ORVANA MINERALS CORP.

ANNUAL INFORMATION FORM

FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2021

December 29, 2021

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FORWARD-LOOKING STATEMENTS DISCLAIMER

Certain statements in this Annual Information Form ("AIF") constitute forward-looking statements or forward-looking information within the meaning of applicable securities laws ("forward-looking statements"). Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions, potentials, future events or performance (often, but not always, using words or phrases such as "believes", "expects" "plans", "estimates" or "intends" or stating that certain actions, events or results "may", "could", "would", "might", "will" or "are projected to" be taken or achieved) are not statements of historical fact, but are forward-looking statements.

Forward-looking statements relate to, among other things, the potential impact of the COVID-19 on the Company's business and operations, including its ability to continue operations; the Company's ability to manage challenges presented by COVID-19; the accounting treatment of COVID-19 related matters; Orvana's ability to prevent and/or mitigate the impact of COVID-19 and other infectious diseases at or near the Company's mines and support the sustainability of its business including through the development of crisis management plans, increasing stock levels for key supplies, monitoring of guidance from the medical community, and engagement with local communities and authorities; the Company's ability to achieve improvement in free cash flow; the ability to maintain expected mining rates and expected throughput rates at El Valle Plant; the potential to extend the mine life of El Valle Mine (together with Carlés Mine, "El Valle") in Spain and Don Mario Mine ("Don Mario") in Bolivia beyond their current life-of-mine estimates, including specifically, but not limited to in the case of Don Mario, the processing of the mineral stockpiles and the reprocessing of the tailings material; the Company's ability to optimize its assets to deliver shareholder value; the Company's ability to optimize productivity at El Valle and Don Mario; estimates of future production, operating costs and capital expenditures; mineral resource and reserve estimates; statements and information regarding future feasibility studies and their results; future transactions; future metal prices; the ability to achieve additional growth and geographic diversification; the potential for discovery of additional mineral resources; future financial performance, including the ability to increase cash flow and profits; future financing requirements; and mine development plans. Among other places, forward-looking statements are included in the section of this AIF headed "Description of the Business - Outlook".

Forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by the Company as of the date of such statements, are inherently subject to significant business, economic and competitive uncertainties and contingencies, which includes, without limitation, as particularly set out in the notes accompanying the Company's most recently filed financial statements. The estimates and assumptions of the Company contained or incorporated by reference in this AIF, which may prove to be incorrect, include, but are not limited to, the various assumptions set forth herein or as otherwise expressly incorporated herein by reference as well as: there being no significant disruptions affecting operations, whether due to labour disruptions, supply disruptions, power disruptions, damage to equipment or otherwise; permitting, development, operations, expansion and acquisitions at El Valle and Don Mario being consistent with the Company's current expectations; political developments in any jurisdiction in which the Company operates being consistent with its current expectations; certain price assumptions for gold, copper and silver; prices for key supplies being approximately consistent with current levels; production and cost of sales forecasts meeting expectations; the accuracy of the Company's current mineral reserve and mineral resource estimates; labour and materials costs increasing on a basis consistent with Orvana's current expectations; labour and materials costs increasing on a basis consistent with Orvana's current expectations; the availability of necessary funds to execute the Company's plan; there will be no material change to mineral resource estimates, conceptual mine plan and operations, internal rate of return, sensitivities, taxes, net present value, potential recoveries, design parameters, operating costs, capital costs, production data and economic potential; the timing and costs for production decisions; permitting timelines and requirements are achieved in a timely manner; exploration and planned exploration programs are sufficiently funded and executed in a timely manner; timing for first gold production; processing the stockpile at El Valle in connection with the metal production catch-up program; identifying additional resources beyond the replenishment of annual depletion rates at El Valle for the extension of mine life; issuing an updated PEA for Taguas in a timely manner; completion of the infill drilling program at Taguas; making a decision on the oxides stockpile at Don Mario in a timely manner; and the Company's general objectives and strategies.

A variety of inherent risks, uncertainties and factors, many of which are beyond the Company's control, affect the operations, performance and results of the Company and its business, and could cause actual events or results to differ materially from estimated or anticipated events or results expressed or implied by forward-looking statements. Some of these risks, uncertainties and factors include: the potential impact of the COVID-19 on the Company's business and operations, such as our ability to continue operations; our ability to manage challenges presented by COVID-19; the accounting treatment of COVID-19 related matters; Orvana's ability to prevent and/or mitigate the impact of COVID-19 and other infectious diseases at or near our mines; our ability to support the sustainability of our business including through the development of crisis management plans, increasing stock levels for key supplies, monitoring of guidance from the medical community, and engagement with local communities and authorities; fluctuations in the price of gold, silver and copper; the need to recalculate estimates of resources based on actual production experience; the failure to achieve production estimates; variations in the grade of ore mined; variations in the cost of operations; the availability of qualified personnel; the Company's ability to obtain and maintain all necessary regulatory approvals and licenses; the Company's ability to use cyanide and other chemical agents in its mining operations; risks generally associated with mineral exploration and development, including the Company's ability to continue to operate El Valle and/or ability to resume long-term operations at the Carlés Mine; the Company's ability to successfully implement a sulfidation circuit and ancillary facilities to process the current oxides stockpiles at Don Mario; the Company's ability to successfully carry out development plans at Taguas; sufficient funding to carry out development plans at Taguas and to process the oxides stockpiles at Don Mario;; the ability of the Company to successfully transition operations in Don Mario, from open pit to processing stockpiles and tailings; the Company's ability to acquire and develop mineral properties and to successfully integrate such acquisitions; the Company's ability to execute on its strategy; the Company's ability to obtain financing when required on terms that are acceptable to the Company; challenges to the Company's interests in its property and mineral rights; current, pending and proposed legislative or regulatory developments or changes in political, social or economic conditions, in the countries in which the Company operates; and general economic conditions worldwide; current and future environmental matters; and the risks identified in the Company's disclosures. This list is not exhaustive of the factors that may affect any of the Company's forward-looking statements and reference should also be made to the section of this AIF headed "Risk Factors" for a description of additional risk factors.

The forward-looking statements made in this AIF with respect to the anticipated development and exploration of the Company's mineral projects are intended to provide an overview of management's expectations with respect to certain future activities of the Company and may not be appropriate for other purposes.

Forward-looking statements are based on management's current plans, estimates, projections, beliefs and opinions, and except as required by law, the Company does not undertake any obligation to update forward-looking statements should assumptions related to these plans, estimates, projections, beliefs and opinions change. Readers are cautioned not to put undue reliance on forward-looking statements.

Cautionary Notes to Investors – Reserve and Resource Estimates

In accordance with applicable Canadian securities regulatory requirements, all mineral reserve and mineral resource estimates of the Company disclosed in this AIF have been prepared in accordance with NI 43-101 (as defined below), classified in accordance with Canadian Institute of Mining Metallurgy and Petroleum's "CIM Standards on Mineral Resources and Reserves Definitions and Guidelines" (the "CIM Guidelines").

Pursuant to the CIM Guidelines, mineral resources have a higher degree of uncertainty than mineral reserves as to their existence as well as their economic and legal feasibility. Inferred mineral resources, when compared with measured or indicated mineral resources, have the least certainty as to their existence, and it cannot be assumed that all or any part of an inferred mineral resource will be upgraded to an indicated or measured mineral resource as a result of continued exploration. Pursuant to NI 43-101, inferred mineral resources may not form the basis of any economic analysis, including any feasibility study. Accordingly, readers are cautioned not to assume that all or any part of a mineral resource exists, will ever be converted into a mineral reserve, or is or will ever be economically or legally mineable or recovered.

EXPLANATORY NOTES

In this AIF, references to "Orvana" or the "Company" mean Orvana Minerals Corp. and, unless the context requires otherwise, include the subsidiaries of Orvana. Unless otherwise noted herein, information in this AIF is presented as at September 30, 2021.

As at September 30, 2021, the last business day of the Company's fiscal 2021 year ("fiscal 2021" or "FY2021"), the value of one Canadian dollar was 0.7849 in US dollars and the value of one Euro was 1.1579 in US dollars, according to the Bank of Canada and European Central Bank, respectively.

References in this AIF (i) to gold and silver in ounces mean fine troy ounces and are referred to as "ounces" or "oz", (ii) to copper are in pounds also referred to as "lb", (iii) to the "MD&A" are to the Company's Management's Discussion and Analysis dated November 30, 2021 in respect of the Company's fiscal year ended September 30, 2021 filed at www.sedar.com, and (iv) to NI 43-101 are to *National Instrument 43-101 – Standards of Disclosure for Mineral Projects*.

Documents Incorporated by Reference

The information provided in this AIF is supplemented by disclosure contained in the documents listed below which are incorporated by reference into this AIF. These documents must be read together with the AIF in order to provide full, true and plain disclosure of all material facts relating to Orvana. The documents listed below are not contained within or attached to this document. The documents may be accessed on SEDAR at www.sedar.com under the Company's profile. The NI 43-101 technical reports listed below and incorporated in this AIF relate to the reported reserves and resources of the Company's three material properties, namely Orovalle (Spain), Don Mario (Bolivia) and Taguas (Argentina).

Document	Report Date	Date Filed on SEDAR website	Document Category on the SEDAR website
NI 43-101 Technical Report on the Orovalle Operation, Asturias, Spain (the "Orovalle 43-101 Report")	November 30, 2020	December 29, 2020	Technical Report
NI 43-101 Technical Report on the Don Mario Oxide Stockpile Project (the "Don Mario Oxide Stockpile 43-101 Report")	December 29, 2020	December 29, 2020	Technical Report
NI 43-101 Technical Report on the Don Mario Tailings Reprocessing Project (the "Don Mario Tailings 43-101 Report))	December 23, 2021	December 29, 2021	Technical Report
NI 43-101 Technical Report on the Tagus Property, San Juan, Argentina (the "Taguas 43-101 Report")	June 30, 2021	July 28, 2021	Technical Report

METAL PRICES TABLE

The following table sets forth the closing spot prices for gold, silver and copper as at September 30, 2021:

Metal	Price in US Dollars	Price in Euros at 1.1579 (3)
Gold per ounce (1)	$1,742.80	€1,505.13
Silver per ounce (1)	$21.525	€18.59
Copper per pound (2)	$4.10	€3.54

(1) For gold and silver spot prices, please refer to the London Bullion Market Association on www.lbma.org.uk.

(2) For copper spot price, please refer to the London Metal Exchange on www.lme.com.

(3) For exchange rate, please refer to the European Central Bank on www.ecb.europa.eu.

UNIT CONVERSION TABLE

The following table sets forth certain standard conversions between Standard Imperial units and the International System of Units (or metric units):

To Convert From	To	Multiply By
Grams	Ounces (troy)	0.03215
Kilograms	pounds	2.20462

CORPORATE STRUCTURE

Name, Address and Incorporation

The Company was formed by the amalgamation of Pan Orvana Resources Inc. ("Pan Orvana") and New Kelore Mines Limited ("New Kelore") pursuant to articles of amalgamation dated February 24, 1992 under the *Business Corporations Act* (Ontario) and an amalgamation agreement between such parties dated December 30, 1991. The name of the amalgamated company was Orvana Minerals Corp.

Pan Orvana was incorporated under the laws of the Province of British Columbia on March 27, 1987 under the name Orvana Resources Inc. and changed its name to Pan Orvana Resources Inc. on September 4, 1987. New Kelore was incorporated by Letters Patent pursuant to the laws of the Province of Ontario on May 9, 1945 under the name Kelwren Gold Mines Limited. In 1948, it changed its name by Supplementary Letters Patent to Kelore Mines Limited and on March 27, 1953, it further changed its name to New Kelore Mines Limited.

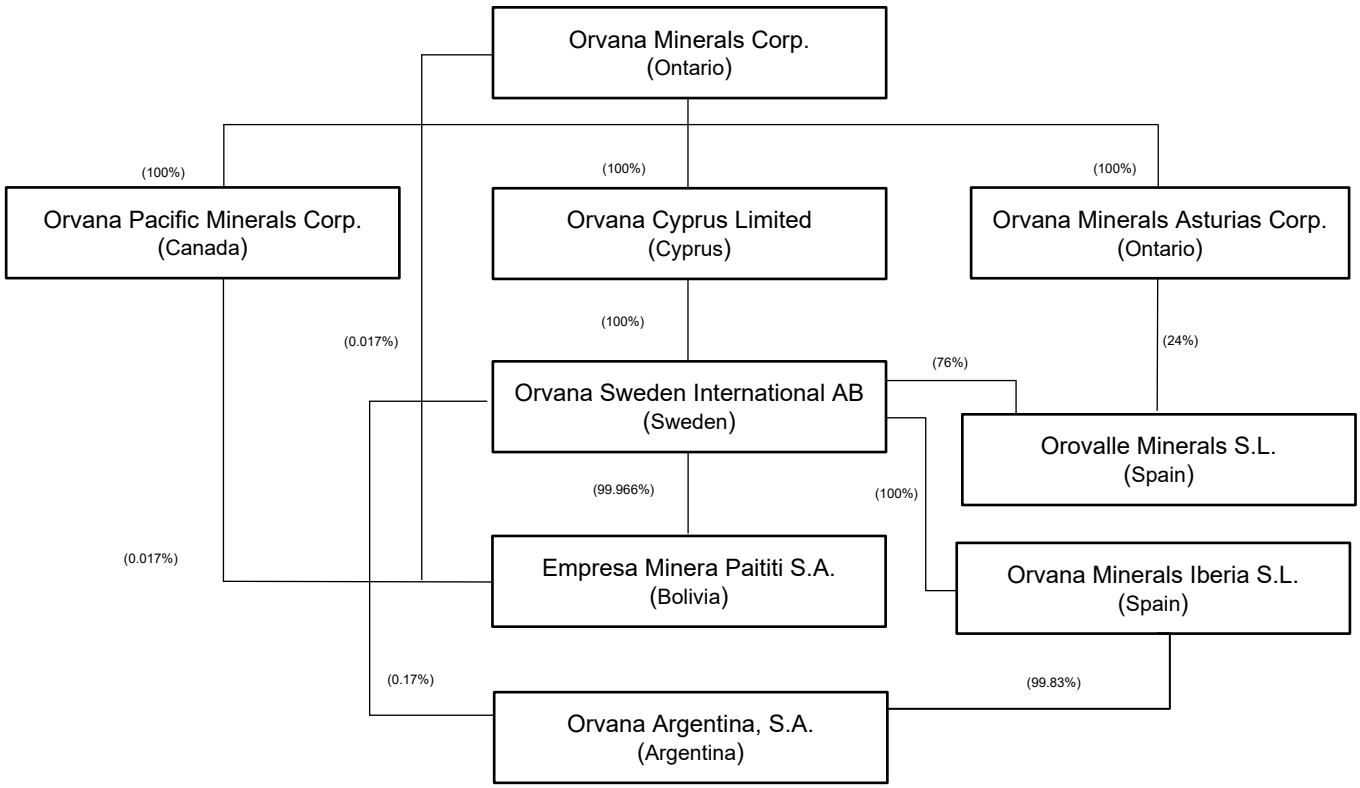
The registered and records office and the head office of the Company are located at 70 York Street, Suite 1710, Toronto, Ontario, Canada M5J 1S9.

The Company's common shares ("Common Shares") are listed on The Toronto Stock Exchange under the symbol TSX:ORV.

Intercorporate Relationships

Historically, Orvana has conducted its exploration, development and production activities in foreign jurisdictions through subsidiary companies incorporated in those jurisdictions. The Company's active subsidiaries and holding companies, all of which are wholly-owned, are as follows: (i) Canada: Orvana Pacific Minerals Corp.; (ii) Ontario: Orvana Minerals Asturias Corp.; (iii) Spain: Orovalle Minerals S.L. ("Orovalle") and Orvana Minerals Iberia, S.L.; (iv) Cyprus: Orvana Cyprus Limited; (v) Sweden: Orvana Sweden International AB; (vi) Bolivia: Empresa Minera Paititi S.A. ("EMIPA"); and (vii) Argentina: Orvana Argentina, S.A.

The inter-corporate relationships among Orvana and each of its active and holding subsidiaries are outlined in the diagram below. The diagram below also provides specific information on (i) the percentage of votes attaching to all voting securities of each subsidiary beneficially owned, controlled or directed by Orvana, which is the percentage of total securities owned of each such subsidiary, and (ii) the jurisdiction of incorporation or continuance, as the case may be, of Orvana and each of its subsidiaries (which is set out in parentheses):



Orvana has the following inactive subsidiaries: Minera Orvana Peru S.A, Clarendon Mining Limited, Minera Orvana S.A de CV in Peru, Jamaica, Mexico respectively

GENERAL DEVELOPMENT OF THE BUSINESS

Introduction

Orvana is a multi-mine gold-copper-silver producer with organic growth opportunities. Orvana's properties consist of:

(i) The El Valle and Carlés mines and the El Valle processing plant (collectively, "El Valle"), producer of copper concentrate and doré. El Valle is located in Asturias, Northern Spain, and is managed by its subsidiary Orovalle Minerals, S.L. ("Orovalle"), that, in addition to El Valle, owns certain mineral rights located in the region of Asturias;

(ii) The Don Mario Operation ("Don Mario"), a set of assets that includes Las Tojas ore body, and the previously mined out Lower Mineralized Zone ("LMZ"), Upper Mineralized Zone ("UMZ") and Cerro Felix mines, plus the Processing Plant, currently in care and maintenance. Don Mario is located in Chiquitos, Southeastern Bolivia, and is managed by its subsidiary Empresa Minera Paitií, S.A. ("EMIPA"). EMIPA temporarily suspended operations in the first quarter of fiscal 2020; and

(iii) The Taguas Property ("Taguas"), located in Argentina. On May 14, 2019, the Company entered into a purchase agreement with Compañía Minera Taguas S.A. (the "Vendor") pursuant to which Orvana agreed to acquire the Taguas property. The Vendor is a related party, as it is indirectly owned by Orvana's 51.9% shareholder (See "Transactions with Fabulosa Mines Limited - Related Party Transactions" for further details). Taguas consists of 15 mining concessions over an area of 3,273.87 ha. It is located in the Province of San Juan, on the eastern flank of the Andes, between 3,500 m to 4,300 m above sea level. Orvana Argentina S.A. was incorporated on December 9, 2020 as a subsidiary of the Company to complete the acquisition of the Taguas property. The transfer of the mineral rights was completed on May 21, 2021. In consideration for 100% of Taguas, Orvana granted the Vendor an indivisible net smelter royalty equal to 2.5% on all future metals production mined from Taguas. The Toronto Stock Exchange ("TSX") has provided acceptance of the acquisition.

Orvana's strategic focus is on initiatives and opportunities that deliver long-term shareholder value. In that regard, Orvana is currently working to optimize its operations, reduce its unitary operating costs and realize organic growth in its future production base through exploration within, and in proximity, to its existing units in Spain, Bolivia and Argentina.

Three-Year History

Orovalle

In fiscal 2019, the Company continued to target increasing oxide ore production as part of the initiatives to improve ore grade and continued its plant improvements in order to allow for the processing of a higher ratio of oxide ore. The Carlés short-term project that had started in fiscal 2018 was completed in the second quarter of fiscal 2019. A new short-term project started in the fourth quarter of fiscal 2019, providing skarn until the beginning of fiscal 2020. During fiscal 2019, El Valle produced 64,327 ounces of gold and 5.0 million pounds of copper compared with 58,259 ounces of gold and 5.1 million pounds of copper during fiscal 2018. Gold production increased by 10%, primarily due to higher grades and tonnes milled. Copper production decreased by 2% primarily due to lower grades and recoveries, partially offset by higher tonnes milled.

During fiscal 2020, gold production was 51,104 ounces, 21% lower than the previous year. Production decrease was due to a combination of 17% lower head grade and 4% lower throughput. Copper production was 5.6 million pounds, 12% higher than the previous year. Production increase was due to a combination of 10% and 6% higher head grade and recovery, partially off-set by 4% lower throughput.

During the first quarter of fiscal 2020, Orovalle and its workers' legal representatives signed a new Collective Bargaining Agreement, effective from January 1, 2020 to the later of December 31, 2022 or until the next CBA becomes effective. The CBA regulates labor conditions and includes regulations related to risk prevention, salaries and working hours.

During fiscal 2021, gold production was 47,413 ounces, 7% lower than the previous year. Production decrease was due to 10% lower head grade, partially off-set by 3% higher throughput. Gold head grade was 2.45 g/t, compared to 2.71 g/t reported last year. Copper production was 6.3 million pounds, 12% higher than the previous year. Production increase was due to 3% higher throughput, 6% higher head grade and 2% higher recoveries. Copper head grade was 0.53%, compared to 0.50% reported last year.

Don Mario

During fiscal 2019, Don Mario produced 32,932 ounces of gold compared with 45,125 ounces of gold during fiscal 2018. Gold production decreased by 27% primarily due to the transition from mining LMZ and Cerro Felix satellite deposits during fiscal 2018 to mining Cerro Felix and Las Tojas deposits during fiscal 2019.

In the first quarter of fiscal 2020, the Company suspended mining operations at Las Tojas due to higher than expected mining dilution caused by narrow, erratic and discontinued mineralized structures, which resulted to be uneconomic. As a result of the suspension of mining operations, gold production in fiscal 2020 decreased at Don Mario to 2,317 ounces. A workforce restructuring program started in November 2019, with a reduction of 182 employees during fiscal 2020.

A care and maintenance program was implemented at the end of first quarter of fiscal 2020. Throughout fiscal 2021, the Don Mario operation continued in care and maintenance ("C&M"). Critical areas of the C&M program are: site security, environmental control, power generators maintenance, preventive maintenance of process plant, preventive maintenance of mine equipment and maintenance of camp facilities.

The UMZ deposit, depleted in 2017, generated during its mine life 2 million tonnes of mixed copper oxide stockpile (the "Oxides Stockpile Project" or the "OSP"), with gold and silver grades. Since fiscal 2018 the Company has been analyzing an economic way to treat its Oxides Stockpile concluding in fiscal 2020 that a sulfidation circuit would maximize the value of the stockpile. The OSP quality assurance (metallurgical) testing was completed in the second half of November 2021.

In 2019, the Company commenced an evaluation of re-processing tailings to determine the viability of recovering gold from material deposited in the tailings impoundment since the commencement of production at Don Mario (the Tailings Reprocessing Project). The Company completed the estimation of the TRP's mineral resources in December 2021.

Taguas

On May 14, 2019, the Company entered into a purchase agreement with Compañía Minera Taguas S.A. pursuant to which Orvana agreed to acquire the Taguas property located in the Province of San Juan, On July 9, the Company filed a Preliminary Economic Assessment Report for the Taguas property. Orvana Argentina S.A. was incorporated on December 9, 2020 as a subsidiary of the Company to complete the acquisition of the Taguas property.

The transfer of the mineral rights was completed on May 21, 2021. In consideration for 100% of Taguas, Orvana granted the vendor an indivisible net smelter royalty equal to 2.5% on all future metals production mined from Taguas.

In fiscal 2020, as a result of the completion of an intelligence-assisted data analysis, the Company identified a total of 17 new high probability gold targets at Taguas, consisting of 9 new areas and 8 extended areas of previous known mineralization. All of the newly identified targets are based on a 96% level of similarity to the known gold mineralization. These results suggested that there was an enhanced probability of increasing the potential of the Property's oxides and sulphides resources. In order to validate the potential of the new targets, the Company developed a fieldwork exploration campaign during the first quarter of fiscal 2021, including new access points, geological mapping and soil and rock sampling. A drilling campaign to enlarge the mineral resource commenced in February 2021 and was completed in April 2021 with a total of 4,689 meters drilled.

On July 9, 2019, the Company filed a Canadian National Instrument 43-101 compliant preliminary economic assessment report on Taguas. On July 28, 2021 the Company filed a new Canadian National Instrument 43-101 compliant report dated June 30, 2021, updating the mineral resource estimate on Taguas. Both reports are available at the Company's profile on www.sedar.com.

In fiscal 2021 Orvana retained an independent engineering firm to prepare an updated Preliminary Economic Assessment for the Taguas Project. The scope of the report is limited to the oxidized gold-silver mineralization occurring near surface in Cerros Taguas. The report is being finalized in the first quarter of fiscal 2022.

The following table includes consolidated operating and financial performance data for the Company for the periods set out below:

	FY2021	FY2020	FY2019
Operating Performance			
Gold			
Grade (g/t)	2.45	2.56	2.34
Recovery (%)	91.9	93.1	92.6
Production (oz)	47,413	53,421	97,259
Sales (oz)	46,628	55,344	96,540
Average realized price / oz	$1,819	$1,647	$1,313
Copper			
Grade (g/t)	0.53	0.45	0.45
Recovery (%)	82.3	80.8	76.3
Production ('000 lbs)	6,283	5,611	5,015
Sales ('000 lbs)	6,315	5,512	5,073
Average realized price / lb	$3.91	$2.68	$2.77
Financial Performance *(in 000's, except per share amounts)*			
Revenue	$105,513	$101,994	$136,400
Mining costs	$74,845	$82,240	$113,558
Gross margin	$13,301	($2,114)	($528)
EBITDA (1)	$19,917	$9,544	$18,065
Net loss	($1,112)	($1,592)	($5,266)
Net loss per share (basic/diluted)	($0.01)	($0.01)	($0.04)
Operating cash flows before non-cash working capital changes (1)	$21,163	$8,959	$18,312
Operating cash flows	$16,573	$11,435	$14,444
Ending cash and cash equivalents	$11,327	$15,572	$12,351
Capital expenditures (2)	$14,155	$8,681	$9,963
Cash operating costs (by-product) ($/oz) gold (1) (3)	$1,152	$1,278	$1,094
All-in sustaining costs (by-product) ($/oz) gold (1) (3)	$1,583	$1,582	$1,253
All-in costs (by-product) ($/oz) gold (1) (3)	$1,694	$1,614	$1,288

(1) Earnings before interest, taxes, depreciation and amortization ("EBITDA"), operating cash flows before non-cash working capital changes, COC, AISC and AIC are non-IFRS performance measures.

(2) These amounts are presented in the consolidated cash flows in the audited consolidated financial statements of Orvana as at and for the year ended September 30, 2021 and related notes thereto (the "2021 Financials") on a cash basis. Each reported period excludes capital expenditures incurred in the period which will be paid in subsequent periods and includes capital expenditures incurred in prior periods and paid for in the applicable reporting period. The calculation of AISC and all-in costs ("AIC") includes capex incurred (paid and unpaid) during the period.

(3) COC includes total production cash costs incurred at the Company's mining operations. AISC includes COC plus sustaining capital expenditures, corporate administrative expense, costs of community relations, exploration and evaluation costs, and reclamation cost accretion. AIC represents AISC plus non-sustaining capital expenditures, non-sustaining exploration and non-sustaining study costs. Certain other cash expenditures, including one-time costs, one-time

severance charges, tax payments, debt payments, dividends and financing costs are not included in the calculation of AIC. The Company believes that COC plus AISC represents the total costs of producing gold from current operations, and provides the Company and other stakeholders of the Company with additional information relating to the Company's operational performance and ability to generate cash flows. As the measure seeks to reflect the full cost of gold production from current operations, new project capital is not included in AISC. The Company reports these measures on a gold ounces sold basis.

Orovalle

Through its wholly-owned subsidiary, Orovalle, the Company owns and operates its mines located in the Rio Narcea Gold Belt in northern Spain. At El Valle Mine, the Company mines sulphides (referred to hereinafter as "skarns") and oxides underground. Since acquiring El Valle in 2009, the Company has hired essential personnel, rehabilitated the mill and plant, purchased or leased appropriate equipment, improved the stability of the tailings impoundment, and completed the sinking and subsequent upgrading of a 420-meter shaft to facilitate underground development and mining. The Company commissioned El Valle in May 2011 and advanced to commercial production in August 2011. At Carlés Mine, the Company mined skarns underground until February 2015 when the mine was placed on care and maintenance. Since then, the activities at Carlés restarted on several short-term projects. The Carlés Mine is currently in care and maintenance, but it is expected to continue to deliver skarn material to El Valle Plant in the future.

The Company mined in fiscal 2021 high gold grade oxides tonnes and blended them with a ratio of 43% together with skarns ore. Mechanical advance rates in oxides areas increased by 4% to 7,823 meters during fiscal 2021, as compared to fiscal 2020. During fiscal 2021, gold production was 47,413 ounces and copper production was 6.3 million pounds. Compared with fiscal 2020, gold production decreased by 7% primarily due to 10% lower head grade, partially off-set by 3% higher tonnes milled; and copper production increased by 12% primary due to 3%, 6% and 2% higher tonnes milled, head grade, and recoveries, respectively.

Metal production was slightly below fiscal 2021 guidance mainly due to the mid-August plant stoppage caused by the assessment of corrective measures to the tailings pumping circuit, which was impacted by the failure of a legacy open-pit wall. Underground mining continued operating throughout the plant stoppage, generating a stockpile that will be the basis to catch-up fiscal 2021 delayed production into fiscal 2022.

In December 2020, the Company completed the review of its mine maintenance programs (processes, organizational structure and technical services). As a result of the review, the Company has implemented changes in the organizational structure and worked on the standardization of maintenance processes, being the main targets equipment availability increase and maintenance cost reduction.

The Company continues its metallurgical testing to determine if the processing of a higher ratio of oxides ore is possible. Additional studies on recovery optimization at the plant are being conducted, considering the chemical characterization of the areas to be mined in fiscal 2022.

A project is in progress to optimize mine haulage, both trucking-fleet size and hoisting. The analysis was completed in fiscal 2021, and the Company is now in the process of evaluating the conclusions of the analysis to update its life-of-mine haulage strategy.

In March 2020 the World Health Organization declared the COVID-19 outbreak to be a global pandemic. The situation remains dynamic with countries around the world responding in different ways to address the outbreak. The COVID-19 pandemic is causing significant financial market declines and social dislocation, globally. At Orovalle, the Company made efforts to safeguard the health of its employees, while continuing to operate safely and responsibly maintain employment and economic activity. The Company continues to implement comprehensive and proactive measures to respond to the COVID-19 pandemic; and continues to work closely with local governments and authorities to ensure proper protocols are followed during the ongoing COVID-19 crisis.

The Company continues to pursue its objectives of optimizing production, lowering unitary cash costs, maximizing free cash flow, and extending the life-of-mine of its operations at Spain.

More information about Orovalle is provided below under "Description of the Business - Principal Mineral Projects - Orovalle" and "Appendix B - Principal Mineral Projects - Orovalle".

Don Mario

Through its wholly-owned subsidiary, EMIPA, the Company owns the Don Mario Operation, located in southeastern Bolivia, currently in care and maintenance.

During the fourth quarter of fiscal 2019, mining activities transitioned from Cerro Félix to open pit operations in Las Tojas. Don Mario was put temporarily under care and maintenance since the end of the first quarter of fiscal 2020 because of a higher than expected ore-grade operational mining dilution with more narrow, erratic and discontinued mineralized structures, which resulted in uneconomic unitary cost per ounce. Production during fiscal 2021 at Don Mario was nil while operation continues in care and maintenance, transitioning to the Oxides Stockpile Project.

A care and maintenance program was implemented at the end of first quarter of fiscal 2020. Critical areas of the program are: site security, environmental control, power generators maintenance, preventive maintenance of process plant, preventive maintenance of mine equipment and maintenance of camp facilities.

From fiscal 2018 the Company has been analyzing an economic way to treat its oxides stockpile accumulated from past mining activities (2 million tonnes, 1.85 g/t Au and 1.89% Cu), concluding in fiscal 2020, that a sulfidation circuit would maximize the value of the stockpile. The OSP quality assurance (metallurgical) testing was completed in the second half of November 2021. Next phases of the OSP are engineering and cost analysis to establish the CAPEX, and financing alternatives evaluation. The Company expects to close technical, financial and funding analysis in the second half of fiscal 2022. Subject to a positive outcome, construction is planned for fiscal 2023. Subject to the favorable completion of technical, economic and funding analysis, the OSP is expected to provide three full production years for Don Mario.

In order to maximize the exploration potential of the 53,325 hectares available at Don Mario, new reprocessing and interpretation of historical geological data was completed in December 2020. As a result, a new comprehensive exploration program was launched in the fourth quarter of fiscal 2021. Areas of interest will be subject to non-drilling exploration fieldwork during fiscal 2022.

In 2019, the Company commenced an evaluation of re-processing tailings (TRP) to determine the viability of recovering gold from material deposited in the tailings impoundment since the commencement of production at Don Mario. The Company completed the estimation of the TRP's mineral resources in December 2021 and expects to commence scoping studies in the second half of fiscal 2022.

More information about Don Mario is provided below under "Description of the Business - Principal Mineral Projects - Don Mario", "Appendix B - Principal Mineral Projects - Don Mario Oxides Stockpile Project" and "Appendix B - Principal Mineral Projects - Don Mario Tailings Reprocessing Project".

Taguas

On May 14, 2019, the Company entered into a purchase agreement with Compañía Minera Taguas S.A. (the "Vendor") pursuant to which Orvana agreed to acquire the Taguas property, located in the Province of San Juan, Argentina. Orvana Argentina S.A. was incorporated on December 9, 2020 as a subsidiary of the Company to complete the acquisition of the Taguas property. On May 21, 2021 the Company completed the requisite steps to transfer ownership of the Taguas property to Orvana Argentina S.A. The Toronto Stock Exchange ("TSX") subsequently provided acceptance of the acquisition upon receipt of applicable closing documentation. In consideration for 100% of Taguas, Orvana granted the Vendor an indivisible net smelter royalty equal to 2.5% on all future metals production mined from Taguas.

In fiscal 2020, as a result of the completion of an intelligence-assisted data analysis, the Company identified a total of 17 new high probability gold targets at Taguas, consisting of 9 new areas and 8 extended areas of previous known mineralization. All of the newly identified targets are based on a 96% level of similarity to the known gold mineralization. These results suggested that there was an enhanced probability of increasing the potential of Taguas' oxides and sulphides resources. In order to validate the potential of the new targets, the Company developed a fieldwork exploration campaign during the first quarter of fiscal 2021, including new access points, geological mapping and soil and rock sampling. A drilling campaign to enlarge the mineral resource commenced in February 2021 and was completed in April 2021 with a total of 4,689 meters drilled.

