EXPLORATION & MINING CONSULTING

TECHNICAL REPORT ON THE DON MARIO OXIDE STOCKPILE PROJECT, EASTERN BOLIVIA 2020

San Juan Canton
Chiquitos Province
Bolivia

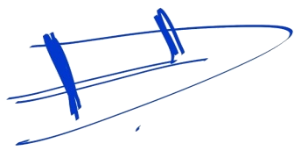
Prepared for: Empresa Minera Paititi S.A.
Edificio Centro Empresarial Equipetrol, Piso 3, oficina 301
Santa Cruz de la Sierra, Bolivia
Effective Date: September 30th, 2020
Report Date: December 29th, 2020

Prepared By:
Gino Zandonai, M.Sc.
C.P., Mining Engineer
DCGS Exploration and Mining Consulting

Date and Signature Page

The effective date of this technical report is September 30th, 2020.

"Original signed and stamped by"



Gino Zandonai, M.Sc., C.P. (CRISCO #0155), Mining Engineer, Date: December 29th, 2020
DGCS Exploration and Mining Consulting

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1.0 Summary

1.1 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 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 a sulphidization 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 circuits to recover the gold, silver and copper contained in the Oxide Stockpiles.

Table 1.1 Oxide Stockpile Mineral Reserves (exclusive of in situ) – September 30, 2020

Proven							
Location/Zone	**Tonnage**	**Grade**	**Grade**	**Grade**	**Contained Metal**	**Contained Metal**	**Contained Metal**
	(000 t)	**(g/t Au)**	**(% Cu)**	**(g/t Ag)**	**(000 oz Au)**	**(t Cu)**	**(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	**2032**	**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.*

1.2 Technical Summary

1.2.1 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").

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.

1.2.2 Existing Infrastructure

Surface and underground 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

1.2.3 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

1.2.4 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.

1.2.5 Mineral Resources

Table 1.2 Oxide Stockpile Mineral Resources – September 30, 2020

Measured							
Location/Zone	**Tonnage**	**Grade**	**Grade**	**Grade**	**Contained Metal**	**Contained Metal**	**Contained Metal**
	(000 t)	**(g/t Au)**	**(% Cu)**	**(g/t Ag)**	**(000 oz Au)**	**(t Cu)**	**(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
Total	**2184**	**1.84**	**1.89**	**49.3**	**129.0**	**41282.6**	**3461.2**

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 out of the Oxide Stockpile are not reported in this Technical Report.

1.2.6 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 Sulphidization. Mineral Reserves are summarized in Table1.3

Table 1.3 Oxide Stockpile Mineral Reserves – September 30, 2020

Proven							
Location/Zone	**Tonnage**	**Grade**	**Grade**	**Grade**	**Contained Metal**	**Contained Metal**	**Contained Metal**
	(000 t)	**(g/t Au)**	**(% Cu)**	**(g/t Ag)**	**(000 oz Au)**	**(t Cu)**	**(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
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DM5 (Dolomite Oxide)	192	1.86	1.64	48.7	11.5	3,149	300.4
Total	**2032**	**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.*
3. *Mineral Reserves (exclusive of in situ). Numbers may not add due to rounding.*

1.2.7 Mining Methods

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

1.2.8 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)

1.2.9 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.

1.2.10 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.

1.2.11 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.

1.2.12 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***

1.2.13 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.

1.2.14 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.

2.0 Introduction and Terms of Reference

2.1 Scope of Reporting

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.

The purpose of this report is to review, the metallurgical work done in 2020 that justified the use of the Sulphidization process to recover the copper, gold and silver contained in the Oxide Stockpile. Ores extracted from the depleted UMZ deposit. This Technical Report was prepared in accordance with both NI 43-101 - Standards of Disclosure for Mineral Projects and the Canadian Institute of Mining, Metallurgy and Petroleum's Definition Standards on Mineral Resources and Mineral Reserves.

The Company plans to complete 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 start the commercial production.

This Technical Report uses primarily metric measurements, with the exceptions of ounces ("oz") and pounds ("lbs").

The currency used is U.S. dollars ("USD" or "$").

