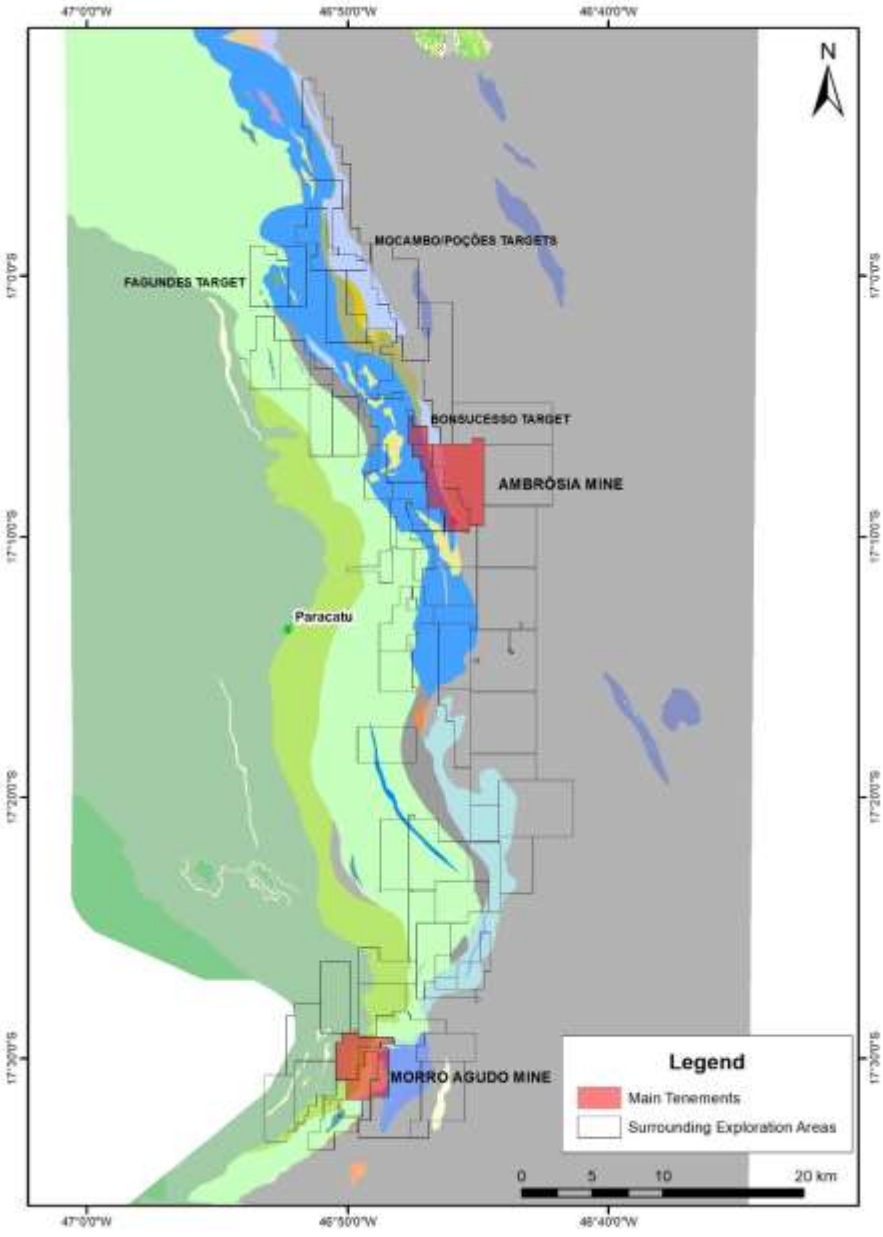


Mineral Tenures, Surface Rights, Water Rights, Royalties and Agreements

Nexa Brazil owns 100.0% of Morro Agudo. The total Morro Agudo project area is about 80 km long and 10 km wide at the widest extent and covers a significant strike extent of the lithologies that host mineralization at the Morro Agudo Mine and along the Ambrosia Trend.

Nexa Brazil holds two granted mining concessions in the Morro Agudo mine area of approximately 827.61 hectares, with a valid mining concession application for an additional area of approximately 618.50 hectares. In the Ambrosia Trend area, Nexa Brazil has one granted mining concession (999.30 hectares), and two mining concession applications (1,496.50 hectares).

Morro Agudo Project Mineral Rights



Brazilian companies that hold mining concessions are subject to a royalty payment known as Financial Compensation for the Exploitation of Mineral Resources (*Compensação Financeira pela Exploração de Recursos Minerais*)("**CFEM**"), imposed by the National Mining Agency ("**ANM**"). Revenues from mining activities are subject to CFEM which is paid to the ANM. CFEM is a monthly royalty based on the sales value of minerals, net of taxes levied on the respective sale. When the produced minerals are used in its internal industrial processes, CFEM is determined based on the costs incurred to produce them or is determined by a reference price of the respective mineral to be defined by the ANM. The applicable rate varies according to the mineral product (currently [2.0]% for zinc and lead). The Morro Agudo Mine is not subject to any royalties other than the CFEM and royalty payments to surface rights holders if mining occurs in their property equal to 50% of the related CFEM.

There is also a monthly inspection fee related to the transfer and commercialization of certain minerals in some Brazilian states, such as Minas Gerais, where the concessions are located (*Ta*xa *Estadual de Recursos Minerais* - TFRM).

Nexa Brazil holds two water licences for water usage for which renewal applications have been lodged. There is sufficient suitable land available within the mineral tenure held by Nexa Brazil for tailings disposal, mine waste disposal, and installations such as the process plant and related mine infrastructure.

History

Exploration activities conducted to date have included geological mapping, rock chip, pan concentrate, stream sediment, and soil sampling, airborne and ground geophysical surveys and drilling.