On July 9, 2019, the Company filed a Canadian National Instrument 43-101 compliant preliminary economic assessment report on Taguas. On July 28, 2021 the Company filed a new Canadian National Instrument 43-101 compliant report dated June 30, 2021, updating the mineral resource estimate on Taguas. Both reports are available at the Company's profile on www.sedar.com.

In fiscal 2021 Orvana retained an independent engineering firm to prepare an updated Preliminary Economic Assessment for the Taguas Project. The scope of the report is limited to the oxidized gold-silver mineralization occurring near surface in Cerros Taguas. The report is being finalized in the first quarter of fiscal 2022.

In fiscal 2021, the Company evaluated financing alternatives to advance its projects. In the first quarter of fiscal 2022, through its wholly-owned subsidiaries Orovalle Minerals S.L. and Orvana Minerals Iberia, S.L., the Company closed a syndicated loan for €15 million with two Spain-based banks. Orvana will use the proceeds to fund the development of the Taguas Project in Argentina and structural capital expenditures in Spain.

More information about Don Mario is provided below under "Description of the Business - Principal Mineral Projects - Taguas" and "Appendix B - Principal Mineral Projects - Taguas".

Changes in Board of Directors and Management

During fiscal 2021 there have not been any changes in the board of directors and management of the Company.

At the Company's annual and special shareholders' meeting held on February 18, 2021, the following members of the board of directors of the Company were re-elected: George Darling, Alan Edwards, Alfredo Garcia Gonzalez, Edmundo Guimaraes, Sara Magner and Gordon Pridham. On February 18, 2021, the board of directors of the Company re-appointed Mr. Juan Gavidia as its Chief Executive Officer and Ms. Nuria Menendez as its Chief Financial Officer.

Financing

Orovalle Revolving Facilities

In July 2019, Orovalle renewed a revolving credit facility with Banco Santander S.A. for an amount of €1,5 million for a one-year term bearing an annual rate of Euribor plus 2.27%. The credit facility is secured by Orovalle's VAT receivable from the Spanish government. In July 2020, this revolving credit facility was closed.

In January 2020, Orovalle renewed a revolving credit facility with Bankinter S.A. ("Bankinter") for an amount of €1 million, for a three-month renewable term and bearing no interest. An administration fee is charged for each renewal. Under the terms of the agreement, all or part of the financing received must be used for the remittance of payroll tax, VAT and corporate taxes to the Spanish tax agency with payment being processed through the Bankinter account. No security was required to be posted for this facility. This facility was closed in April 2020.

In May 2020, Orovalle obtained a new revolving credit facility with Bankinter for an amount of €1.5 million for a yearly renewable term, and bearing an annual interest of 1.95%. As of September, 30, 2020 this account had a balance of approximately $1.2 Million. As of September 30, 2021 this account has a balance of approximately $1.7 million.

BISA TSF Loan, Heavy equipment Loan and Revolving Facility

In June 2017, EMIPA closed with Bisa Bank a loan denominated in Bolivian currency, of approximately $11.3 million, comprised of an $8.3 million term facility (the "BISA TSF Loan") and a $3.0 million revolving working capital facility.

The proceeds of the TSF Loan were used to fund a major tailings storage facility expansion project that will add sufficient capacity to support future operations. Under the terms of the TSF Loan, seven disbursements of specified amounts will be drawn down as expenditures are incurred for the tailings storage facility expansion, with the first draw down occurring on June 30, 2017. The TSF Loan has an interest rate of 5.3% per annum, with twelve quarterly repayments beginning in April 2018. As at September 30, 2020, $8.3 million were drawn down this facility and $6.2 million of principal were repaid.

As at September 30, 2021, EMIPA had received the full amount for $8.3 million (September 30, 2020 – $8.3 million) and principal repayments of $6.2 million were made against the TSF Loan, such that the principal outstanding at September 30, 2021 was $2.1 million (September 30, 2020 - $2.1 million). Security for both the BISA TSF Loan and the revolving working capital facility include the CIL asset and other equipment at Don Mario.

In May 2018, EMIPA obtained a Bolivian loan with BISA of $2.4 million for heavy equipment purchases. This loan has thirty six equal monthly repayments, and an interest rate of 5.5% per annum. Security for the loan includes heavy equipment purchased. As at September 30, 2021, the full amount of the loan was drawn down and principal repayments of $1.8 million were made against the Heavy Equipment Loan, such that the principal outstanding was $0.5 million.

On April 1, 2020, the Bolivian Government issued Law 1294 Exceptional law of deferral of debt payments and temporary reduction of the payment of basic services allowing entities incorporated under the laws of Bolivia to reschedule debt repayments of principal and interests with a due date between April 1, 2020 and the end of quarantine of COVID-19. On August 26, 2020 the Bolivian Government issued Law 1319, clarifying that the extension of the automatic deferral of repayments (principals and interests) will continue until December 31, 2020. EMIPA, based on these rules, deferred several installments of the TSF and Heavy Equipment Loans due between April and December 2020, maintaining the remaining installments according to the existing terms of the loan agreements. This resulted in $0.9 million deferred from fiscal 2020 to fiscal 2021. Interests were applicable for the deferred periods at the originally agreed interest rate of 5.3% and 5.5%. The Supreme Decree number 4409 issued by the Bolivian Government on December 2, 2020 established that Bolivian banks should amend with their clients a new repayment calendar for any debts affected by laws 1294 and 1319, taking into consideration the financial situation of each Company due to the COVID-19 pandemic. In April 2021, EMIPA and BISA Bank finalized the new repayment schedule for the TSF and Heavy Equipment Loans. Pursuant to the new repayment schedule, $2.6 million originally due in fiscal 2020 and 2021, is deferred to fiscal 2022. Interest will continue to apply for the deferred period at the originally agreed interest rates.

Restructuring Loan

In February 2020, EMIPA entered into a Bs.20,880,000 ($3.0 million) term facility with BISA in Bolivia, the proceeds of which were used to pay severances regarding restructuring process. The BISA Restructuring Loan bears an interest rate of 6% per annum and matured in February 2021 with repayment of the full amount and the accrued interests on the due date. Security for the BISA Restructuring Loan is tied to certain specific equipment that is currently under care and maintenance.

As at September 30, 2021, the full amount of the loan was drawn down and repaid.

BISA Short Term Loan

In March 2021, EMIPA entered into a Bs.20,542,786 ($2,952) short term financing facility with BISA in Bolivia, the proceeds of which were used for the repayment of the Restructuring Loan.

The facility bears an interest rate of 6% per annum and matured in August 2021 with repayment of the full amount and the accrued interests on the due date. Security for this facility is tied to certain assets at Don Mario, that is currently under care and maintenance.

As at September 30, 2021, the full amount of the loan was drawn down and repaid.

Spanish Banking Facility

In January 2019 Orovalle closed a syndicated credit facility for a total amount of €6 million (in USD, $ 6,741). These funds were used to repay the Samsung Prepayment Facility. In May 2019, Orovalle increased the facility by €2 million, achieving a total aggregated amount of €8 million (approximately $ 9 million), with the same terms and conditions.

This facility is subject to a 2% bank opening commission fee, bears a fixed annual interest rate of 2.55%, semi-annual principal repayments and semi-annual interest payments over a term of four years.

The Company’s obligations to the lenders are secured by: (i) the pledge of all of Orvana’s shares of Orovalle; and (ii) 25% restricted cash (as of September, 30 2021 the restricted cash linked to this financing is $0.9 million).

Amongst the obligations, Orovalle is required to comply with net finance debt to EBITDA proforma financial covenant calculated based on individual financial information. This resulting rate must be lower than 3.5 for fiscal 2020, and lower than 3 and 2 for fiscal 2021 and 2022, respectively. At September 30, 2021, Orovalle is in compliance with the Spanish Banking Facility covenants.

During fiscal 2019 Orovalle made principal repayments of €1 million, during fiscal 2020 made principal repayments of €2 million and during fiscal 2021 made principal repayments of €2 million.

The detail of proceeds and repayments of this banking facility up until September 30, 2021 is described below:

Facility	Bank	Principal (000s)	Proceeds up until September, 30 2021 (000s)	Repayments up until September, 30 2021 (000s)	Outstanding balance, September 30 2021 (000s)
Loan	Bankia	€ 2,667	€ 2,667	€1,667	€1,000
	BBVA	2,667	2,667	1,667	1,000
	Sabadell	2,666	2,666	1,666	1,000
Totals (€ 000s)		€ 8,000	€ 8,000	€5,000	€3,000
Totals ($ 000s)		$9,263	$9,263	$5,872	$3,391

Bankinter Loan

On August 23, 2019, Orovalle entered into a new short-term loan with Bankinter. The principal amounted to approximately $0.4 million with a fixed annual interest rate of 1.5%. This loan matured on September 2020. During fiscal 2020 the company fully repaid this loan.

Bankia Loan

In February 2021, Orovalle entered into a loan with Bankia. The principal amounted to €0.5 million at a fixed annual interest rate of 1.3%. This loan matures in February 2023. For the year ended September 30, 2021, the Company paid $0.2 million in principal.

COVID-19 Related Financing

As part of the Spanish national program to mitigate economic impacts caused by the COVID-19 pandemic, the Spanish Government offered guarantee lines to the Spanish banking sector through the Official Credit Institute “ICO”, to facilitate companies to access funding. Since April 2020 Orovalle obtained several financing facilities with this guarantee from the Spanish Credit Institute. The detail of proceeds and repayments of each one is described below:

Facility	Bank	Principal (000s)	Proceeds up until September, 30 2021 (000s)	Repayments up until September, 30 2021 (000s)	Outstanding balance, September 30 2021 (000s)
Loan	Bankinter	€ 1,000	€ 1,000	€ 1,000	€ -
	Bankinter	500	500	61	439
	Sabadell	1,500	1,500	309	1,191
	BBVA	800	800	497	303
	Sabadell	547	547	136	324
	Sabadell	350	350	87	350
Revolving line	BSCH	1,800	1,800	-	1,800
Totals (€ 000s)		€ 6,497	€6,497	€2,090	€4,407
Totals ($ 000s)		$7,523	$7,523	$2,420	$5,103

2021 Syndicated Loan

During fiscal 2021, the Company evaluated alternatives to fund the development of the Taguas Project in Argentina and structural capital expenditures in Spain. Subsequent to September 30, 2021 the Company, through its wholly-owned subsidiaries Orovalle and Orvana Minerals Iberia, S.L., obtained approval from two Spain-based banks to access a syndicated loan (the "Syndicated Loan") for €15 million, which was closed on December 23, 2021. The Syndicated Loan will provide the Company with improved financial metrics to fulfill its growth strategy.

The Syndicated Loan bears a variable interest rate of Euribor plus 2.5%, with semi-annual repayments over a four-year term, and is subject to a 1.5% commission fee. Orvana's obligations are secured by the pledge of Orovalle and Iberia's shares. Amongst the obligations, the ratio net finance debt to EBITDA calculated based on the aggregated financial information of Orovalle and Iberia, must be, throughout the life of the financing, less than 3.5.

Transactions with Fabulosa Mines Limited - Related Party Transactions

Current Ownership Interest

As at the date of this AIF, Fabulosa Mines Limited ("Fabulosa") holds 70,915,027 Common Shares, representing 51.9% of the currently outstanding Common Shares. Fabulosa does not hold any other securities of the Company as at the date of this AIF.

Agreement to Acquire the Taguas Property

On May 14, 2019, the Company entered into a purchase agreement with Compañía Minera Taguas S.A. (the "Vendor") pursuant to which Orvana agreed to acquire the Taguas property located in the Province of San Juan, Argentina. In consideration for 100% of Taguas, Orvana will grant the Vendor an indivisible net smelter royalty equal to 2.5% on all future metals production mined from Taguas.

Taguas consists of 15 mining concessions over an area of 3,273.87 ha. It is located in the Province of San Juan, Argentina, on the eastern flank of the Andes, between 3,500 m to 4,300 m above sea level. The Property is approximately 25km north of Barrick's Veladero operations.

Pursuant to Multilateral Instrument 61-101 – Protection of Minority Security Holders in Special Transactions ("MI 61-101"), entering into the Purchase Agreement with the Vendor is a "related party transaction" as the Vendor is indirectly owned by Orvana's 51.9% shareholder. The Company is exempt from the requirements to obtain a formal valuation or minority shareholder approval in connection with the transaction contemplated by the Purchase Agreement by virtue of sections 5.5(a) and 5.7(a), respectively, of MI 61-101, as neither the fair market value of the subject matter of the Purchase Agreement, nor the fair market value of the consideration for Taguas exceeds 25% of the Company's market capitalization as calculated in accordance with MI 61-101. The purchase agreement was considered and unanimously approved by the board of directors of the Company. Ms. Sara Magner abstained from voting on this matter.

Orvana Argentina, S.A. was incorporated on December 9, 2020 as a subsidiary of the Company to facilitate the purchase of the Taguas property. On May 21, 2021 the Company completed the requisite steps to transfer ownership of the Taguas property to Orvana Argentina S.A. The Toronto Stock Exchange has provided final acceptance of the acquisition. In consideration for 100% of Taguas, Orvana granted the Vendor an indivisible net smelter royalty equal to 2.5% on all future metals production mined from Taguas.

DESCRIPTION OF THE BUSINESS

Principal Mineral Projects

The Company has three material properties described below. To satisfy the reporting requirements of National Instrument 51-102F2 with respect to the Company's material mineral projects, the Company has opted, as permitted by the Instrument, to reproduce the summaries from the technical reports on the respective material properties and to incorporate by reference each such technical report into this AIF. The reproduction of the summaries of the respective properties are set out at Appendix B – Principal Mineral Projects.

Orovalle

The following table includes consolidated operating and financial performance data for Orovalle for the periods set out below:

	FY2021	FY2020	FY2019
Operating Performance			
Ore mined (tonnes) (wmt)	722,852	677,894	713,818
Ore milled (tonnes) (dmt)	655,866	633,765	658,046
Daily average throughput (dmt)	1,995	1,823	1,898
Gold			
Grade (g/t)	2.45	2.71	3.26
Recovery (%)	91.9	92.7	93.2
Production (oz)	47,413	51,104	64,327
Sales (oz)	46,628	52,457	62,249
Copper			
Grade (%)	0.53	0.50	0.45
Recovery (%)	82.3	80.8	76.3
Production ('000 lbs)	6,283	5,611	5,015
Sales ('000 lbs)	6,315	5,512	5,073
Financial Performance (in 000's, except per share amounts)			
Revenue	$105,513	$97,569	$91,115
Mining costs	$69,752	$69,128	$70,006
Gain (loss) before income tax	$16,640	($1,440)	$2,234
Capital expenditures	$14,261	$10,371	$8,689
Cash operating costs (by-product) ($/oz) gold (1)	$1,043	$1,151	$1,004
All-in sustaining costs (by-product) ($/oz) gold (1)	$1,376	$1,385	$1,185
All-in costs (by-product) ($/oz) gold (1)	$1,384	$1,387	$1,190

(1) COC includes total production cash costs incurred. AISC includes COC plus sustaining capital expenditures, corporate administrative expense, community relations, exploration and evaluation costs, and reclamation cost accretion. As the measure seeks to reflect the full cost of gold production from current operations, new project capital is not included in AISC. AIC represents AISC plus non- sustaining capital expenditures and non-sustaining exploration. Certain other cash expenditures, including tax payments, debt payments, dividends and financing costs are also not included in the calculation of AIC. The Company reports these measures on a gold ounces sold basis.

Fiscal 2021 production decreased to 47,413 ounces of gold and increased to 6.3 million pounds of copper compared with 51,104 ounces of gold and 5.6 million pounds of copper during fiscal 2020. Gold production decreased by 7% primarily due to 10% lower head grade, partially off-set by 3% higher tonnes milled. Copper production increased by 12% primary due to 3%, 6% and 2% higher tonnes milled, head grade and recoveries respectively.

Exploration Background

Since Orovalle's involvement with El Valle Mine, there have been exploration and key discoveries at El Valle Mine and Carlés Mine.

The gold-copper deposits in Rio Narcea Gold Belt are complex deposits that present challenges for exploration. The original mineral deposits are usually internally complex skarn deposits that have been subjected to epithermal alteration and remobilization of the mineralization, plus displacement and distortion by both high-angle reverse and thrust faults. In addition, individual ore zones may be high grade, but relatively small and difficult to locate.

Despite these challenges, the area was sufficiently well mineralized, therefore continued exploration at El Valle Mine found enough new resources to extend the mine life.

Black Skarn North was discovered in 2001 by underground drilling at the north boundary of the main El Valle intrusive. The discovery drill hole, Val-1001, intersected 3.2 g/t Au and 0.54% Cu over 46 m, which includes high grade areas containing 10.17 g/t Au and 2.4% Cu over 7.60 m. At the same time, Charnela South was also discovered by underground drilling.

In 2003, a program looking for deeper mineralization east of El Valle pit discovered the Area 208 zone by intersecting mineralization from a deep surface hole. This was followed by further drilling from the bottom of El Valle open pit and the first drill hole, Val-208, intersected 10.80 g/t Au over 51.10 m near the open pit, and another zone with 13 g/t Au over five meters further east of the pit.

Area 107 (A107) and San Martín mineralized zones were discovered in 2007 and 2008, and S107 Zone was discovered in 2010. In 2011, mineralization was encountered in the Black Skarn Northwest Zone.

In 2013 and 2014 the Black Skarn area was extended from Northwest to West, and in Carlés North mineralization at depth was defined with an exploration program for this purpose.

The Villar oxide zone, located in the eastern side of El Valle Mine behind the A107 area, was discovered in 2015, while testing for mineralization that may have been shadowed by the existing resource. An eleven holes drilling program totaling 1,223 meters was completed to intersect this zone, with ten out of the eleven holes intersecting ore grade mineralization.

In 2016 and 2017, oxide mineralization with ore grade was intercepted in the upper part of the Black Skarn Northwest Zone, which was included as a new area in the Boinás oxide Resources Estimate. This area had good potential and was a target area for the drilling campaign. In April 2017, an exploration drilling program started in the lower area of the Carlés Northwest orebody; 3,869 meters were completed in 42 DDH's, with success to increase the resources.

Along 2018 a drilling program was completed to define the Oxide Black Skarn, the good grades and due to the proximity with the actual developments, this structure was started to be mined in the second half of 2018. Drilling to extend the Villar zone and A107 to the South was completed too.

In September 2018 an exploration drilling program was started in Quintana Investigation Permit focused on testing the geochemistry and geophysics anomalies found in the field work. Two drill holes were completed totaling 1202.8 mts during the first half of fiscal 2019 to confirm the existence of gold within the main regional structure two kilometers away from Boinás Mine.

The drilling program in 2019 was aimed to convert the Inferred resources into Measured and Indicated resources, mainly in oxides areas and, secondly, to add new Inferred resources.

During fiscal 2020, the Company completed a strong infill drilling program targeting an important resources conversion from Inferred to Measured and Indicated, mainly in Area 208. At the same time, the brownfield program, focused on looking for oxides mineralized structures to the east of El Valle deposit following the regional trends, had positive results adding a new oxide area called "High Angle East" located 100 meters away from Boinás East.

In fiscal 2021, Orovalle drilled a total of 28,349 meters, consisting of the following: (i) 23,553 meters were drilled in El Valle; 15,467 meters were infill drilling and 8,086 meters were brownfield drilling; (ii) 2,738 meters were drilled in Carlés and (iii) 2,057 meters were completed in greenfield programs. In 2021 as a result of the brownfield program a new oxide area, called "E2", was defined.

Drilling Fiscal 2021

An aggregate of 28,349 meters were drilled in fiscal 2021, with the following distribution:

	Meters FY 2021	Comments
Infill drilling		
Breccia East	4,164	Oxide structure located to the North of the El Valle deposit. Drilling program was started in March 2021 targeting to convert Inferred resources into Indicated resources.
Boinas South	4,135	Drilling program focused on add skarn material and targeting to add new M+I resources.
Area 208	3,658	Infill drilling campaign completed in H1 fiscal year 2021 targeting an important resources conversion from Inferred to M&I resources.
Boinas East	1,541	Grade control program focused on stope definition.
Other areas El Valle	1,970	Small drilling campaigns were completed in different areas for resources conversion.
Carles West	2,738	Infill drilling program was started in May and it is expected to conclude in Q1 FY2022 targeting the Inferred resources conversion into M&I and add new resources.
Brownfield drilling		
High Angle East	5,046	Strong drilling program was completed in Q3 FY2021 in order to increase the understanding of this new structure targeting extend the mineralization area.
Area 208 East	2,263	New oxide structure was discovered as result of the brownfield drilling program in the Northeastern El Valle deposit.
Other areas El Valle	777	Small drilling programs were executed in other areas (Oxide Black Skarn, Boinas East, West Skarn) adding new resources.
Greenfield drilling		
Lidia	1,017	Two drill holes were completed in H1 FY2021. Company plans to start the second phase in Q1 FY2022.
Ortosa Godán	1,041	Drilling program was started in August and it will be extended during FY2022

The Resources Estimate includes the drill hole information up to June 30, 2021. Greenfield programs information is not included for Resources Estimation.

At the end of fiscal 2021, drilling at El Valle and Carlés has totaled approximately 510,589 meters in 4,696 holes, of which Orovalle drilled approximately 246,870 meters in 1,785 holes. In fiscal 2021, 23,553 meters of infill definition and exploration diamond drilling were completed at El Valle over 171 drill holes; 2,738 meters were completed in Carlés over 13 drill holes.

In El Valle oxides areas 9,752 meters were executed as follows: Breccia East (43%), A208 (38%), S107 (9%), Black Skarn Oxides (7%) and El Valle Fault (4%), with the target to convert Inferred resources into Measured and Indicated resources. In El Valle skarn areas 5,716 meters were drilled, in Boinás South (72%), Boinás East (27%) and Black Skarn (1%) with the same target.

7,779 meters of brownfield were drilled in El Valle oxides in order to define new resources, the areas drilled were High Angle East (65%), E2 (29%), Black Skarn Oxides (4%) and West Skarn (2%). Regarding skarn areas, a small drilling program was executed in Boinás East with 307 meters.

Most of the infill drilling program was executed in Breccia East. 4,164 meters were completed to define this oxide structure located at the north of Area 208 where 3,658 meters were drilled too. Additionally, 383 meters were extended to intersect El Valle Fault. These programs were executed at the same time as the investigation drift was advanced. The drilling campaign was executed to the north (first in Area 208 and then in Breccia East and El Valle Fault) converting Inferred resources into Measured and Indicated resources. This drilling program will continue in FY2022 in order to complete the Breccia East definition. These structures have mineralization still open at depth, which will be drilled in the future years. In addition, 2,263 meters were completed in this area to continue the brownfield program started in FY2020 in order to explore the potential looking for parallel oxides structures similar to A208 and following the

regional structural trend (N-S/N35ºE). As a result of the brownfield program, the E2 new oxide area was defined. The drilling program in E2 will continue in FY2022.

Another small infill drilling campaign to convert Inferred resources was carried out in S107 and Black Skarn Oxides with 867 and 680 meters respectively.

A strong drilling program was also executed in Boinás South; 4,135 meters were drilled in this skarn targeting to add new Inferred, Measured and Indicated resources. Boinás South is located between Black Skarn and Boinás East and in the contact with the intrusive. This drilling program will continue in FY2022. 1,541 meters were drilled in Boinás East, mainly in stope definition in order to provide high confidence in the mine plan production and 40 meters in Black Skarn with the same purpose.

In addition to the brownfield drilling completed in E2, 5,046 meters were executed in High Angle East. This structure was discovered in fiscal 2020 and its definition continued during fiscal 2021 adding new resources. Other small drilling programs were executed in Black Skarn Oxides and West Skarn with 300 and 170 meters respectively, extending the mineralization in both cases.

A total of 2,738 meters were drilled in Carlés West. This zone was defined as Inferred material and, as a result of the infill drilling program, this material was converted into Measured and Indicated resources and new Inferred resources were added.

In terms of greenfield drilling, 1,017 meters were executed in Lidia Investigation Permit. This permit is located in Navelgas Gold Belt. Two drill holes were completed and the second phase will take place in FY2022. 1,041 meters were drilled in Ortosa-Godán Project, located in Rio Narcea Gold Belt, 5 km to the north of Carlés. This drilling program started in August 2021 and is in progress in fiscal 2022. The target in these areas consists of defining potential mineralization in order to add future resources for Orovalle.

The drilling program continues focused on oxide areas to convert the inferred material in measured and indicated material. Additionally, Orovalle intends to continue with the exploration programs to look for new Inferred resources and new structures. The Company continues pursuing opportunities to define new resources in different satellite projects out of El Valle. An important number of environmental, archeological and other studies were done along fiscal years 2020 and 2021 as requirement in order to accelerate greenfield drilling programs. COVID-19 pandemic has had an effect on these activities causing delays in the administration process to obtain permits.

Growth Exploration

Ongoing brownfield and infill drilling in and around the El Valle and Carlés mines are expected to continue strong conversion of resources into reserves and adding new resources to the orebodies extending the current mine life.

Orovalle has a robust regional exploration package consisting of 45,164 hectares which includes concessions and investigation permits, some of which are still in progress. Strategic near-term regional targets within our permits include Lidia and Ortosa Godán permits.

Core Logging, Sampling, Analysis and Data Verification

For skarns, and some of the epithermal oxides zones, drill holes tend to intercept the mineralization at varying angles due to irregular morphologies of the different mineral zones, and due to drilling positions. More regular planar deposits, such as A107, have better drilling angles. In general, drilling is spaced between 20 m and 40 m in active or exploited mining areas. Drilling density away from the core of the underground mine and beneath previous pits is generally greater than 40 m and usually no more than 100 m.

The majority of the holes drilled are HQ diameter. When required due to ground conditions, NQ core is used to extend HQ holes to their target depth. PQ core is used for the initial few meters of exploration holes and for metallurgical purposes. Core boxes are transported daily from underground or greenfield projects and delivered to the core shed and laboratory facility in Begega. The core is photographed wet with the name of the hole and the depth. The core is then laid on core logging benches awaiting both geotechnical and geological logging by Orovalle geologists.

A Rock Mass Rating (RMR) is then determined by the geologist and is later entered into the geological database. The RMR is also stored in the block models and used for mine planning purposes. Once the geotechnical logs are complete, geologists proceed to log lithology, alteration, mineralization and structure using pre-defined geological legends. The logs are hard copy and handwritten logs with graphical representations of the drill hole geology. The start and end of geological units are marked on the boxes. Upon completion of the geotechnical logging, geological logging, sampling and density

calculation, the handwritten logs are transferred to the senior geologist who scans the logs and enters the information into the RECMIN database. Collar locations are measured during drilling by surveyors. The collar location, azimuth and inclination of the drill hole are measured and are subsequently used to replace pre-entered planned collar locations in the drill hole database. Down hole survey measurements are conducted using a Reflex Maxibor, or Gyrologic, instrument. Data is exported from the instrument and then transferred to the drill hole database.

On average, 6,592 samples were assayed per month in fiscal 2021, consisting of exploration core, underground grade control samples, mill samples and environmental samples. Orovalle has its own on-site assay laboratory located on the hill side in Begega, above El Valle open pit, approximately 15 minutes by road from the administration and processing facilities for the mine. Both sample preparation and analysis are performed at the laboratory. The laboratory is ISO 9001certified which is renewed every year.

Regarding the drill core sampling, intervals selected for assaying are marked on the boxes, the sample code corresponding to the drill hole identification number and the sample depth. The target sampling length is 1.5 meters, rarely exceeding two meters. The minimum sampling length is 25 cm. Samples are taken for 4.0 meters on either side of the mineralization. Any drill core zone not sent for assaying is discarded while the core selected for sampling is split, half the core is assayed and the remaining half of the core is returned to the core box and stored in covered core storage facilities near the logging facility.

No channel face sampling from Boinás is used in the resource estimation, as sampling of the oxide faces is problematic due to the timing of ground support/heading availability and only partial exposure of the face due to shotcrete cover.

At Carlés, underground chip samples are taken honoring a nominal 1.5 m interval and litho-structural boundaries. Given the similarity in sample support and the layered nature of the Carlés zones, the underground chip samples are used for resource estimation.

Density information is collected after logging at a density measurement station within the core logging facility. Density measurements are taken on two to three lithologies different in every drill hole. The density sample is returned to the box after density measurement. For highly fractured zones where density measurements cannot be reliably measured using the methodology described, densities are determined based on production results.

In terms of sample preparation, once split, drill core samples are placed on a metallic sample tray with a large envelope containing two adhesive barcoded labels and one barcoded label pasted to the envelope. The remaining labels are stored within the envelope to accompany the sample throughout the sample preparation process.

The sample preparation procedure is as follows:

- Core samples are dried at a temperature of 105ºC.
- The entire dried sample is crushed through a jaw crusher to 95%<6 mm.
- The coarse crushed sample is further reduced to 95%<425 microns using an LM5 bowl-and-puck pulverizer.
- An Essa rotary splitter is used to take a 450 g to 550 g sub-sample of each split for pulverizing. The remaining reject portion is bagged and stored.
- The sample is reduced to a nominal -200 mesh using an LM2 bowl-and-puck pulverizer.
- 150 g sub-samples are split using a special vertical-sided scoop to cut channels through the sample which has been spread into a pancake on a sampling mat.
- Samples are then sent to the laboratory for gold and base metal analysis. Leftover pulp is bagged and stored.

After sample preparation, 30 g samples are analyzed for Au by fire assay with an atomic absorption spectroscopy (AAS) finish and two-gram samples for Ag, As, Bi, Cu, Hg, Pb, Sb, Se, and Zn by ICP optical emission spectroscopy (ICP-OES) after an aqua regia digestion. Sampling is carried out in batches of 30 with the first and last samples being analysed twice with the average of the two values being reported, also a standard and a blank is inserted in every batch by laboratory personnel. Gold values exceeding 15 g/t Au are automatically repeated to confirm the grade of the sample. Fluorine is also analysed, although using a different method. The sample is sintered with a mixture of zinc oxide and sodium carbonate and the soluble fluorine is leached with hot water and filtered. The fluorine solution is adjusted to pH 5.2 to pH 5.5 with nitric acid and an ionic strength adjusting buffer (TISAB III) before the final fluorine concentration being determined with a fluoride selective electrode.

Assay results are received by the mine site geological personnel to be entered into the drill hole database.

Greenfield drill holes samples are prepared for Orovalle and then sent to an external laboratory (ALS Laboratory) for analyses. 30 g samples are analyzed for Au by fire assay with an atomic absorption (Au AA-25) and 35 elements by ICP (ME-ICP41) after an agua region digestion. When Au and Ag values are >100 ppm and Cu and As values are >10,000 ppm, specific analysis methods are used to determinate the final grade.

In addition to the controls inserted by laboratory personnel, geologist insert certified reference material (CRM), blanks and duplicate samples into the sample stream. The on-site senior geologist reviews the results prior to acceptance of the assay results. Orovalle repeats the entire batch analysis if the standard falls outside acceptable limits. If a blank or duplicate is observed to fail, 20% of the batch is re-assayed. If the 20% that is re-assayed does not match the original analysis, then the entire batch is re-analysed.

Orovalle currently performs the following data verification steps prior to finalization of the data:

- collar surveys conducted by in-house personnel are entered in a spreadsheet, transformed to UTM coordinates and checked by the project geologist;
- geological logs are entered into a spreadsheet by the geologist responsible for logging the hole, and when complete the database geologist checks and adds the data into the database;
- results received from the labs are subject to Quality Assurance/Quality Control which is reviewed by the project geologist;
- data entered into the RecMin database is subject to numerous controls to identify gaps, double-entry, overlaps, duplication, and absent values; and
- when the information is verified, it is added to the Datamine database. There are two security database copies: one in RecMin and another one in Datamine.

Mineral Resources and Reserves Estimates

In fiscal 2020, Orovalle engaged an independent engineering firm, Roscoe Postle Associates Inc. (“RPA”), to complete mineral reserves and resources estimates and a life-of-mine-plan (“LOMP”) update, which were published in the “Technical Report on Orovalle Operation, Asturias, Spain” dated November 30, 2020 by: (i) Rick C. Taylor, P.Eng., of RPA, in respect of the estimated mineral reserves and the life of mine plan, and (ii) John Makin, P.Geo., of RPA, in respect of the estimated mineral resources. Each of Messrs. Taylor and Makin is a Qualified Person within the meaning of NI 43-101.

Reproduced at “Appendix B - Principal Mineral Projects - Orovalle” is the summary section of the Orovalle 43-101 Report. The full text of the Orovalle 43-101 Report is available for viewing on SEDAR at www.sedar.com and is incorporated by reference in this AIF. Defined terms and abbreviations used herein and not otherwise defined shall have the meanings ascribed to such terms in the Orovalle 43-101 Report.