2.2 Sources of Information

Site visits has been carried out by DGCS, Qualified Person Gino Zandonai, QP, MSc. Mining, on various occasions during 2008, 2009, 2010, 2015, 2016, 2017, 2018 and 2019. DGCS is responsible for all the sections of this technical report. The Consultant of DGCS is an independent qualified person for the purposes of NI 43-101.

In 2020 it was not possible to field visit specifically to see the metallurgical tests, G. Zandonai was in remote contact,

Mr. Zandonai was responsible for reviewing and updating the mineral resources and reserve models for the UMZ, LMZ, LT and CF deposits as well as the stockpile inventory of the Don Mario Complex since 2016, until the AIF –FY2019 report dated December 27th, 2019.

2.3 List of abbreviations

Units of measurement used in this report conform to the metric system. All currency in this report is US dollars (US$) unless otherwise noted.

Table 2.1: Listing of Abbreviations and Conversions

a	Annum	kWh	kilowatt-hour
A	ampere	L	litre
bbl	barrels	lb	pound
btu	British thermal units	L/s	litres per second
°C	degree Celsius	m	metre
C$	Canadian dollars	M	mega (million); molar
cal	Calorie	m^2	square metre
cfm	cubic feet per minute	m^3	cubic metre
cm	centimetre	µ	micron
cm^2	square centimetre	MASL	metres above sea level
d	Day	µg	microgram
dia	diameter	m^3/h	cubic metres per hour
dmt	dry metric tonne	mi	mile
dwt	dead-weight ton	min	minute
°F	degree Fahrenheit	µm	micrometre
ft	Foot	mm	millimetre
ft^2	square foot	mph	miles per hour
ft^3	cubic foot	MVA	megavolt-amperes
ft/s	foot per second	MW	megawatt
g	gram	MWh	megawatt-hour
G	giga (billion)	oz	Troy ounce (31.1035g)
Gal	Imperial gallon	oz/st, opt	ounce per short ton
g/L	gram per litre	ppb	part per billion
Gpm	Imperial gallons per minute	ppm	part per million
g/t	gram per tonne	psia	pound per square inch absolute
gr/ft^3	grain per cubic foot	psig	pound per square inch gauge
gr/m^3	grain per cubic metre	RL	relative elevation
ha	hectare	s	second
hp	horsepower	st	short ton
hr	hour	stpa	short ton per year
Hz	hertz	stpd	short ton per day
in.	inch	t	metric tonne
in^2	square inch	tpa	metric tonne per year

J	joule	tpd	metric tonne per day
k	kilo (thousand)	US$	United States dollar
kcal	kilocalorie	USg	United States gallon
kg	kilogram	USgpm	US gallon per minute
km	kilometre	V	volt
km^2	square kilometre	W	watt
km/h	kilometre per hour	wmt	wet metric tonne
kPa	kilopascal	wt%	weight percent
kVA	kilovolt-amperes	yd^3	cubic yard
kW	kilowatt	yr	year

3.0 Reliance on Other Experts

This report was prepared by DGCS for EMIPA and the information, conclusions and recommendations contained herein are based upon information available at the time of report preparation. This includes data and reports made available by EMIPA as well as publicly available reporting. Sources of such information are referenced in this report and are detailed in the References Cited section of the report. Information contained in this report is believed to be reliable, but parts of the report are based upon information not within the control of DGCS. DGCS have no reason, however, to question the quality or validity of data used in this report. Comments and conclusions presented herein reflect the authors' best judgment at the time of report preparation.

DGCS relied upon EMIPA with respect to provision of opinions and information regarding Bolivian mining law and regulations, mineral titles, surface titles and mineral agreements that pertain to the Don Mario operation. DGCS also relied upon EMIPA with respect to provision of opinions on site environmental liabilities and details of current status and nature of site environmental and production permits that exist for the Don Mario operation. Summarized information pertaining to these items that appears in this report was confirmed by EMIPA.

This report expresses opinions regarding exploration and development potential for the Don Mario operation as well as recommendations for further investigations and analysis. These opinions and recommendations are intended to serve as future guidance but should not be construed as a guarantee of success.

4.0 Property Description and Location

4.1 General

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”). (Figure 4.1).