Modern underground mining commenced in 1988 from the Morro Agudo Mine. The Ambrosia Norte deposit was discovered in 1973, Ambrosia Sul in 2011, and Bonsucesso in 2014. Mining of the Ambrosia Sul deposit commenced in 2017. During the fourth quarter of 2020, operations at Ambrosia Sul of the Morro Agudo Mine, which was reaching the end of its life of mine, were suspended.

Production from Ambrosia Sul and Morro Agudo for the Period 2018-2020 are showed bellow.

Ambrosia Sul Mine Production (2018 - 2020)

	Unit	2018	2019	2020
Ore Tonnage	kt	188.71	225.74	278.38
Waste Tonnage	kt	2,826.98	1,477.00	1,077.04
Zn Grade	%	2.72	2.83	3.62
Pb Grade	%	0.24	0.18	0.16

Morro Agudo Mine Production History (2018 - 2020)

	Unit	2018	2019	2020
Ore Tonnage	Mt	0.77	0.82	0.80
Zn Grade	%	2.22	2.17	2.15
Pb Grade	%	0.61	0.55	0.61

Geological Setting, Mineralization and Deposit Types

The Morro Agudo and Ambrosia Trend deposits are classified as examples of Irish-style sedimentary hosted deposits. Mineralization is hosted within a sequence of pelitic carbonate rocks belonging to the Morro do Calcário Formation that is part of the regional Vazante group. The deposits occur on the Brasília Fold Belt.

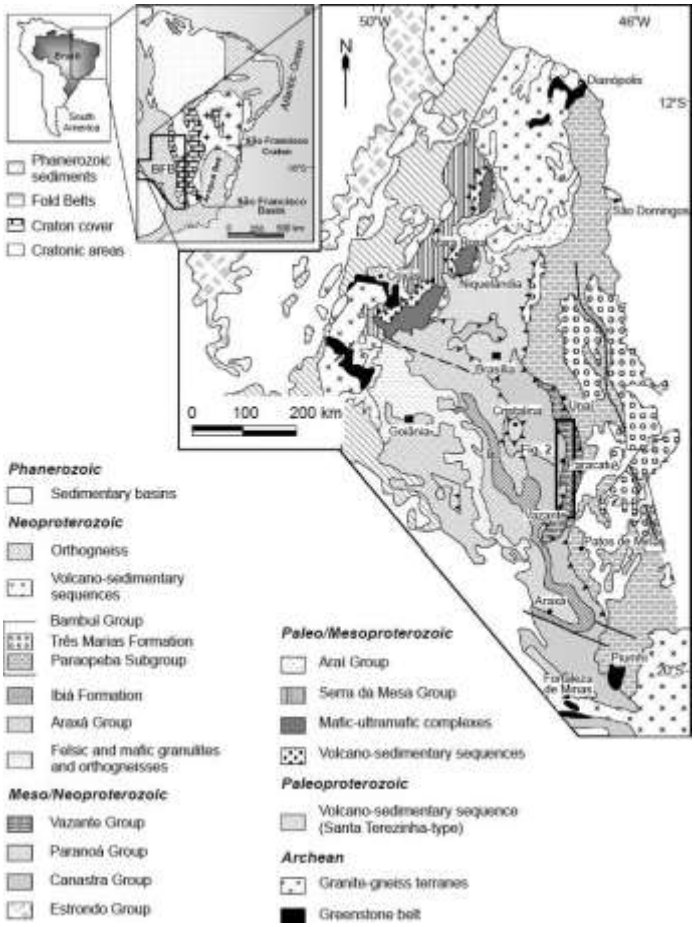
The Morro Agudo zinc and lead deposit comprises a number of concordant stratabound sulphide bodies, non-concordant remobilized sulphide (sphalerite and galena) bodies, and intra-formational dolarenites and breccias of Morro do Calcário Formation. The combined length of the known mineralized bodies at the Morro Agudo Mine is approximately 1,700 m, the width is about 1,200 m, and the bodies have a variable thickness with a maximum of about 10m. Mineralization is bounded to the northwest by the main fault. The western limit has not yet been defined, but drilling has shown continuity of mineralization at depth. Sulphide lenses are at most, 4 m thick, separated by intervals that range from a few centimeters to several meters, depending on the lithology where they are deposited. Mine geologists have identified eight mineralized strata, denominated from G to N, from the base to the top, respectively. Sulphide mineralization can be present in the form of irregular veins of coarse sphalerite and galena, discontinuous and/or sparsely disseminated pockets of galena and coarse sphalerite, and as fine-grained sphalerite, galena, and pyrite forming clast cement and void fill.

The Ambrosia Trend deposits (Ambrosia Sul, Ambrosia Norte and Bonsucesso) occur in the pelite — carbonate rocks of the Vazante Group in a similar stratigraphic position to the Morro Agudo Mine.

Mineralization is predominantly veinlike, and is associated with brecciated dolomites that were tectonically interleaved in metasedimentary rocks along the Ambrosia Fault zone. In most cases, there is a single mineralized structure, but occasionally, two or more mineralized structures are present. At Ambrosia Sul, mineralization is controlled by hydrothermal breccias in a flower morphology.

Both oxide and sulfide mineralization have developed in the Morro Agudo and Ambrosia Trend deposits. Oxide mineralization is primarily in the form of smithsonite and cerussite. Sulfide mineralization is primarily sphalerite and galena. The geological setting and understanding of the mineralization setting are adequately known to support mineral resource and mineralized material estimation and mine planning. The following figure shows the regional geological setting.