Since the Orovalle 43-101 Report, the Company has updated the mineral reserves and resources. The updated mineral resource estimates for El Valle as at September 30, 2021 were prepared by Orovalle under the supervision of Ms. Guadalupe Collar, European geologist and the Chief of Geology of Orovalle, based on updating resource block models incorporating drilling results from July 1, 2020 to June 30, 2021 and accounting for production depletion up to September, 2021. Mineral resource estimates are summarized in the following tables:

SUMMARY OF MINERAL RESOURCES INCLUSIVE OF MINERAL RESERVES

SEPTEMBER 30, 2021 - Orovalle Minerals S.L. – Orovalle Operation

Measured Mineral Resources

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lb Cu)
Boinás Oxide	1,690	4.02	10.90	0.44	218	592	16,440
Boinás Skarn	2,704	2.55	16.28	0.71	221	1,416	42,308
Carlés	374	3.23	7.21	0.43	39	87	3,502
La Brueva							
Total	**4,767**	**3.12**	**13.66**	**0.59**	**478**	**2,094**	**62,249**

Indicated Mineral Resources

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lb Cu)
Boinás Oxide	3,553	4.63	5.24	0.32	529	599	25,167
Boinás Skarn	674	2.70	16.68	0.66	61	361	9,841
Carlés	1,346	3.21	7.37	0.35	139	319	10,329
La Brueva							
Total	**5,572**	**4.05**	**7.14**	**0.37**	**728**	**1,279**	**45,337**

Measured + Indicated Mineral Resources

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lb Cu)
Boinás Oxide	5,242	4.43	7.06	0.36	747	1,190	41,606
Boinás Skarn	3,378	2.58	16.36	0.70	280	1,777	52,149
Carlés	1,719	3.22	7.33	0.37	178	405	13,831
La Brueva							
Total	**10,340**	**3.62**	**10.15**	**0.47**	**1,205**	**3,373**	**107,586**

Inferred Mineral Resources

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lb Cu)
Boinás Oxide	1,752	4.44	5.95	0.31	250	335	11,863
Boinás Skarn	572	2.56	11.67	0.44	50	232	5,564
Carlés	1,167	3.25	5.07	0.31	122	190	8,031
La Brueva	193	3.87	15.25	0.09	24	94	382
Total	**3,684**	**3.74**	**7.04**	**0.32**	**446**	**852**	**25,838**

Notes:

1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are estimated at gold equivalent ("AuEq") cut-off grades of 2.48 g/t for Boinás oxides, 2.11 g/t for Boinás skarns and 1.96 g/t for Carlés. AuEq cut-offs are based on recent

operating results for recoveries, off-site concentrate costs and on-site operating costs. AuEq cut-off grades of 2.48 g/t was used for La Brueva.

3. Mineral Resources are estimated using a long-term gold price of US$1,700 per ounce; copper price of US$3.25 per pound; and a silver price of US$ 20 per ounce. A US$/Euro exchange rate of 1/1.20 was used.
4. Mineral Resources are inclusive of Mineral Reserves.
5. A crown pillar of 60 m is excluded from the Mineral Resource below El Valle TSF.
6. A crown pillar of 40m is excluded from the Mineral Resource below Boinás East open pit.
7. Unrecoverable material in exploited mining areas has been excluded from the Mineral Resources.
8. A no-mining sterilization zone of 10 meters below already mined stopes in Boinás has been excluded from the Mineral Resources.
9. A no-mining sterilization zone of 5 meters around waste filled stopes in Boinás has been excluded from the mineral resources.
10. Areas of mineral blocks in Carlés and Boinas have been removed from the Mineral Resource report to ensure RPEEE.
11. Numbers may not add due to rounding.
12. El Valle mineral resources estimates were prepared under the supervision G. Collar, European Geologist, a qualified person for the purposes of NI 43-101, who is an employee of OroValle and thus not independent of the Company.

Mineral reserves were estimated by Orovalle. Mineral Reserves processes and the resulting Reserve Statements have been reviewed, scrutinized, audited, and approved by Brian Buss, a qualified person for the purposes of NI 43-101. A site visit to the Orovalle operations was conducted by Mr. Buss on (November 2, 3, and 4, 2021). The bulk of the technical work in preparing the Mineral Reserves was conducted by experienced and capable staff at Orovalle for the Boinás and Carlés underground mines.

Mineral Reserve estimates were based on robust cut-off grade and mine design processes applied to the Measured and Indicated Resources. Appropriate dilution and extraction factors were applied based upon the specifics of each orebody type and assigned mining methods. Areas where stopes above cut-off grade were isolated or remote from existing infrastructure or otherwise deemed impractical to mine were removed from the Mineral Reserve estimate. Stopes that were planned for extraction prior to September 30, 2021 were also excluded.

Mineral Reserves are summarized in the following table:

MINERAL RESERVES – SEPTEMBER 30, 2021
Orovalle Minerals S.L. – Orovalle Operation

Category	Tonnage (000 t)	Grade (g/t Au)	Grade (g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lbs Cu)
Proven	1,327	2.71	9.02	0.43	116	385	12,574
Probable	1,997	3.25	4.20	0.28	209	270	12,324
Proven and Probable	**3,324**	**3.04**	**6.13**	**0.34**	**324**	**655**	**24,898**

Proven

Category	Tonnage (000 t)	Grade (g/t Au)	Grade (g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lbs Cu)
Boinás Skarn	736	3.32	6.91	0.32	79	164	5,237
Boinás Oxides	561	1.91	11.89	0.57	34	214	7,041
Carlés	30	2.84	7.21	0.44	3	7	296
Total	**1,327**	**2.71**	**9.02**	**0.43**	**116**	**385**	**12,574**

Probable

Category	Tonnage (000 t)	Grade (g/t Au)	Grade (g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lbs Cu)
Boinás Skarn	1,522	3.58	3.02	0.26	175	148	8,822
Boinás Oxides	276	1.91	11.06	0.46	17	98	2,771
Carlés	200	2.55	3.80	0.17	16	24	731
Total	**1,997**	**3.25**	**4.20**	**0.28**	**209**	**270**	**12,324**

Notes:

1. CIM (November 29, 2019) definitions and guidelines were followed for Mineral Reserve estimation.
2. Mineral Reserves are estimated using AuEq break-even cut-off grades by zone, consisting of 3.35 g/t AuEq for Boinás oxides (D&F), 2.90 g/t AuEq for Boinás skarns (SLS), and 2.09 g/t AuEq for Carlés skarn (SLS). AuEq cut-offs are based on recent operating results for recoveries, off-site concentrate costs, and on-site operating costs. AuEq factors are based on metal prices, metallurgical recoveries, metal payables, and selling costs.
3. Mineral Reserves are estimated using average long term prices of US$1,600/oz Au, US$18/oz Ag, and US$3.00/ lb Cu. A US$/€ exchange rate of 1.20/1.00 was used.
4. A minimum mining width of 4 m was used.
5. Crown pillars of 75 m and 42 m are excluded from the Mineral Reserves below the El Valle TSF and Boinás East open pits, respectively.
6. A no-mining sterilization zone of 10 m below mined out stopes and 5 m around waste filled stopes has been applied.
7. El Valle mineral reserves estimates were prepared under supervision of Brian Buss, a qualified person for the purposes of NI 43-101, who is an independent consultant of the Company.
8. Numbers may not add due to rounding.

Life of Mine Plan

Orovalle has produced a production schedule based upon the estimated Mineral Reserves. The schedule includes oxides and skarns ore mined from both the Boinás and Carlés underground mines at an average rate of 664,800 tpa for a period of 5 years, and it is presented in the following table:

LIFE OF MINE PLAN (LOMP) – OCTOBER 2021

Orovalle Minerals S.L. – Orovalle Operation

Item	Units	FY2022	FY2023	FY2024	FY2025	FY2026	Total
Mill Feed							
Tonnes	000 t	639	685	691	667	642	3,324
Gold Grade	g/t Au	2.85	3.26	3.07	3.13	2.84	3.04
Silver Grade	g/t Ag	9.95	3.91	3.44	6.18	7.53	6.13
Copper Grade	% Cu	0.48	0.34	0.27	0.25	0.36	0.34
Metal Contain							
Gold	000 oz Au	58	72	68	67	59	324
Silver	000 oz Ag	204	86	76	132	156	655
Copper	000 lb Cu	6,773	5,196	4,133	3,713	5,030	24,898

Underground mining at Carlés is planning to re-commence in the near future subject to evaluation of the results of the last drilling campaign. In the LOMP, proposed Carlés skarn production averages 77,000 tpa over three years of the schedule, producing 19,128 oz Au, 31,409 oz Ag and 1,024 thousands lbs Cu.

Until such time as mining operations resume at the Carlés underground mine, it will be kept on care and maintenance. Orovalle is currently undertaking a review of alternatives including mining skarn ore from the Carlés open pit. It is possible that approximately 300,000 t of skarn ore could be mined from Carlés open pit, however, this is subject to the relevant permits, and land being obtained. For this reason, this additional potential has not been included in the Mineral Reserve estimate.

Other

Additional information on Orovalle is provided below in “Appendix B - Principal Mineral Projects - Orovalle”.

Don Mario

The following table includes operating and financial performance data for Don Mario for the periods set out below:

	FY2021	FY2020	FY2019
Operating Performance			
Ore mined (tonnes) (dmt)	-	62,291	745,846
Ore milled (tonnes) (dmt)	-	64,875	739,635
Daily average throughput (dmt)	-	2,190	2,185
Gold			
Grade (g/t)	-	1.07	1.51
Recovery (%)	-	84.4	91.2
Production (oz)	-	2,317	32,932
Sales (oz)	-	2,887	34,291
Financial Performance *(in 000's, except per share amounts)*			
Revenue	-	$4,425	$45,287
Mining costs	$5,092	$13,112	$43,552
Income (loss) before tax	($8,081)	$(10,638)	$(3,906)
Capital expenditures	$901	$759	$2,929
Cash operating costs (by-product) ($/oz) gold	-	$3,600	$1,256
All-in sustaining costs (by-product) ($/oz) gold	-	$4,214	$1,361
All-in costs (by-product) ($/oz) gold	-	$4,472	$1,429

A care and maintenance program was implemented at the end of first quarter of fiscal 2020. Throughout fiscal 2021, the Don Mario operation continued in care and maintenance.

Exploration

The Company is defining the exploration program for the 53,325 hectares available at the Don Mario Complex. New reprocessing and interpretation of historical geological data was completed in December 2020. As a result, a new comprehensive exploration program was launched in the fourth quarter of fiscal 2021. Areas of interest will be subject to non-drilling exploration fieldwork during fiscal 2022.

In order to maximize the exploration potential of the 53,325 hectares available at Don Mario, new reprocessing and interpretation of historical geological data was completed in December 2020. As a result, a new comprehensive exploration program was launched in the fourth quarter of fiscal 2021. Areas of interest will be subject to non-drilling exploration fieldwork during fiscal 2022.

In 2019, the Company commenced an evaluation of re-processing tailings to determine the viability of recovering gold from material deposited in the tailings impoundment since the commencement of production at Don Mario (the "Tailings Reprocessing Project"). The Company completed the estimation of the TRP's mineral resources in December 2021, and expects to commence scoping studies in the second half of fiscal 2022.

Drilling Fiscal 2021

The Company did not conduct any drilling campaigns at Don Mario in fiscal 2021.

Mineral Resources and Reserves Estimates

In the first quarter of fiscal 2021, EMIPA engaged an independent engineering firm, DGCS Exploration and Mining Consulting ("DGCS"), to confirm the mineral resource and reserve estimates for the Oxides Stockpile at Don Mario as at September 30, 2020, which was published in the "Technical Report on Don Mario Oxide Stockpile," dated December 29, 2020 by Mr. Gino Zandonai, M.Sc. Mining, CP, Mining Engineer, who is a qualified person independent of the Company for the purposes of NI 43-101 (Don Mario Oxide Stockpile 43-101 Report").

Reproduced at "Appendix B - Principal Mineral Projects – Don Mario" is the summary section of the Don Mario Oxide Stockpile 43-101 Report. The full text of the Don Mario Oxide Stockpile 43-101 Report is available for viewing on SEDAR at www.sedar.com and is incorporated by reference in this AIF. Defined terms and abbreviations used herein and not otherwise defined shall have the meanings ascribed to such terms in the Don Mario Oxide Stockpile 43-101 Report.

In the first quarter of fiscal 2022, EMIPA engaged the independent engineering firm DCGS to confirm the mineral resource for the Don Mario Tailings Reprocessing Project as at September 30, 2021, which was published in the "Technical Report on Don Mario Tailings Reprocessing Project, Eastern Bolivia," dated December 23, 2021 by Mr. Gino Zandonai, M.Sc. Mining, CP, Mining Engineer, who is a qualified person independent of the Company for the purposes of NI 43-101 (Don Mario Oxide Stockpile 43-101 Report").

Reproduced at "Appendix B - Principal Mineral Projects – Don Mario" is the summary section of the Don Mario Tailings Reprocessing 43-101 Report. The full text of the 43-101 Report is available for viewing on SEDAR at www.sedar.com and is incorporated by reference in this AIF. Defined terms and abbreviations used herein and not otherwise defined shall have the meanings ascribed to such terms in the Don Mario Oxide Stockpile 43-101 Report.

The following tables summarize the Mineral Resource and Mineral Reserve estimates for EMIPA as at September 30, 2021:

Mineral Resources

Don Mario - Oxide Stockpile Mineral Resources – September 30, 2021

	Measured						
Location/Zone	**Tonnage (000 t)**	**Grade (g/t Au)**	**Grade (% Cu)**	**Grade (g/t Ag)**	**Contained Metal (000 oz Au)**	**Contained Metal (t Cu)**	**Contained Metal (000 oz Ag)**
DM1 Oxide	492	2.24	1.74	54.4	35.4	8,559.6	861.0
DM2 (Oxide Pre-strip)	278	1.90	1.98	17.9	17.0	5,508.8	160.5
DM3 (Dolomite Oxide)	190	1.89	1.96	21.6	11.5	3,724.0	132.1
Plant Stockpile Oxide)	515	1.61	1.57	57.8	26.7	8,108.3	958.3
DM4 Stock Talco	506	1.61	2.38	63.5	26.2	12,067.4	1,033.2
DM5 (Dolomite Oxide)	202	1.86	1.64	48.7	12.1	33,14.4	316.2
DM6 (Tremolite Oxide)							
Total	**2,184**	**1.84**	**1.89**	**49.3**	**129.0**	**41,282.6**	**3,461.2**

Notes:

1. CIM definitions were followed for Mineral Resources and were prepared by G. Zandonai, a Qualified Person for the purposes of NI43-101, who is an employee of DGCS SA and is independent of the Company.
2. Mineral Resources are estimated using a long-term gold price of US$ 1,700 per ounce, copper price of US$3.25 per pound and a silver price of US$20 per ounce.
3. Numbers may not add due to rounding.

Don Mario - Tailings Reprocessing Project Mineral Resources – September 30, 2021

	Indicated				Inferred			
Cut Off Au	**Kt**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**	**Kt**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**
0.7	11	0.71	5.49	0.69	-	-	-	-
0.6	133	0.65	5.33	0.66	41	0.63	5.04	0.57
0.5	1,390	0.54	5.46	0.59	705	0.53	4.44	0.46
0.4	3,320	0.49	4.96	0.55	4,629	0.46	4.16	0.42
0.3	***3,677***	***0.48***	***4.79***	***0.53***	***5,474***	***0.45***	***4.00***	***0.40***
0.2	3,798	0.47	4.67	0.52	5,688	0.44	3.89	0.40
0.1	3,798	0.47	4.67	0.52	5,688	0.44	3.89	0.40

Notes:

1. CIM definitions were followed for Mineral Resources and were prepared by G. Zandonai, a qualified Person for the purposes of NI43-101, who is an employee of DGCS SA and is independent of the Company.
2. Highlighted Base Case Au 0.3 g/t Cutoff considered for mine life.
3. Numbers may not add due to rounding.

Mineral Reserves

Don Mario - Oxide Stockpile Mineral Reserves - September 30, 2021

	Proven						
Location/Zone	**Tonnage (000 t)**	**Grade (g/t Au)**	**Grade (% Cu)**	**Grade (g/t Ag)**	**Contained Metal (000 oz Au)**	**Contained Metal (t Cu)**	**Contained Metal (000 oz Ag)**
DM1 Oxide	492	2.24	1.74	54.4	33.7	8,132	818.0
DM2 (Oxide Pre-strip)	264	1.90	1.98	17.9	16.1	5,233	152.5
DM3 (Dolomite Oxide)	181	1.89	1.96	21.6	11.0	3,538	125.5
Plant Stockpile Oxide)	490	1.61	1.57	57.8	25.4	7,703	910.3
DM4 Stock Talco	438	1.65	2.44	64.9	23.2	10,683	914.7
DM5 (Dolomite Oxide)	192	1.86	1.64	48.7	11.5	3,149	300.4
Total	**2,032**	**1.85**	**1.89**	**49.3**	**120.9**	**38,438**	**3,221.3**

Estimated metal recoveries based on processing by sulphidation.

Notes:

1. *CIM definitions were followed for Mineral Reserves and were prepared by G. Zandonai, a qualified person for the purposes of NI 43-101, who is an employee of DGCS SA and is independent of the Company.*
2. *Mineral Reserves are estimated using a long-term gold price of $ 1,600 per ounce, copper price of $3.00 per pound and a silver price of $18 per ounce.*
3. *Mineral Reserves (exclusive of in situ). Numbers may not add due to rounding.*

Mine Life Extension and Outlook

Since fiscal 2018, the Company has been evaluating metallurgical alternatives to process its Oxides Stockpile, concluding that a sulfidation circuit would maximize the value of the stockpile. As at September 30, 2020, EMIPA had oxides stockpile resources (Measured) of approximately 2.18 million tonnes with an average gold grade of 1.84 g/t.

The quality assurance (metallurgical) testing was completed in November 2021. Results to date are validating the Company's preliminary assumptions in terms of the OSP's positive economics. Next phases of the OSP are engineering and cost analysis to establish the CAPEX, and financing alternatives evaluation. The Company expects to close technical, financial and funding analysis in the second half of fiscal 2022. Subject to a positive outcome, construction is planned for fiscal 2023.

In 2019, the Company commenced an evaluation of re-processing tailings (the TRP) to determine the viability of recovering gold from material deposited in the tailings impoundment since the commencement of production at Don Mario. The Company completed the estimation of the TRP's mineral resources in December 2021 and expects to commence scoping studies in the second half of fiscal 2022.

Additional information on Don Mario is provided below in "Appendix B - Principal Mineral Projects - Don Mario".

Taguas

The property is located at the northern end of the Tertiary-age Valle del Cura volcanic belt in San Juan province (Argentina) and on the eastern flank of the El Indio metallogenic Belt. The Taguas Property is host to a high-sulfidation epithermal gold-silver system hosted in altered Tertiary age rhyolite volcaniclastic rocks.

Supergene-oxidized gold-silver mineralization occurs on the south half of the Taguas Property at Cerro Taguas Norte, Cerro Taguas Sur, Cerro III and Cerro IV (collectively also referred to as “Cerros Taguas”). The oxide gold-silver mineralization consists of sub-vertical, northeast striking mineralized structures in an envelope of lower-grade mineralization. The high-grade zones measure 1.5 m to 8 m wide and have lengths of 40 m to over 500 m. The high-grade zones consist of relatively continuous mineralization with gold grades ranging from 0.2 g/t Au to over 4.0 g/t Au and 10 g/t Ag to over 50 g/t Au. Oxidation extends from surface to approximately 200 m below surface.

Sulfide (pyrite-enargite) gold-silver mineralization has been encountered on the north half of the property at Cerro Campamento, and Cerro Silla Sur. Intersections with grades of over 50 g/t Au and 100 g/t Ag have been encountered over down-hole lengths of 1.5 m to 5.0 m in discrete mineralized vein structures. This style of mineralization has been also encountered below the depth of oxidation in Cerros Taguas, generally below 150-200 meters.

Some indicators of copper-gold porphyry mineralization have also been found on the Taguas Property.

The understanding of the regional and property-scale geology is sufficiently advanced to allow for construction of geological models to support Mineral Resource estimation for the Project.

The Taguas Property is comprised of 15 mining concessions and one road easement totalling 3,273.87 ha. The Taguas Project site is located at an elevation of 3,500 m to 4,300 m above sea level on the eastern flank of the Andes mountain range in the Province of San Juan in northern Argentina. The site is approximately 200 km north of the town of Tudcum and can be reached from the road to the Veladero mine site, which is operated by Barrick Gold.

The Project site has a dry summer season from December to April during which most exploration activities have occurred. Up to two meters of snow can fall during the winter season from May to November.

On May 14, 2019, Orvana entered into an Asset Purchase Agreement to acquire the Taguas Property from Minera Taguas in exchange for a 2.5 % net smelter royalty. On May 21, 2021 all the requisite steps to transfer ownership of the Taguas property to Orvana Argentina S.A. were completed.

Surface rights holders for the Taguas Property are Barrick Exploraciónes Argentina S.A. and the Sociedad Anónima de Explotación y Comercio Minero Colanguil Limitada. Water rights have been requested and granted to conduct exploration activities at Taguas. Water concessions for mine operations have not yet been granted, but preliminary hydrological studies and site water balance indicate that sufficient surface water can be obtained to support a mining operation on the Property and permits to draw water can be obtained as the proposed Taguas Project advances.

Exploration

Nearly 56,600 m of drilling has been carried out on the Taguas Property. Drill programs have been carried out by Minera Aguilar, Piuquenes, Gold Fields and Orvana. Most of the drilling has been diamond core drilling; however, Piuquenes drilled 28 reverse-circulation holes (3,524 m) testing oxide gold-silver mineralization during the 2015-2016 and 2016-2017 field seasons.

Two exploration drifts were driven by Aguilar in the 1980s and 1990s. The drifts were located at Cerro Campamento and at Cerro Taguas Norte and Cerro Taguas Sur. The exploration developments at Cerro Taguas Norte and Cerro Taguas Sur were rehabilitated and re-sampled by Piuquenes in 2018, and assay data from this re-sampling program is included in the Mineral Resource estimate.

In fiscal 2020, as a result of the completion of an intelligence-assisted data analysis, the Company identified a total of 17 new high probability gold targets at Taguas, consisting of 9 new areas and 8 extended areas of previous known mineralization. All of the newly identified targets are based on a 96% level of similarity to the known gold mineralization. These results suggested that there was an enhanced probability of increasing the potential of the Property’s oxides and sulphides resources. In order to validate the potential of the new targets, the Company developed a fieldwork exploration campaign during the first quarter of fiscal 2021, including new access points, geological mapping and soil and rock sampling. A drilling campaign to enlarge the mineral resource commenced in February 2021 and was completed in April 2021 with a total of 4,689 meters drilled.

On July 28, 2021 the Company filed the Taguas NI 43-101 Report. The updated mineral resource Estimate includes both oxide and sulphide ore of three areas: Cerro Taguas, Cerro Silla Sur and Cerro Campamento, and is the result of drilling programs completed between 1985 and 2021.

The Company defined an infill drilling program at Cerros Taguas to improve confidence in the continuity of oxide mineralization, and to upgrade mineral resource classification categories. The program includes expansion drilling simultaneously with the infill drilling plan, in those areas that have been left open after the 2021 drilling campaign. The Company commenced the drilling campaign in early December 2021.

Sampling, Analysis and Data Verification

Samples from the Minera Aguilar campaigns were prepared and analyzed at an in-house laboratory in Mendoza with limited intra-laboratory check assays at Mina Aguilar and the El Indio Mine in Chile. Beginning during the 2007-2008 field season, Piuquenes began to formalize chain of custody and assay QA/QC procedures and have samples prepared and analyzed at the internationally accredited Alex Stewart lab in Mendoza.

Since 2007, drilling, sampling, sample security, sample preparation and analysis have been of sufficient standard to allow for Mineral Resource estimation for the Taguas Project. Re-surveying and re-sampling and assaying programs, including re-sampling of underground development at Cerro Taguas Norte and Cerro Taguas Sur executed by Piuquenes have been carried out to similar standard bringing confidence in the quality of data from legacy drilling and sampling programs to sufficient standard to support Mineral Resource estimation.

Gold Fields had check-samples of historic drilling, and original samples from its drill program prepared at ALS Chemex in Mendoza, then assayed by 50 g fire assay and ICP AES and ICP MS at the ALS Chemex lab in Lima. The Gold Fields assaying, and re-assaying used a rigorous QA/QC program to control gold and silver assaying.

Following the Gold Fields program, sampling and re-sampling programs conducted by Piuquenes and Orvana from 2013 to 2021 were prepared and assayed by 50 g fire assay at Alex Stewart in Mendoza and used formal QA/QC protocols to control gold and silver assaying.

During the 2021 summer field season, Orvana executed a diamond drill campaign. A total of 4,689 m was drilled and 3,114 core samples and quality control samples were sent for analysis. Samples were prepared and analyzed by Alex Stewart International Argentina SA Laboratory in Mendoza. This laboratory is ISO 9001; ISO 17025, and ISO 14001 certified. Samples were prepared following the P-5 laboratory preparation code: the samples were dried, crushed to passing 10 mesh (>80%), riffle split of 1kg sample and pulverized to 106 microns (>95%). The assays included 50 g Au by fire assay (FA), AA finish and 39 element package with aqua regia dilution and ICP OES finish. Over limits for Au and Ag were run in 50 g sample by FA and gravimetric method finish. Coarse and pulp rejects were returned and are stored in the Piuquenes storage facilities.

Mineral Resource Estimates

In fiscal 2021, Orvana Argentina, S.A. engaged independent consultants, Mr. Joseph J. Kowalik, PhD., QP MMSA Senior Consulting Geologist, and Mr. Ronald G. Simpson, P.Geo of Geosim Serivces Inc.,, to complete mineral resources estimates, which were published in the “Independent Technical Report NI 43-101 on the Taguas Project, San Juan, Argentina,”” dated June 30, 2021. Each of Messrs. Kowalik and Simpson is a Qualified Person within the meaning of NI 43-101.

Reproduced at “Appendix B - Principal Mineral Projects - Taguas” is the summary section of the Taguas 43-101 Report. The full text of the Taguas 43-101 Report is available for viewing on SEDAR at www.sedar.com and is incorporated by reference in this AIF. Defined terms and abbreviations used herein and not otherwise defined shall have the meanings ascribed to such terms in the Taguas 43-101 Report. The Taguas resource estimate remains unchanged from the Taguas 43-101 Report effective as at June 30, 2021 to the date of this AIF.

SUMMARY OF MINERAL RESOURCES

SEPTEMBER 30, 2021 – Orvana Argentina, S.A. – Taguas

Cerros Taguas Inferred Mineral Resource Estimate
SEPTEMBER 30, 2021

Material Type	COG AuEq	Tonnes 000's	Au g/t	Ag g/t	Cu %	AuEq	0z Au 000's	0z Ag 000's	Cu M lbs
Oxide	0.25	54,993	0.35	12.1	0.00	0.49	619	21,429	0
Sulfide	0.30	76,362	0.25	6.4	0.18	0.56	606	15,639	305
Combined		131,355	0.29	8.8	0.11	0.53	1,225	37,068	305

Cerros Taguas Notes:

1. Mineral resource estimate prepared by Mr. R. Simpson, P.Geo., of GeoSim Services Inc. with an effective date of June 30,2021. Mineral Resources are classified using the 2014 CIM Definition Standards.
2. Gold equivalent (AuEq g/t) calculations were based on assumed metal prices of $1,700/oz Au, $20/oz Ag, and $3.25/lb Cu. Cu. AuEq = Au(g/t) + Ag(g/t) *0.0118+Cu*1.311.
3. Cut-off grades are 0.25 g/t AuEq for oxide material and 0.30 g/t AuEq for sulfide material.
4. An optimized pit shell was generated using the following assumptions: metal prices/recoveries in Note 2 above; a 45° pit slope; mining costs of $2.00 per tonne, processing costs of $5.20 per tonne in oxide and $9.00 per tonne in sulfide. General & administrative charges of $1.50 per tonne. All amounts are expressed in US dollars.
5. Totals may not sum due to rounding.
6. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

Cerro Silla Sur Inferred Mineral Resource Estimate
SEPTEMBER 30, 2021

Material Type	Tonnes	Au g/t	Ag g/t	Cu %	AuEq g/t	Contained Metal		
						0z Au	0z Ag	Cu M lbs
Oxide	228,100	3.30	42.9	0.00	3.80	24,186	314,391	
Sulfide	521,900	3.07	64.5	0.35	4.28	51,446	1,081,773	4.0
Total	750,000	3.14	57.9	0.24	4.14	75,632	1,396,163	4.0

Cerro Campamento Inferred Mineral Resource Estimate
SEPTEMBER 30, 2021

Material Type	Tonnes	Au g/t	Ag g/t	Cu %	AuEq g/t	Contained Metal		
						0z Au	0z Ag	Cu M lbs
Oxide	242,580	5.50	45.8	0.00	6.04	42,919	356,888	
Sulfide	1,278,750	3.73	40.6	0.55	4.94	153,392	1,667,534	15.6
Total	1,521,330	4.01	41.4	0.47	5.12	196,311	2,024,422	15.6

Cerro Silla Sur and Cerro Campamento Notes:

1. Mineral resource estimate prepared by Mr. R. Simpson, P.Geo., of GeoSim Services Inc. with an effective date of June 30, 2021. Mineral Resources are classified using the 2014 CIM Definition Standards.
2. Gold equivalent (AuEq g/t) calculations were based on assumed metal prices of $1700/oz Au, $20/oz Ag, and $3.25/lb Cu. AuEq = Au(g/t) + Ag(g/t) *0.0118+Cu*1.311

3. Cut-off grade is 2 g/t AuEq.
4. Vein models were diluted to a minimum width of 1.5m.
5. Totals may not sum due to rounding.
6. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

Other

Additional information on Taguas is provided below in "Appendix B - Principal Mineral Projects - Taguas".

Outlook

The Company continues to implement comprehensive and proactive measures to respond to the COVID-19 pandemic; and continues to work closely with local governments and authorities to ensure that proper protocols are followed during the ongoing COVID-19 crisis. The overall impact on each of our sites will depend on the progression of the pandemic and measures in place for preventing transmission.

The Company continues to pursue its objectives of optimizing production, lowering unitary cash costs, maximizing free cash flow, and extending the life-of-mine of its operations under a long term operational strategy. Main objectives per unit are:

- Orovalle:
    - Strong cash flow generation based on stable production plan.
    - Continued exploration drive to keep replenishing, and expanding, the resource base.
    - Renew 5-Year Life of Mine Plan, as has been the case for the last five years.
- Orvana Argentina:
    - Complete new PEA on the Taguas Project in the first quarter of fiscal 2022.
    - Conduct Infill Drilling Program, required to develop Pre-Feasibility Study, in the first half of fiscal 2022.
- EMIPA:
    - Determine the viability of the OSP in fiscal 2022.
    - Subject to approval and financing, construction of OSP to be in 2023. 3-year production life between 2024 and 2026 is the goal.
    - Develop scoping studies for a subsequent project regarding reprocessing tailings, in fiscal 2022.

o Comprehensive exploration program, started in fiscal 2021, is set to continue throughout fiscal 2022. No drilling is expected at this phase of the program.

The following table sets out fiscal 2021 results and fiscal 2022 production and cost guidance for the Company's sole unit in production (Orovalle):

Orovalle	FY 2021 Actual	FY 2022 Guidance (1)
Metal Production		
Gold (oz)	**47,413**	**48,000 – 53,000**
Copper (million lbs)	**6.3**	**5.8 – 6.5**
Capital Expenditures	**$12,803**	**$22,000 – $25,000**
Cash operating costs (by-product) ($/oz) gold (1)	**$1,043**	**$1,050 – $1,150**
All-in sustaining costs (by-product) ($/oz) gold (1)	**$1,376**	**$1,550 – $1,700**

(1) Fiscal 2022 guidance assumptions for COC and AISC include by-product commodity prices of $4.00 per pound of copper and an average Euro to US Dollar exchange of 1.17.

Revenue

The Company has the following material off-take agreements for the sale of the products produced at Orovalle:

- In March 2011, the Company entered into a contract with a metals trader in Zug, Switzerland for the sale of the gold-copper-silver concentrates produced from Orovalle. The Company believes that, due to the availability of alternative purchasers, no material adverse effect would result if such off- taker was unable to purchase the gold-copper-silver concentrates from Orovalle.
- In November 2021, the Company entered into a contract with a metals trader in New Jersey, United States for the sale of the dore produced from Orovalle. The Company believes that, due to the availability of alternative purchasers, no material adverse effect would result if such off- taker was unable to purchase the dore from Orovalle.

Compared to fiscal 2020, revenue for fiscal 2021 increased by $3.5 million or 3% to $105.5 million from sales of 46,628 ounces of gold and 6.3 million pounds of copper, compared with revenue of $102 million from sales of 55,344 ounces of gold and 5.5 million pounds of copper. The increase in revenue was primarily due to higher gold and copper realized prices, and higher copper sales volume, partially off-set by lower gold sales volume.

Compared to fiscal 2019, revenue for fiscal 2020 decreased by $34.4 million or 25% to $102 million from sales of 55,344 ounces of gold and 5.5 million pounds of copper, compared with revenue of $136.4 million from sales of 96,540 ounces of gold and 5.0 million pounds of copper in 2019. The decrease in revenue was primarily due to lower gold sales volume, partially off-set by higher copper sales volume and higher realized gold price.

Compared to fiscal 2018, revenue for fiscal 2019 decreased by $10.3 million or 7% to $135.5 million from sales of 96,540 ounces of gold and 5.0 million pounds of copper, compared with revenue of $145.8 million from sales of 102,018 ounces of gold and 8.7 million pounds of copper. The decrease in revenue was primarily due to lower gold sales volume and lower copper sales volume, partially off-set by higher realized gold price.

Employees

As of September 30, 2021, Orvana and its subsidiaries employed a total of 525 full-time employees and 173 contract personnel, for a total of 698, as follows: (i) 38 employees and 57 contractors providing mine, mill, camp and support services at Don Mario; (ii) 486 employees and 113 contractors providing mine, mill and support services at Orovalle; and (iii) one employees and three contractors (one of whom is the Chief Executive Officer of Orvana) at the Company's head office in Toronto, Canada. The Company employs a number of personnel who are experienced in open-pit and underground mining techniques as well as polymetallic mineral processing. The Company has skilled professionals in all the required technical and financial areas, but will supplements them with specialized consultants as required. Although the Company's business requires personnel with specialized skills, the Company believes that persons having the necessary skills are generally available.

Health, Safety, Environment and Social Practices

The board of directors of the Company has a Safety, Environment and Technical Committee. The purpose of this committee is to provide support and oversight for the Company's safety, health, environmental and sustainability programs, and to assist in reviewing the technical, safety, health, environmental and sustainability performance of the Company.

Orvana maintains various industry standard metrics to track its safety and health performance over time such as lost-time injury frequency rates and lost-time injury severity rates as well as environmental performance.

Health and Safety

The Company maintains health and workplace safety programs at each of its operations. In order to ensure that safety goals and optimal safety standards are achieved, comprehensive training programs for personnel take place on an ongoing basis. Regular operations inspections are performed by representatives from the mine operations, planning and safety departments as well as by regulatory authorities and independent third-party experts. These inspections review current conditions and trigger action on potential safety issues that arise as mine development progresses. The Company has also hired service providers to support the Company's safety department in risk assessment, training and work environment monitoring.