The property includes:

- the UMZ deposit, depleted in 2017-2018;
- the LMZ deposit, where approximately 420,000 ounces were produced by principally underground mining methods from 2003 to 2009;
- the upper extension of the LMZ deposit already depleted in 2018
- the CF deposit, located 500m Northwest of the UMZ open pit, also depleted in 2019.
- the LT deposit, located 12 km from the Don Mario mine infrastructure and mined by open pit in 2009. A re-open new areas in 2019 but only for a short time period. Operations were closed in 2019

Figure 4.1: Location map of Don Mario Property

4.2 Land Tenure and Surface Rights

The following comments on land tenure and surface rights were summarized by EMIPA from Zandonai (2013). DGCS has relied upon EMIPA for provision of this information and is not providing a professional opinion in this regard. EMIPA has advised that all mineral rights, production and environmental titles and permits were in good standing at the effective date of this report and that all related regulatory obligations with respect to the Don Mario operation have been met.

The Don Mario district consists of 10 contiguous mineral concessions covering approximately 53,325 ha ("Property") (Figure 4.2 and Table 4.1). The Bolivian Government granted mining rights through legal instruments called "***Contratos mineros",*** mining contracts. The government of Bolivia has enacted a regulation of these mining contracts. EMIPA has 10 mining contracts signed with the Bolivian state, it is the second company with this type of contract conferring the right to explore, exploit, refine, and sell all mineral substances within the concession's borders. The Superintendent of Mines for the Department of Santa Cruz has granted EMIPA a 100% interest in the Mining Contracts (former Mineral ATES) listed in Table 4.1 and, as a result, EMIPA has all the required rights to develop, mine and market the minerals and metals within its boundaries. The cancellation or reversion, in favour of the State, of Mining Contract occurs only if (a) EMIPA does not fulfill its "social economic function" which is fulfilled with the development of mining activities or (b) EMIPA does not comply with the "economic social interest" by failing to pay the required annual mining patent (approximately $24 per unit for the first five years and approximately $48 per unit each additional year). EMIPA is fulfilling its social economic function and has paid the mineral Mining Contracts' fees for the 10 concessions.

The perimeters of the Mining Contract have not been surveyed or physically marked in the field with the exception of Point 1 of the Don Mario Mineral Mining Contract, which was surveyed with reference to the nearest National Topographic System datum point. The UMZ, LMZ and CF deposits are located in the Don Mario area.