Regional Geological Map of the Brasília Fold Belt



Exploration

Exploration activities conducted to date have included geological mapping; rock chip, pan concentrate, stream sediment, and soil sampling; airborne and ground geophysical surveys and drilling.

In 2020, the brownfield exploration program was directed towards intensifying the diamond drilling work at the Bonsucesso target, confirming zinc and lead mineralization along the strike of the mineralized zone and opening the potential to extend de mineralized bodies.

Drilling

Core drilling using diamond tipped tools has been the primary exploration tool. Production drilling operations have been performed by company personnel over the project's history, using a variety of drilling machines. Core sizes have included NQ (75mm), HQ (96mm), and BQ (36mm) core diameters.

Geological logs were completed on all core holes. Geotechnical descriptions are also completed and stored in the geological database. All core holes were photographed. Core recoveries are generally good.

In 2020, the drilling program was focused on the northern (infill) and the central (extension) area of the Bonsucesso target, confirming resources and extending the mineralization. No drilling activity was executed in 3Q20 due to the COVID-19 pandemic. Project activities focused on acquiring data and reviewing the brownfield and regional drilling program to resume of exploratory activities in early October, 2020. Regionally, some drill holes were drilled in the south trend of Ambrosia Mine to investigate the potential mineralized structures.

Our expenditures for this project in 2020 were US$1.37 million, which was primarily related to exploration and geological activities. In 2020, we drilled 32 exploration drill holes, including Bonsucesso and regional targets, totaling 12.23 km. For 2021, the Company is expected to drill a total of 9.30 km and has budgeted a total of US$1.76 million in mineral exploration expenditures.

Sampling, Analysis and Data Verification

Sample collection and core handling are in accordance with industry standard practices. Procedures to limit potential sample losses and sampling biases are in place. Sample intervals are consistent with the type of mineralization.

Sample preparation and analysis for exploration samples from Morro Agudo were performed at the Morro Agudo Mine laboratory from as early as 1987. That laboratory is not independent, and has not been accredited. Beginning in late 2015, ALS Global was chosen as the primary laboratory. The ALS Global laboratory is independent and is ISO 9001 and ISO 17025 accredited. Sample analysis at the mine laboratory and ALS Global is performed using standard procedures that are widely used in the industry. In both cases, analytical procedures are adequate to support mineral resource and mineralized material estimation and mine planning.

The QA/QC methodology uses standards, field duplicates, pulp duplicates, coarse rejects, blanks, and external check assays. QA/QC procedures were implemented in 2011 at the Morro Agudo Mine, and have improved over time. Evaluation of QA/QC data at the Morro Agudo Mine and Ambrosia Trend indicate that the analytical data are sufficiently precise and accurate to support mineral resource estimation and mine planning. Density determinations were completed using water displacement and immersion procedures and the data are considered reasonable and adequate to support mineral resource and mineralized material estimation and mine planning.

Sample security consists largely of storing core and samples in locked facilities and use of chain of custody forms to track core and sample movement. This is acceptable for high-grade zinc deposits. Management of the Morro Agudo Mine and Ambrosia Trend databases follows a standard procedure used for all Company databases. Prior to extracting data for mineral resource and mineralized material estimation, internal checks are made to assure that the right information is used in the mineral resource estimate. These data are also checked when data are entered into the database. When inconsistencies are discovered, corrective action is required and includes participation by the mine team and the database manager. Three audits have been performed by independent third-parties on the mineral resource estimates, including Snowden Mining Industry Consultants (or Snowden) on Ambrosia Norte (2012) and Ambrosia Sul (2014), and a gap analysis study performed by Amec Foster Wheeler in 2016 on the Morro Agudo Mine. High-level reviews of the database and procedures were performed in 2017 in support of the Morro Agudo Technical Report. These included reviews of sampling procedures, geological logging procedures, core drilling and core handling procedures, and QA/QC procedures.

Data from the Morro Agudo Mine and the Ambrosia Trend deposits have undergone significant scrutiny since 2012. The type and amount of data validation is consistent with modern programs, the data accurately reflect the original geological logging, data locations, and assay values, and the data will support mineral resource estimation and mine planning.

Mineral Processing and Metallurgical Testing

All mineralized material is processed in the existing Morro Agudo concentrator, which has a conventional flowsheet incorporating crushing, grinding and sequential lead and zinc flotation. Metallurgical parameters are derived from a combination of plant operating history, mineralogy, laboratory and pilot scale flotation test work and assumptions.

Metallurgical test work completed to date has included mineralogy, grinding calibration tests; laboratory flotation tests; and pilot plant test work. The Morro Agudo Mine and Ambrosia Sul mineralization contain a simple mineralogical assemblage and responded well to a simple and conventional flowsheet and reagent suite.

A robust test program was conducted in respect of the Bonsucesso ore, including mineralogy, hardness tests and flotation tests. Bonsucesso presented a mineralogical assemblage very similar to Morro Agudo and hardness lower than Morro Agudo did, and those are very positive results. Bonsucesso also can be treated using a conventional flowsheet like the Morro Agudo concentrator and has presented excellent metallurgical results.

Separate zinc and lead recoveries were assigned to Morro Agudo, Ambrosia Sul and Ambrosia Norte/Bonsucesso mineralization. These are based on a combination of historical plant recoveries, metallurgical test work and assumed zinc recoveries of approximately 86.7% are achievable from Morro Agudo Mine and Ambrosia Sul mineralized material containing approximately 3% zinc. Lead recoveries are more sensitive to head grade and are more variable.

The Morro Agudo plant produces clean, low-iron, zinc concentrates. The main impurity in zinc concentrate is dolomite, which contains CaO and MgO. There are no other known deleterious elements in zinc concentrate. There are no known deleterious elements in the lead concentrate, and no penalties are applied by customers.