Environmental

Orvana is committed to developing and operating its mines and projects, including reclamation efforts, in full compliance with local environmental regulations and recognized international environmental standards. In furtherance of this commitment, Orvana regularly implements programs to protect and enhance natural habitats and sensitive species, including reclamation and reforestation efforts and the establishment of water sources for wildlife. The Company monitors the water and air quality on a frequent basis at Orovalle and Don Mario and these operations are also periodically inspected by environmental regulatory authorities. Third parties sample and analyze both surface and ground water following protocols established by the applicable regulatory authorities in order to provide the necessary information. Any regulated elements whose values are not in compliance in the subject jurisdictions, when detected, are evaluated.

Where the levels of certain regulated elements potentially exceed permitted levels, evaluations have been provided to the appropriate regulatory authorities and remedial actions have been sought out, evaluated and, where warranted in the circumstances, implemented. Orovalle is currently working through one such matter involving selenium discharges into the Cauxa River in Asturias, Spain, in respect of which it has received and may receive additional monetary sanctions and is subject to a criminal investigation. The Cauxa River flows past El Valle Mine operated by the Company's Spanish subsidiary, Orovalle, as well as certain other mining properties owned by third parties. Selenium is a naturally occurring element that is found in rocks, land and water and thus is also naturally found in certain food supplies. The maximum content level for selenium has been set (i) in drinking water at 50 micrograms per liter ("µg/L") by Health Canada and the Environmental Protection Agency in the United States (the "EPA") and (ii) in surface water with fish based on selenium levels in fish tissue and in lotic surface water without fish at 3.1 µg/L by the EPA. In 2011, Spain set the limit of selenium in inland surface water at 1 µg/L and in other surface water and drinking water at 10 µg/L. The Company believes that, based on recent scientific studies conducted by the Company under international standards, the levels of selenium in Cauxa River are not a health or environmental risk.

Spanish Water Authorities have taken the position that the levels of selenium in the river flowing past the El Valle Mine exceed the levels permitted by applicable regulations as a result of discharges attributed to Orovalle which may not be in compliance with certain of Orovalle's permits (the "SE Discharge Matter"). In recent years, Orovalle has received approximately €1.0 million (approximately $1.1 million) in fines relating to these matters and may face further additional fines or other sanctions, including the revocation or suspension of certain permits, in the future. Orovalle is appealing the outstanding fines, approximately $0.7 million, and the enforcement of certain fines has been suspended pending the related criminal matter. A judge of the criminal court of Asturias conducted an investigation into the potential commission by Orovalle of a reckless crime under the Spanish penal code relating to the SE Discharge Matter. After six years of investigation, during the third quarter of fiscal 2020 the Grado's Court issued the order to commence an oral trial to address the SE Discharge Matter in a criminal court of Oviedo (the capital of Asturias). The request of the prosecutor and the state's attorney acting in this process includes a fine of up to €20 million and the eventual withholding of Orovalle's operations until it is demonstrated that the alleged polluting activity has ceased. The petition also includes a €5 million indemnity for civil liability. At this time, the state prosecutor has petitioned these sanctions against Orovalle in respect of this matter. Orovalle has filed its preliminary statement of defence requesting for the dismissal of the allegations on the basis that, among other things, there is an absence of a committed offence. The process to resolve this matter is ongoing, and as of the date of this AIF, no final decision by the courts have been rendered in respect of this matter. A date for the commencement of the oral trial had been set for March 2021. Due to procedural matters, on March 1, 2021, the trial was rescheduled to an undetermined date in the future. In connection with the pending oral trial, the Court set a requirement on Orovalle to provide a bond in the

amount of €7 million as warranty for contingent liabilities, subject to the outcome of the oral trial. Orovalle has appealed the bond requirement. The appeal is in progress as of date hereof. Individuals have been excluded from any charges, and this case relates only to Orovalle at this time. If Orovalle is ultimately found responsible, monetary penalties, amongst other sanctions, may be applied. These sanctions could have a material impact on the Company. At this time, a final decision in this matter has not been rendered. Orovalle has cooperated and will continue to cooperate with investigations and is defending itself vigorously. Orovalle has been working to remediate this matter through various activities including the implementation of a reverse osmosis water treatment plant in September 2014 and the development of a long-term water management plan, which is in progress. While it appears that these remediation efforts are addressing these matters, there can be no assurances that Orovalle's continuing remediation activities will successfully achieve full compliance with local regulations. In addition, Orovalle has been seeking to either amend certain of its permits or, alternatively, to receive new permits, and to receive extensions of deadlines to comply with local requirements. Orvana is committed to developing and operating its mines and projects in full compliance with local environmental regulations and recognized international environmental standards.

The Company must dispose, in a safe manner, of the tailings that part of the crushed rock leaves after the metals are extracted. This is typically done in an impoundment area that not only contains this material and waste water, but provides a contingency for extraordinary seismic and weather events so that this material remains contained. El Valle Mine must provide bonds to ensure that the impacted areas are remediated. Total cash and investments in funds deposited with Spanish financial institutions for reclamation bonds including in respect of the tailings impoundment area amounted to approximately $8.9 million at September 30, 2021 and these monies are expected to be released after all reclamation work at El Valle has been completed. Spanish regulatory authorities have demanded that an additional reclamation bond of €5.0 million be deposited by the Company under Spanish mining regulations in respect of El Valle. The Company is challenging the requirement to fund the additional reclamation bond through an administrative appeal process. The Company is also working with the Spanish regulatory authorities to come to an agreement regarding posting the bond, including the consideration of alternatives to posting this bond, while preserving the Company's rights during the appeal process. The costs incurred by the Company in connection with environmental monitoring and maintenance related to environmental matters are generally treated as ordinary operating expenses.

Sustainability

Orvana is committed to the social development and well-being of the communities in which it operates. To this end, in addition to the payment of income taxes and other local community taxes such as land moving taxes, Orvana continues to support, financially and otherwise, local community endeavors associated with these objectives. In fiscal 2019, Orvana corporate leaders continued to be active in visiting and participating in sustainability initiatives in Spain and Bolivia. During fiscal 2020 and 2021, participation in sustainability initiatives in Spain and Bolivia were limited due to the worldwide COVID-19 pandemic. The Company has supported the communities surrounding El Valle by donating funds to local museums and funding the re-stocking of fish species into local rivers. Additionally, Orovalle has continued its commitment to support cultural activities, and sponsoring different Belmonte events and celebrations; collaborating with an archeological investigation in the Boinás area; supporting the Salas Salmon Fair and championship; supporting the Gold Panning Championship in Navelgas; and the Belmonte Marathon.

In the Chiquitos Province of Bolivia where the Don Mario is located, the Company is actively involved in working with communities to contribute to the improvement of their standard of living. In 2011, Orvana renewed its support of investing $1.8 million in the local communities over a five-year period. Projects supported by Orvana include supervision of and financial support for community development projects such as utilities and parks, education and information technology, cultural events and sporting initiatives, community business development initiatives, agricultural projects and maintenance of community roads. Projects were jointly monitored by the Company and community boards and funds were disbursed in accordance with the plan for the five-year period. In fiscal 2016, the Company entered into two agreements to fund a total of $0.3 million to community projects. One of the agreements was with the San José local government to support development projects, such as improvements in educational facilities and in a women's shelter, and the other agreement was with East Turubó communities to assist with projects related to an indigenous development plan. All projects are reviewed and approved by the Company and funds are disbursed based on project progress. In fiscal 2017, the Company proposed to the San José local government and East Turubó communities to develop projects together that are focused on health, education and sanitation (garbage management system), given that, based on international experience, these types of projects have a direct and positive impact on communities. The Company also proposed to use other sources of available funds for these types of projects. In fiscal 2018, the Company, as part of its vision of focusing on health, education and sanitation, supported projects

directly related to those areas (new school classrooms, education programs base on local classical music) in coordination with San José local government and proposed a five years agreement to East Turubó communities. In 2019, nine projects were executed in coordination with the San José de Chiquitos Municipality. These projects are related to education (3), sanitation (3) and health (3). One of the projects of sanitation is related to the provision of water to the community of San Juan. These project were executed in the same city of San José as well as in all five communities of the TCO –T (Tierras Originarias de Origen – Turubó). As of September 2021, EMIPA maintains periodic conversations with communities to provide updates regarding the activities at Don Mario.

Foreign Operations

The Company's principal mineral projects are at Orovalle in Spain, Taguas in Argentina, and Don Mario in Bolivia. The head office of Orvana is located in Toronto, Canada. Consequently, the Company is substantially dependent on its foreign operations.

RISK FACTORS

The following discussion summarizes the principal risk factors that apply to the Company's business and that may have a material adverse effect on the Company's business, financial condition and results of operations, or the trading price of the Common Shares. Enterprise risk management is carried out by management of the Company under policies approved by the board of directors thereof. Management of the Company identifies and evaluates risks in co-operation with the Company's operating units. The board of directors of the Company reviews the risk management programs and provides oversight on specific areas. The Company's overall risk management program seeks to minimize potential adverse effects on the Company's financial and operating performance.

The Company's activities expose it to a variety of financial risks, market risks (including commodity price risks, currency risks and interest rate risks), credit risks, liquidity risks, financing risks and other risks. Orvana's business is subject to certain other risks in operational, strategic and regulatory areas. In managing risk, management of the Company focuses on the risk factors that impact the ability of the Company to operate in a safe, profitable and responsible manner.

Financial Risks

Currency Risk

Currency fluctuations may affect the costs Orvana incurs at its operations and may affect Orvana's operating results and cash flows. Orvana's functional currency is the US dollar. The Company operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the US dollar and the Euro. Orvana earns its revenue in US dollars. In respect of Orovalle, Orvana incurs most of its operating costs and capital expenditures in Euros, the value of which has varied against the US dollar since Orovalle commenced operations in 2011. Appreciation of certain non-US dollar currencies such as the Euro against the US dollar would increase the costs of production, making Orvana's mines less profitable. In respect of Don Mario, Orvana incurs most of its operating costs and capital expenditures in Bolivianos, the exchange rate for which has not varied materially against the US dollar in recent years, although inflation has been decreasing in Bolivia over the past three years.

The Company is continuously monitoring currency trends, and from time to time, fixes the exchange rate US dollar versus Euro for a limited amount of cash.

Commodity Price Risks

The Company's business, its ability to generate positive cash flows and the value of the Company's mineral properties are heavily influenced by metal prices, particularly the prices of gold, copper and silver, as well as the cost and availability of commodities which are consumed or otherwise used in connection with Orvana's operations, including, fuel and electricity. If the world market price of gold, copper or silver were to drop and the prices realized by Orvana on gold, copper or silver sales were to decrease

significantly and remain at such a level for any substantial period, Orvana's profitability and cash flow would be further adversely affected. An increase in worldwide demand for other critical resources such as input commodities, drilling equipment, tires and skilled labor may cause unanticipated cost increases and delays in delivery times, thereby impacting the Company's operating costs, capital expenditures and production schedules. Delays in delivery times may also occur as a result of lower supplies and materials in stock following the recent downturn in commodities.

Prices of metals and other commodities can and do change significantly over short periods of time and are affected by numerous factors beyond the control of the Company, including changes in the level of supply and demand, international economic and political trends, expectations of inflation, currency exchange fluctuations including the strength of the US dollar, interest rates, global or regional consumption patterns, speculative activities and increased production arising from improved methods and new discoveries. There can be no assurance that prices at which the Company can sell the mineral products it produces will be sufficient to ensure that the Company's properties can be mined profitably. A sustained or significant further decline in the price of gold, copper or silver would have adverse effects on the profitability of the Company and would negatively impact cash flows. To facilitate the management of certain of its price risk, the Company has hedged a portion of its gold and copper production.

The Company is continuously monitoring commodity price trends, and from time to time, fixes the price for a limited amount of production.

Use of Derivatives

As described in the section of this AIF headed "Risk Factors - Financial Risks – Commodity Price Risks," Orvana has undertaken certain hedging activities to manage the risks associated with gold or copper price volatility and may undertake additional hedging activities and use certain derivative products solely for the purpose of managing the risks associated with gold or copper price volatility, changes in other commodity input prices, interest rates, foreign currency exchange rates and energy prices. The use of derivative instruments involves certain inherent risks including: (i) credit risk - the risk that the creditworthiness of a counterparty may adversely affect its ability to perform its payment and other obligations under its agreement with Orvana or adversely affect the financial and other terms the counterparty is able to offer to Orvana; (ii) market liquidity risk – the risk that Orvana has entered into a derivative position that cannot be closed out quickly, by either liquidating such derivative instrument or by establishing an offsetting position; and (iii) unrealized mark-to-market risk – the risk that, in respect of certain derivative products, an adverse change in market prices for commodities, currencies or interest rates will result in Orvana incurring an unrealized mark-to-market loss in respect of such derivative products. There can be no assurance that Orvana will undertake any further hedging activities or continue current hedging activities.

Credit Risk

The Company's credit risk is primarily attributable to gold, copper and silver concentrate and gold doré sales and value-added tax receivables. The Company has a concentration of credit risk with two customers to which gold, copper and silver concentrate and gold doré are sold under agreements and who provide provisional payments to the Company upon each product shipment. Value-added taxes refundable or otherwise recoverable are collected from the Bolivian and Spanish governments, in accordance with applicable local laws, rules and procedures.

Liquidity and Financing Risks

Liquidity risk represents the risk that the Company will not be able to meet its financial obligations as they fall due. Financing risk represents the risk that, if unanticipated events occur that may impact the operations of El Valle and Don Mario, as well as exploration activities at Taguas, and/or if the Company does not have adequate access to additional financing on terms acceptable to the Company, the Company may not have adequate resources to maintain its operations or advance its projects as currently anticipated. Cash flows forecasting is performed in the operating entities of the Company and aggregated at the Orvana corporate level. Management monitors these rolling forecasts to ensure the Company has sufficient cash to meet its financial obligations and operational needs at all times.

As at September 30, 2021, the Company's outstanding debt totals $13 million. See "Development of the Business – Financing".

Orvana may assume additional debt in future periods or reduce its holdings of cash and cash equivalents in connection with funding future acquisitions, existing operations, capital expenditures, dividends or in pursuing other business opportunities.

If unanticipated events occur that adversely impact the operations of Orovalle, the development activities at Don Mario, the planned exploration activities at Taguas, and/or if the Company does not have adequate access to financing on terms acceptable to the Company, the Company may not have adequate resources to maintain its operations or advance its projects as currently anticipated. In such circumstances, the Company may need to take additional measures to increase its liquidity and capital resources, including obtaining additional debt or equity financing, strategically disposing of assets or pursuing joint-venture partnerships, equipment financings or other receivables financing arrangements. The Company may experience difficulty in obtaining satisfactory financing terms or adequate project financing. Failure to obtain adequate financing on satisfactory terms could have a material adverse effect on Orvana's results of operations or financial condition.

Internal Control Environment

Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Disclosure controls and procedures are designed to ensure that information required to be disclosed by a company in reports filed with securities regulatory agencies is recorded, processed, summarized and reported on a timely basis and is accumulated and communicated to a company's management, including its chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure. Orvana has invested resources to document and analyze its system of disclosure controls and its internal control over financial reporting. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance with respect to the reliability of financial reporting and financial statement preparation.

Global Economic Issues

Global financial and economic conditions have been characterized by extreme volatility in recent years, including commodity-price fluctuations and the cost of debt and equity securities. Access to public and private debt and equity financing has been negatively impacted during this time. If such conditions persist or worsen, they could negatively impact the ability of the Company to obtain additional debt or equity financing in the future and, if obtained, on terms favourable to the Company. Additionally, global economic conditions may cause decreases in asset values that are deemed to be other than temporary, which may result in impairment losses. Changes in global economic conditions may also lead to significant changes in commodity prices. If these conditions and volatility persist or worsen, the Company's business, results of operations and financial condition could be adversely impacted and the value and price of the Company's Common Shares could be adversely affected.

Operational, Strategic and Regulatory Risks

New Diseases and Epidemics (Such as COVID-19)

In December 2019, a novel strain of coronavirus known as COVID-19 surfaced in Wuhan, China, and has spread around the world, with resulting business and social disruption. COVID-19 was declared a worldwide pandemic by the World Health Organization on March 11, 2020. The speed and extent of the spread of COVID-19, and the duration and intensity of resulting business disruption and related financial and social impact, are uncertain, and such adverse effects may be material. Efforts to slow the spread of COVID-19 could severely impact the operation and development of Company's mines and projects. To date, a number of governments have declared states of emergency and have implemented restrictive measures such as travel bans, quarantine and self-isolation. If the operation or development of one or more of the Company's properties is disrupted or suspended as a result of these or other measures, it may have a material adverse impact on the Company's profitability, results of operations, financial condition and stock price. While governmental agencies and private sector participants will seek to mitigate the adverse effects of COVID-19, and the medical community is seeking to develop vaccines and other treatment options, the efficacy and timing of such measures is uncertain.

The actual and threatened spread of COVID-19 globally could adversely affect global economies and financial markets resulting in a prolonged economic downturn and a decline in the value of the Company's stock price. The extent to which COVID-19 (or any other disease, epidemic or pandemic) impacts business activity or financial results, and the duration of any such negative impact, will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning COVID-19 and the actions required to contain or treat its impact, among others.

Mineral Resources and Reserves Estimates and Replacement of Depleted Reserves

Mineral resources and reserves provided by the Company are estimates and no assurances can be given that such estimated mineral resources and reserves are accurate or that the indicated level of minerals will be mined, milled or otherwise produced. Such estimates are, in part, based on interpretations of geological data obtained from drill holes and other sampling techniques. Actual mineralization or formations may be different from those predicted. Market price fluctuations of gold, copper and silver, as well as increased production, capital costs or reduced recovery rates, may result in Orvana's mineral resources and reserves becoming unprofitable to develop for periods of time or may render uneconomic certain mineral reserves containing relatively lower grade mineralization.

In addition, short term operating factors relating to mineral reserve estimates such as the need for the orderly development of orebodies, the processing of new or different ore grades, the technical complexity of ore bodies, unusual or unexpected ore body formations or ground conditions, ore dilution or varying metallurgical and other ore characteristics may cause mineral reserves to be reduced or Orvana to be unprofitable in any particular accounting period. Estimated mineral resources and reserves may have to be recalculated based on actual production experience and costs and/or the prevailing prices of the metals produced. Failure to obtain or maintain necessary permits or government approvals or changes to applicable laws or regulations could also cause Orvana to reduce its mineral reserves estimates. Any of these factors may require Orvana to reduce its mineral reserves and resources, which could have a negative impact on Orvana's financial results. Orvana's current life-of-mine plans are based on the mineral reserves estimates set out in this AIF. Changes in factors such as those noted above may result in changes in mine plans which could cause a reduction in mineral reserves.

Orvana's mineral reserves must be replaced to maintain production levels over the long term. Reserves can be replaced by expanding known orebodies, locating new deposits or making acquisitions. Exploration is highly speculative in nature. Exploration projects involve many risks and are frequently unsuccessful. Once a site with mineralization is discovered, it may take several years from the initial phases of drilling until production is possible, during which time the economic feasibility of production may change. Substantial expenditures are required to establish proven and probable reserves and to construct mining and processing facilities. As a result, there is no assurance that current or future exploration programs will be successful.

Depletion of reserves may not be offset by discoveries or acquisitions and divestitures of assets could lead to a lower reserve base. Reserves calculated in accordance with NI 43-101 may also decrease due to economic factors such as the use of a lower metal price assumption. The mineral base of Orvana will decline if reserves are mined without adequate replacement and Orvana may not be able to sustain production to or beyond the currently contemplated mine lives, based on current production rates.

Production Estimates

No assurance can be given that production estimates will be achieved. The Company's actual production volumes and production costs may vary from estimates for a variety of reasons including: attributes of the material mined varying from those used in estimations of grade, tonnage, dilution and metallurgical and other characteristics; short-term operating factors relating to mineral resources, such as the need for orderly development of ore bodies or the processing of new or different grades; the inability to replicate small-scale laboratory tests under production scale conditions; fluctuations in the sales price of products or the availability of suppliers; risks and hazards associated with mining; inclement weather conditions; natural disasters, including floods, drought and earthquakes; unexpected labour shortages or disruptions; unanticipated technical issues or shutdowns; technical complexity in connection with mining or expansion activities; unusual or unexpected geological formations; shortages or interruptions in the supply of, and the price of, natural gas, water, fuel and other mining inputs, including critical parts or equipment; sequencing or processing challenges resulting in lower than expected recovery rates; and permitting regulations and requirements.

Development, Capital Projects and Operation of Mines

Mine development and operations involve considerable risks including technical, financial, legal and permitting. Substantial expenditures are usually required to establish mineral reserves and resources estimates, to evaluate metallurgical processes and to construct and commission mining and processing facilities at a particular site. Currently, the Company's revenue stream depends on production from Orovalle. These projects do not have extensive operating histories upon which to base estimates of future cash flow or extensive mine lives. It is not unusual in the mining industry for mining operations to experience unexpected problems following commencement of commercial production, resulting in delays and requiring more capital than anticipated. Actual costs and economic returns may differ materially from the Company's estimates. Risks associated with the operation of mines include, without limitation: unusual or unexpected geological formations; unstable ground conditions that could result in cave-ins or landslides; floods; power outages; shortages, restrictions or interruptions in supply of natural gas, cyanide, sulphur, iron sponge, lime, water or fuel; labour disruptions; social unrest in adjacent areas; equipment failure; fires; explosions; failure of tailings impoundment facilities; the inability to obtain suitable or adequate machinery, equipment or labour; the near term ability to successfully transition operations in Don Mario, from open pit to processing stockpiles and tailings; and the long term ability to confirm mineral resources and reserves at Taguas. Any of these risks could have a material adverse effect on the Company's results of operations or financial condition.

Infrastructure

Mining, processing, development and exploration activities depend, to one degree or another, on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants, which affect capital and operating costs. The lack of availability on acceptable terms or the delay in the availability of any one or more of these items could prevent or delay exploitation or development of the Company's projects. If adequate infrastructure is not available in a timely manner, there can be no assurance that the exploitation or development of the Company's projects will be commenced or completed on a timely basis, if at all; the resulting operations will achieve the anticipated production volume, or the construction costs and ongoing operating costs associated with the exploitation and/or development of the Company's advanced projects will not be higher than anticipated. In addition, unusual or infrequent weather phenomena, sabotage, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Company's operations and profitability.

Competition

The Company faces considerable competition in acquiring promising mineral claims, mineral leases, exploration properties or other mining assets, access to water, power and other required infrastructure, engaging joint venture partners and obtaining funding support. As a result of this competition, some of which is against companies with substantial capabilities and greater financial and technical resources than Orvana, the Company's costs of such acquisitions may increase or Orvana may be unable to acquire mineral properties, engage joint venture partners or obtain funding on terms it considers acceptable. Orvana also competes with other mining companies to attract and retain key executives and employees. There can be no assurance that Orvana may be able to compete successfully with its competitors in acquiring properties, assets or access to infrastructure or in attracting and retaining skilled and experienced employees.

Acquisitions and Divestitures

From time to time, Orvana examines opportunities to acquire additional mining assets and businesses or divest business units. Any acquisition or divestiture that Orvana may choose to complete may be of significant size, may change the scale of Orvana's business and operations, and may expose Orvana to new or greater geographic, political, operating, financial, legal and geological risks. Orvana's success in its acquisition activities depends on its ability to identify suitable acquisition candidates, negotiate acceptable terms for any such acquisition, and integrate the acquired operations successfully with those of Orvana. Any acquisitions would be accompanied by risks. For example, there may be a significant change in commodity prices after Orvana completes an acquisition or divestiture and established a purchase price or exchange ratio; a material orebody may prove to be below expectations; Orvana may have difficulty integrating and assimilating the operations and personnel of acquired companies, realizing synergies and maximizing the financial and strategic position of the combined enterprise and maintaining uniform standards, policies and controls across the organization; the integration or divestiture may disrupt Orvana's ongoing business and its relationships with employees, customers, suppliers and contractors; and an acquired business or assets may have unknown liabilities which may be significant.

In the event that Orvana chooses to raise debt capital to finance any such acquisition, Orvana's leverage will be increased. If Orvana chooses to use equity as consideration for such acquisition, existing shareholders may suffer dilution. In addition, many companies in the mining industry have seen significant downward pressure on their equity values after announcing significant acquisitions. There is a risk that if Orvana were to announce a significant acquisition, the value of the Common Shares could decrease over the short, medium and/or long term. There can be no assurance that Orvana would be successful in overcoming these risks or any other problems encountered in connection with such acquisitions.

Title Matters

The Company's interests in mineral tenures grant it rights to the minerals discovered in the course of exploration. Obtaining and maintaining property and mineral rights is subject to ongoing compliance with the laws and regulations promulgated with respect to such rights by Orvana. While the Company believes that its title to each of its properties, mineral claims and concessions is generally in good standing, the Company's title to any of such properties, claims and concessions can be uncertain, may be contested and is not guaranteed. The Company's title to any of its properties, mineral claims and concessions may be challenged or impugned and properties, claims and concessions may be subject to prior unregistered agreements or transfers, or local land claims, and title may be affected by undetected defects.

Water Supply

El Valle is a no-discharge facility as process water is discharged into the tailings impoundment and sent back to the plant. If there is a water deficit in this closed system, the Company can use mine water to make up that deficit. When in operation, the amount of ore processed at Don Mario is dependent on the volume of water available in nearby reservoirs, which depends on the amount and timing of seasonal rainfall. If a sufficient amount of water is not accumulated and maintained, Don Mario may not be able to operate at full capacity or may be able to do so only on an intermittent basis. Water rights have been requested and granted to conduct exploration activities at Taguas. Water concessions for mine operations have not yet been granted, but preliminary hydrological studies and site water balance indicate that sufficient surface water can be obtained to support a mining operation on the Taguas property and permits to draw water can be obtained as a proposed Taguas project advances.

Regulatory and Other Risks

The Company is operating El Valle in Spain, Don Mario in Bolivia, and conducting exploration activities at Taguas, in Argentina. As a result, the Company is subject to the laws and governmental regulations in those countries as well as those in Canada and in any other country in which it may develop operations. Changes to such laws or governmental regulations could have a material adverse effect on the Company's ability to obtain and maintain compliance with permits and licenses necessary to operate which could have a material adverse effect on Orvana's results of operations, liquidity or financial condition. Such changes could include changes in respect of: income taxes or royalties; environmental matters; license and permit requirements; human rights matters; repatriation of profits; export controls; restrictions on production; expropriation or nationalization of property; limitations on foreign ownership; and changes in governments or other intervention of governments or other political or economic developments in the jurisdictions in which Orvana carries or may carry on business in the future.

The applicable anti-corruption and anti-bribery laws generally prohibit companies and their intermediaries from making improper payments for the purpose of obtaining or retaining business or other commercial advantage and require the reporting of certain government payments. Orvana's policies mandate compliance with such laws, which can give rise to substantial penalties or other consequences. Orvana operates in jurisdictions that have experienced governmental and private sector corruption to some degree, and, in certain circumstances, strict compliance with anti-bribery laws may conflict with certain local customs and practices. There can be no assurance that Orvana's internal control policies and procedures always will protect it from reckless or other inappropriate acts committed by the Company's affiliates, employees or agents. Violations of these laws, or allegations of such violations, could result in regulatory breaches, fines, temporary shut-down or suspension of operations, litigation or other administrative proceedings which could have a material adverse effect on Orvana's business, financial position and results of operations.

In Canada, the Extractive Sector Transparency Measures Act ("ESTMA"), a federal regime for the mandatory reporting of payments to government, came into force on June 1, 2015. ESTMA introduces new reporting and transparency obligations for the Canadian extractive sector, containing broad reporting obligations with respect to payments to governments and state owned entities worldwide. A failure to comply with ESTMA could result in significant monetary liability for the Company and its directors and officers. While Orvana has put in place processes to comply with ESTMA, there can be no guarantee that such processes will eliminate the risk of a failure to comply with ESTMA.

Permits

Orvana's mining and processing operations and development and exploration activities are subject to extensive permitting requirements. Failure to obtain required permits and/or to maintain compliance with permits once obtained could result in injunctions, fines, suspension or revocation of permits and other penalties. While Orvana strives to obtain and comply with all of its required permits, there can be no assurance that Orvana will obtain all such permits and/or achieve or maintain full compliance with such permits at all times.

The Company is working through such permitting issues at El Valle Mine in Spain. Spanish regulatory authorities have taken the position that Orovalle is not complying with all conditions of certain permits, including the discharge level of selenium and the posting of additional reclamation bonds. Orovalle is working with Spanish regulatory authorities to develop a solution for compliance. Orovalle is also appealing these permit conditions in courts. There can be no assurances that these actions will be successful in changing Spanish regulatory authorities' position on Orovalle's permit compliance. See "Health, Safety, Environment and Social Practices - Environment" above.

Activities required to obtain and/or achieve or maintain full compliance with such permits can be costly and involve extended timelines. Failure to obtain and/or comply with required permits can have serious consequences, including damage to Orvana's reputation; stopping Orvana from proceeding with the development of a project; negatively impacting the operation or further development of a mine; increasing the costs of development or production and litigation or regulatory action against Orvana and may materially adversely affect Orvana's business, results of operations or financial condition.

Orvana's ability to successfully obtain and maintain key permits and approvals will be impacted by its ability to develop, operate and close mines in a manner that is consistent with the creation of social and economic benefits in the surrounding communities and may be adversely impacted by real or perceived detrimental events associated with Orvana's activities or those of other mining companies affecting the environment, human health and safety or the surrounding communities.

Environmental, Health and Safety Regulations

Orvana's mining and processing operations and development and exploration activities are subject to extensive laws and regulations governing the protection of the environment, waste disposal, worker safety, mine development, water management and protection of endangered and other special status species. Failure to comply with applicable environmental and health and safety laws and regulations could result in injunctions, fines, suspension or revocation of permits and other penalties. Where the levels of certain regulated elements potentially exceed permitted levels, evaluations have been provided to the appropriate regulatory authorities and remedial actions have been evaluated and/or implemented, as warranted in the circumstances.

Orovalle is currently working through one environmental matter involving selenium discharges into the Cauxa River in Asturias, Spain in respect of which it has received and may receive additional monetary sanctions or other sanctions, including the revocation or suspension of certain permits, and is subject to a criminal investigation. Orovalle has been working to remediate this matter through various activities including the implementation of a reverse osmosis water treatment plant in September 2014 and the development of a longer-term water management plan, which is in progress. To date, these remediation efforts have not fully addressed these matters and there can be no assurances that Orovalle's continuing remediation activities will be successful in the short term, or at all, to achieve full compliance with local regulations. In addition, Orovalle has been seeking changes to certain of its permits or, alternatively to receive new permits, relating to these matters, as well as extensions of deadlines to comply with local requirements. See "Health, Safety, Environment and Social Practices - Environment" above.

Activities required to achieve full compliance can be costly and involve extended timelines. Future changes in applicable environmental and health and safety laws and regulations could substantially increase costs and burdens to achieve compliance. Failure to comply with such laws, regulations and permits can have serious consequences, including damage to Orvana's reputation; stopping Orvana from proceeding with the development of a project; negatively impacting the operation or further development of a mine; increasing the costs of development or production; and civil, regulatory or criminal action against Orvana and may materially adversely affect Orvana's business, results of operations or financial condition.

Orvana may also be held responsible for the costs of addressing contamination at the site of current or former activities or at third party sites. Orvana could also be held liable for exposure to hazardous substances. The costs associated with such responsibilities and liabilities may be significant. While Orvana has implemented health and safety initiatives at its sites to ensure the health and safety of its employees, contractors and members of the communities affected by its operations, there is no guarantee that such measures will eliminate the occurrence of accidents or other incidents which may result in personal injuries or damage to property, and in certain instances such occurrences could give rise to regulatory fines and/or civil liability.

In certain of the countries in which Orvana has operations, it is required to submit, for government approval, a reclamation plan for each of its mining sites that establishes Orvana's obligation to reclaim property after minerals have been mined from the site. In Spain, bonds or other forms of financial assurances are required security for these reclamation activities. Orvana may incur significant costs in connection with these reclamation activities, which may materially exceed the provisions Orvana has made for such reclamation. In addition, the unknown nature of possible future additional regulatory requirements and the potential for additional reclamation activities create further uncertainties related to future reclamation costs, which may have a material adverse effect on Orvana's financial condition, liquidity or results of operations. On June 27, 2011, as a condition of receiving an environmental permit on that date, the Government of the Principality of Asturias, required Orovalle to commit to post an additional reclamation bond in the amount of €5.0 million (approximately $5.9 million). To satisfy this requirement, Orovalle deposited €5.0 million in September 2011 with a local bank in favour of the Spanish regulatory authorities. As referenced in "Health, Safety, Environment and Social Practices - Environment" above, Spanish regulatory authorities have demanded that an additional reclamation bond of €5.0 million be deposited by the Company under Spanish mining regulations in respect of El Valle. The Company is challenging the requirement to fund the additional reclamation bond through an administrative appeal process. The Company is also working with the Spanish regulatory authorities to come to an agreement regarding posting the bond, including the consideration of alternatives to posting this bond, while preserving the Company's rights during the appeal process. See "Health, Safety, Environment and Social Practices - Environment" above.

Political and Related Risks

Orvana's international assets and operations are subject to various political, economic and other uncertainties, including, among other things, (i) risks of political instability and changing political or economic conditions; (ii) labour and civil unrest, acts of war, terrorism, sabotage, civil disturbances or loss due to theft; (iii) expropriation, nationalization, renegotiation, cancellation or forced modification of existing concessions, licenses, permits, approvals, contracts or property; (iv) adverse changes in laws or policies or increasing legal and regulatory requirements including those relating to taxation, royalties, imports, exports, duties, currency, repatriation restrictions, or other claims by government entities, including retroactive claims and/or changes in the administration of laws, policies and practices; (v) delays in obtaining or the inability to obtain or maintain necessary governmental permits or to operate in accordance with such permits or regulatory requirements; and (vi) restrictions on export of gold, copper

or other minerals outside of the countries in which such minerals are mined, restrictions on foreign investment in or ownership of resources and other trade barriers or restrictions.