Figure 4.2: EMIPA Mining Contracts and Contiguous areas

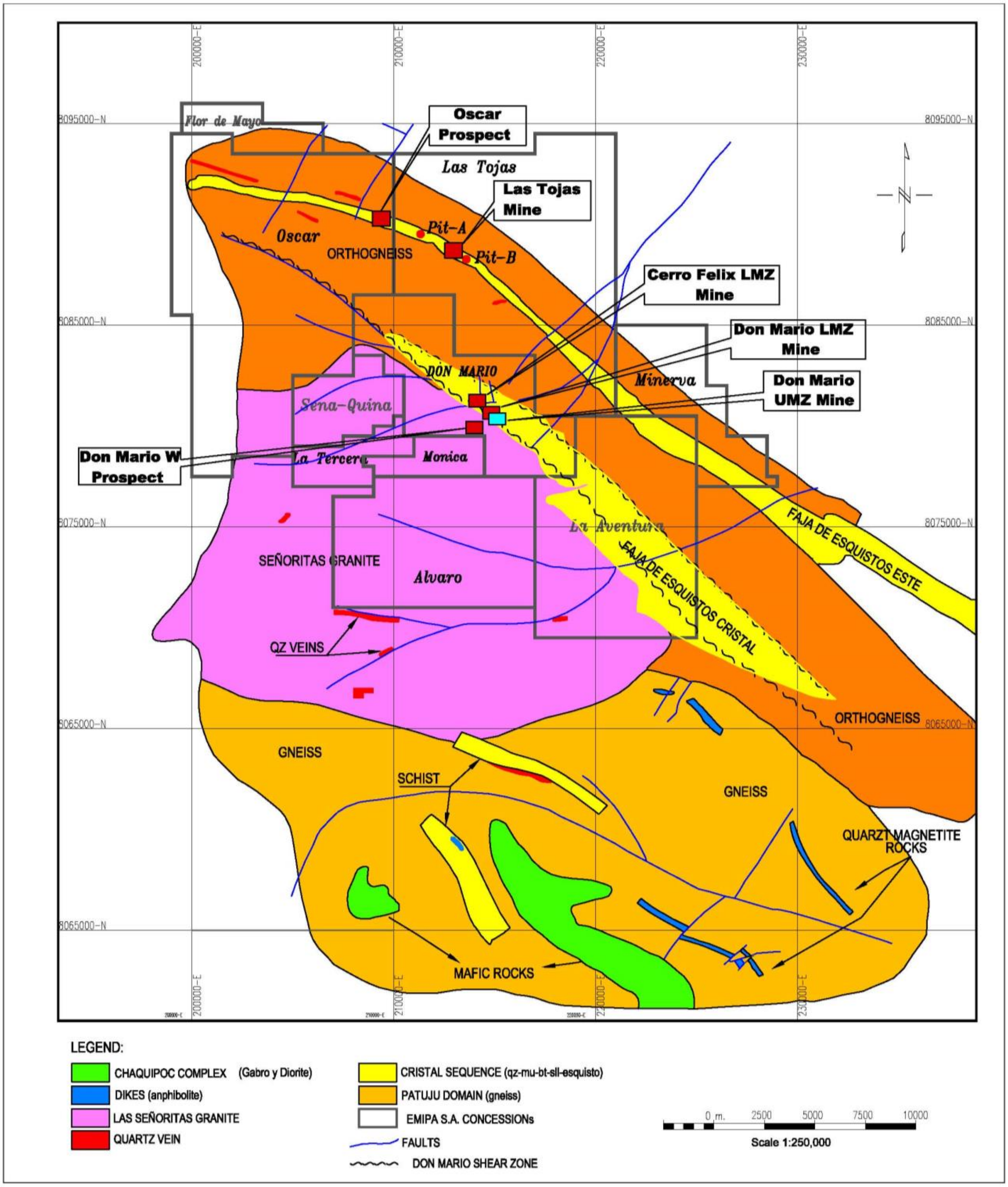


Table 4.1: EMIPA Mining Contracts at September 30, 2020

Mining Area	Area ha	Code Number	Mining Administrative Contract	Title Number	Ttile Holder
DonMario	5,300	1500013	AJAM/DDSC/CAM/9/2019 de 5/2/2019	79/2019 25/2/2019	**EMIPA S.A.**
Mónica	925	1500007	AJAM/DDSC/CAM/2/2019 de 5/2/2019	72/2019 25/2/2019	**EMIPA S.A.**
LaTercera	1,150	1500005	AJAM/DDSC/CAM/6/2019 de 5/2/2019	76/2019 25/2/2019	**EMIPA S.A.**
SenaQuina	1,825	1500018	AJAM/DDSC/CAM/3/2019 de 5/2/2019	73/2019 25/2/2019	**EMIPA S.A.**
Oscar	13,500	1500016	AJAM/DDSC/CAM/8/2019 de 5/2/2019	78/2019 25/2/2019	**EMIPA S.A.**
Minerva	3,225	1500015	AJAM/DDSC/CAM/7/2019 de 5/2/2019	77/2019 25/2/2019	**EMIPA S.A.**
FlorDeMayo	1,200	1500003	AJAM/DDSC/CAM/4/2019 de 5/2/2019	74/2019 25/2/2019	**EMIPA S.A.**
Álvaro	6,300	5356	AJAM/DDSC/CAM/ADEC/0025/2020	264/2020 - 20/11/2020	**EMIPA S.A.**
La Aventura	8,200	1500004	AJAM/DDSC/CAM/1/2019 de 5/2/2019	71/2019 25/2/2019	**EMIPA S.A.**
LasTojas	11,700	1500006	AJAM/DDSC/CAM/5/2019 de 5/2/2019	75/2019 25/2/2019	**EMIPA S.A.**

4.3 Mineral Exploration and Mining Rights in Bolivia

All mineral substances in Bolivia belong to the State. A mineral concession conveys to the owner of the concession the exclusive rights to carry out any or all of the following mining activities: prospecting and exploration, exploitation (mining), beneficiation of ores, smelting and refining, and marketing of minerals and metals. The Bolivian government, through the Mining Code, Law No. 535, recognizes mining activities to be projects of national interest and of public utility. This recognition gives preference to mining rights over other surface rights or competing economic interests such as forestry or agriculture. If necessary, a mine operator can use arbitration and expropriation procedures to acquire use, surface easements, or water rights owned by third parties, if such rights or easements are required to operate a mine.