Mineral Resources Estimate

The mineral resource estimate dated December 31, 2020 for Bonsucesso and Morro Agudo were reported using the 2014 CIM Definition Standards and were completed by Nexa using Datamine Studio RM, Leapfrog Geo, and Isatis softwares. Wireframes for geology and mineralization were constructed in Leapfrog Geo based on geology sections, assay results, lithological information, and structural data. Assays were capped to various levels based on exploratory data analysis and then composited to one metre lengths. Wireframes were filled with blocks considering different size for each mine (Morro Agudo underground with 6m x 6m x 1m; and Bonsucesso with 2m x 12m x 5m) with sub-celling at wireframe boundaries. Blocks were interpolated with grade using Ordinary Kriging (OK) and Inverse Distance Squared (ID^2). Blocks estimates were validated using industry standard validation techniques. Classification of blocks used distance-based criteria. Reporting was done considering a NSR cut-off value greater than US$37.95/t for Morro Agudo Mine and US$46.22/t for Bonsucesso, minimum thickness of 3.0 m was applied for Bonsucesso and 4.5 m for Morro Agudo. NSR cut-off values for the mineral resources are based on LOM costs of zinc price of US$2,869.14/t (US$1.30/lb), lead price of US$2,249.40/t (US$1.02/lb) and metallurgical recoveries are based on historical processing data.

Mineral Reserves

There are no Mineral Reserves at the Morro Agudo Mine.

Mining Operations

Mining Methods

The LOM is based on mill feed material including inferred mineral resources to be sourced from the operating underground Morro Agudo Mine, the open pit Ambrosia Sul Mine and Bonsucesso deposits that are assumed to be mined using underground mining methods.

The primary extraction method at the Morro Agudo Mine is inclined room-and-pillar. The mineralized zones are accessed via a ramp system. Backfill is in limited use at the Morro Agudo Mine and is specified on an operational basis depending upon the deposit geometry.

The Morro Agudo Mine is a mature operation, and staff has a well-developed understanding of the hydrogeology, geology, and mining methods required to safely extract the mineralization. Development and access profiles take advantage of the known hanging wall structural characteristics to minimize ground support requirements. Water inflows into the Morro Agudo Mine are not a major source of water volume to the mine. The Morro Agudo Mine ventilation infrastructure is essentially at the full extent of development and is not currently planned to have significant expansion going forward. The primary mine access for material and personnel is a ramp via the portal. A shaft is used primarily for hoisting mill feed and waste material and can be used as an emergency egress if necessary. Electrical power supply is in place underground. The forecast production rate is 1,100 t/d on average.

The proposed mine plan for Bonsucesso considering a bulk mining operation using AVOCA as mining method. Uncemented waste rock backfill will be employed to fill the stopes to provide hanging wall support to reduce mining dilution. The proposed Bonsucesso underground mine will be accessed through a portal and ramp developed from surface. The current 13.8 kV power supply to the Ambrosia Sul operations will be improved to support development at Bonsucesso that will require an extension of the distribution network and an electrical substation. The forecast production rate from Bonsucesso varies from 2,000 to 3,300 t/d during LOM.

The Ambrosia Sul open pit is approximately 35 km north of the Morro Agudo plant site. Production and waste rock from the Ambrosia Sul open pit is mined using contract mining equipment operated by Nexa employees. Truck haulage to the Morro Agudo Mine is undertaken using contract haulage. Electrical power is provided to the Ambrosia Sul Mine by CEMIG, a regional energy provider in Minas Gerais. CEMIG has a contract to supply the mine through an existing 13.8kV distribution network. The forecast production is a nominal 750 t/d on average. Since the suspension of its operations in the fourth quarter of 2020 onwards, activities at the mine have been limited to ensuring appropriate maintenance and security.

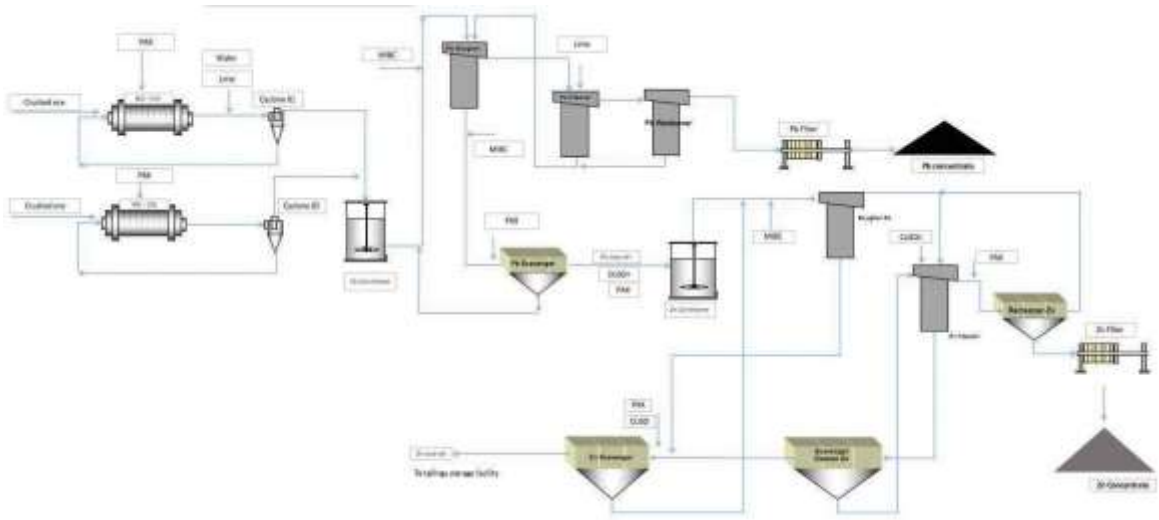
Processing and Recovery Operations

The Morro Agudo mill uses a conventional crushing, grinding and flotation circuit to produce separate lead and zinc sulphide concentrates. The Morro Agudo plant design has developed since 2003 with a number of debottlenecking and improvement projects. In 2003, Mill 2 was installed, increasing the capacity of the plant from approximately 750,000t/a capacity to 1,150,000t/a. Flotation columns were installed in the lead and zinc circuit that year. Additional flotation cells were installed to increase lead recovery. In 2016, the Eriez Stack Cell was installed as the lead second cleaner. The plant capacity is significantly in excess of the tonnages to be treated in the LOM plan.