The Company also may be hindered or prevented from claiming against or enforcing its rights with respect to a government's action because of the doctrine of sovereign immunity. It is not possible for the Company to accurately predict political or social conditions or developments or changes in laws or policy or to what extent, if any, such conditions, developments or changes may have a material adverse effect on the Company's operations. Moreover, it is possible that deterioration in economic conditions or other factors could result in a change in government policies respecting the presently unrestricted repatriation of capital investments and earnings. These risks may limit or disrupt operating mines or projects, restrict the movement of funds, cause Orvana to have to expend more funds than previously expected or required, or result in the deprivation of contract rights or the taking of property by nationalization or expropriation without fair compensation, and may materially adversely affect Orvana's financial position or results of operations.

In Bolivia, the Bolivian constitution provides that the government shall grant mining rights by means of mining contracts in place of the previously established process of granting mining concessions. A process for the migration of mining concessions into mining contracts has finished. Accordingly, previously acquired rights under mining concessions such as those of the Company in respect of "Don Mario" are respected and subject to this migration process.

On May 28, 2014, Law 535 of Mining and Metallurgy (the "New Mining Law") was promulgated in Bolivia. Pursuant to the New Mining Law, the Company must develop its mining activities to comply with the economic and social function, which means observing the sustainability of the mining activities, work creation, respecting the rights of its mining workers, and ensuring the payment of mining patents and the continuity of existing activities. The New Mining Law does not make any substantial changes to the current tax and royalty regimes in relation to mining activities. The Company having met all the requirements under the new Mining Law and related regulation has completed the procedure and has signed with the Bolivian state 10 mining administrative contracts related to the 10 mining areas over which it has pre-constituted rights according to the Political Constitution of the State. The Company has been carrying out mining activities in Don Mario and has rights over other 9 mining areas with respect to which it has or it is planning to conduct certain exploration activities.

In Bolivia, Supreme Decree 1802 provides that when annual gross domestic product (GDP) grows more than 4.5%, an extra month of salary must be paid to all salaried workers in Bolivia, including the private sector, in respect of the month of December (the "Esfuerzo por Bolivia"). In 2021, the GDP grew less than 4.5% and, therefore, the Ministry of Labor did not apply the Esfuerzo por Bolivia rule.

Insurance

Orvana is subject to significant risks and hazards, including environmental hazards, industrial accidents, unusual or unexpected geological conditions, labor force disruptions, civil strife, unavailability of materials, equipment, weather conditions, pit wall failures, rock bursts, cave-ins, flooding, seismic activity, water conditions, theft, terrorism, intrusion and sabotage, most of which are beyond Orvana's control. These risks and hazards could result in: damage to, or destruction of, mineral properties or producing facilities; personal injury or death; environmental damage; delays in mining; and monetary losses and possible legal liability.

The Company has comprehensive insurance coverage in support of its risk management program to cover some of these risks and hazards. The insurance is maintained in amounts that are believed to be reasonable depending on the circumstances surrounding each identified risk. There is no assurance that all circumstances of loss which may occur will be covered under the Company's insurance program or that, in the event of a claim, the amount of the Company's insurance coverage, if any, will be adequate to cover the full amount of the claim.

Reliance on Key Personnel and Labour Relations

The Company's operations are dependent on the abilities, experience and efforts of key personnel. If any of these individuals were to be unable or unwilling to continue to provide their services to the Company, there may be a material adverse effect on the Company's operations. The Company's success is dependent upon its ability to attract and retain qualified employees and personnel to meet its needs from time to time. The Company may be negatively impacted by the availability and potential increased costs that may be associated with experienced key personnel and general labour.

Orvana's ability to achieve its future goals and objectives is dependent, in part, on maintaining good relations with its employees and minimizing employee turnover. Work stoppages or other industrial relations events at either of Orvana's operations could lead to delayed revenues, increased costs and delayed operation cash flows. As a result, prolonged labor disruptions at either of Orvana's operations could have a material adverse impact on its operations as a whole.

Community Relations and Social License to Operate

The Company's relationship with the communities in which it operates are critical to ensure the future success of its existing operations and the construction and development of its projects. There is an increasing level of public concern relating to the perceived effect of mining activities on the environment and on communities impacted by such activities. Certain non-governmental organizations ("NGOs"), some of which oppose globalization and resource development, are often vocal critics of the mining industry and its practices, including the use of cyanide and other hazardous substances in processing activities. Adverse publicity generated by such NGOs or others related to extractive industries generally, or Orvana's operations specifically, could have an adverse effect on the Company's reputation or financial condition and may impact its relationship with the communities in which it operates. While Orvana is committed to operating in a socially responsible manner, there is no guarantee that the Company's efforts in this respect will mitigate this potential risk. Orvana has implemented community relations initiatives within its areas of influence in both Spain and Bolivia, in order to anticipate and manage social issues that may arise at its operations.

Litigation

Orvana is currently subject to certain litigation and may be involved in disputes with other parties in the future which may result in litigation. The results of litigation cannot be predicted with certainty. The costs of defending or settling such litigation can be significant. If Orvana is unable to resolve these disputes favourably, it may have a material adverse impact on Orvana's financial performance, cash flow and results of operations. See "Legal Proceedings".

Conflicts of Interest

Directors of the Company are or may become directors or officers of other mineral resource companies or have significant shareholdings in such other companies and, to the extent that such other companies may participate in ventures in which the Company may participate, the Company's directors may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation.

Controlling Shareholder

As at the date of this AIF, Fabulosa owned approximately 51.9% of the outstanding Common Shares. In addition, as described above under the heading "Development of the Business - Transactions with Fabulosa Mines Limited - Related Party Transactions", Fabulosa has certain contractual rights entitling it to nominate directors of the Company. Consequently, Fabulosa currently has the ability to control the election of the Company's board of directors and may be able to cause the Company to undertake corporate transactions without the consent of the Company's other shareholders, including causing or preventing a change of control of the Company. The liquidity of the Common Shares may be adversely affected as only 48.1% of the Common Shares are being freely traded. This, together with Fabulosa's ability to influence the Company, may have a negative impact on the trading price of the Common Shares.

Share Trading Volatility

The securities of many mineral exploration and development companies, particularly those considered development stage companies, including Orvana's Common Shares, have experienced wide fluctuations in price that have not necessarily been related to the operating performance, underlying asset values or the prospects of such companies, but may be related to global financial and economic conditions, commodities price fluctuations and market liquidity. There can be no assurance that continued fluctuations in the price of Orvana's Common Shares will not occur.

DIVIDENDS

The Company has not declared any dividends to date. The payment of any future dividends by the Company will be considered by the board of directors having regard to the Company's earnings, financial requirements and other conditions at a future time.

DESCRIPTION OF CAPITAL STRUCTURE

The authorized capital of the Company consists of an unlimited number of Common Shares. As at September 30, 2021, there were 136,623,171 Common Shares outstanding. As at the date of this AIF, Fabulosa held 70,915,027 Common Shares, representing 51.9% of the currently outstanding Common Shares.

Each Common Share carries one vote at all meetings of shareholders, is entitled to receive dividends as and when declared by the Board, and is entitled to participation in in the remaining property and assets of the Company upon dissolution or winding-up.

As described above under the heading "Development of the Business - Transactions with Fabulosa Mines Limited - Related Party Transactions", Fabulosa has a pre-emptive right with respect to the issuance of additional Common Shares or securities convertible into Common Shares to other persons, entitling Fabulosa to acquire Common Shares or convertible securities on the same terms and conditions as those so issued by the Company, subject to applicable requirements of the Toronto Stock Exchange.

Orvana has adopted a 2006 stock option plan (the "2006 Option Plan"), a 2018 stock option plan ("2018 Stock Option Plan"), a Restricted Share Unit Plan for designated executives (the "RSU Plan"), a Deferred Share Unit Plan for directors (the "DSU Plan") and a Stock Appreciation Plan for designated executives (the "SAR Plan"). The 2018 Stock Option Plan was initially adopted by the shareholders of the Company at the annual general & special shareholders meeting held on February 14, 2018. The 2018 Stock Option Plan was subsequently re-approved by the shareholders of the Company at the annual general and special shareholders meeting held on February 18, 2021. Since the adoption of the 2018 Stock Option Plan, no further grants of options will be made by the Company under to the 2006 Stock Option Plan. Information relating to the Option Plan, the RSU Plan, the DSU Plan and the SAR Plan and securities outstanding thereunder is set out in Orvana's most recent management information circular filed at www.sedar.com.

MARKET FOR SECURITIES

The Common Shares are listed and traded on the Toronto Stock Exchange under the symbol “ORV”. The following table provides the historical monthly trading price ranges and volumes for the Common Shares during the fiscal year ended September 30, 2021:

Trade Date	Symbol	High Price	Low Price	Trade Volume
September 2021	ORV	0.39	0.28	777,549
August 2021	ORV	0.445	0.365	896,806
July 2021	ORV	0.54	0.375	2,374,194
June 2021	ORV	0.44	0.36	1,125,775
May 20202120	ORV	0.44	0.36	2,088,552
April 2021	ORV	0.30	0.25	662,558
March 2021	ORV	0.33	0.225	1,239,875
February 2021	ORV	0.39	0.26	1,557,964
January 2021	ORV	0.37	0.30	1,324,594
December 2020	ORV	0.355	0.25	2,291,734
November 2020	ORV	0.285	0.215	382,379
October 2020	ORV	0.30	0.24	802,829

DIRECTORS AND OFFICERS

The names and provinces/states of residence of the directors and officers of the Company as at the date of this AIF, the positions and offices held by them with the Company, and their principal occupations for the past five years are set forth in the following table.

Name and Province or State and Country of Residence	Position with the Company (1)	Principal Occupation For Past Five Years
Darling, George(3)(4) British Columbia, Canada	Director since February 2017	Senior VP Engineering, Sandstorm Gold Ltd., a gold streaming and royalty company (current) Senior Mine Consultant and Regional Director at Hatch Ltd., a mining business and technical consulting company
Edwards, Alan (2) (4) Arizona, USA	Director since May 2016	President of AE Resources Corp., a mining consulting company (current) Director and Chairman of the Technical & Sustainability Committee of Arizona Sonoran Copper Company, Inc. (current) Director, Chairman of the Technical Committee of Entrée Resources Ltd., a mineral resource company (current) Director, Chairman of the Sustainability and Technical Committee of Americas Gold and Silver Corporation (current) Director and Non-Executive Chairman of Tonogold Resources, Inc. Non-Executive Chairman of the Board of Rise Gold Corp. Non-Executive Chairman of the Board of Mason Resources Corp. Principal of Gladiator Mining Group LLC Director of Detour Gold Corporation
Garcia, Alfredo (4) Santiago, Chile	Director since February 2018	Businessman with over 40 years' experience in the mining business, most of them related with base metals and gold exploration (current) Regional Exploration Manager (International Division) of Antofagasta plc, a Chilean copper mining group, from 2011 to 2017.
Guimaraes, Ed (2) Ontario, Canada	Director since February 2013	Chief Financial Officer of Sierra Metals Inc., a diversified base metals producer in Latin America (current) Director of Sociedad Minera Corona, S.A.

Name and Province or State and Country of Residence	Position with the Company (1)	Principal Occupation For Past Five Years
Magner, Sara (3) Virginia, U.S.A.	Director since November 2015	Chair of the Board of Trustees of The Langley School (current) Corporate Secretary and General Counsel of Minera S.A.(6), affiliate of Fabulosa
Pridham, Gordon (2) (3) Ontario, Canada	Chairman since February 2018	Director of America Gold and Silver Corporation (previously Scorpio Mining Corporation (current)
	Director since November 2014	Advisory board member of Enertech Capital (current) Principal of Edgewater Capital (current) Director of Tervita Corporation Director and Chair of the board of CHC Student Housing Corp. Director of Roxgold Inc., a gold mining company with operations in West Africa.
Gavidia, Juan Florida, U.S.A.	Chief Executive Officer since January 2018	Vice-President, Operations of Orvana Minerals Corp.
Menendez, Nuria Asturias, Spain	Chief Financial Officer since May 2018	General Manager of Orovalle Minerals, a subsidiary of Orvana Minerals Corp.
Vu, Binh Ontario, Canada	VP Legal Affairs since November 2018 General Counsel since December 2017	General Counsel of Alberta Oilsands Inc. Principal, BVU Venture Law Corporation (current)

(1) The term of office of each director expires at the close of the next annual meeting of shareholders of the Company. An officer of the Company serves until such officer resigns or his or her replacement is appointed.

(2) Member of the Audit Committee.

(3) Member of the Compensation, Nominating and Corporate Governance Committee.

(4) Member of the Safety, Environment and Technical Committee.

(5) Minera S.A. is an international mining holding company.

As at the date of this AIF, to the knowledge of the Company, the directors and officers of the Company as a group beneficially owned, or exercised control or direction over, directly or indirectly, an aggregate of 1,117,750 Common Shares of the Company representing approximately 0.818% of the outstanding Common Shares of the Company.

LEGAL PROCEEDINGS

As disclosed in “Health, Safety, Environment and Social Practices - Environment” above, a judge of the criminal court of Asturias conducted an investigation into the potential commission by Orovalle of a reckless crime under the Spanish penal code relating to the SE Discharge Matter. After six years of investigation, during the third quarter of fiscal 2020 the Grado’s Court issued the order to commence an oral trial to address the SE Discharge Matter in a criminal court of Oviedo (the capital of Asturias). A date for the commencement of the oral trial had been set for March 2021. Due to procedural matters, on March 1, 2021, the trial was rescheduled to an undetermined date in the future. In connection with the pending oral trial, the Court set a requirement on Orovalle to provide a bond in the amount of €7 million as warranty for contingent liabilities, subject to the outcome of the oral trial. Orovalle has appealed the bond taking the position that past and prevailing levels of selenium in waterways impacted by Orovalle did not cause any damage to the environment. The appeal is in progress as of date hereof. Individuals have been excluded from any charges, and this case relates only to Orovalle at this time. With respect to the oral trial, Orovalle has filed its preliminary statement of defence asking for the acquittal on the basis that, among other things, there is absence of a committed criminal offence. If Orovalle is ultimately found responsible, monetary penalties, amongst other sanctions, may be applied. These sanctions could have a material impact on the Company. At this time, Orovalle has not been sentenced. It has cooperated and will continue to cooperate with investigations and is defending itself vigorously. The Company may be involved in other legal proceedings from time to time, arising in the ordinary course of its business. The amount of ultimate liability with respect to these actions will not, in the opinion of management, materially affect the Company’s financial position, results of operations or cash flows. The Company does not believe that the outcome of any of the matters not recorded in its financial statements, individually or in aggregate, would have a material adverse effect.

Certain former employees of EMIPA affected by the restructuring process at Don Mario during the second quarter of fiscal 2020 (the “Former Employees”) decided not to accept the dismissal terms provided for under applicable employment laws in Bolivia. In respect of these Former Employees, the Company proceeded to deposit into a judicial account the compensation benefits to which the aforementioned employees were entitled within the period established by law and according to the terms defined by the local regulation. As a result of filings by the Former Employees under the labour administrative resolution process to dispute EMIPA’s dismissal process, the Santa Cruz Departmental Labor Authority notified EMIPA in July 2020 by way of “reinstatement resolutions” directing that the 78 Former Employee should be reinstated to their original job positions with the payment of the wages accrued since their dismissal. EMIPA subsequently filed an administrative appeal to dispute the ”reinstatement resolutions” on the basis that the dismissal process conducted by EMIPA during the restructuring process is in compliance with applicable employment laws. The result of the administrative appeal was positive for EMIPA, therefore Former Employees filed a final appeal known as the “Hierarchical Recourse” with the Ministry of Labor at La Paz (national administrative level), the last step of the labor administrative resolution process. During December 2020, the Ministry of Labor at La Paz ruled in favour of the Former Employees. EMIPA appealed the “Hierarchical Recourse” ruling to seek a further determination of the matter through a judiciary and/or constitutional process. On June 11, 2021, the Constitutional Court ruled in favor of EMIPA granting guardianship and instructing correction of identified errors by the Minister of Labor. In response, the Minister of Labor issued new Administrative Resolutions confirming its previous position. These new Ministerial Resolutions were annulled by the Constitutional Protection Ruling of December 16, 2021, issued by the Third Constitutional Chamber of La Paz. The December 16, 2021 ruling by the Third Constitutional Chamber of La Paz requires the Ministry of Labor to specifically address the force majeure principle raised by EMIPA as a cause for termination of employment. Several files at Administrative, Constitutional and Criminal procedures in connection with the labor matters continue in progress as of date hereof, and EMIPA will defend itself vigorously in these matters. If EMIPA is ultimately obliged to reinstate the Former Employees, it could have a material impact on the Company.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

During fiscal 2021, 2020 and 2019, the Company entered into certain transactions with Fabulosa, a 51.9% shareholder of Orvana. For a description of these transactions, see “Development of the Business - Transactions with Fabulosa Mines Limited - Related Party Transactions”.

TRANSFER AGENT AND REGISTRAR

As at the date of this AIF, the Company’s transfer agent and registrar is TSX Trust (formerly, AST Strust Company (Canada)), 100 Adelaide St W #301, Toronto, ON M5H 1S3.

MATERIAL CONTRACTS

Other than contracts described in this AIF, there are no other material contracts entered into before fiscal 2021, but still in effect or entered into during fiscal 2021.

AUDIT COMMITTEE DISCLOSURE

The Audit Committee’s Charter

The Charter of the Audit Committee of the Company is included in this AIF as Appendix A.

Composition of the Audit Committee

The Audit Committee members are Edmundo Guimaraes (Chair), Gordon Pridham and Alan Edwards, each of whom is “independent” and “financially literate”, as such terms are defined in Multilateral Instrument 52-110 - Audit Committees of the Canadian Securities Administrators (“MI 52-110”).

Mr. Edmundo Guimaraes is a Chartered Professional Accountant, Chartered Accountant and holds a Bachelor of Arts in Administrative and Commercial Studies. He is the Chair of the Audit Committee, the Chief Financial Officer of Sierra Metals Inc. and has been an independent business consultant since 2008. Prior to that, Mr. Guimaraes was Executive Vice President, Finance and Chief Financial Officer of Aur Resources Inc. Mr. Guimaraes is a director and member of audit committees of certain other Canadian public companies.

Mr. Gordon Pridham is a graduate of the University of Toronto and the Institute of Corporate Directors program. He has spent a career working for global financial institutions that financed and advised companies in public and private markets across a broad range of industry sectors. He has served on numerous other audit committees.

Mr. Alan Edwards holds an MBA, with an emphasis in Finance, and Bachelor of Science in Mining Engineering both from the University of Arizona in Tucson, Arizona. He has spent a career working in various positions including senior leadership and executive roles, such as CEO and president, with various companies in the global mining sector.

Pre-approval Policies and Procedures

The charter of the Audit Committee requires prior approval by the Audit Committee of non-audit services to be provided by the Company’s auditors or, if the Audit Committee determines it to be appropriate, prior approval by the Chair of the Audit Committee. In the latter case, any pre-approval must be presented to the full Audit Committee at its next scheduled meeting.

External Auditor Service Fees

The following table sets forth the fees incurred by Orvana during fiscal 2021 and fiscal 2020 in respect of the services set out below provided by PwC, the Company's external auditors:

Fiscal Year ended September 30, (US$'000)	2021	2020
Audit fees (1)	375	330
Audit-related fees (2)	3	9
Tax fees (3)	23	37
All other fees (4)	2	-
Total fees(5)	**$403**	**$376**

(1) "Audit fees" include the aggregate professional fees billed by PwC for the audit of the annual consolidated financial statements of the Company. Audit fees are reflected according to the agreement for each fiscal year.

(2) "Audit-related fees" include the fees billed by PwC for assurance and related services that are reasonably related to the performance of the audit and are not included in "Audit fees".

(3) "Tax fees" include the aggregate fees billed by PwC for tax compliance, tax advice, tax planning and advisory services relating to the preparation of corporate income tax and capital tax returns.

(4) "All other fees" include the aggregate fees billed by PwC for all other products and services other than those presented in the categories of audit, audit-related fees and tax fees.

(5) Reimbursements of expenses are excluded from the above.

INTERESTS OF EXPERTS

PwC LLP is Orvana's external auditor and prepared the "Independent Auditors' Report to the Shareholders of Orvana Minerals Corp.", dated November 30, 2021 in respect of the 2021 Financials. PwC has informed Orvana that it is independent with respect to Orvana within the meaning of the Rules of Professional Conduct of the Chartered Professional Accountants of Ontario.

Each of the following individuals is a "qualified person" for the purposes of NI 43-101: (i) of RPA, Mr. Rick C. Taylor, P.Eng., in respect of the estimated mineral reserves and the life of mine plan; Mr. John Makin, P.Geo., in respect of the estimated mineral resources; Mr. Jack P. Lunnon, CGeol and EurGeol; Mr. Patrick Donlon, FAusIMM; and Ms. Alessandra (Alex) Pheiffer, M.Sc., PrSciNat, EAPAN (such individuals being the overall author of the Orovalle 43-101 Report and having approved of the scientific and technical information from the Orovalle 43-101 Report disclosed in Appendix B of this AIF, unless otherwise indicated); (ii) Mr. Gino Zandonai of DGCS (such individual being the author of the Don Mario Oxide Stockpile 43-101 Report and having approved of the scientific and technical information from the Don Mario Oxide Stockpile 43-101 Report disclosed in Appendix B of this AIF, unless otherwise indicated); (iii) Mr. Gino Zandonai of DGCS (such individual being the author of the Don Mario Tailings 43-101 Report and having approved of the scientific and technical information from the Don Mario Tailings 43-101 Report disclosed in Appendix B of this AIF, unless otherwise indicated) and (iii) Mr. Joseph J. Kowalik, PhD., QP MMSA Senior Consulting Geologist, and Mr. Ronald G. Simpson, P.Geo of Geosim Serivces Inc., in respect of the estimated mineral resources, (such individuals being the overall authors of the Taguas 43-101 Report and having approved of the scientific and technical information from the Taguas 43-101 Report disclosed in Appendix B of this AIF, unless otherwise indicated).

Mr. Brian W. Buss supervised the estimate of Orovalle's mineral reserves as at September 30, 2021. Mr. Buss, a Professional Mining Engineer, registered in the province of Ontario, Canada, is a qualified person independent of the Company for the purposes of reporting under NI 43-101. He has approved the scientific and technical information relating to Orovalle's disclosed in this AIF. Ms. Guadalupe Collar Menéndez supervised the estimate of Orovalle's mineral resources as at September 30, 2021. Ms. Collar Menéndez, the Chief of Geology at Orovalle, is a qualified person who is not independent of the Company for the purposes of NI 43-101 and has approved all of the scientific and technical information relating to Orovalle disclosed in this AIF.

To the knowledge of Orvana, as of the date hereof, none of such individuals beneficially own, directly or indirectly, any Common Shares of Orvana or securities convertible into Common Shares of Orvana.

ADDITIONAL INFORMATION

Additional information with respect to Orvana, including directors' and officers' remuneration and indebtedness, principal holders of Orvana's securities and securities authorized for issuance under equity compensation plans, where applicable, is contained in Orvana's management information circular for its most recent annual meeting of shareholders that involved the election of directors. Additional financial information is provided in the 2021 Financials and management's discussion and analysis for fiscal 2021, the Company's most recently completed financial year. This information and additional information relating to Orvana are available on Sedar at www.sedar.com and on Orvana's website at www.orvana.com.

APPENDIX A

ORVANA MINERALS CORP. - ANNUAL INFORMATION FORM

APPENDIX A

ORVANA MINERALS CORP. - ANNUAL INFORMATION FORM

Charter of the Audit Committee

1. Purpose

The Audit Committee (the "Committee") of the Board of Directors (the "Board") of Orvana Minerals Corp. (the "Corporation") is appointed by the Board to assist the Corporation and the Board in fulfilling their respective obligations relating to the integrity of the internal financial controls and financial reporting of the Corporation.

2. Membership

Independence

The Committee shall consist of such number of members (at least three) as are appointed from time to time by the Board. Unless otherwise determined by the Board and permitted by Multilateral Instrument 52-110 - *Audit Committees* ("MI 52-110"), the Committee shall be composed solely of directors who have no direct or indirect material relationship with the Corporation which could, in the view of the Board, reasonably interfere with the exercise of such director's independent judgement, and are otherwise independent as determined in accordance with MI 52-110.

Financial Literacy

Unless otherwise determined by the Board and permitted by MI 52-110, all members of the Committee shall be financially literate, meaning they shall have the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues generally comparable to the issues that can reasonably be expected to be raised by the Corporation's financial statements.

Chair of the Audit Committee

The Board shall appoint the Chair of the Committee. The Board may, by resolution, at any time remove any member of the Committee, with or without cause, or add to or otherwise change the membership of the Committee. Committee membership shall not, however, be reduced to less than three or vary from the qualification requirements specified above. A member of the Committee shall cease to be a member upon ceasing to be a director of the Corporation.

3. Duties and Responsibilities

The Committee shall have all the powers and duties conferred on it by the laws governing the Corporation and such other powers and duties as may be conferred on it from time to time by resolution of the Board. In addition to the foregoing powers and duties, the Committee shall have the following duties and responsibilities:

(a) To review, prior to approval thereof by the Board and public disclosure thereof, all financial statements of the Corporation, whether annual or periodic, and the external auditor's report, if any, thereon and any annual or interim MD&A (a) prepared for submission to a meeting of the directors of the Corporation, (b) which may be required by applicable law to be reviewed by the Committee or (c) which the Board may by resolution determine shall be so reviewed, and to report to the Board:

  (i) if the same have been prepared in accordance with the laws to which the Corporation is subject and the policies from time to time adopted by the Board;

  (ii) any significant changes in the form or content of such statements from the corresponding statements most recently approved by the Board and the reason(s) therefore, together with any intervening developments in relevant accounting principles, policies and practices which have been taken into account in preparing such financial statements or which, in the opinion of the Committee or the external auditor of the Corporation, might have been taken into account for that purpose; and

  (iii) relating to the report of the external auditor as to form and content of such statements and as to the level of co-operation of management received by the external auditor in the conduct of the audit.

(b) To review all annual or periodic financial results press releases of the Corporation prior to public disclosure by the Corporation.

(c) To satisfy itself that adequate procedures are in place for the review of public disclosure of any financial information of the Corporation including the information listed in (1) and (2) above and to periodically assess such procedures.

(d) To review all financial statements of the Corporation, whether annual or periodic, appearing in a prospectus.

(e) To review estimates and judgments that are material to reported financial information and consider the quality and acceptability of the Corporation's accounting policies and procedures and the clarity of disclosure in financial statements.

(f) To review such investments and transactions that could adversely affect the well-being of the Corporation as the external auditor or any officers of the Corporation may bring to the attention of the Committee.

(g) To receive reports on the periodic findings of any regulatory authority and management's response and observations thereon.

(h) To meet with the external auditor to discuss the quarterly and annual statements and the transactions referred to in this Charter.

(i) To review the audit plan, including such factors as the integration of the external auditor's plan for procedures performed in Canada and elsewhere and whether the nature and scope of the planned audit procedures can be expected to detect material weaknesses in internal controls and determine if financial statements present fairly and accurately the Corporation's financial position in accordance with generally accepted accounting principles.

(j) To identify the risks inherent in the business of the Corporation and to review and approve management's risk philosophy and risk management policies necessary to address as much as reasonably possible those identified risks.

(k) To satisfy itself that management has taken appropriate actions to ensure the effective management of such risks and to review periodic reports received from management in order to perform its oversight role.

(l) To review periodically, but at least annually, management reports demonstrating compliance with risk management policies and confirm annually that management has taken reasonable steps to ensure compliance with standards.

(m) To review and recommend to the Board the appointment of an external auditor and the compensation of such external auditor.

(n) To review and evaluate the performance of the external auditor, including how and under what circumstances external auditors are to be rotated or removed, such review to include, but not be limited to:

  (i) a review of estimated and actual fees;

  (ii) a review of the engagement letter of the external auditor and the scope and timing of the audit work;

  (iii) pre-approval of all non-audit work to be performed by the external auditor and the fees to be paid therefor; and

  (iv) at least annually, obtaining and reviewing a report by the external auditor describing (A) the internal quality-control procedures of the external auditor; and (B) any material issues raised by the most recent internal quality-control review, peer review, review by any independent oversight body such as the Canadian Public Accountability Board or governmental or professional authorities within the preceding five years respecting one or more independent audits carried out by the external auditor and the steps taken to deal with any issues raised in these reviews.

(o) To ensure that the Corporation complies with the guidelines of the *Canadian Institute of Chartered Accountants* relating to the hiring of current and former partners and employees of the external auditor.

(p) To be directly responsible for overseeing the work of the external auditor including the resolution of disagreements between management and the external auditor regarding financial reporting.

(q) To review with the external auditor the performance of management involved in the preparation of financial statements, any problems encountered by the external auditor, any restrictions on the external auditor's work, the co-operation received in performance of the audit and the audit findings, any significant recommendations made to management on internal controls and other financial and business matters and management's response to the recommendations.

(r) To provide the external auditor with the opportunity to meet with the Committee without management present at least once per year for the purpose of discussing any issues.

(s) If determined appropriate by the Committee, to delegate authority to pre-approve non-audit services of the external auditor to the chair of the Committee, which pre-approval must be presented to the full Committee at its next scheduled meeting.

(t) To confirm the accountability of the external auditor to the Committee and the Board and to satisfy itself that the external auditor's independence in carrying out the audit function is not impaired by either management or the external auditor's own action or activities.

(u) To require the management of the Corporation to implement and maintain appropriate internal control and data security procedures and oversee their implementation and operation.

(v) To review periodic reports received from the internal auditor of the Corporation or a third party internal auditor (the "Internal Auditor") with respect to the Corporation's system of disclosure controls and procedures and internal control over financial reporting, including annual plans as applicable, and to review any material matters arising from any known or suspected violation of the Code of Business Conduct and Ethics of the Corporation with respect to financial and accounting matters raised through the Company's whistleblower line or otherwise.

(w) To review the competencies, skills, experience and areas of expertise of a potential candidate for the position of Chief Financial Officer of the Corporation.

(x) To conduct any investigation considered appropriate by the Committee.

(y) To review the competence and adequacy of the Corporation's staffing for the accounting, financial and internal audit functions.

(z) To establish a satisfactory procedure for the receipt, retention and handling of complaints received by the Corporation regarding accounting, internal accounting controls or auditing matters, which will include procedures for the confidential, anonymous submission of concerns by employees with regard to these matters.

(aa) To report and make recommendations to the Board arising from its responsibilities as the Committee considers appropriate.

(bb) The Committee shall complete any other duties and responsibilities delegated by the Board to the Committee from time to time.

To ensure that the Committee is able to discharge the foregoing duties and responsibilities, the Corporation shall require the external auditor and Internal Auditor to report periodically directly to the Committee.

4. Review of Internal Audit Function

The Committee shall review the mandate of the Internal Auditor, the annual budget and planned activities and organizational structure thereof to ensure that it is independent of management and has sufficient resources to carry out its mandate.

The Committee shall meet in camera with the Internal Auditor as frequently as the Committee determines is appropriate for the Committee to fulfil its responsibilities to discuss any areas of concern to the Committee or to the Internal Auditor to confirm that (i) significant resolved and any unresolved issues between the Internal Auditor and management have been brought to the attention of the Committee; (ii) the principal risks of the Company's businesses have been identified by management and appropriate policies and systems have been implemented to manage these risks; and (iii) the integrity of the Company's internal control and management information systems are satisfactory.

5. Minutes

Minutes shall be kept of all meetings of the Committee. The Chair of the Committee may appoint a Committee member or any other attendee to be the secretary of a meeting.

6. Meetings

Except as otherwise provided in this mandate, the rules and regulations relating to the calling and holding of and proceedings at meetings of the Committee shall be those, making allowance for the fact that it is a committee, that apply to meetings of the Board, subject to such modifications as may, from time to time, be determined by resolution of the Committee. Until otherwise determined by resolution of the Board:

(a) The quorum for meetings of the Committee shall be two of its members.

(b) Meetings of the Committee may be called by its Chair or Vice Chair, if any, or by any member of the Committee, or by the external auditor of the Corporation. The Committee may at any time request the attendance of any officer of the Corporation or any person at any meeting of the Committee. Any member of the Committee may request the external auditor of the Corporation to attend every meeting of the Committee held during the member's term of office.

(c) The external auditor of the Corporation shall receive notice of every meeting of the Committee and may attend and be heard at any meeting.

(d) Meetings of the Committee shall be held at such time and place as may be determined from time to time by the Committee or by the Chair or Vice Chair, if any, of the Committee (but in no event less than once quarterly), and notice thereof shall be given in the manner and with the length of notice provided in the resolution(s) of the Board relating to notices of meetings of directors.

7. Reports to the Board

The Committee shall report to the Board as follows:

(a) In the case of interim and annual statements and any returns that under applicable legislation must be approved by the Board, the Committee shall report thereon to the Board before approval is given.

(b) All significant actions of the Committee shall be reported to the Board preferably at its next succeeding regular Board meeting or, if not possible, at the following meeting of the Board and shall be subject to revision or alteration by the Board.

(c) The Committee may call a meeting of the Board to consider any matter of concern to the Committee.

8. Access to Information

In its discharge of the foregoing duties and responsibilities, the Committee shall have the authority to communicate directly with the external auditor and shall have free and unrestricted access at all times, either directly or through its duly appointed representatives, to the relevant accounting books, records and systems of the Corporation and shall discuss with the employees and auditors of the Corporation such books, records, systems and other matters considered appropriate.

9. Independent Advisors

The Committee shall have the authority to engage such independent counsel and other advisors as it may from time to time deem necessary or advisable for its purposes and to set and cause to be paid by the Corporation the compensation of any such counsel or advisors.

10. No Rights Created

This Charter is a broad policy statement and is intended to be part of Committee's flexible governance framework. While this Charter should comply with all applicable laws, regulations and listing requirements and the Company's articles and by-laws, this Charter does not create any legally binding obligations on the Committee, the Board or the Corporation.