In accordance with Articles 96 and 107 of the Mining Code, a concession owner is entitled to erect and construct within or outside his concession all the facilities and means of communication and transportation deemed necessary to carry out the activities permitted under the Mining Code. Within the perimeter of the concession, the concession owner may use the lands under public domain without charge, including extracting construction materials, timber and other materials from such lands.

The sale and purchase of public lands is administered by the National Service of Agrarian Reform, in accordance with the provisions of the National Agrarian Reform Law.

Articles 111 and 112 of the Mining Code address the waters freely in the public domain as well as waters that flow out of or through the concession. These surface waters are subject to the Law on Waters, the Environmental Law and other dispositions governing water resources.

A referendum at the end of January, 2009 approved the revised Bolivian constitution. Changes to governmental regulations concerning mining activities, environmental compliance, foreign ownership of property, and export controls and repatriation of profits are included in the new Constitution.

4.4 Implications of Bolivia's Mining and Metallurgy Law

On May 28, 2014, Law 535 of Mining and Metallurgy (the "New Mining Law") was promulgated. Pursuant to the 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 Mining Law does not make any substantial changes to the current tax and royalty regimes in relation to mining activities.

DGCS has relied upon this information provided by EMIPA for current report purposes and is not providing an independent professional opinion.

4.5 Environmental Liabilities

DGCS has been advised by EMIPA that all required environmental permits and related documentation are in place to allow present and currently planned future operation of the Don Mario site. It is understood that these include reference to eventual performance of detailed mine closure and site reclamation activities.

At the report date, DGCS was not aware of any environmental liabilities on the property that are not addressed under the terms of existing mining, milling and environmental permits. EMIPA has advised that all such material permits are in place to operate, and continue to operate, the Don Mario mine. DGCS is not aware of any other significant factors and risks that may affect access, title, or the right or ability to continue operation of the Don Mario mine, but is not providing a professional opinion in this regard.

4.6 Royalty

Production from Don Mario is subject to a 3% NSR payable quarterly. This expense totaled $0.1 million for fiscal 2020. The Bolivian government collects a mining royalty tax on the revenue generated from copper, gold and silver sales from Don Mario at rates of 5%, 7% and 6%, respectively. These amounts totaled $0.3 million for fiscal 2020."

5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Introduction

Information in this report section has been taken with only minor modification from the Wright et al. (2009) NI 43-101 technical report prepared by Amec for Orvana.

5.2 Accessibility

The Don Mario mining camp is located within the Don Mario mineral concessions and is easily accessible either by air, a distance of 380 km, by road, or a combination of rail and road, a distance of 458 km from Santa Cruz de la Sierra (Table 5.1). Santa Cruz de la Sierra is the Santa Cruz Department capital and has a population of approximately 2 million habitants and is serviced by an international airport, Viru Viru. The city of Santa Cruz de la Sierra can be reached by regularly scheduled international flights arriving at Viru Viru.

A 1,200m long gravel airstrip, suitable for light, twin engine, and short takeoff and landing (STOL) aircraft, is located 6 km southwest of the Don Mario camp. The airstrip is well constructed, but can be subject to damage from severe rainfall. Several air charter companies serve the region from the Trompillo civilian airport in Santa Cruz de la Sierra, and the journey to the camp takes approximately 60-90 minutes. Road travel from Santa Cruz de la Sierra is mainly along improved gravel roads and the 458 km journey takes 8 to 12 hours to complete. The access route can be classified into the four segments described in Table 5.1.