In 2020, the Morro Agudo plant processed 0.46 kt of ore originated from Santa Elina Mine (Mineração Santa Elina Indústria e Comércio S.A), located in Rondonia State in Brazil, by a contract in place with Nexa. The ROM had high zinc grade with average of 12.53% and 5.02% Pb. This material blended with Ambrosia Sul and Morro Agudo run of mine increased both zinc and lead head grade.

Zinc concentrate is transported to the Company's Treˆs Marias zinc smelter. The smelter process concentrates from silicate concentrates from the Company's Vazante operations, sulphide concentrates from the Morro Agudo Mine and sulphide concentrates from external parties in a ratio of approximately 70%:13%:17%. The concentrates from the Morro Agudo and Ambrosia Sul mines, and the proposed Morro Agudo project concentrates, are important for the viability of Tres Marias, as they provide a local and accessible source of sulphide concentrates with low iron, which can be fed in ratio with the Vazante silicate concentrates. This helps produce sufficient sulphuric acid and leach solutions in appropriate ratios to optimize smelter production and economics. The following figure illustrates the process flowsheet.

Milling and Flotation Flowsheet



Morro Agudo Circuit Metallurgical Performance (2018 - 2020)

	Unit	Item	2018	2019	2020
Production	tonnes		1,060,932	1,168,396	1.180.621
Mill Head Grade	%	Pb	0.71	0.52	0.49
	%	Zn	2.70	2.33	2.41
Pb Concentrate	%	Pb Recovery	81.01	77.84	69.20
	%	Pb Grade	51.48	49.39	50.06
Zn Concentrate	%	Zn Recovery	92.18	89.60	88.40
	%	Zn Grade	40.97	40.91	40.80

For several years, the Morro Agudo Mine has sold some or all of its flotation tailings to local farmers as a soil modifier. Since 2016, all flotation tailings have been decanted, dried, and reclaimed for sale. Contracts are in place for this material with specification limits set out in the contract terms.

Infrastructure, Permitting and Compliance Activities

Project Infrastructure

All infrastructure required for the current Morro Agudo Mine mining and processing operations has been constructed and is operational. This includes the underground mine, access roads, powerlines, water pipelines, offices and warehouses, process plant/concentrator, conveyor systems, waste rock facilities, temporary mill feed stockpiles and tailings storage facilities.

The Ambrosia Sul open pit is a short-life operation with supporting functions and infrastructure being provided by the Morro Agudo Mine site. The Bonsucesso project is currently in the feasibility study stage which was placed on hold in 2020 in response to the COVID-19 pandemic. The mine will be treated as a satellite mine for the complex considering that it will be build minimum operational facilities at the site and that the Morro Agudo plant

will be used for ore processing. Studies also being carried out to define if we will have synergy with Ambrosia facilities.

Environmental, Permitting and Social Considerations

The Morro Agudo Operation holds several permits in support of the current operations. The main instrument to regulate the operation is a set of operating licenses issued by the Environmental Agency from the state of Minas Gerais. The licenses are active, some of them under renewal process.

Tailings management at the Morro Agudo Mine consists of three tailings storage facilities (or TSFs), denoted as Deposit 1, 2, and 3. Water is recovered in the deposits and returned to the process plant. Embankment raises are not planned for the deposits as increases in the total volume of the reservoirs are limited by the extraction and sale of the contained tailings. Dam safety inspections are carried out by Company professionals on a monthly basis and by third-party consultant, Geoconsultoria, annually.

The approved water monitoring plan requires monitoring of groundwater quality, surface water for physical, chemical and hydrobiological parameters, as established in the three operating licenses. In addition, Nexa's licenses have an annex, called annex 2, which establishes a self-monitoring program that provides the type of monitoring, points, frequency and parameters. Tailings dams have a diversion channel to secure the areas upstream and downstream of the dams. The main sources of water for operations are from recycled water from the mine, and from the TSFs.

In partnership with the appropriate internal and external resources, Company staff developed and implemented a Community Engagement Relations Plans by determining the potentially-impacted communities and probable partner stakeholders that could be potentially impacted; defining issues that are important to stakeholders; and establishing objectives consistent with what the Company and the affected communities wish to accomplish.

Projects

Nexa has interests in four greenfield mining projects in Peru (Shalipayco, Hilarión, Pukaqaqa and Florida Canyon Zinc) and one in Brazil (Caçapava do Sul). Such projects are undergoing preliminary studies. For more information see "—Mining operations—Mining greenfield projects" included in the Company's Form 20-F.

Shalipayco

*The most recent NI 43-101 technical report with respect to Shalipayco is the technical report titled "Technical Report on the Preliminary Economic Assessment of the Shalipayco Project, Junín Region, Perú" with an effective date of July 26, 2017 (the "**Shalipayco Technical Report**") prepared by RPA and in particular: David Robson, P.Eng, M.B.A, José Texidor Carlsson, P.Geo., Kathleen A. Altman, Ph.D., P.E., and Stephan Theben, Dipl. Ing. The Shalipayco Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com.*

Certain of the scientific and technical information set out herein with respect to Shalipayco is based on information presented in the Shalipayco Technical Report. The mineral resources for the Shalipayco Project have been estimated by Nexa as of December 31, 2018 and reviewed by a qualified person. The qualified person for the mineral resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee. José Antonio Lopes has also reviewed and approved certain information set out herein that has been updated since the date of the Shalipayco Technical Report.