11. Board Review of Charter

The Board shall review the adequacy of the Committee’s charter on at least an annual basis. In accordance with MI 52-110, the text of this Charter shall be included in the Corporation’s Annual Information Form.

APPENDIX B

ORVANA MINERALS CORP. - ANNUAL INFORMATION FORM

Principal Mineral Projects

Terms not otherwise defined herein are defined in the Annual Information Form of Orvana dated December 29, 2021.

Orovalle

The following is the summary section of the Orovalle 43-101 Report entitled "*Technical Report on the Orovalle Operation, Asturias, Spain*" dated November 30, 2020 prepared by Roscoe Postle Associates UK Ltd. (RPA), now part of SLR Consulting Ltd (SLR). The full text of the Orovalle 43-101 Report is available for viewing on SEDAR at www.sedar.com and is incorporated by reference in this AIF. Defined terms and abbreviations used herein and not otherwise defined shall have the meanings ascribed to such terms in the Orovalle 43-101 Report.

EXECUTIVE SUMMARY

Roscoe Postle Associates UK Ltd. (RPA), now part of SLR Consulting Ltd (SLR), was retained by Orovalle Minerals S.L. (Orovalle) to prepare an independent Technical Report on the Orovalle Operation. The purpose of this Technical Report is to disclose Mineral Resource and Mineral Reserve estimates for the Orovalle Operation, as at September 30, 2020. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects. RPA initially visited the property from June 1 to 13, 2014 and again from October 19 to 21, 2020.

The Orovalle Operation includes:

- El Valle Boinás and Carlés gold-copper-silver mines, located in Asturias, Spain in the municipalities of Belmonte de Miranda and Salas, along with the El Valle processing plant and El Valle tailings storage facility (TSF), collectively, the El Valle Operation.
- La Brueva and Quintana projects, located in Asturias, Spain in the municipality of Belmonte de Miranda, which consist of mineral rights not currently being exploited.
- La Ortosa-Godán project, located in Asturias, Spain in the municipality of Salas, which consists of mineral rights not currently being exploited.
- Lidia project, located in Asturias, Spain in the municipality of Allande, which consists of mineral rights not currently being exploited.

Orovalle is a wholly owned subsidiary of Orvana Minerals Corp. (Orvana). Orvana is an Ontario registered company and its common shares are listed on the Toronto Stock Exchange (TSX) under the symbol ORV.

Orvana is a gold, copper and silver producer with properties in Spain, Bolivia, and Argentina. In September 2009, Orvana acquired Orvana Minerals Asturias Corp. (previously Kinbauri Gold Corp. (KGC)) and with it the historically producing El Valle Operation. The El Valle Operation recommenced commercial production in August 2011.

The Boinás underground mine is a currently producing asset, with a nominal mining rate of 2,000 tonnes per day (tpd) ore. Mined ore is classified into oxide and skarn ore. The Carlés open pit and underground mines are currently on care and maintenance.

A gravity-flotation-leach processing plant, located at Boinás, produces doré bars and copper concentrate with gold and silver credits. Total production for the 2020 fiscal year (FY), which runs from October to September, was 51,104 ounces (oz) of gold and 5.6 million pounds (Mlb) of copper. A total of 633,765 tonnes (t) of ore were milled during the FY 2020.

Orovalle Operation Mineral Reserves total 3.4 Mt, at grades of 2.78 g/t Au, 6.86 g/t Ag, 0.36% Cu, and. A Life of Mine Plan (LOMP) for Orovalle forecasts five years of mining at similar production rates to the current operation.

CONCLUSIONS

RPA offers the following conclusions:

GEOLOGY AND MINERAL RESOURCES

- Measured and Indicated Mineral Resources, inclusive of Mineral Reserves, total 7.93 Mt, grading 3.74 g/t Au, 10.38 g/t Ag, and 0.51% Cu, containing 0.955 Moz Au, 2.646 Moz Ag, and 90 Mlb Cu.
- Inferred Mineral Resources total 3.36 Mt, grading 3.80 g/t Au, 8.64 g/t Ag, and 0.33% Cu, containing 0.410 Moz Au, 0.934 Moz Ag, and 24.8 Mlb Cu.
- Drilling, logging, and sampling methodologies meet industry standards and are suitable to support Mineral Resource and Mineral Reserve estimations.
- The sampling method and approach is reasonable to support Mineral Resource estimation.
- The sample preparation, analysis, and security procedures at the Orovalle Operation are adequate for use in Mineral Resource estimation.
- The quality assurance/quality control (QA/QC) program as designed and implemented by Orovalle is appropriate, and the assay results within the database are suitable for use in Mineral Resource and Mineral Reserve estimation.
- The database contains no significant errors and is suitable to support Mineral Resource and Mineral Reserve estimation.
- RPA undertook independent checks on the database, wireframing, capping, compositing, variography, and grade estimation and found all differences to be within acceptable limits. The Orovalle Operation database contains no significant errors and is suitable to support Mineral Resource and Mineral Reserve estimation.
- RPA considers the 2020 Mineral Resource to be free of material flaws and acceptable for use in estimating Mineral Reserves.
- The final variance between the Mineral Resource model and metal production from the El Valle processing plant is likely to be within 15% of the estimate. These results are acceptable as they are similar to other high nugget gold operations in comparable geological settings.

MINING AND MINERAL RESERVES

- Proven and Probable Mineral Reserves total 3.43 Mt, grading 2.78 g/t Au, 6.86 g/t Ag, and 0.36% Cu, containing 307,000 oz Au, 756,240 oz Ag, 27.6 Mlb Cu. Mineral Reserves are estimated at metal prices of US$1,600/oz Au, US$18/oz Ag, US$3.00/lb Cu, and a US$/€ exchange rate of 1.20/1.00.
- Some marginal grade material is included in Mineral Resources, and excluded from Mineral Reserves, due to application of dilution factors and higher cut-off grades.
- Mining unit costs are known to vary significantly by mining method, with low productivity drift and fill mining (D&F) via hydraulic hammer being considerably more expensive than higher productivity sub-level stoping (SLS) mining.
- The production schedule forecasts five years of mining at similar production rates to the current operation.
- Production activities are expected to continue at Boinás underground from developed areas through to the end of the mine life.
- There is potential to increase oxide ore extraction from within the TSF crown pillar exclusion zone. This is subject to a current investigation by an independent international consulting firm and could potentially increase Mineral Reserves further.

- The Carlés underground mine is currently on care and maintenance. Carlés underground Mineral Reserves as of September 2020 comprise 136,000 t at 2.56 g/t Au, 4.71 g/t Ag, and 0.20% Cu classified as Probable. Orovalle is currently evaluating the information obtained from the last drilling campaign in the FY 2020. Mine designs are under review in order to maximize the value of the Carlés orebody and to define the production future schedule. An additional 300,000 t of skarn ore could potentially be extracted from the Carlés open pit. However, this is contingent on Orovalle obtaining the required land and environmental permits. As such, these tonnes have been excluded from the Mineral Reserves estimate at this point in time.

- The average life of mine (LOM) operating cost is estimated to be US$102/t milled. Sustaining capital costs are estimated to total US$48.2 million, plus US$15.1 million (discounted) for reclamation and closure (including a total of US$8.9 million in bonds already lodged).

- Cash flow analysis of the production plan verified that Mineral Reserves are economically mineable, under the metal price and cost assumptions summarised in this Technical Report.

MINERAL PROCESSING AND METALLURGICAL TESTING

- The El Valle processing plant has historically processed three different types of ore: Boinás oxides, Boinás skarn, and Carlés skarn at varying ratios, and has generally demonstrated its ability to consistently achieve throughput and recovery targets. RPA is not aware of any circumstances that would prevent the El Valle processing plant from continuing to achieve its target performance metrics.

- Based on the gold mineralogy in the oxide and sulphide ores, it is anticipated that gold in oxide ore will generally be recovered as doré product from gravity and carbon in leach (CIL) circuits, while gold in sulphide skarn ore will be recovered into flotation concentrate. RPA analysed the available plant data for correlations, and it is evident that as expected the recovery of gold to copper concentrate and doré is influenced by the plant feed ore mix. A higher oxide to skarn ratio generally results in a higher recovery of gold to doré, with the converse also holding true.

- Recent mineralogical examinations of process streams and reviews of plant procedures are valuable sources of information that assist with improving plant performance. An independent plant metal accounting audit report was produced (SC242) in 2015.

- RPA is in agreement with the conclusions of the 2016, 911 Metallurgy Corp. (911 MC) Transition Ore Test, Report SC257, that transition ore can be processed through the El Valle processing plant as part of the ore feed mix. The gravity and flotation circuits should continue to be used in conjunction with the CIL circuit to ensure that minimal cyanide soluble copper minerals enter the leach.

- RPA has reviewed the independent Mine Laboratory ISO 9001 Audit Report prepared by Aenor and published in March 2020, and certificates for weight scale calibrations undertaken in 2019 by an independent third party. In RPA's opinion the ISO 9001 certification and ongoing audits and independent weight scale calibrations are good practice and contribute to the integrity of metal accounting processes.

ENVIRONMENT, PERMITTING, AND SOCIAL/COMMUNITY

- The Orovalle Operation is permitted and bonded, however Spanish regulatory authorities have taken the position that Orovalle is not complying with all conditions of their permits (as discussed below).
- Orovalle is working through an environmental matter involving selenium discharges to the Caúxa River, which has had financial implications and may have additional financial, permitting or legal consequences for the operations. Remediation activities including water treatment as well as ongoing permitting-related discussions with the Spanish regulatory authorities have been on-going since 2014. Orovalle has noted that there are uncertainties and risks associated with the outcomes of this matter that could significantly affect the Orovalle Operation's ability to continue mining.
- Contamination of receiving water resources (and subsequent downstream impacts) appears to be the main environmental risk identified at the Orovalle Operation. As a result, water treatment and management are identified as a focus area for the operations given the matter identified above.
- Reclamation plans and associated bonds are in place for the mine. The reclamation plans are reviewed every five years and are used to inform ongoing rehabilitation of areas no longer needed for mining activities. This is in line with good industry practise.
- In addition to the bonds already in place, Orovalle has noted that the Spanish regulatory authorities have requested an additional reclamation bond of €5 million (approximately US$5.854 million) be deposited in their favour to satisfy additional reclamation bond commitments in respect of the El Valle TSF. Orovalle has filed an appeal with the Spanish regulatory authorities against the assessment of the additional bond. Through the administrative appeal process, Orovalle is working with Spanish regulatory authorities to seek alternatives, which includes, without limitation, relief from posting the additional reclamation bond.
- To maintain a social license to operate, it is highly important that the surrounding municipalities and communities are supportive of mining activities at El Valle-Boinás and Carlés. Individually or collectively the social and community considerations discussed in this Technical Report (whether real or perceived, positive or negative) can have a material influence on the ongoing operations and development of the mine. These need to be closely monitored and actively managed to minimise the risk to the operations.

RECOMMENDATIONS

RPA offers the following recommendations:

GEOLOGY AND MINERAL RESOURCES

1. Further refinement of existing sub-domains, and additional sub-domains, where required, be generated to define high grade trends within the lithology wireframes.
2. A 2.5 m block size may better represent local grade variability, but greatly increase processing time. Smaller block sizes should be tested prior to future Mineral Resource updates.
3. Investigations should be undertaken to identify the source of higher copper failures in blank values.
4. A full variography review should be undertaken prior to the next resource estimate to consider the low nugget modelled by Orovalle.
5. Continue to improve the reconciliation process by monitoring the performance of the short term block model against grade control sampling and explore the use of high grade domain wireframes to restrict the interpolation of elevated grades.
6. Continue using underground stope optimization as a standard practice for Mineral Resource reporting to ensure Reasonable Prospects for Eventual Economic Extraction (RPEEE).

MINING AND MINERAL RESERVES

1. Investigate the potential to increase Mineral Reserves from within the current 75 m TSF crown pillar exclusion zone.

2. Incorporate truck tonne kilometres (TKm) reporting, in long term, and short term plans, for more transparency in cost forecasting.
3. Movement of waste is planned on a short term basis, however, the incorporation of waste handling in the long term planning for more accurate costing is recommended.
4. Investigate ways of increasing the utilisation of the rock hoist for transporting increased skarn and waste tonnage thus reducing truck cycles, traffic on the main ramps, and transportation costs.

MINERAL PROCESSING AND METALLURGICAL TESTING

1. Continue to periodically examine gold and copper deportment in process streams and adjust parameters accordingly.
2. Commission a metal accounting audit for FY 2020 as a follow up to the 2015 SC 242 report. It would be beneficial to use the "Amira P754 Metal Accounting Code of Practice and Guidelines" as a guide for best practice metal accounting.
3. A study should be carried out to better understand the source of the highest contributing penalty elements antimony (Sb), bismuth (Bi) and fluorine (F), their host mineralogy, upgrade ratio, and options to limit and control the deportment of these elements to concentrate.
4. Aim to increase run of mine pad mill feed stocks to aid blending of consistent ore feed to the mill.

ENVIRONMENT, PERMITTING, AND SOCIAL/COMMUNITY

1. Orovalle should continue actively engaging the Spanish regulatory authorities to resolve the on-going matter of the discharge level of selenium (first flagged in 2014) and the posting of additional reclamation bonds (first flagged in 2011).
2. Environmental monitoring and investigative studies should continue to further inform water contamination risks and related management thereof and to ensure compliance with applicable environmental standards.
3. Discussions with Orovalle employees for the purposes of this technical review suggest that management systems and processes are in place to continually identify, assess and mitigate potential risks arising from the operations. An opportunity exists for the mine to improve its record keeping.
4. To maintain a social license to operate, it is highly important that the surrounding municipalities and communities are supportive of mining activities at El Valle-Boinás and Carlés. Individually or collectively the social and community considerations discussed in this Technical Report (whether real or perceived, positive or negative) can have a material influence on the ongoing operations and development of the mine. These need to be closely monitored and actively managed to minimise the risk to the operations.

ECONOMIC ANALYSIS

This section is not required as Orovalle is a producing issuer, and the Orovalle Operation is currently in production and there is no material expansion of current production.

TECHNICAL SUMMARY

PROPERTY DESCRIPTION AND LOCATION

The Orovalle Operation is located in north western Spain within the Asturias Province, approximately 35 km west of the Asturian capital, Oviedo, and approximately 30 km south of the north coast of Spain along the Cantabrian Sea.

The mineral rights for the Orovalle Operation are held in the form of Exploitation Concessions (ECs) and Investigative Permits (IPs). The combined ECs occupy a total surface area of 3,812 ha, which includes the La Ortosa-Godán and La Brueva areas which are not currently being exploited. The Orovalle Operation includes three IPs comprising 3,327 ha.

LAND TENURE

ECs and IPs are granted by the regional authorities of Asturias, who maintain the power to oversee these licences.

An EC provides the holder of the concession with the right to extract minerals from a specified area, subject to approval of an Exploitation Plan by the Mining Authorities. ECs are granted on 30 year terms and renewable upon application. The Exploitation Plan includes an Environmental Impact Study and Restoration Plan, which requires approval by the Environmental Authorities. The Orovalle Operation Exploitation Plans and respective Environmental Studies and Restoration Plans, which were approved in 1996, 2000, and 2004, give the holder of the ECs the right to carry out further investigation activity inside the mining areas. Authorisation is required from the Mining Authorities, which is achieved by submitting an annual investigation plan. Work plans must be presented to the Directorate General of Energy, Mining, and Reactivation (DGEMR in Spanish) before January 31st of each year.

An IP provides the holder of the permit the right to investigate the resources in the permit area, subject to approval of an Investigation Plan by the Mining Authorities. The holder has the right to carry out exploration activities including geological studies, soil geochemistry, geophysics, and drilling. If there are any proposed surface activities that the Mining Authorities believe may affect the environment, the holder of the IP may be required to obtain additional approvals from the Environmental Authorities. IPs are granted on three year terms and renewable upon application.

ROYALTIES

There is a royalty agreement in place between Orovalle and Anglo Pacific Group PLC (APG). The net smelter return (NSR) royalty is 2.5% for gold prices up to US$1,100/oz Au, and 3.0% for gold prices above US$1,100/oz Au (based on the average gold price per quarter).

HISTORY

Prior to Orovalle's involvement, the Boinás and Carlés deposits have been subject to mining activities dating back to the Roman era. In the 1800s and early 1900s, several small copper mines were in production and mining for arsenopyrite was carried out during World War II.

Modern exploration commenced in the 1970s at Carlés. Sporadic drilling and sampling programs through the 1970s and 1980s gave way to underground exploration in 1990. Further drilling and engineering work by Rio Narcea Gold Mines Limited (RNGM) culminated in the commencement of production in the Boinás West Pit in 1997, followed by the Boinás East and El Valle Pits. Approximately 5.4 Mt of ore was mined from 1998 to 2006 producing approximately 973,000 oz Au.

Underground production began in 2003 at Carlés and 2004 at Boinás. Underground operations ceased in 2006. In 2009, Orvana acquired the mining rights and began underground mining in 2010.

GEOLOGY AND MINERALIZATION

The Río Narcea Gold Belt contains the El Valle-Boinás and Carlés mines, as well as the La Brueva, Quintana, and La Ortosa-Godán exploration projects. The Lidia project is located into Navelgas Gold Belt. Both belts are located in the western portion of the Cantabrian Zone in the north western part of the Hercynian-age Iberian Massif. The Cantabrian Zone and the nearby West Asturian-Leonese Zone consist of a stratigraphic section of Paleozoic sedimentary rocks that range in age from Middle Cambrian to Permian. The lower stratigraphic section of the Cantabrian Zone includes the Láncara Formation (Cambrian limestone), which is underlain by Cambrian feldspathic sandstone. The limestone has a total thickness of approximately 250 m and constitutes the principal host rock for gold and copper mineralisation at El Valle-Boinás.

The Navelgas Gold Belt, which hosts the intrusion-hosted Lidia early exploration project, was extensively mined during Roman times, with workings occurring in the northeast trending fracture system that defines this gold belt (18 km wide and 70 km long).

The 45 km long and four kilometre wide Río Narcea Gold Belt is characterised by the alignment of mineral occurrences, Paleozoic sediments, Tertiary Basins, fracture zones, and igneous intrusions. The most important igneous intrusions, from north to south, are the La Ortosa-Godán, Carlés, Pando, La Brueva, Villaverde-Pontigo, and El Valle-Boinás intrusives.

Metamorphism in the Río Narcea Gold Belt is related only to intrusion of the igneous rocks, which produced contact metamorphism in the sedimentary rocks. They produce hornfels in the clastic units and skarn in the carbonate units.

Gold mineralisation in the Río Narcea Gold Belt consists mainly of two types:

- **Gold-bearing copper skarn**: related to the interaction between late Hercynian intrusions, mesothermal solutions, and carbonate host rocks. This is the primary type of gold deposit that may be affected by later events (favourable host rocks for skarn include the Láncara Formation at El Valle-Boinás and the Rañeces Group Formation at Carlés).
- **Jasperoid type**: related to subvolcanic dykes and epithermal solutions which cause silicification with argillisation and sericitisation, plus epigenetic, hypogene oxidation. This type of mineralisation may overprint, remobilise, and enrich gold mineralisation within the skarn deposits, as happened at El Valle-Boinás. Also, this can form the breccia-style gold mineralisation that produced higher grades at El Valle-Boinás. Limited to structural zones of varying width, that dip at high angles. They are typically the sites of leaching and enrichment that extend as much as 400 m below the surface.

EL VALLE-BOINÁS

The gold mineralisation system has a strike length of two kilometres and a width of at least 0.5 km. The intrusive is elongated trending N35°E with a length of 500 m, and an average thickness of 300 m. A copper-gold mesothermal skarn was developed mainly along the contact between the igneous rock and the carbonate unit.

CARLÉS

The Carlés deposit is a gold and copper bearing skarn developed predominantly in the Devonian limestones of the lower portion of the Rañeces Formation along the north margin of the Carlés granodiorite. The Carlés intrusion is approximately circular in plan with a diameter of approximately 750 m.

Mineralisation is continuous for over 1,000 m, ranging in thickness from 1.5 m to over 25 m, dipping 50° to 90° away from the granitic intrusion. The skarn is known over a vertical continuity of 400 m and remains open at depth.

LA BRUEVA

La Brueva gold deposit is seven kilometres northeast of the El Valle mine on a 40 m wide, east-west trending fracture zone that cuts the Rio Narcea anticline almost perpendicular to the axial trend. At surface, the fracture zone is located in the contact between the Oville and Barrios Formations. Several million cubic metres of material were mined out from the La Brueva pit by the Romans.

At the eastern end of the historical La Brueva pit, an oxidised, quartz rich jasperoid breccia with partially oxidised patchy veins of arsenopyrite is prominently displayed in a road cut. A channel sample from the exposure assayed 4.15 g/t Au over a 15 m true width.

EXPLORATION STATUS

Drilling at the Orovalle Operation has totalled approximately 500,689 m in 3,538 holes of which 236,770 m in 1,768 holes have been drilled by Orovalle.

For the skarns and some of the epithermal oxide zones, drill holes tend to intercept the mineralisation at varying angles relative to the core axis depending on drill access and the irregular morphologies of the mineral zones. More regular, planar deposits such as A107 have better drilling angles, especially when drilling to depth. In general, drilling is spaced between 20 m and 40 m in active or exploited mining areas. Drilling density away from the core of the underground mine and beneath previous pits is generally greater than 40 m and can be in excess of 100 m in lesser explored areas.

Limited non-drilling exploration activity has been conducted since 2012, with early exploration being summarised in in Section 6 of this Technical Report.

The gold-copper deposits in the Río Narcea Gold Belt are complex deposits that present challenges for exploration. The original mineral deposits are typically internally complex skarn deposits that have been subjected to epithermal alteration and remobilisation of the mineralisation, plus displacement and distortion by both high angle reverse and thrust faults. In addition, individual zones of mineralisation may be high grade, but relatively small and difficult to locate.

Some regional exploration activities have been undertaken to better define regional targets that do not currently have Mineral Resources, such as Lidia, Quintana, and La Ortosa-Godán. Since the previous RPA 2014 Technical Report, Orovalle has undertaken geological mapping, rock samples, soil geochemistry, and geophysical surveys.

Mineral Resources have been declared at El Valle-Boinás, Carlés, and La Brueva. RPA considers that there is good exploration potential within regional targets. These include La Ortosa-Godán and which is part of the Rio Narcea gold belt and is located three kilometres northwest of Carlés. Several targets have been identified through drilling. The Quintana prospect located southwest of El Valle has been also been tested with drilling.

The Lidia prospect located 20 km west of El Valle is a target within the Navelgas gold belt and has been identified for potential skarn mineralization in the contact between intrusives and limestone.

Exploration is planned to further test the prospectivity of these deposits, and other potential regional targets are being investigated.

MINERAL RESOURCES

The 2020 updated Mineral Resource estimate for the Orovalle Operation was completed by Orovalle personnel and reviewed by RPA.

A summary of the updated Mineral Resources effective as of September 30, 2020 inclusive of Mineral Reserves is provided in Table 1-1.

Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions) were used for Mineral Resource classification and estimation.

As discussed in greater detail Section 20, Orovalle is currently engaged in working through an environmental matter involving selenium discharges to the Caúxa River, which has had financial implications and may have additional financial, permitting or legal consequences for the operations which could materially affect the Mineral Resource estimate. RPA is not aware of any other permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

TABLE 1-1 SUMMARY OF MINERAL RESOURCES INCLUSIVE OF MINERAL RESERVES – SEPTEMBER 30, 2020

Orovalle Minerals S.L. – Orovalle Operation

Measured Mineral Resources

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lbs Cu)
Boinás Oxide	806	3.84	15.29	0.58	99	396	10,286
Boinás Skarn	2,146	2.69	16.54	0.78	186	1,141	36,741
Carlés	232	3.45	10.00	0.53	26	75	2,696
La Brueva							
Total	**3,184**	**3.04**	**15.75**	**0.71**	**311**	**1,612**	**49,723**

Indicated Mineral Resources

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lbs Cu)
Boinás Oxide	3,025	4.78	4.94	0.34	465	480	22,356
Boinás Skarn	398	2.78	17.82	0.75	36	228	6,591
Carlés	1,327	3.37	7.64	0.38	144	326	10,971
La Brueva							
Total	**4,749**	**4.22**	**6.77**	**0.38**	**644**	**1,034**	**39,918**

Measured + Indicated Mineral Resources

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lbs Cu)
Boinás Oxide	3,831	4.58	7.12	0.39	564	876	32,642
Boinás Skarn	2,544	2.70	16.74	0.77	221	1,370	43,332
Carlés	1,559	3.38	7.99	0.40	169	400	13,667
La Brueva							
Total	**7,934**	**3.74**	**10.38**	**0.51**	**955**	**2,646**	**89,641**

Inferred Mineral Resources

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lbs Cu)
Boinás Oxide	1,665	4.36	8.62	0.30	233	461	11,057
Boinás Skarn	348	2.85	18.51	0.74	32	207	5,698
Carlés	1,163	3.26	4.62	0.30	122	173	7,703
La Brueva	187	3.90	15.53	0.09	23	93	357
Total	**3,362**	**3.80**	**8.64**	**0.33**	**410**	**934**	**24,816**

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated at a gold equivalent (AuEq) cut-off grade of 2.52 g/t AuEq for Boinás oxide, 2.20 g/t AuEq for Boinás skarn,1.96 g/t AuEq for Carlés skarn, and 2.52 g/t AuEq for La Brueva oxides.
3. Mineral Resources are estimated using long term prices of US$1,700/oz Au, US$3.25/lb Cu, and US$20/oz Ag. A US$/€ exchange rate of 1.20/1.00 was used.
4. Mineral Resources are inclusive of Mineral Reserves
5. Crown pillars of 60 m and 40 m are excluded from the Mineral Resource below the El Valle TSF and Boinás-East open pits, respectively.
6. Unrecoverable material in exploited mining areas has been excluded from the Mineral Resource.
7. Areas of contiguous blocks with volumes less than 500 m3 have been removed from the Mineral Resource report to ensure Reasonable Prospects for Eventual Economic Extraction.
8. Numbers may not add due to rounding.

MINERAL RESERVES

Mineral Reserves were estimated by RPA, in conjunction with Orovalle personnel, for the Boinás and Carlés underground mines. Carlés open pit skarn material was not included in the Mineral Reserves estimate at this time as the necessary land and environment permits have not yet been obtained by Orovalle.

Mineral Reserve estimates were based on mine designs applied to Measured and Indicated Resources, with dilution and extraction factors applied based upon the designed mining method. Areas where stopes above cut-off grade were isolated, were removed from the Mineral Reserve estimate with stopes planned for mining up to September 30, 2020 also excluded. Mineral Reserves are summarised in Table 1-2.

TABLE 1-2 MINERAL RESERVES – SEPTEMBER 30, 2020
Orovalle Minerals S.L. – Orovalle Operation

Category	Tonnage (000 t)	Grade (g/t Au)	Grade (g/t Ag)	Grade (% Cu)	Contained Metal (000 oz Au)	Contained Metal (000 oz Ag)	Contained Metal (000 lbs Cu)
Proven	1,156	2.14	11.61	0.51	79	431	12,922
Probable	2,275	3.1	4.44	0.29	227	325	14,668
Proven and Probable	**3,431**	**2.78**	**6.86**	**0.36**	**307**	**756**	**27,590**

Notes:

1. CIM (2014) definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated using AuEq break-even cut-off grades by zone, consisting of 3.35 g/t AuEq for Boinás oxides (drift and fill (D&F)), 2.90 g/t AuEq for Boinás skarns (SLS), and 2.09 g/t AuEq for Carlés skarn (SLS). AuEq cut-offs are based on recent operating results for recoveries, off-site concentrate costs and on-site operating costs. AuEq factors are based on metal prices, metallurgical recoveries, metal payables, and selling costs.
3. Mineral Reserves are estimated using average long-term prices of US$1,600/oz Au, US$18/oz Ag, and US$3.00/lb Cu. A US$/€ exchange rate of 1.20/1.00 was used.
4. A minimum mining width of 4 m was used.
5. Crown pillars of 75m and 42 m are excluded from the Mineral Reserve below the El Valle TSF and Boinás-East open pits, respectively.
6. A no-mining sterilisation zone of 10 m below mined out stopes and 5 m around waste filled stopes has been applied.
7. Numbers may not add due to rounding.

MINING METHOD

The Orovalle Operation consists of underground mines at Boinás and Carlés and an open pit at Carlés. Currently the Boinás underground mine is the only producing asset, with a nominal mining rate of 2,000 tpd. Both Carlés mines are currently on care and maintenance with underground production planned to recommence in the near future subject to a review of recently acquired drilling data. There is also potential to mine additional skarn ore from the Carlés open pit, subject to land acquisition and mining permissions being obtained.

The current mining methods used at the Boinás underground mine are overhand D&F and transverse and longitudinal longhole sublevel stoping (SLS). The D&F mining method is utilised in the oxides and some transitional areas of the Boinás mine, as dictated by geological and geotechnical constraints. Longitudinal SLS is used exclusively in the more competent skarns. The Carlés mine is planned to utilise both SLS methods underground, where the orebody dip is suitable, and D&F where the orebody dip is too shallow for SLS mining. Should the open pit at Carlés recommence production in the future, then a conventional drill and blast, truck and shovel method will be used.

RPA has produced a production schedule in conjunction with Orovalle based upon the estimated Mineral Reserves. The schedule includes oxide and skarn ore mined from both the Boinás and Carlés underground mines at an average rate of 706,000 tpa for a period of five years and is shown in Table 1-3. The total production schedule shows 3,431,000 t of ore, mined from both Boinás and Carlés, containing an estimated 307,000 oz Au, 756,240 oz Ag, and 27.6 Mlb Cu.

In the LOMP, proposed Carlés skarn production averages 45,000 tpa over the last three years of the schedule producing 11,200 oz Au, 20,600 oz Ag, and 0.6 Mlb Cu.

Orovalle is currently undertaking a review of alternatives including mining skarn ore from the Carlés open pit which is also currently on care and maintenance. It is possible that approximately 300,000 t of skarn ore could be mined from the open pit, however, this is subject to the relevant permits, and land being obtained. For this reason, this additional potential has not been included in the Mineral Reserve estimates.

TABLE 1-3 LIFE OF MINE PLAN– OCTOBER 2020
Orovalle Minerals S.L. – Orovalle Operation

Item	Units	FY 2021	FY 202	FY 2023	FY 2024	FY 2025	Total
Mill Feed							
Tonnes	000 t	704	698	681	675	673	**3,431**
Gold Grade	g/t Au	2.64	2.93	2.68	2.90	2.75	**2.78**
Silver Grade	g/t Ag	8.24	9.76	6.68	4.88	4.55	**6.86**
Copper Grade	% Cu	0.42	0.47	0.33	0.32	0.28	**0.36**
Metal Production							
Gold	000 oz Au	60	66	59	63	60	**307**
Silver	000 oz Ag	187	219	146	106	98	**756**
Copper	000 lb Cu	6,552	7,238	4,882	4,829	4,088	**27,590**

MINERAL PROCESSING

The Orovalle El Valle processing plant consists of the following process stages:

- Single stage crushing
- Semi Autogenous Grinding (SAG) and pebble crushing
- Ball milling
- Gravity circuit

- Flotation circuit
- CIL circuit
- Desorption and regeneration circuit
- Electrowinning and smelting
- Tailings detox and disposal

The El Valle processing plant has a nameplate capacity of 600,000 tpa, however, subsequent expansions have increased throughput capacity to 750,000 tpa depending on ore types.

Gold recovery is consistently in the 90% to 95% range and averaged 92.4% for the 42 month period from October 2016 to May 2020. Copper and silver recoveries are influenced by the ratio of oxide and transition ore to sulphide ore, and as a result recovery fluctuates month to month, depending on the ore feed. The 42 month average recoveries over the same period were 78.7% for copper and 76.0% for silver.

PROJECT INFRASTRUCTURE

Surface and underground infrastructure at the Orovalle Operation include the following:

- A processing facility with a capacity of up to 750,000 tonnes per annum (tpa).
- A TSF located in the old El Valle open pit.
- Workshops, offices, warehouse facilities, and a mine changeroom facility.
- Site power supply to the Orovalle Operation
- A 420 m deep shaft at Boinás equipped for hoisting ore and waste.
- A decline and a series of ramp-connected levels at each mine site.
- Ventilation raises and escapeways.

The main access to the Boinás site is from the south on a public road that bypasses the village of Boinás; the site entrance includes a gate and security.

Auxiliary equipment includes pump systems to distribute water, water recovery systems, gas storage, control boilers, gas heaters, blowers, compressors, etc.

The office was expanded in 2011. Other surface facilities include changing rooms, lunch rooms, clinic, warehouses, maintenance shops, electromechanical workshops, a reverse osmosis water treatment plant, a shotcrete plant, a complete laboratory that includes a sample preparation area with jaw crusher, roll mill, LM5, LM2, rotary and manual splitter, etc., fire-assay laboratory, an Agilent Technologies (Varian Inc.) ICP emission spectrometer, and a core storage facility, electrical power lines and substations for the Orovalle Operation, and a complete telecommunication system providing phone lines and fast internet and intranet connections for the various offices.

The tailings storage facility (TSF) is located within the old El Valle pit and is lined with an appropriate synthetic geomembrane and clay cap. This is a no-discharge facility.

MARKET STUDIES

The principal products produced at the Orovalle Operation are freely traded, at prices that are widely known, so that prospects for sale of any product is virtually assured, subject to achieving product specifications.

As per industry standards for copper concentrate, penalty charges are incurred for various deleterious elements when they are over specified concentrations. There are also certain deleterious elements that include a hard cap, above which the concentrate is not readily saleable. These elements are: fluorine, chlorine, arsenic, and antimony.

Some concentrate lots have been above this cap from time to time, requiring amendments to the original smelter contracts to make allowances for certain deleterious elements. These amendments are agreed upon for specific time periods as opposed to specific concentrate lots.

RPA reviewed the current contracts (and amendments) for smelting and refining copper concentrate and doré bars and considers the terms, rates, and charges for the contracts to be within industry standards.