Table 5.1: Road Segment Distances ((From Alcalde, 2012)

From	To	Incremental Length	Cumulative Distance	Road Type
Santa Cruz de la Sierra	San Jose de Chiquitos	280 km	280 km	280 km paved, open year round
San Jose de Chiquitos	Taperas	42 km	322 km	42 km paved (rail-head at Taperas)
Taperas	San Juan	60 km	382 km	Improved gravel road
San Juan	Don Mario Camp	76 km	458 km	Improved gravel road

5.3 Climate

The climate is sub-humid tropical. Average monthly maximum temperatures range from 29ºC in July to 34ºC in October. Minimum average temperatures range from 16ºC in June to 25ºC in November. Annual rainfall is approximately 1,200 mm, mostly falling in sharp downpours during the rainy season between November and March. The annual evaporation is 1,600 mm, with daily rates ranging from 3.5 mm to 5.0 mm. Mining and exploration activities take place year round.

5.4 Local Resources

No permanent settlements exist within the concessions' perimeter. The nearest settlement is the village of San Juan (population 350), 76 km south. The largest settlement in the region is the local administrative centre of San José de Chiquitos (population 29,000). The local employees are hired from these and other nearby communities such as Robore (Zandonai, 2013). EMIPA's labor force as of September 30, 2019 consists of approximately 220 full time employees and approximately 201 contractors. At present, the labor force during care and maintenance transition period towards Oxide project was significantly reduced to approximately 30 technicians.

5.5 Infrastructure

Surface infrastructure at the Don Mario Complex include the following:

- Average 2,000 tpd. processing facility
- A tailings storage facility (TSF) and freshwater dam
- Modern 300 person camp facility, consisting of sleeping accommodation (both single, double and multiple occupancy types), recreation facilities, kitchens and lunch rooms.
- Shops, offices and warehouse facilities
- On site natural gas power plant and substation
- De-commissioned sulphuric acid plant
- Carbon in leach ("CIL") circuit
- Flotation circuit

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 sulphidization 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.

Other surface facilities include changing rooms, lunch rooms, clinic, warehouses, maintenance shops, electromechanical workshops, a laboratory, a core storage facility, and a complete telecommunication system providing phone lines and fast internet and intranet connections for the various offices.

5.6 Physiography

The Property is located near the central point of South America and at the northern limit of the Paragua Platte River drainage basin near the watershed divide with the Amazon River system to the north. The region is characterized by gently undulating terrain at an elevation range of 300 meters above sea level (masl) to 450 masl with a few local peaks, including Cerro Pelado. To the south and east, the relief is generally low, but with several peaks rising to over 500 masl. The peak of Cerro Pelado is at 424 masl and approximately 120 m above the Don Mario camp.

There are no perennial streams within 20 km of the Don Mario camp.

With the exception of Cerro Pelado, the area is thickly forested with deciduous trees, including timber varieties such as morado, tajibo and verdolaga. In contrast, Cerro Pelado is essentially bare of trees and vegetated with only scattered scrub and copper tolerant grasses. The region is part of the Chiquitano dry forest.

Local fauna includes tapirs, monkeys, wild pigs, and a variety of birds.

6.0 History

6.1 Introduction

Content of Section 6.0 has been taken with minor modification from the Wright et al. (2009) technical report by Amec, which was also extensively cited by Zandonai (2013), plus other applicable disclosure.

6.2 Summarized Property History

Cerro Pelado, also referred to as Cerro Don Mario, is the 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 explored by four companies (Table 6.1). This resulted in the discovery and/or delineation of the LMZ, the UMZ, CF, LT, and several other prospects within 20 km of the mine site.

Table 6.1: Summarized History of the Don Mario Property

Period	Operator	Phase
Colonial	Republican	Pre-industrial copper mining on Cerro Don Mario by local peoples and Jesuit missionaries
1988		British Mission geological survey carries out mapping in the Bolivian shield but does not reach Don Mario
1991-1993	La Rosa	Early exploration of the UMZ
1993-1995	Billiton	Billiton operates and funds a JV with La Rosa to explore the UMZ. Early drillholes discover the LMZ and exploration focus turns to the LMZ
1996	Orvana	Billiton JV is terminated and La Rosa sells Don Mario to Orvana, a TSE-listed junior exploration company. Orvana advances exploration of the LMZ
2002-2004	Comsur	Orvana attracts investment to develop the LMZ
2005-2006	EMIPA	Management assumed by Orvana. LMZ in full operation, exploration programs carried out on the UMZ
2007-2009	EMIPA	Exploration and initial investment are made to advance the Las Tojas and UMZ projects to production as the LMZ reserves are depleted