The Shalipayco Project consists of 52 concessions totaling 22,608.99 hectares and one mineral claim totaling 740.59 hectares located in the Jun´ın Region, approximately 170 km northeast of Lima, Peru and approximately 35

km southeast of the city of Cerro de Pasco. The center of the Shalipayco Project is located at approximately 75°58'W Longitude and 10°07'S Latitude at elevations between 4,000 and 4,800 MASL. The Shalipayco property can be reached by vehicle from Cerro de Pasco by driving southwards along Route 3N (Longitudinal de la Sierra) to the town of Carhuamayo, then turning northeasterly along a secondary road. Any mining development on the Shalipayco property would have access to hydroelectric power from the national electrical grid system (Sistema Electrico Interconnectado National). Water requirements for a mining project could be met by streams and small lakes on the Shalipayco property.

The Shalipayco Project is a joint venture between Nexa Peru (which holds a 75.0% interest) and Pan American Silver Perú S.A.C. (which holds the remaining 25.0%). Companĩa Minera Shalipayco S.A.C. holds 100.0% of the mineral interests in the Shalipayco Project, with the exception of one mineral concession held directly by Nexa Resources. It is a potential underground polymetallic project containing zinc, lead and silver deposits. This project consists of mining concessions with evidence of MVT mineralization, which is a deposit type similar to our Morro Agudo Mine. The Shalipayco mineralization is mainly located within the Chambará formation that is part of the Pucará Group, considered the most important Peruvian location for MVT mineralization.

From late April 2017 to late January 2018, Nexa completed a total of 37,239 meters of diamond drilling, out of which 35,105 meters were in 122 exploration holes and 2,134 meters were for metallurgical test work in 12 holes.

Data from this drilling phase has contributed to the redefinition of the geological, structural and mineralization model, as well as to a new block model that indicates an increase to the 2017 mineral resource estimate. The mineral resource estimate conforms to the 2014 CIM Definition Standards.

In 2020, Nexa spent approximately US$ 0.9 million on the project relating to maintaining the facilities (office and warehouse) in Carhuamayo, and cunducting some desktop analysis in relation to the pre-feasibility study. All field activities at Shalipayco were on hold during 2020 due to COVID-19 pandemic and the Peruvian Government´s lockdown order. As a result, no exploration activities have been carried out during such period.

There is no budget for exploration in 2021. Although metallurgical tests are ongoing, the pre-feasibility study remains on hold as negotiations to obtain our social license with the local community of Carhuamayo are ongoing.

Hilaríon

*The most recent NI 43-101 technical report with respect to Hilarión is the technical report titled "Technical Report on the Hilarión Project, Ancash Region, Peru" with an effective date of February 14, 2020 (the "**Hilarión Technical Report**") prepared by RPA and in particular: Jason Cox, P.Eng., Normand Lecuyer, P.Eng., Rosmery J. Cardenas Barzola, P.Eng., Brenna J. Y. Scholey, P. Eng., and Luis Vasquez, M.Sc., P. Eng. The Hilarión Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com. The scientific and technical information set out herein with respect to Hilarión is based upon information prepared by or under the supervision of a qualified person involved with the preparation of the Hilarión Technical Report or approved by such person.*

Certain of the scientific and technical information set out herein with respect to Hilarion is based on information presented in the Hilarion Technical Report. The mineral resources for the Hilarion Project have been estimated by Nexa as of December 31, 2019 and reviewed by a qualified person. The qualified person for the mineral resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee. José Antonio Lopes has also reviewed and approved certain information set out herein that has been updated since the date of the Hilarion Technical Report.

The Hilario´n Project is located in the Department of Ancash, approximately 230 km north of Lima, Peru, and approximately 80 km south of the city of Huaraz. The centre of the project is approximately at Universal Transverse Mercator (UTM) co-ordinates 8,895,000 mN and 282,000 mE (WGS 84, Zone 18S). The project can be reached by vehicle via a secondary road off of Route 3N (Longitudinal de la Sierra).

The Hilario´n Project consists of a large, irregularly shaped block of contiguous concessions with several smaller, non-contiguous concessions peripheral to it. It consists of 71 mineral concessions covering an area of approximately 15,408.28 hectares and one mineral claim totaling 209.72 hectares. Of the 72 mineral rights comprising the project, 59 mineral concessions and one mineral claim are registered in the name of Nexa Peru and ten are

registered in the name of Compañía Minera Gaico S.A. ("Gaico"), a company 93.4% owned by Nexa. Two mineral concessions are held jointly by Gaico (50%) and the Estate of Mr. Arnulfo Carbajal (50%).

The mineralization at Hilarión–El Padrino occurs along the contacts of dikes but also as discrete tabular vertical zones. The zones are elongated parallel to the main northwestsoutheast structures, which is also the direction of most of the dikes. The Hilarión deposit consists of multiple zones that vary from 3 m to 65 m in thickness and from 100 m to 1,500 m along strike. The mineralization in the project area consists of sulphides containing potentially economic concentrations of zinc, silver, lead, copper, and gold that have formed during the interaction between magmatic hydrothermal fluids and the country limestone (skarn).