ENVIRONMENTAL, PERMITTING AND SOCIAL CONSIDERATIONS

Environmental studies comprising monitoring and impact assessments are undertaken for the Orovalle Operation. Additional studies have taken place since 2014 to understand and inform water contamination risks and related management thereof. These should continue.

Apart from the statements included under the "Conclusions" section above, RPA is not aware of any other items that would impact the ongoing operations.

CAPITAL AND OPERATING COST ESTIMATES

The estimated sustaining capital costs included in the LOMP total US$48.2 million and include the costs for mine development, mine infrastructure, equipment replacement and refurbishments, plant expansion, and tailings management.

In addition to sustaining capital costs, an estimated cost of US$15.1 million (discounted) for reclamation and closure is included of which US$8.9 million is currently held in bond. This estimate includes installation and operation of a post-closure water treatment plant, and decommissioning liabilities through until 2060.

Operating costs in the LOMP are based on recent operating history, and average approximately US$70 million per year for the next five years. Unit rates are summarised in Table 1-4. The average LOM operating cost is US$102/t milled.

TABLE 1-4 UNIT OPERATING COSTS – BOINÁS AND CARLÉS

Orovalle Minerals S.L. – Orovalle Operation

Item	Units	Boinás		
		Oxide	Skarn	Carlés Skarn
Geology & Mining	US$/t milled	75.96	58.55	50.28
Processing & Laboratory	US$/t milled	20.35	20.35	20.35
Environmental, Safety & G&A[1]	US$/t milled	13.37	13.37	0.00
Total	**US$/t milled**	**109.68**	**92.26**	**70.63**

Note:
1. 100% G&A costs allocated to Boinás Ore.

Don Mario – Oxides Stockpile Project

The following is the summary section of the Don Mario Oxide Stockpile 43-101 Report entitled "Don Mario Oxide Stockpile Project, Eastern Bolivia" dated December 29th, 2020 (effective date September 30th, 2020) prepared by Qualified Person, Gino Zandonai, M.Sc., C.P., Mining Engineer of DCGS Exploration and Mining Consulting. The full text of the Don Mario Oxide Stockpile 43-101 Report is available for viewing on SEDAR at www.sedar.com and is incorporated by reference in this AIF. Defined terms and abbreviations used herein and not otherwise defined shall have the meanings ascribed to such terms in the Don Mario 43-101 Report.

Executive Summary

DGCS S.A. ("DGCS") was retained by Empresa Minera Paititi S.A. ("EMIPA" or "the Company"), to prepare a technical report in accordance with National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") for Don Mario Oxide Stockpile Project (the "Project" or "OSP"). Mr. Zandonai, principal of DGCS is an independent qualified person for the purposes of NI 43-101 who is the author of this report.

EMIPA is a wholly owned subsidiary of Orvana Minerals Corp. ("Orvana"). Orvana is an Ontario registered company and its common shares are listed on the Toronto Stock Exchange (TSX) under the symbol ORV.

EMIPA is the owner of the Don Mario Operation ("Don Mario"), a set of assets that includes Las Tojas ore body, and the previously mined out Lower Mineralized Zone ("LMZ"), Upper Mineralized Zone ("UMZ") and Cerro Felix mines, plus the Processing Plant and the Tailings Storage Facility. Don Mario temporarily suspended operations in the first quarter of fiscal 2020 (October to December 2019), and is currently in care and maintenance. Don Mario is located in the San Juan Canton, Chiquitos Province, Department of Santa Cruz, in eastern Bolivia.

The UMZ deposit, depleted in 2017, generated a 2Mton mixed copper oxide stockpile (the "Oxide Stockpile") with gold and silver grades during its mine life. The grades for copper, gold and silver grades are 1.89%, 1,85g/t and 49.3 g/t respectively (See Table 1.1). The Company plans to restart production in Don Mario by treating the Oxide Stockpile. Subject to the favorable completion of technical, economic and funding analysis, the OSP is expected to provide three full production years for Don Mario.

The stockpile resource had been estimated in the 2016 Technical Report "Don Mario Mine Operation 2016" dated January 27, 2017 (the "2016 Report"). A copy of the 2016 Report is posted under the Company's profile on www.sedar.com. The assumption was that the stockpile would be processed by flotation and would not be included in the carbon-in-leach circuit. However, since fiscal 2018, the Company has been evaluating metallurgical alternatives to process the Oxide Stockpile, involving different international metallurgical consultants. The evaluation concluded that a sulphidization circuit would maximize the value of the stockpile.

The Company plans to complete the final evaluation of the Project by the end of the third quarter of fiscal 2021 (the Company's fiscal year 2021 runs from October 2020 to September 2021), after completion of detailed engineering works; whose purpose is to de-risk technical CAPEX assumptions and sourcing costs. Subject to the favorable completion of technical, economic and funding analysis, the sulphidization circuit, and ancillary facilities development is expected to require approximately twelve months to then start commercial production.

The preliminary capital cost estimate for modification of the existing circuit to process the oxide ores with an acid leach/cyanidation process is approximately US$25.6 million (without first filling of the circuit and applicable taxes). DGCS evaluated the Stockpile Mineral Reserves in a cash flow analysis, and verified that they are economically treatable, under the metal price and cost assumptions summarized in this report.

All information and data were provided by EMIPA. Key reports, which the author has relied on, are as follows:

1. Torres. WR., 2020. EMIPA Internal Report- Informe de Pruebas Metalúrgicas cíclicas con agua tratada (Interim Report)

2. Zandonai, G., 2016. Don Mario Mine Operation 2016 Technical Report. NI 43-101-compliant report on mineral resources and reserves for the Total Don Mario Operation for Orvana by DGCS S.A., 130 p. ("DGCS -2016 report").

3. Zandonai, G., 2019. AIF _ EMIPA 2019 MRMR – Mineral Resources and Mineral Reserves Technical Report of the Don Mario Operation prepared for Orvana by DGCS S.A., 20 p. ("AIF- MRMR -2019 report").

4. Wright, C., Podhorski-Thomas, M., and Colquhoun, W., 2008, Technical Report for the Don Mario Property, Chiquitos Province, Bolivia: AMEC (Peru) 207 p. ("AMEC-2008 report").

This report summarizes the results of the metallurgical work developed by EMIPA team with support of external metallurgical consultants, which are the basis to recover the copper, gold and silver from the Oxide Stockpile. The positive technical and economic evaluation of the Project justifies the investment and necessary changes and improvements of the current processing plant, to recover the gold, silver and copper contained in the Oxide Stockpile.

Table 1.1:

Oxide Stockpile Mineral Reserves September 30, 2020

	Proven						
Location/Zone	**Tonnage (000 t)**	**Grade (g/t Au)**	**Grade (% Cu)**	**Grade (g/t Ag)**	**Contained Metal (000 oz Au)**	**Contained Metal (t Cu)**	**Contained Metal (000 oz Ag)**
DM1 Oxide	492	2.24	1.74	54.4	33.7	8,132	818.0
DM2 (Oxide Pre-strip)	264	1.90	1.98	17.9	16.1	5,233	152.5
DM3 (Dolomite Oxide)	181	1.89	1.96	21.6	11.0	3,538	125.5
Plant Stockpile Oxide)	490	1.61	1.57	57.8	25.4	7,703	910.3
DM4 Stock Talco	438	1.65	2.44	64.9	23.2	10,683	914.7
DM5 (Dolomite Oxide)	192	1.86	1.64	48.7	11.5	3,149	300.4
Total	**2,032**	**1.85**	**1.89**	**49.3**	**120.9**	**38,438**	**3,221.3**

Estimated metal recoveries based on processing by sulphidization.

Notes:

1. *CIM definitions were followed for Mineral Reserves and were prepared by G. Zandonai, a qualified person for the purposes of NI 43-101, who is an employee of DGCS SA and is independent of the Company.*
2. *Mineral Reserves are estimated using a long-term gold price of $ 1,600 per ounce, copper price of $3.00 per pound and a silver price of $18 per ounce.*

Technical Summary

Property Description and Location

Don Mario is located in San Juan Canton, Chiquitos Province, Santa Cruz Department in Eastern Bolivia, about 458 km east of the department capital Santa Cruz de la Sierra. The operation commenced commercial production in July of 2003. The complex of mineral rights consists of 10 contiguous mineral concessions that cover approximately 53,325 ha ("Don Mario Complex").

The Company is currently defining the exploration program for the 53,325 hectares available at the Don Mario Complex. The review of historical data is in progress, in order to prioritize targets and define exploration activities. This exploration program is out of the scope of this Technical Report.

Existing Infrastructure

Surface infrastructure at the Don Mario Complex include the following:

- Processing/Comminution Plant of 2,000 tpd

- A tailings storage facility (TSF)
- Freshwater dam
- 300 person camp facility, consisting of sleeping accommodation (both single, double and multiple occupancy types), recreation facilities, kitchens and lunch rooms.
- Workshops, offices and warehouse facilities
- Natural gas power plant and substation
- De-commissioned sulfuric acid plant
- Carbon in leach ("CIL") circuit
- Flotation circuit

History

Cerro Pelado, also referred to as Cerro Don Mario, was a prominent hill formed by the Don Mario UMZ deposit. This location is known to be an ancient site of mining for oxidized copper mineralization. Following the discovery of gold at the site in 1991, the area was sequentially explored by three main companies, these being La Rosa, Billiton and Orvana. This resulted in the discovery and/or delineation of the LMZ, Cerro Felix ("CF") and Las Tojas ("LT") Au-Cu deposits and the UMZ Cu-Au deposit, plus several other prospects within 20 km of Don Mario. EMIPA acquired the property in 1996 from four Bolivian companies that jointly owned the Don Mario concessions; and initiated mining of the LMZ deposit in 2003. Underground mining of the LMZ deposit ceased in 2009 and was replaced by open pit production from the UMZ deposit, augmented by lesser open pit production from the LT and CF deposits.

Geology and Mineralization

The Don Mario property is underlain by Lower to Middle Proterozoic metamorphic rocks of the Cristal Sequence that comprise a portion of the Bolivian Shield's Aventura Complex. The Cristal Sequence is composed of medium to high grade metasedimentary units such as biotite schist, mica schist, quartzite, biotite–plagioclase gneiss and calcsilicates gneiss; as well as lesser amounts of pegmatite and amphibolite dikes. The Cristal Schist belt subunit hosts the Don Mario mine's Upper and Lower Mineralized Zones as well as the nearby CF, Don Mario North, and Don Mario South gold prospects (Wright et al., 2009).

Mining and exploration programs to date on the property have shown the Don Mario deposit to consist of the gold-enriched area (LMZ) and the copper-enriched area (UMZ). The LMZ was characterized by a well-developed northwest striking and steeply northeast dipping structural/lithologic corridor that constrains gold-copper-silver mineralization as well as distinctive alteration assemblages. Alteration associated with gold-copper-silver mineralization commonly takes the form of iron carbonate, white mica, biotite, quartz, albite, andalusite, staurolite, garnet, cordierite, gedrite and anthophyllite-cummingtonite. Spatial disposition of the LMZ and UMZ areas may be of structural derivation, with the calc-silicate dominated and synclinally folded UMZ host sequence representing a shearing-associated "flower structure" above the sheared LMZ.

Past geologists have characterized mineralization at the Don Mario deposit as being structurally focused or shear zone related. However, as outlined by Wright et al. (2009), alternative views on deposit genesis include skarn association, banded iron formation-hosted structural association, and deformed, syngenetic massive sulphide association. In contrast to these, the deposit was more recently classified by Arce Burgoa (2009) as being a deformed example of the Iron Ore copper Gold (IOCG) association.

Mineral Resources

Table 1.2

Oxide Stockpile Mineral Resources – September 30, 2020

	Measured						
Location/Zone	**Tonnage (000 t)**	**Grade (g/t Au)**	**Grade (% Cu)**	**Grade (g/t Ag)**	**Contained Metal (000 oz Au)**	**Contained Metal (t Cu)**	**Contained Metal (000 oz Ag)**
DM1 Oxide	492	2.24	1.74	54.4	35.4	8559.6	861.0
DM2 (Oxide Pre-strip)	278	1.90	1.98	17.9	17.0	5508.8	160.5
DM3 (Dolomite Oxide)	190	1.89	1.96	21.6	11.5	3724.0	132.1
Plant Stockpile Oxide)	515	1.61	1.57	57.8	26.7	8108.3	958.3
DM4 Stock Talco	506	1.61	2.38	63.5	26.2	12067.4	1033.2
DM5 (Dolomite Oxide)	202	1.86	1.64	48.7	12.1	3314.4	316.2
DM6 (Tremolite Oxide)							
Total	**2,184**	**1.84**	**1.89**	**49.3**	**129.0**	**41,282.6**	**3,461.2**

Notes:

1. CIM definitions were followed for Mineral Resources and were prepared by G. Zandonai, a qualified Person for the purposes of NI43-101, who is an employee of DGCS SA and is independent of the Company.
2. Mineral Resources are estimated using a long-term gold price of US$ 1,700 per ounce, copper price of US$3.25 per pound and a silver price of US$20 per ounce.
3. Numbers may not add due to rounding.

The scope of analysis is limited to the Oxide Stockpile Project. Resources outside of the Oxide Stockpile are not reported in this Technical Report.

Mineral Reserves

Mineral Reserves were estimated by DGCS, in conjunction with EMIPA personnel, for the Oxide Stockpile Project. Mineral Reserve estimates as at September 30, 2020 were based on the updated metal recoveries considering the stockpile processing by Sulphidation. Mineral Reserves are summarized in Table 1.3:

Table 1.3

Stockpile Mineral Reserves - September 30, 2020

	Proven						
Location/Zone	**Tonnage (000 t)**	**Grade (g/t Au)**	**Grade (% Cu)**	**Grade (g/t Ag)**	**Contained Metal (000 oz Au)**	**Contained Metal (t Cu)**	**Contained Metal (000 oz Ag)**
DM1 Oxide	492	2.24	1.74	54.4	33.7	8,132	818.0
DM2 (Oxide Pre-strip)	264	1.90	1.98	17.9	16.1	5,233	152.5
DM3 (Dolomite Oxide)	181	1.89	1.96	21.6	11.0	3,538	125.5
Plant Stockpile Oxide)	490	1.61	1.57	57.8	25.4	7,703	910.3
DM4 Stock Talco	438	1.65	2.44	64.9	23.2	10,683	914.7
DM5 (Dolomite Oxide)	192	1.86	1.64	48.7	11.5	3,149	300.4
Total	**2,032**	**1.85**	**1.89**	**49.3**	**120.9**	**38,438**	**3,221.3**

Estimated metal recoveries based on processing by sulphidation

Notes:

1. *CIM definitions were followed for Mineral Reserves and were prepared by G. Zandonai, a qualified person for the purposes of NI 43-101, who is an employee of DGCS SA and is independent of the Company.*
2. *Mineral Reserves are estimated using a long-term gold price of $ 1,600 per ounce, copper price of $3.00 per pound and a silver price of $18 per ounce.*
3. *Mineral Reserves (exclusive of in situ). Numbers may not add due to rounding.*

Mining Methods

The method of Oxide Stockpile exploitation will be based on the blending, loading and haulage of different rock types, averaging grade for recovery of Au-Cu-Ag.

Mineral Processing

Basically, the Don Mario mill was based on closed-circuit SAG milling and a typical carbon-in- column ("CIC")/carbon-in-leach ("CIL") operation that produced a doré bar through electro- winning and smelting. The processing plant can process 708,750 tpa with a daily throughput of average 2,000 tpd.

Since 2018, the Company has been re-evaluating the economic potential of processing its existing mineral Oxide Stockpile. The preliminary assumption was that it would be processed by flotation and would not be included in the carbon-in-leach circuit. However, since 2018, the Company has been evaluating different metallurgical alternatives, concluding that a sulphidization circuit would maximize the value of the stockpile.

EMIPA's original processing plant flowsheet will be extended by additional circuits in order to treat the Oxide Stockpile. The resulting sequence of macro unit operations will then consist of the following:

- Crushing and Screening
- Talc Flotation

- Acid Leaching
- Copper Electrowinning
- Neutralization
- Cyanide Leaching
- Filtering and Precipitation
- Carbon in Column (CIC)
- Carbon in Pulp (CIP)
- Strip Electrowinning & Smelt
- DETOX
- Tailings Storage Facility (TSF)

Project Infrastructure

Don Mario's main infrastructure was completed in 2003 for underground mining. During 2009, a ball mill was added to increase throughput capacity from 750 tpd to 2,000 tpd.

Surface facilities other than the process plant include a 300 person camp facility with kitchens, lunch rooms, changing rooms, clinic, warehouses, maintenance shops, electromechanical workshops, a laboratory, a core storage facility, a freshwater dam, a natural gas power plant, electrical power lines and substations, and a complete telecommunication system providing phone lines and fast internet and intranet connections for the various offices. The surface facilities also include a de-commissioned sulfuric acid plant and a CIL circuit which has been recommissioned in 2016.

The Tailings Storage Facility (TSF) is located approximately 1.0 km to the northeast of the processing plant, and is properly lined and has an adequate pumping system. The plant-tailings circuit is a no-discharge facility. The Company has commenced an evaluation of re-processing tailings to determine the viability of recovering gold from material deposited in the tailings impoundment since the commencement of production at Don Mario. The Company targets the completion of the scoping study by the second half of fiscal 2021. The evaluation of the tailings re-processing viability is out of the scope of this report.

Markets

The principal commodities at the Don Mario Operation are freely traded, at prices that are widely known, so that prospects for sale of any production are virtually assured, subject to achieving product parameters.

As per industry norms for Au Dore, Cu Cathodes and Ag Concentrate, penalty charges are incurred for various deleterious elements when they are over specified concentrations.

Environmental, Permitting and Social Considerations

EMIPA has obtained all material permits to operate Don Mario: the mine, the processing plant, and the tailings storage facility. It does not require additional permits for the Oxide Stockpile Project, but it does require to update authorities of reagents consumption levels.

Capital and Operating Cost Estimates

The capital cost estimate for modification of the existing processing plant to process the Oxide Stockpile with acid leach/cyanidation is approximately US$25.6 million (without first filling of the circuit and taxes).

The breakdown of the initial CAPEX for the Oxide Stockpile Project is shown in table 1.4:

Table 1.4
CAPEX's Breakdown - Oxide Stockpile

Code	Items	Au/Ag Circuit	Cu Circuit	CAPEX USD M
1	ELECTRO WINING		10.0	10.0
2	FILTER PRESS	2.9	0.5	3.4
3	SX (SOLVENT EXTRACTION)		2.4	2.4
4	TF (TANK FARM)		3.2	3.2
5	PLANT WATER TREATMENT	1.6		1.6
6	OTHER EQUIPMENT & CIVIL WORKS	4.5	0.5	5.0
	TOTAL CAPEX	**9.0**	**16.6**	**25.6**

The unit operating cost for processing the Oxide Stockpile, is estimated at an average of US $93.1 per tonne. See Table 1.5.

Table 1.5
Unit Operation Costs

Items	Units	Average USD M
Processing	$/t	80.1
G&A	$/t	11.9
Stockpile Ore Consumptions	$/t	1.1
TOTAL OPEX	**$/t**	**93.1**

Conclusions

Based on the revision of the technical and economic analysis provided by EMIPA the Project to process the Oxide Stockpile ores is a profitable endeavor and it will extend the life of the operation by three years.

DGCS believes that advancing on the development of the Oxide Stockpile Project is the best valuable option for the interests for the Company.

Recommendations

DGCS has prepared the following recommendations with respect to the development and implementation of the Oxide Stockpile Project:

- Consider strict ore control when loading the ore from the stockpile to the crusher and eventually make an area next to the crusher that the ores can be subject to a second screening. Besides the sampling implementation already in place, consider providing the "ore control geologists" with a Niton XRF (portable sampling device) to reduce the risk of sending materials such as talc to the process. The experience of the LPF flotation in the past caused technical problems that ended up stopping the plant for several weeks.

- Acid leaching of oxides ores containing high levels of carbonates, compounded by the presence of talc, will generate an exothermic reaction with excessive frothing due to the release of carbon dioxide gas. EMIPA's mill staff feels that this can be mitigated by injection of the acid at the bottom of the agitator in the acid leach tanks.

Don Mario – Tailings Reprocessing Project

The following is the summary section of the 43-101 Technical Report entitled "Don Mario Tailings Reprocessing Project " dated December 23rd, 2021 (effective date September 30th, 2021) prepared by Qualified Person, Gino Zandonai, M.Sc., C.P., Mining Engineer of DCGS Exploration and Mining Consulting. The full text of the Don Mario Tailings Reprocessing Project 43-101 Report is available for viewing on SEDAR at www.sedar.com and is incorporated by reference in this AIF. Defined terms and abbreviations used herein and not otherwise defined shall have the meanings ascribed to such terms in the Don Mario 43-101 Report.

Executive Summary

Executive Summary

Don Mario is located in San Juan Canton, Chiquitos Province, Santa Cruz Department in Eastern Bolivia, about 458 km east of the department capital of Santa Cruz de la Sierra. The operation commenced commercial production in July of 2003. The complex of mineral rights consists of 10 contiguous mineral concessions that cover approximately 53,325 ha ("Don Mario Complex").

Between the months April to June, 2018, EMIPA executed a drilling program in Don Mario tailings deposit to determine the tailings resources.

DGCS reviewed the geological and technical information delivered by EMIPA regarding the tailing's characteristics and estimated the mineral resources in the Don Mario tailings. DGCS considers that the drilling and sampling performed in 2018 on the tailings have enough coverture and that the QA/QC procedures show that the samples used for estimation have an acceptable level of exactitude and precision for resource estimation.

Two extraction methods considered mechanical and hydraulic extraction. DGCS believes that the proposed tailing mining method and reprocessing options are adequate according EMIPA's capabilities and infrastructure.

The tailings treatment considered is CIL-CIC-FLOTATION to take advantage of potential synergies with the planned oxide sulfidation project.

Once resource category parameters were applied, the Don Mario Tailing mineral resource statements are presented in Table 1.1.

Table 1.1: Don Mario Tailings Reprocessing Project Mineral Resource

Effective September 30, 2021

	INDICATED				INFERRED			
Cut Off Au	**Kt**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**	**Kt**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**
0.7	11	0.71	5.49	0.69	-	-	-	-
0.6	133	0.65	5.33	0.66	41	0.63	5.04	0.57
0.5	1,390	0.54	5.46	0.59	705	0.53	4.44	0.46
0.4	3,320	0.49	4.96	0.55	4,629	0.46	4.16	0.42
0.3	3,677	0.48	4.79	0.53	5,474	0.45	4.00	0.40
0.2	3,798	0.47	4.67	0.52	5,688	0.44	3.89	0.40
0.1	3,798	0.47	4.67	0.52	5,688	0.44	3.89	0.40

Notes:

1. CIM definitions were followed for Mineral Resources and were prepared by G. Zandonai, a qualified person for the purposes of NI43-101, who is an employee of DGCS SA and is independent of the Company.
2. Highlighted Base Case Au 0.3 g/t Cutoff considered for mine life
3. Numbers may not add due to rounding.

Estimated project life of 3.8 years at a mining rate of 2.4 Mton per year, considering as Base Case the mineral resources estimated (Indicated + Inferred) by DGCS at 0.3 g/t Au cutoff.

Preliminary CAPEX of $18.5 MUS$. Estimation based on historical and preliminary quotes, and assuming investment after the end of the oxide stockpile processing.

Operating cost is estimated in an average of $25.97 US$ per ton. The OPEX has been projected by two operation mechanical and hydraulic methods and based on a combination of historical costs, projections based on first principle estimates and information from CIL-CIC-FLOTATION operation in past years.

Based on this report information and conclusions, DGCS makes the following recommendations:

- Design and execute an infill drilling program with Vibracore system, to obtain a final 50 m x 50 m drilling grid on Don Mario tailings deposit, targeting the tailings resources upgrade to Measured + Indicated.
- Perform metallurgical studies for the CIL-CIC-Flotation process on the samples obtained from the infill drilling program.
- Review CAPEX, OPEX and metal prices to build an economic evaluation to calculate Mineral Reserves on Don Mario Tailings Project from Measured and Indicated Resources.
- For mechanical extraction of the tailings, to avoid sinking it is necessary to evaluate and define:
    - The dewatering process,
    - The tailings loading capacities and mining equipment maximum weight.

Technical Summary

Property Description and Location

Don Mario is located in San Juan Canton, Chiquitos Province, Santa Cruz Department in Eastern Bolivia, about 458 km east of the department capital of Santa Cruz de la Sierra. The operation commenced commercial production in July of 2003. The complex of mineral rights consists of 10 contiguous mineral concessions that cover approximately 53,325 ha (“Don Mario Complex”).

Between the months April to June, 2018 EMIPA executed an exploratory drilling program in Don Mario tailings deposit to determine the tailings resources.

Existing Infrastructure

Surface infrastructure at the Don Mario Complex include the following:

- Processing / Comminution Plant of 2,000 tpd
- A tailings storage facility (TSF)
- Freshwater dam
- 300-person camp facility, consisting of sleeping accommodation (both single, double and multiple occupancy types), recreation facilities, kitchens and lunch rooms.
- Workshops, offices and warehouse facilities
- Natural gas power plant and substation
- Carbon in leach (“CIL”) & Carbon in Column (CIC) circuits
- DETOX
- Flotation circuit

History

Cerro Pelado, also referred to as Cerro Don Mario, was a prominent hill formed by the Don Mario UMZ deposit. This location is known to be an ancient site of mining for oxidized copper mineralization. Following the discovery of gold at the site in 1991, the area was sequentially explored by three main companies, these being La Rosa, Billiton and Orvana. This resulted in the discovery and/or delineation of the LMZ, Cerro Felix (“CF”) and Las Tojas (“LT”) Au-Cu deposits and the UMZ Cu-Au deposit, plus several other prospects within 20 km of Don Mario. EMIPA acquired the property in 1996 from four Bolivian companies that jointly owned the Don Mario concessions and initiated mining of the LMZ deposit in 2003. Underground mining of the LMZ deposit ceased in 2009 and was replaced by open pit production from the UMZ deposit,

augmented by lesser open pit production from the LT and CF deposits, production or exploitation was suspended at end 2019.

Geology and Mineralization

A geological characterization seems negligible for tailings resource estimation, but is included to detail the type and source of the materials present in the tailings deposit.

The Don Mario property is underlain by Lower to Middle Proterozoic metamorphic rocks of the Cristal Sequence that comprise a portion of the Bolivian Shield's Aventura Complex. The Cristal Sequence is composed of medium to high grade metasedimentary units such as biotite schist, mica schist, quartzite, biotite–plagioclase gneiss and calcsilicates gneiss, as well as lesser amounts of pegmatite and amphibolite dikes. The Cristal Schist belt subunit hosts the Don Mario mine's Upper and Lower Mineralized Zones as well as the nearby CF, Don Mario North, and Don Mario South gold prospects (Wright et al., 2009).

Mining and exploration programs to date on the property have shown the Don Mario deposit to consist of the gold-enriched area (LMZ) and the copper-enriched area (UMZ). The LMZ was characterized by a well-developed northwest striking and steeply northeast dipping structural/lithologic corridor that constrains gold-copper-silver mineralization as well as distinctive alteration assemblages. Alteration associated with gold-copper-silver mineralization commonly takes the form of iron carbonate, white mica, biotite, quartz, albite, andalusite, staurolite, garnet, cordierite, gedrite and anthophyllite-cummingtonite. Spatial disposition of the LMZ and UMZ areas may be of structural derivation, with the calc-silicate dominated and synclinally folded UMZ host sequence representing a shearing-associated "flower structure" above the sheared LMZ.

There are two main bodies of mineralization on the Property and several prospects that are hosted in the Crystal Schist and Eastern Crystal Sequence belts. These areas were mined in several years from 2003 to 2019 in the sequence as follows:

Don Mario Lower Mineralized Zone (LMZ.). (2003 to 2009)

LMZ mined composed by quartz-amphibole-garnet-magnetite-cordierite ± biotite rock, is the main host of the mineralization. This unit hosts most of the economically significant mineralization and exhibits mineralogical and textural variability along strike in underground mine. The lithology is a greenish-gray, fine-to-coarse grained, moderately foliated quartz-amphibole-garnet-magnetite rock, which hosts intervals of very coarse grained radiating gedrite-cordierite ± garnet rock and less commonly, quartz-magnetite rock.

Primary metallic minerals include electrum, chalcopyrite, galena, sphalerite, bismuthinite, scheelite, and molybdenite. Iron sulphides include pyrrhotite, pyrite and minor marcasite. The average total sulphide content is generally less than 5%. Native gold is present at grain boundaries adjacent to amphiboles.

Las Tojas mine. (2009 to 2011)

Located to 15 Km NE from DM in the Eastern Schist Belt. Mined composed to similar rock types from LMZ, generally composed by quartz-garnet-amphibole-biotite and quartz biotite± sillimanite rock, include iron minerals, sulphides, pyrrhotite, pyrite, chalcopyrite and native gold in quartz shearing close to amphiboles. The grade was lower than LMZ Don Mario in 22% below. Las Tojas also had a short period of exploitation during 2019 with low grades, and same LMZ lithology.

Don Mario Upper Mineralized Zone (UMZ.) - (2011 to 2016)

The UMZ mineralization is characterized by Au, Cu, Ag, Pb and Zn as oxide and sulphide mineralization. Although most of the UMZ is oxidized, a portion is interpreted to be a sulphide zone. The dominant host units of UMZ mineralization are diopside, tremolite rock, and massive tremolite rock with lesser amounts in dolomite/ophicalcite, and talc schist. The most abundant lithology is massive tremolite rock. In the sulphide zone, massive tremolite rock is characterized by intergrown acicular aggregates of dark green tremolite with chalcopyrite, sphalerite and less common bornite grains interstitial to silicates. Sulphide mineralization is composed of chalcopyrite in varying abundance, with subordinate gold, silver (as electrum), sphalerite, and galena. It was exploited between 2011 and 2016. (2.0 Mton. remaining in stockpile).

Don Mario Pushback Lower Mineralized Zone (LMZ.). (2016 to 2017)

Same to LMZ. LMZ called Pushback, being the upper remaining of the lower mineralization, with lower grades than 15%, unlike the underground method, the lithology and mineralization are the same.

Cerro Felix mine. (2017 to 2018)

1.5 kilometers north along strike from Don Mario. Cerro Felix mineralization, is hosted, or associated with granitic pegmatite's, and LMZ rock types. Grades are lower than Don Mario LMZ, composed by quartz – biotite –garnet rock.

Las Tojas mine. (2018 to 2019)

In the last quarter of 2018, a second belt is rediscovered on an extensions of former Las Tojas mine, which was previously exploited, and several small pits are designed for exploitation, generally composed of rocks similar to the LMZ, although with low grades between 1.5 to 2.5 g / t gold.

Drilling

Between the months April to June, 2018 EMIPA executed a drilling program in Don Mario tailings deposit to determine the tailings resources. The program first considered the drilling of 38 holes, but later was expanded to 76 holes due the inclusion of additional 38 twin holes.

The drilling was executed using a portable drill type Wink Vibracore, which uses adjustable vibrating frequencies that allows to control the penetration velocity and recovers consistent sample cores.

The core samples were recovered in polystyrene bags, that were previously installed inside the drill rods. The recovered core samples were tagged and transported to the sampling area, next to the soil laboratory.

The samples mechanical preparation and the different mesh sieving (below 100 and 200 mesh) were performed by ALS laboratory in Oruro, Bolivia. Then, the samples were submitted to ALS laboratory in Lima, Perú. The analytical methods used were:

- ALS Code Au-AA13: Gold cyanide lixiviation and AAS finish (Atomic Absorption Spectrometry), 30 g aliquot
- ALS Code Ag-AA13: Silver cyanide lixiviation and AAS finish (Atomic Absorption Spectrometry), 30 g aliquot
- ALS Code Cu-AA13: Copper cyanide lixiviation and AAS finish (Atomic Absorption Spectrometry), 30 g aliquot
- ALS Code ME-MS61: four acid digestion and ICP-MS 48 elements finish (Induced Coupling Plasma Spectrometry)
- ALA Code S-IR08: Total Sulphur using LECO equipment
- ALA Code Au-ICP21: Gold by fire assay and ICP-AES finish (Atomic Emission with induced Plasma Coupling)

EMIPA implemented a QA/QC program, that included duplicates, blanks and standards. The analytical data of the control samples were processed by Wood Plc, Peru subsidiary. The following table shows the control samples details (Table 1.2).

Table 1.2: Tailings Control Samples

SAMPLES TOTAL	CONTROL TYPE	CODE	N° CONTROL SAMPLES	APPLIED CONTROL PERCENTAGE	RECOMMENDED CONTROL PERCENTAGE
1,386	Coarse Duplicate	DG	57	4%	2%
	Fine Duplicate	DF	54	4%	2%
	Standard	MR	81	6%	6%
	Coarse Blank	BG	30	2%	2%
	Fine Blank	BF	30	2%	2%
	External Laboratory Control	CE	84	6%	4%

The QA/QC program shows an acceptable level of precision and accuracy for the tailings samples and is suitable for resource estimation.

Metallurgical Tests and Tailings Treatment Method

It is preliminary assumed that the tailings would be processed by carbon in leach and flotation circuit (CIL-CIC-FLOTATION), after the oxides stockpile depletion, to take advantage of both projects synergy.

The throughput assumption is 292 t/h of tailings material according to the following process:

- Carbon in Leach (CIL)
- Carbon in Column (CIC)
- Strip Electro winning & Smelt
- DETOX
- Flotation
- Retreated Tailings Storage Facility (TSF)

Mineral Resource

Block grade, block density and block volume parameters for the Don Mario Tailings were estimated using geostatistical methods.

Subsequent application of resource category parameters resulted in the Don Mario Tailings mineral resource statement, presented in Table 1.3.