2010-2016	EMIPA	Investment to develop the UMZ, Acid Leach & Flotation, Oxides stock pile formed and made to advance the LMZ Pushback and Cerro Felix Project. UMZ reserves in situ are depleted
2016-2018	EMIPA	Investment and rebuild CI-CIC process for development LMZ Pushback, and exploration confirm resource in Cerro Felix & las Tojas
2019-2020	EMIPA	Cerro Felix & Las Tojas partial development and in situ reserves depleted. OSP (Stockpiles Project), continue improve. Started to Care & Maintenance Don Mario Facilities.

7.0 Geological Setting and Mineralization

7.1 Introduction

The following descriptions of geological setting and mineralization present at the Don Mario operation have been taken with local modification from descriptions in the Zandonai (2013) Technical Report by DGCS, which cites the Brisbois et al. (2003) technical report by AMEC as the original information source.

7.2 Geological Setting

7.2.1 Regional Geology

The Don Mario concessions are located within one of approximately twenty Lower to Middle Proterozoic schist belts in the Bolivian Shield (Litherland et al., 1986, Annels et al., 1986). The Bolivian Shield forms the southwestern edge of the Brazilian Precambrian Shield and has been subdivided into a Middle Proterozoic Paragua Craton, which is up to 270 km wide and is bordered by two parallel Middle to Upper Proterozoic orogenic belts: the Sunsas Mobile Belt along its western edge and the Aguapei Mobile Belt along its eastern margin. The entire Bolivian Shield was mapped by the British Mission in the 1976 to 1983 period with the results published as a series of 16 maps at 1:250,000; however because of the reconnaissance nature of the project, Cerro Don Mario was not investigated at that time.

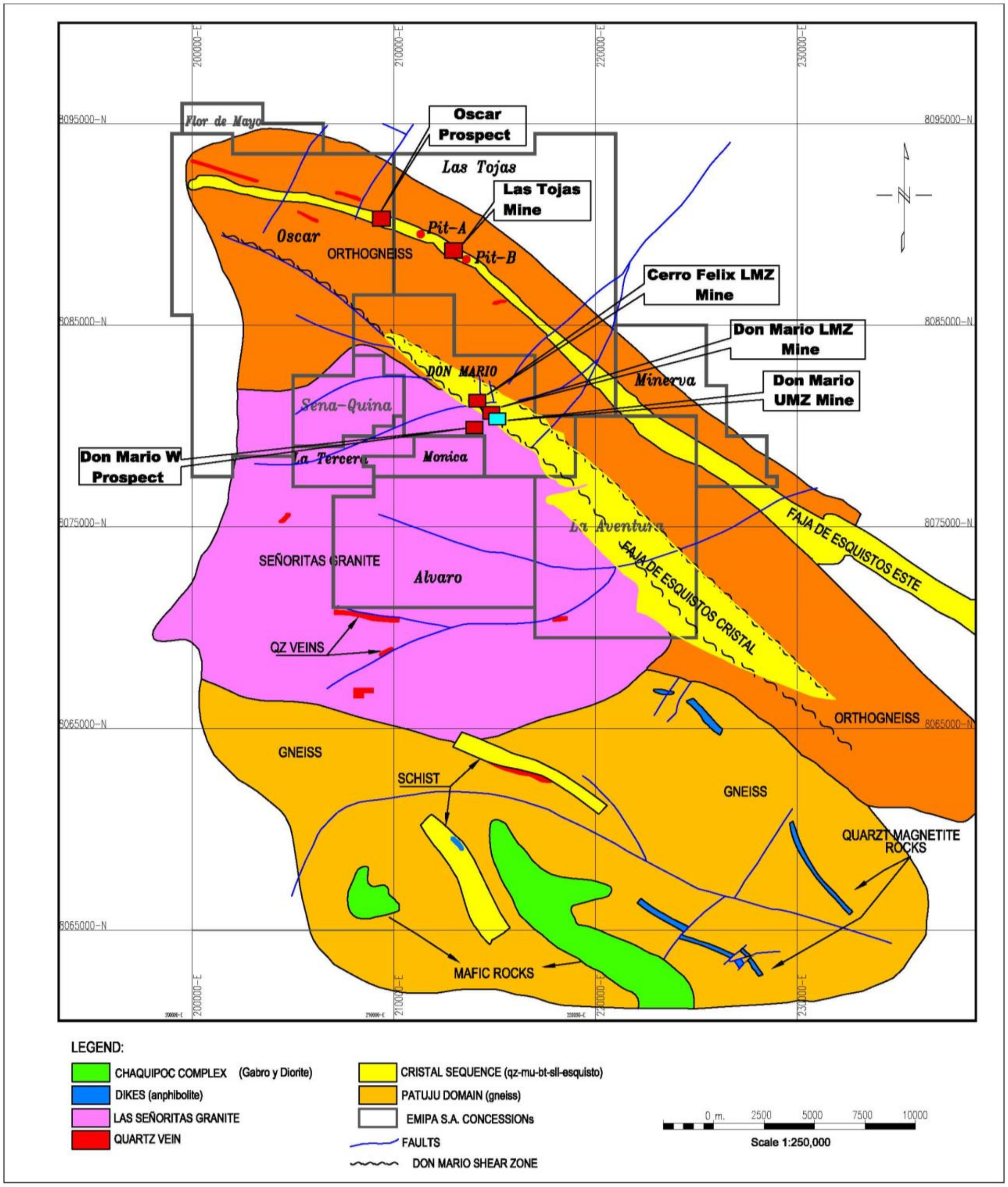
Remapping by the Bolivian Geological Survey, SERGEOMIN, in the 1990's provided more details of the region surrounding Don Mario (Curro, 1997). As shown in Table 6 1, the oldest rocks underlying the Paragua Craton are two metamorphic Lower Proterozoic Superunits: the Lomas Manechas Granulite Complex and the Aventura Complex.