From 2005 to 2014, in addition to mapping, remote sensing, topographical and geophysical surveys, Nexa completed four drilling campaigns totaling 244.0 km on Hilarión and El Padrino deposits. During 2018-2019, two additional drilling campaigns totaling 17.1 km were carried out. The recent 2018-2019 drilling predominantly focused on the Hilarión North zone. During 2019, Nexa drilled 12 drill holes totaling 9.1 km at Hilarión. High grade and thick intercepts revealed continuity of the mineralized zones of the deposit to the north and south and demonstrated the potential for resource increase.

In 2020, activities were reduced due COVID-19 pandemic and the Peruvian Government´s lockdown order, but Nexa carried out 4.6 km of diamond drilling testing in the extension of the Hilarión mineralization trend to the northeast towards the Mia and Hilarión South targets, totaling 5 drill holes, and completed the sampling for the metallurgical test study. Nexa spent approximately US$5.0 million on the Hilarión Project, including exploration activities, geological mapping, rock chip sampling, diamond drilling, and permitting.

In 2021, we have budgeted US$7.9 million for the Hilarión project and planned 14.1 km of diamond drilling to test the southern projection of the Hilarión mineralized trend at the south of Hilarión deposit, where Zn, Pb, Cu, Ag mineralized veins trending east-west and north-south occur at surface level, as well as a sampling campaign of 10 tonnes for ore sorting tests.

Pukaqaqa

*The most recent NI 43-101 technical report with respect to Pukaqaqa is the technical report titled "Technical Report on the Pukaqaqa Project, Huancavelica Region, Peru" with an effective date of August 4, 2017 (the "**Pukaqaqa Technical Report**") prepared by RPA and in particular: Jose Texidor Carlsson, P.Geo., Katharine Masun, P.Geo., David M. Robson, P.Eng., M.B.A., Kathleen A. Altman, P.E., and Stephan Theben, Dipl.-Ing. The Pukaqaqa Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com. The scientific and technical information set out herein with respect to Pukaqaqa is based upon information prepared by or under the supervision of a qualified person involved with the preparation of the Pukaqaqa Technical Report or approved by such person.*

Certain of the scientific and technical information set out herein with respect to Pukaqaqa is based on information presented in the Pukaqaqa Technical Report. The mineral resources for the Pukaqaqa Project have been estimated by Nexa as of July 31, 2017 and reviewed by a qualified person. The qualified person for the mineral resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee. José Antonio Lopes has also reviewed and approved certain information set out herein that has been updated since the date of the Pukaqaqa Technical Report.

The Pukaqaqa Project consists of 34 granted concessions totaling 11,131.29 hectares located in the Department of Huancavelica, approximately 230 km southeast of Lima, Peru and approximately 11 km northwest of the city of Huancavelica. The center of the Pukaqaqa Project is approximately at Universal Transverse Mercator (UTM) co-ordinates 8,595,000m N and 498,000m E (WGS 84, Zone 18S). The distance by road from Huancavelica to the site is 69 km on winding gravel roads and takes about 2.5 hours to drive.

The Pukaqaqa Project consists of a large, irregularly shaped block of contiguous concessions and one smaller, non-contiguous concession. In October 2001, Milpo optioned 100% of the Pukaqaqa property from Rio Tinto Mining and Exploration Ltd. (or Rio Tinto) for staged cash payments totaling US$4.0 million over a six-year period. Rio Tinto retains a 1.0% NSR royalty.

No drilling program was carried out on the project during 2020.

The pre-feasibility studies at Pukaqaqa remain on hold, only metallurgical tests are in progress. In addition, we are renegotiating the EIA for the Pukaqaqa Project, which should also extend the future project timeline.

Florida Canyon Zinc

The most recent NI 43-101 technical report with respect to Florida Canyon Zinc is the technical report titled "NI 43-101 Technical Report, Preliminary Economic Assessment, Florida Canyon Zinc Project, Amazonas Department, Peru" with an effective date of July 13, 2017 (the "Florida Canyon Zinc Technical Report") prepared by SRK Consulting (U.S.) Inc. ("SRK") and in particular: Walter Hunt, CPG, J.B. Pennington, MSc, CPG, AIPG, Daniel H. Sepulveda, Joanna Poeck, BEng Mining, SME-RM, MMSAQP, Jeff Osborn, BEng Mining, MMSAQP, James Gilbertson, MCSM, CGeol, FGS, and John Tinucci, Ph.D., P.E. The Florida Canyon Zinc Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com.

Certain of the scientific and technical information set out herein with respect to Florida Canyon Zinc is based on information presented in the Florida Canyon Zinc Technical Report. The mineral resources for the Florida Canyon Zinc Project have been estimated by Nexa as of October 30, 2020 and reviewed by a qualified person. The qualified person for the mineral resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee. José Antonio Lopes has also reviewed and approved certain information set out herein that has been updated since the date of the Florida Canyon Zinc Technical Report.

The Florida Canyon Zinc Project is owned and operated by Minera Bongará S.A., a joint venture between Solitario Zinc Corp. ("Solitario") and Nexa in existence since 2006. Nexa owns 61.0% of Minera Bongará S.A., with Solitario holding the remaining 39.0% ownership interest. Florida Canyon Zinc is an advanced mineral exploration project comprised of 16 contiguous mining concessions, covering approximately 12,600 hectares. The concession titles are in the name of Minera Bongará. All of these concessions are currently titled.

The Minera Bongará concessions are completely enveloped by the Chambara Project, a second group of 38 contiguous mining concessions, covering approximately 29,395 hectares and 10 mineral claims covering 7,323 hectares. Ten concession titles are in the name of Minera Chambara (joint venture between Solitario and Milpo). 18 mineral concessions and 10 mineral claims are in the name of Nexa, pending the tranfer to Minera Chambara.