Table 1.3: Don Mario Tailings Reprocessing Project Mineral Resource

Effective September 30, 2021

	INDICATED				INFERRED			
Cut Off Au	**Kt**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**	**Kt**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**
0.7	11	0.71	5.49	0.69	-	-	-	-
0.6	133	0.65	5.33	0.66	41	0.63	5.04	0.57
0.5	1,390	0.54	5.46	0.59	705	0.53	4.44	0.46
0.4	3,320	0.49	4.96	0.55	4,629	0.46	4.16	0.42
0.3	3,677	0.48	4.79	0.53	5,474	0.45	4.00	0.40
0.2	3,798	0.47	4.67	0.52	5,688	0.44	3.89	0.40
0.1	3,798	0.47	4.67	0.52	5,688	0.44	3.89	0.40

Notes:

1. CIM definitions were followed for Mineral Resources and were prepared by G. Zandonai, a qualified person for the purposes of NI43-101, who is an employee of DGCS SA and is independent of the Company.
2. Highlighted Base Case Au 0.3 g/t Cutoff considered for mine life
3. Numbers may not add due to rounding

Mineral Reserve

No Mineral Reserves were estimated by DGCS.

Mining Methods

Two extraction methods considered, mechanical extraction and hydraulic. Figure 1.1 shows the mechanical and hydraulic extraction areas.

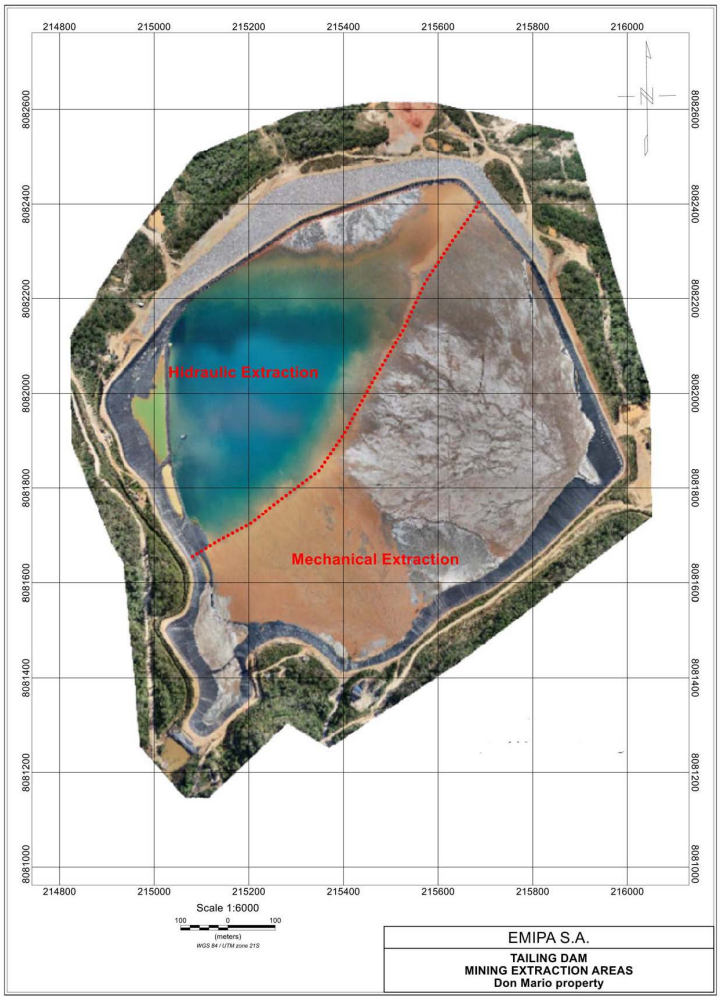


Figure 1.1: Mechanical and Hydraulic Extraction Areas

Project Infrastructure

Don Mario's main infrastructure was completed in 2003 for underground mining, and throughput capacity at 750 tpd. The process plant flowsheet included CIL-CIC circuits and flotation circuit. In 2009 a ball mill was added to the plant to increase throughput capacity from 750 tpd to 2,000 tpd. In 2016 the CIL-CIC circuit was updated.

Surface facilities other than the process plant include a 300 person camp facility with kitchens, lunch rooms, changing rooms, clinic, warehouses, maintenance shops, electromechanical workshops, a laboratory, a core storage facility, a freshwater dam, a natural gas power plant, electrical power lines and substations, and a complete telecommunication system providing phone lines and fast internet and intranet connections for the various offices. The surface facilities also include a de-commissioned sulfuric acid plant.

The Tailings Storage Facility (TSF) is located approximately 1.0 km to the northeast of the processing plant, is properly lined and with an adequate pumping system. The plant-tailings circuit is a no-discharge facility.

Markets

The Don Mario Tailings Reprocessing Project assumes that the principal commodities are freely traded, at prices that are widely known, so that prospects for sale of any production are virtually assured, subject to achieving product specifications.

Planned commercial products are Gold (Au) Dore, Copper (Cu) Concentrate and Silver (Ag) Concentrate.

Environmental, Permitting and Social Considerations

EMIPA has all the required permits to operate the current Don Mario infrastructure (the mine, the processing plant, and the tailings storage facility).

Capital Costs

Preliminary CAPEX of $18.5 MUS$. Estimation based on historical and preliminary quotes, and assuming investment after the end of the oxide stockpile processing.

Table 1.4: CAPEX's Breakdown

Items	CAPEX USD M
ADDITIONAL TANKS & OTHERS	14.0
OWNER'S COST	4.5
TOTAL CAPEX	**18.5**

Operating Costs

Conceptual extraction operating cost includes two mining methods: mechanical and hydraulic. Estimated cost are based on a combination of historical costs and information from CIL-CIC-FLOTATION operation in past years.

The operating cost is estimated in an average of $25.97 per ton (Table 1.5).

Table 1.5: Operating Costs

Items	Units	Average USD M
Processing	$/t	22.61
G&A	$/t	2.84
Tailings Extraction from the TSF	$/t	0.52
TOTAL OPEX	**$/t**	**25.97**

Economic Analysis

As discussed in detail earlier in this report, mineral resource estimates have been completed on the Don Mario Tailing Project.

There is a preliminary financial model of the Project, based on current information. Additional information and analysis would be required to meet NI 43-101 standards for reserves estimation.

Mine Life

Preliminary project life of 3.8 years at a mining rate of 2.4 Mton per year, considering as a Base Case the resource (Indicated + Inferred) estimated at 0.3 g/t Au cutoff.

Conclusions

DGCS reviewed the geological and technical information delivered by EMIPA regarding the tailing's characteristics and drilling, estimated the mineral resources in the Don Mario tailings facility and concludes that:

- The proposed tailings mining method and reprocessing options seem to be adequate according to EMIPA's capabilities and infrastructure.
- The drilling and sampling performed in 2018 on the tailings have enough coverture for Resource Estimation.
- Despite some small errors were found in the QA/QC of the drilling samples, DGCS believes that the tailings drilling samples have an acceptable level of exactitude and precision for resource estimation.
- Once resource category parameters were applied, the Don Mario Tailings Reprocessing Project Mineral Resource statements are presented in Table 1.6.

Table 1.6: Don Mario Tailings Reprocessing Project Mineral Resource

Effective September 30, 2021

	INDICATED				INFERRED			
Cut Off Au	**Kt**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**	**Kt**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**
0.7	11	0.71	5.49	0.69	-	-	-	-
0.6	133	0.65	5.33	0.66	41	0.63	5.04	0.57
0.5	1,390	0.54	5.46	0.59	705	0.53	4.44	0.46
0.4	3,320	0.49	4.96	0.55	4,629	0.46	4.16	0.42
0.3	3,677	0.48	4.79	0.53	5,474	0.45	4.00	0.40
0.2	3,798	0.47	4.67	0.52	5,688	0.44	3.89	0.40
0.1	3,798	0.47	4.67	0.52	5,688	0.44	3.89	0.40

Notes:

1. CIM definitions were followed for Mineral Resources and were prepared by G. Zandonai, a qualified person for the purposes of NI43-101, who is an employee of DGCS SA and is independent of the Company.
2. Highlighted Base Case Au 0.3 g/t Cutoff considered for mine life
3. Numbers may not add due to rounding

Preliminary project life of 3.8 years at a mining rate of 2.4 Mton per year, considering as Base Case the mineral resource (Indicated + Inferred) estimated by DGCS at 0.3 g/t Au cutoff.

Preliminary capital cost estimation of approximately 18.5 million US$ based on:

- Reconditioning & increasing Tanks (historical preliminary quotes)
- Owner's Cost

The operating cost is estimated in an average of $25.97 per ton (Table 1.5). The OPEX was projected by mechanical and hydraulic mining methods, and based on a combination of historical costs, projections based on first principle estimates and information from CIL-CIC-FLOTATION operation in past years.

Recommendations

Based on this report information and conclusions, DGCS makes the following recommendations:

- Design and execute an infill drilling program with Vibracore system, to obtain a final 50 m x 50 m drilling grid on Don Mario tailings deposit, targeting the tailings resources upgrade to Measured + Indicated.
- Perform metallurgical studies for the CIL-CIC-Flotation process on the samples obtained from the infill drilling program.
- Review CAPEX, OPEX and metal prices to build an economic evaluation to calculate Mineral Reserves on Don Mario Tailings Project from Measured and Indicated Resources.
- For mechanical extraction of the tailings, to avoid sinking it is necessary to evaluate and define:
  - The dewatering process,
  - The tailings loading capacities and mining equipment maximum weight.

Taguas

The following is the summary section of the Taguas 43-101 Report entitled "Independent Technical Report NI 43-101 on the Taguas Project, San Juan, Argentina" dated June 30, 2021 (effective date June 30, 2021) prepared by Qualified Persons Joseph J. Kowalik, PhD, QP MMSA Senior Consulting Geologist, and Ronald G. Simpson, P.Geo of Geosim Services Inc. The full text of the Taguas 43-101 Report is available for viewing on SEDAR at www.sedar.com and is incorporated by reference in this AIF. Defined terms and abbreviations used herein and not otherwise defined shall have the meanings ascribed to such terms in the Taguas 43-101 Report.

Executive Summary

Introduction

Geosim Services Inc. (Geosim) of Vancouver was retained by Orvana Argentina, S.A. (Orvana Argentina) to prepare an independent Technical Report on the Taguas Property. The purpose of this Technical Report is to disclose a Mineral Resource estimate for the Taguas Property, as at June 30, 2021. This Technical Report conforms to the NI 43-101 Standards of Disclosure for Mineral Projects.

The Taguas Property (the "Property" or the "Project") is located in San Juan Province, Argentina. The Property has been explored for gold since the mid-1970's leading to the discovery of high-sulfidation style gold-silver mineralization.

Orvana Minerals Corp. (Orvana) entered into an asset purchase agreement with Compañía Minera Taguas S.A (Minera Taguas) on May 14, 2019 pursuant to which, Orvana agreed to acquire the Taguas Property. On May 21, 2021 Orvana completed all the requisite steps to transfer ownership of the Taguas Property to Orvana Argentina S.A., a wholly-owned subsidiary of Orvana.

Terms of Reference

The effective date of this report is June 30, 2021.

Geosim was contracted to prepare an updated Mineral Resource estimate. Geosim has prepared this report with Dr. Joseph Kowalik, independent geological consultant, and support from Orvana led by Raúl Álvarez, Director of Exploration & Technical Services.

Units of measure in this report are metric, time is expressed in years (y) and days (d) and currency is expressed in United States Dollars unless otherwise indicated.

This report provides a summary of the Taguas Mineral Resource update for disclosure under NI 43-101 guidelines.

Project Setting

The Taguas Project site is located at an elevation of 3,500 m to 4,300 m above sea level on the eastern flank of the Andes Mountain range in the Province of San Juan in northern Argentina. The site is approximately 200 km north of the town of Tudcum and can be reached from the road to the Veladero mine site, which is operated by Minera Argentina Gold SRL (owned by Shandong Gold and Barrick Gold Corporation).

The Project site has a dry summer season from December to April during which most exploration activities have occurred. Up to two meters of snow can fall during the winter season from May to November.

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

The Taguas Property is comprised of 15 mining concessions and one road easement totalling 3,273.87 ha.

On May 14, 2019, Orvana entered into an Asset Purchase Agreement to acquire the Taguas Property from Minera Taguas. On May 21, 2021 all the requisite steps to transfer ownership of the Taguas property to Orvana Argentina S.A. were completed.

Surface rights holders are third parties. The surface rights and tenure required to access the Property and accommodate planned infrastructure are expected to be acquired and maintained by Orvana Argentina to allow the project to advance through further study, construction and operation.

Water rights have been requested and granted to conduct exploration activities at Taguas. Water concessions for mine operations have not yet been granted, but preliminary hydrological studies and site water balance indicate that sufficient surface water can be obtained to support a mining operation on the Property and permits to draw water can be obtained as the proposed Taguas Project advances.

The Taguas Property is subject to a three percent royalty charged by the Province of San Juan based on the value of the contained metal minus all costs associated with the extraction of the metals as far as the pit rim and not including crushing, processing or any administration costs.

On May 14, 2019, Orvana Minerals Corp. entered into a purchase agreement with Compañía Minera Taguas S.A. pursuant to which Orvana Mineral Corp.'s subsidiary, Orvana Argentina S.A. acquired the Taguas Property. In consideration for 100% of Taguas, Orvana Argentina S.A. granted Compañía Minera Taguas S.A an indivisible net smelter royalty equal to 2.5% on all future metals production mined from Taguas. This royalty was granted on May 21, 2021 by Orvana Argentina upon the transfer of the Taguas Property to Orvana Argentina.

Geology and Mineralization

The Taguas Property is host to a high-sulfidation epithermal gold-silver system hosted in altered Tertiary age rhyolite volcaniclastic rocks.

Supergene-oxidized gold-silver mineralization occurs on the south half of the Taguas Property at Cerro Taguas Norte, Cerro Taguas Sur, Cerro III and Cerro IV (collectively also referred to as "Cerros Taguas"). The oxide gold-silver mineralization consists of sub-vertical, northeast striking mineralized structures in an envelope of lower-grade mineralization. The high-grade zones measure 1.5 m to 8 m wide and have lengths of 40 m to over 500 m. The high-grade zones consist of relatively continuous mineralization with gold grades ranging from 0.2 g/t Au to over 4.0 g/t Au and 10 g/t Ag to over 50 g/t Ag. Oxidation extends from surface to approximately 200 m below surface.

Sulfide (pyrite-enargite) gold-silver mineralization has been encountered on the north half of the property at Cerro Campamento, and Cerro Silla Sur. Intersections with grades of over 50 g/t Au and 100 g/t Ag have been encountered over down-hole lengths of 1.5 m to 5.0 m in discrete mineralized vein structures. This style of mineralization has been also encountered below the depth of oxidation in Cerros Taguas, generally below 150-200 meters.

Some indicators of copper-gold porphyry mineralization have also been found on the Taguas Property.

The understanding of the regional and property-scale geology is sufficiently advanced to allow for construction of geological models to support Mineral Resource estimation for the Project.

History

Regional grassroots exploration began in the mid-1970s. Minera Aguilar explored the Taguas Property discovering high-grade gold-silver mineralization at Cerro Taguas Sur, Cerro Campamento and the Leonor vein at Cerro Silla Sur. Work during this period included surface prospecting, airborne and surface geophysics, diamond drilling and underground exploration development and sampling. Minera Aguilar's interest in the Property was eventually taken over by Minera Taguas and exploration activities were operated by Compañía Minera Piuquenes S.A. (Piuquenes).

In 2010 Compañía de Minas Buenaventura S.A.A. (Buenaventura) did a due diligence investigation of the higher grade sulfide gold-silver occurrences at Cerro Campamento and Cerro Silla Sur. Buenaventura conducted a re-logging and re-sampling program but did not execute new field work of its own.

From 2011 to 2013 Gold Fields Limited (Gold Fields) explored sulfide mineralization at Cerro Silla Sur, Cerros Taguas and Cerro Campamento under a joint venture (JV) agreement with Piuquenes. Gold Fields executed re-logging, re-sampling, data verification, drilling and assay quality assurance and quality control (QA/QC) work.

Piuquenes re-started exploration activities on the Property following the Gold Fields JV. In 2016 Piuquenes began to focus on the definition of oxide gold-silver mineralization at Cerro Taguas Norte, Cerro Taguas Sur, Cerro III and Cerro IV (i.e. Cerros Taguas).

In 2019, Orvana entered into an Asset Purchase Agreement to acquire the Taguas Property from Minera Taguas and filled a NI43-101 Preliminary Economic Assessment Report on Taguas, which is available on www.sedar.com.

Between February and March 2021, 4,689m of diamond drilling were undertaken: 17 drillholes in Cerros Taguas, 2 in Cerro Campamento and 1 southeast of Cerro Silla Sur. On May 21, 2021 all the requisite steps to transfer ownership of the Taguas property to Orvana Argentina S.A. were completed.

Drilling and Sampling

Nearly 56,600 m of drilling has been carried out on the Property. Drill programs have been carried out by Minera Aguilar, Piuquenes, Gold Fields and Orvana. Most of the drilling has been diamond core drilling; however, Piuquenes drilled 28 reverse-circulation holes (3,524 m) testing oxide gold-silver mineralization during the 2015-2016 and 2016-2017 field seasons.

Samples from the Minera Aguilar campaigns were prepared and analyzed at an in-house laboratory in Mendoza with limited intra-laboratory check assays at Mina Aguilar and the El Indio Mine in Chile. Beginning during the 2007-2008 field season, Piuquenes began to formalize chain of custody and assay QA/QC procedures and have samples prepared and analyzed at the internationally accredited Alex Stewart lab in Mendoza.

Gold Fields had check-samples of historic drilling, and original samples from its drill program prepared at ALS Chemex in Mendoza, then assayed by 50 g fire assay and ICP AES and ICP MS at the ALS Chemex lab in Lima. The Gold Fields assaying, and re-assaying used a rigorous QA/QC program to control gold and silver assaying.

Following the Gold Fields program, sampling and re-sampling programs conducted by Piuquenes and Orvana from 2013 to 2021 were prepared and assayed by 50 g fire assay at Alex Stewart in Mendoza and used formal QA/QC protocols to control gold and silver assaying.

Two exploration drifts were driven by Aguilar in the 1980s and 1990s. The drifts were located at Cerro Campamento and at Cerro Taguas Norte and Cerro Taguas Sur. The exploration developments at Cerro Taguas Norte and Cerro Taguas Sur were rehabilitated and re-sampled by Piuquenes in 2018, and assay data from this re-sampling program is included in the Mineral Resource estimate.

Piuquenes submitted 33 drill core samples to Alex Stewart for wax-sealed, water immersion bulk density determination.

Since 2007, drilling, sampling, sample security, sample preparation and analysis have been of sufficient standard to allow for Mineral Resource estimation for the Taguas Project. Re-surveying and re-sampling and assaying programs, including re-sampling of underground development at Cerro Taguas Norte and Cerro Taguas Sur, executed by Piuquenes, have been carried out to similar standard bringing confidence in the quality of data from legacy drilling and sampling programs to sufficient standard to support Mineral Resource estimation.

Data Verification

Dr. Joseph Kowalik has conducted several site visits to review drilling and core logging since September 2015. In August 2017, Dr. Kowalik visited the site with Mr. R. Simpson to review drill core and logging with the Taguas Project team. From February 14th to February 16th, 2018, Dr. Kowalik and Mr. Simpson visited the site to inspect drill platforms, review drilling, sampling and logging protocols, review drill core, and scout potential locations for Project infrastructure.

The 2021 drilling campaign was supervised by Raúl Alvarez, since mobility restrictions implemented by the Argentine government due to the COVID-19 pandemic prevented Dr Kowalik and Mr. Simpson from entering the country. From February 8th to February 28th, 2021 and from April 16th to April 18th, Mr. Alvarez visited the site to inspect drill platforms, review drill core, drilling, sampling and logging protocols.

The process of data verification indicates that the data collected by Orvana and previous operators adequately reflect deposit dimensions, true widths of mineralization, and the style of the deposits, and adequately support the geological interpretations for the purpose of Mineral Resource estimation. Mr. Simpson is of the opinion that the database quality is adequate for the purposes of the estimation of Mineral Resources, and for Inferred Mineral Resource confidence classification.

Metallurgical Testwork

In 2018 column and bottle roll testing was carried out at Plenge Laboratory in Lima, Peru. The column charges were generated from samples taken during the Piuquenes underground re-sampling program in early 2018. The composites for the metallurgical program had a head assay of 0.6 g/t Au and 39.9 g/t Ag.

The column tests consisted of irrigation of 55 kg of material crushed to 12.5 mm and 6.25 mm and irrigated in a 5 m column with cyanide solution for 23 days.

The column with feed crushed to nominally minus 12.5 mm achieved 87% gold extraction and 52% silver extraction with most of the extraction occurring in the first 10 days of irrigation. This column test was used to establish the estimate of gold and silver recovery for the Taguas PEA.

The Plenge metallurgical testwork program is appropriate to support preliminary estimates of gold and silver recovery from the oxide gold-silver mineralization at Cerro Taguas Norte, Cerro Taguas Sur, Cerro III and Cerro IV using the proposed crushed and agglomerated heap leach flowsheet for the Taguas PEA.

Mineral Resource Estimation

Mineral Resource estimates of the gold-silver-copper mineralization at Cerros Taguas, Cerro Silla Sur, and Cerro Campamento were carried out by R. Simpson in the second quarter of 2021.

The resource estimate for the Cerros Taguas deposit used samples from 90 diamond drill holes, 28 reverse circulation holes and 135 channel chip samples taken from underground exploration cross cuts. Bulk insitu density is estimated from a database of 33 wax-sealed water immersion density determinations.

The resource estimate for Cerro Silla Sur was based on intercepts from 24 core holes and the estimate for Cerro Campamento on intercepts from 38 drill holes. Wireframe models of the mineralized structures were created using a minimum mining width of 1.5m. For both deposits, grades were interpolated by inverse-distance weighting to the third power (ID3) using vein-width composites diluted to the minimum mining width.

The geological model for Cerros Taguas consists of three-dimensional wireframes of nine high-grade structures modeled from underground exposures and drill hole intersections, inside a low-grade envelope constructed by Indicator Kriging a 0.1 g/t AuEq envelope. AuEq has been calculated using the differential of gold and silver metal prices and metallurgical recovery. A base-of-oxide surface was modelled from logs of drill core and RC chip logging.

Grades were interpolated separately for the high-grade domains and the low-grade envelope and combined into 5 m x 5 m x 5 m blocks using the tonnage of high- and low-grade domain in each block. Grades were interpolated using inverse distance weighting to the third power (ID3) and validated using a nearest neighbour model.

Mineral Resources were assessed to be of the Inferred confidence category due to the spacing and quality of the information used to construct the geological models defining the high-grade domains, the low-grade envelope, the depth of oxidation, and to estimate the bulk insitu density and gold and silver grades of the mineralization.

The estimate was prepared using industry standard techniques and has been validated for bias and acceptable grade-tonnage characteristics. There are no other known factors or issues that materially affect the estimate other than normal risks faced by mining projects in Argentina in terms of environmental, permitting, taxation, socio economic, marketing and political factors. GeoSim is not aware of any legal or title issues that would materially affect the Mineral Resource estimate.

Gold equivalent (AuEq) values were based on assumed metal prices of $1700/oz Au, $20/oz Ag, and $3.25/lb Cu.

AuEq = Au(g/t) + Ag(g/t) *0.0118+Cu*1.311

Input parameters for cut-off grade determination are presented in Table 0-1.

Table 1-1: Cut-off Grade Determination

Item	Units	Underground	Open Pit Oxide	Open Pit Sulfide
Gold price	US$/oz	$1,700	$1,700	$1,700
Silver Price	US$/oz	$20.00	$20.00	$20.00
Copper Price	US$/lb	$3.25		$3.25
Gold Recovery	%	90%	87%	90%
Silver Recovery	%	60%	52%	60%
Copper Recovery	%	90%		90%
Mining cost	US$/t milled	$60.00	$2.00	$2.00
Processing cost	US$/t milled	$9.00	$6.00	$9.00

Item	Units	Underground	Open Pit Oxide	Open Pit Sulfide
G&A	US$/t milled	$29.00	$4.00	$4.00
All-in Cost	US$/t milled	$98.00	$12.00	$15.00
Cut-off Grade	g/t AuEq	2.0	0.25	0.30

Mineral Resource Statement

Table 1-2 presents the Inferred Mineral Resource estimate for the Cerros Taguas gold-silver-copper. The cut-off grade used for oxide material is 0.25 g/t AuEq. The cut-off grade used for sulfide material is 0.30 g/t AuEq.

Table 1-2: 2021 Cerros Taguas Inferred Mineral Resource Estimate

Material Type	COG AuEq	Tonnes 000's	Au g/t	Ag g/t	Cu %	AuEq	0z Au 000's	0z Ag 000's	Cu M lbs
Oxide	0.25	54,993	0.35	12.1	0.00	0.49	619	21,429	0
Sulfide	0.30	76,362	0.25	6.4	0.18	0.56	606	15,639	305
Combined		131,355	0.29	8.8	0.11	0.53	1,225	37,068	305

Cerros Taguas Notes:

1. Mineral resource estimate prepared by Mr. R. Simpson, P.Geo., of GeoSim Services Inc. with an effective date of June 30,2021. Mineral Resources are classified using the 2014 CIM Definition Standards.
2. Gold equivalent (AuEq g/t) calculations were based on assumed metal prices of $1,700/oz Au, $20/oz Ag, and $3.25/lb Cu. Cu. AuEq = Au(g/t) + Ag(g/t) *0.0118+Cu*1.311.
3. Cut-off grades are 0.25 g/t AuEq for oxide material and 0.30 g/t AuEq for sulfide material.
4. An optimized pit shell was generated using the following assumptions: metal prices/recoveries in Note 2 above; a 45° pit slope; mining costs of $2.00 per tonne, processing costs of $5.20 per tonne in oxide and $9.00 per tonne in sulfide. General & administrative charges of $1.50 per tonne. All amounts are expressed in US dollars.
5. Totals may not sum due to rounding.
6. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

Approximately 9% of the contained Au ounces and 6 % of the contained Ag ounces at the base case cut-offs were within the high-grade domains. Less than 0.1% of the contained Cu in the sulfide zone was within the high grade domains and they accounted for less than 0.3% of the volume.

The following tables present the Inferred Mineral Resource estimates for the Cerro Silla Sur and Cerro Campamento vein deposits stated at a cut-off grade of 2 g/t AuEq.

Table 1-3: 2021 Cerro Silla Sur Inferred Mineral Resource Estimate

Material Type	Tonnes	Au g/t	Ag g/t	Cu %	AuEq g/t	Contained Metal		
						0z Au	0z Ag	Cu M lbs
Oxide	228,100	3.30	42.9	0.00	3.80	24,186	314,391	
Sulfide	521,900	3.07	64.5	0.35	4.28	51,446	1,081,773	4.0
Total	750,000	3.14	57.9	0.24	4.14	75,632	1,396,163	4.0

Table 1-4: 2021 Cerro Campamento Inferred Mineral Resource Estimate

Material Type	Tonnes	Au g/t	Ag g/t	Cu %	AuEq g/t	Contained Metal		
						0z Au	0z Ag	Cu M lbs
Oxide	242,580	5.50	45.8	0.00	6.04	42,919	356,888	
Sulfide	1,278,750	3.73	40.6	0.55	4.94	153,392	1,667,534	15.6
Total	1,521,330	4.01	41.4	0.47	5.12	196,311	2,024,422	15.6

Cerro Silla Sur and Cerro Campamento Notes:

1. Mineral resource estimate prepared by Mr. R. Simpson, P.Geo., of GeoSim Services Inc. with an effective date of June 30, 2021. Mineral Resources are classified using the 2014 CIM Definition Standards.
2. Gold equivalent (AuEq g/t) calculations were based on assumed metal prices of $1700/oz Au, $20/oz Ag, and $3.25/lb Cu. AuEq = Au(g/t) + Ag(g/t) *0.0118+Cu*1.311
3. Cut-off grade is 2 g/t AuEq.
4. Vein models were diluted to a minimum width of 1.5m.
5. Totals may not sum due to rounding.
6. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

Mineral Reserve Estimation

There are no Mineral Reserves for the Taguas Project.

Interpretation and Conclusions

- **Geology and Mineralization**

The oxide gold-silver mineralization at Cerros Taguas is hosted in felsic volcanic tuffs and is typical of supergene-oxidized high-sulfidation epithermal gold-silver mineralization. The regional and deposit-scale geology and controls on mineralization are sufficiently well understood to permit the construction of geological models and estimation of Mineral Resources for the oxide mineralization at Cerros Taguas.

The Inferred Mineral Resources consist of oxide and sulfide mineralization at Cerros Taguas, Cerro Silla Sur, and Cerro Campamento. At Cerros Taguas the mineralization is open to the north-east and south-west and has potential for expansion. At Cerro Silla Sur, and Cerro Campamento the mineralization remains open along strike and down dip.

The potential for deeper porphyry-style mineralization also exists as an exploration target on the Taguas Property.

- **Metallurgical Testwork**

The metallurgical testwork carried out in 2018 indicate that heap leach gold recovery of 87% and silver recovery of 52% are achievable by processing the oxide gold-silver mineralization at Cerros Taguas with a crushed and agglomerated heap-leach flow sheet. The 2018 testwork program was appropriate to produce preliminary gold and silver recovery estimates given the mineralization type and proposed process flow sheet. Further testwork is required to understand the impact of process feed variability on gold and silver recovery and flowsheet trade-off study is required to further define the process flow sheet.

No metallurgical work has yet been carried out on material below the oxide zone.

- **Mineral Resource Estimate**

Geosim has prepared an updated Mineral Resource estimate for the Taguas Project. The following observations and conclusions were drawn:

- The adequacy of sample preparation, security and analytical procedures are sufficiently reliable to support an Inferred mineral resource estimation and that sample preparation, analysis, and security are generally performed in accordance with exploration best practices at the time of collection.
- The resource estimate is based on analytical data from 240 drill holes representing 53,130m of drilling. Nineteen of these holes (4,189m) were completed in the most recent drill program executed in 2021.
- Statistical analysis of gold grade distribution indicates that cutting or capping of high grades is warranted.
- There is significant potential for expanding the current resource and for discovering additional gold deposits on the Property.

Risks and Opportunities

The project economics are reasonably robust to gold and silver grade; however, there is uncertainty and risk in the tonnage and grade estimates of the Inferred Mineral Resources, and preliminary gold and silver recovery estimates. These risks will be addressed in the scope of work for site investigation and study engineering as the project advances.

Areas of uncertainty that may materially impact the Project's potential economic viability or continued viability include:

- Commodity price assumptions
- Assumptions that all required permits will be forthcoming
- Metallurgical recoveries
- Mining and process cost assumptions
- Ability to maintain permitting and environmental license conditions and the ability to maintain the social license to operate.

There is up-side potential to the Inferred Mineral Resource estimate of oxide and sulfide gold-silver mineralization at Cerros Taguas. Opportunities may be realized with exploration for economic gold-silver mineralization below, and peripheral to the Inferred Mineral Resource and additional drilling could extend the footprint of the present Mineral Resource.

Recommendations

- **Oxide in Cerros Taguas**

A three-phase work program is recommended for the Oxide Gold-Silver Project in Cerros Taguas:

A first phase consisting of a Preliminary Economic Assessment (PEA) based on Oxide type Inferred Mineral Resources in Cerros Taguas, updated in this report.

A second phase consisting of a drilling program to accomplish the following objectives:

- Infill drilling at Cerros Taguas to improve confidence in the continuity of mineralization and to support potential upgrade in Mineral Resource classification categories.
- Geotechnical and hydrogeological drilling to support pre-feasibility mine design.

A third phase consisting of a pre-feasibility study (PFS) is recommended following completion of the first phase drilling program. The PFS would consist of geotechnical field investigations for surface infrastructure, metallurgical testing and PFS study engineering.

- **Phase 1; PEA Update**

Based on the current resource estimations, proceed to update the Preliminary Economic Assessment (PEA) of the project. The PEA study could be expected to take from four to five months to complete. The estimated cost to complete the PEA is approximately USD 0.6 M, including metallurgical testing and engineering studies.

- **Phase 2: Infill Drilling Program**

The objective of the drilling program is to support estimation of Indicated Mineral Resources. Holes will be designed to define the true width and grade of the high-grade domains at distances of 70 m to 90 m between drill holes and improve the model of the depth of the oxidized zone.

Geotechnical drilling is also proposed to support pit design for pre-feasibility studies. Where possible the geotechnical drill holes can be designed to be used in Mineral Resource estimation.

The infill drilling program could begin in November once snow has melted and access to site can be re-established. The fieldwork program could be completed in five to six months including re-establishment of camp, mobilization of drilling crew, execution of field work, assaying, geological modeling and Mineral Resource Estimation.

The estimated cost to complete the drill program is $ 11 M including drilling contracting, platform and access construction, geology supervision, core logging, sampling, assaying, geological modeling, mineral resource estimation, owner's cost, and camp costs during the execution of the program.

- **Phase 3: Pre-Feasibility Study**

Once results from the Phase 2 drilling program and resource model updates are available, a pre-feasibility study is recommended for the Taguas Project. Scope for the PFS is expected to comprise geotechnical field investigation for Project facility location and infrastructure design, a metallurgical test work program including large column leaching and mineralization characterization, updated resource modelling, followed by PFS study engineering. Key trade-offs to be considered in the PFS include:

Infrastructure site locations

Process flow-sheet trade off study

Throughput analysis

The geotechnical fieldwork component of the Phase 3 PFS Study program could be executed in parallel with the Phase 2 drilling program, during the spring and summer field season, but the study engineering work would be executed once the Mineral Resource estimate was complete in late spring. The PFS study engineering could be expected to take from six to nine months to complete. A PFS study report would be the PFS study deliverable; NI 43-101 Technical Report would be produced to support disclosure of results of the PFS.

The estimated cost to complete the PFS Study work program is $ 2M including geotechnical field work supervision, metallurgical testing, and engineering studies.

- **Cerro Campamento & Cerro Silla Sur**

Resource definition drilling is also recommended in order to potentially expand the Mineral Resources at Cerro Campamento and Cerro Silla Sur, in the vicinity of the currently identified gold-silver mineralization in Cerros Taguas. This would be designed to maintain an optimal pipeline of projects development in the Property.