Nexa, as operator of the joint venture company Minera Bongará, has entered into a surface rights agreement with the local community of Shipasbamba, which controls the surface rights of the Florida Canyon Zinc Project. This agreement provides for annual payments and funding for mutually agreed upon social development programs in return for the right to perform exploration work including road building and drilling. From time to time, Milpo also enters into surface rights agreements with individual private landowners within the community to provide access for exploration work.

The Florida Canyon Zinc Project is located in the Eastern Cordillera of Peru at the sub-Andean front in the upper Amazon River Basin. It is within the boundary of the Shipasbamba community, 680 km north-northeast of Lima and 245 km northeast of Chiclayo, Peru, in the District of Shipasbamba, Bongara´ Province, Amazonas Department. The Florida Canyon Zinc Project area can be reached from the coastal city of Chiclayo by the paved Carretera Marginal road. The central point coordinates of the Florida Canyon Zinc Project are approximately 825,248 East and, 9,352,626 North (UTM Zone 17S, Datum WGS 84). Elevation ranges from 1,800 to approximately 3,200 MASL. The climate is classified as high altitude tropical jungle in the upper regions of the Amazon basin. The annual rainfall average exceeds 1m with up to 2m in the cloud forest at higher elevations.

Peru imposes a sliding scale NSR on all precious and base metal production of 1% on all gross proceeds from production up to US$60,000,000, a 2% NSR on proceeds between US$60,000,000 and US$120,000,000 and a 3% NSR on proceeds in excess of US$120,000,000. No other royalty encumbrances exist for the Florida Canyon Zinc Project.

In 2019, Nexa performed a drilling program at Florida Canyon Zing Project, focusing on two sulfide concentration areas, which are related to feeders that generate the concentration of sulphides in the mantos, bodies and veins mineralization. During 2019, Nexa spent approximately US$6.5 million on the project and performed 14.8 km of diamond drilling.

In 2020, Nexa worked on repairing the access road to the projectto reduce logistical costs. Another important activity carried out in 2020 was updating the geological model based on the 2018-2019 drilling campaign and improving ore-type definition (oxide-mixed-sulfide) using qualitative and quantitative analytic data. Consequently, this work was incorporated in the project's updated mineral resources estimate.In 2020, Nexa spent approximately US$1.4 million on this project.

In 2021, the project has a budget of US$1.4 million, including US$0.4 million for a heli-borne Magnetic survey to cover 49,300 hectares, US$0.45 million for access road maintenance and construction, and US$0.4 million to obtain a new environmental permit for drilling plans beyond 2022. The remaining budget is for the maintenance of the project structure and social programs for the local community.

Caçapava do Sul

*The most recent NI 43-101 technical report with respect to Caçapava do Sul is the technical report titled "Technical Report on the Caçapava do Sul Project, State of Rio Grande Do Sul, Brazil" with an effective date of August 3, 2017 (the "**Caçapava do Sul Technical Report**") prepared by RPA and in particular: Jason J. Cox, P.Eng., David A. Ross, P.Geo., Brenna J.Y. Scholey, P.Eng., and Stephan Theben, Dipl.-Ing. The Caçapava do Sul Technical Report has been filed in accordance with NI 43-101, and is available, under Nexa's SEDAR profile at www.sedar.com. The scientific and technical information set out herein with respect to Caçapava do Sul is based upon information prepared by or under the supervision of a qualified person involved with the preparation of the Caçapava do Sul Technical Report or approved by such person.*

Certain of the scientific and technical information set out herein with respect to Caçapava do Sul is based on information presented in the Caçapava do Sul Technical Report. The mineral resources for the Caçapava do Sul Project have been estimated by Nexa as of March 17, 2017 and reviewed by a qualified person. The qualified person for the mineral resources estimate is José Antonio Lopes, B.Geo., MAusIMM (CP) Geo, a Nexa Resources employee. José Antonio Lopes has also reviewed and approved certain information set out herein that has been updated since the date of the Caçapava do Sul Technical Report.

The Caçapava do Sul Project is located in southern Brazil, in the state of Rio Grande do Sul, approximately 260 km southwest of the state capital (Porto Alegre) and approximately 2,300 km southwest of Brasilia. The center of the Caçapava do Sul Project is located at approximately 30.93°S Latitude and 53.48°W Longitude. The approximate Universal Transverse Mercator (UTM) co-ordinates of the center of the currently defined mineralization are 6,576,000m N and 262,000m E (Zone 22 South, datum Córrego Alegre). Access to the Caçapava do Sul property is by road from Porto Alegre, west along paved state highway BR-290 to the town of Boqueirão, then south along paved highway BR-153 to secondary road RS-625.

The Caçapava do Sul Project is a joint venture between Mineração Santa Maria Ltda., a wholly owned subsidiary of Nexa Brazil, which holds a 56.00% interest, and IAMGOLD Corporation, which holds a 44.00% interest. Nexa Brazil is the operator of the joint venture. Under the terms of the agreement, Companhia Brasileira do Cobre retains a 2% NSR royalty on the Caçapava do Sul Project.

On March 28, 2019, Nexa announced the new Copper Stockwork exploration target (which features copper, lead and gold deposits) in the Caçapava do Sul Project. During 2019, our exploration program was focused on the extension of this Copper Stockwork system and drilling associated with geophysical anomalies. It was drilled in the copper Stockwork zone which presented good drill holes results and mineralized intersections. The geological potential of the system remains under-evaluated.

In 2020, Nexa's exploration team reviewed the drilling data to identify upside potential on the brownfield area. No drilling was carried out and a total amount of approximately US$$0.4 million was spent on the Caçapava do Sul Project for maintenance of project structures.

For 2021, we have proposed no exploration activities. As a result of Nexa's strategy Caçapava do Sul Project is on hold.