Recent mapping has indicated that the Cristal Belt Sequence that hosts the Don Mario mineralization forms part of the Aventura Complex and is not one of the schist belts of the San Ignacio Supergroup to which it has been assigned in the past. The San Ignacio Supergroup outcrops in the form of discrete belts composed of quartzites, feldspathic psammites and micaceous schists or phyllites, with subordinate ferruginous, calc silicate, metavolcanic and graphitic rich units (Figure 7.1). In the south, many of the belts contain metamorphosed mafic igneous rocks. These belts are not regarded as true analogues of the classic Archean greenstone belts, which are predominantly multicycle, metavolcanic sequences cored by granite intrusions with subordinate metasedimentary rocks. The Bolivian schist belts are certainly younger and mainly sedimentary; however, like the greenstone belts that have been subjected to multiple periods of deformation, are generally surrounded by gneisses and granitoids, and appear to be favourable sites for precious metal mineralization (Litherland et al., 1986).

Table 7.1: Generalized Geology of the Bolivian Shield and Lithologies on the Property (From Curro, 1997)

~500 Ma Brasiliano Orogenic Cycle			
	Late to post tectonic intrusions		Las Señoritas Granite (994-1020 Ma.)
	Chaquipoc Complex		gabbro and diorite
		unconformity	
~1000 Ma	Late to Post tectonic Vibosi Group		
Sunsas Orogenic Cycle	Sunsas Group	Guanaco Fm. Peñasco Fm. Tacuaral Fm. Guapama Fm.	
~1300 Ma	El tigre Alkaline Complex Late to post kinematic granitoids		
		unconformity	
~1600 -1280 Ma	Syn-to late tectonic intrusions		Amphibolite Dykes/Sills
San Ignacio Orogenic Cycle	San Ignacio Schist Supergroup		~15 - 20 Schist Belt
		hiatus	
~1800 Ma Trans Amazonian Orogenic Cycle	Aventura Complex	Bahia Las Tojas Sequen	Meta-sandstone with quartzite and meta-arkose Muscovite schist
		Cristal Sequence	Biotite Schist Sillimanite Schist + LMZ Quartzite + LMZ Cal-Silicate gneiss + UMZ
		Patuju Domain	Banded orthogneiss Paragneiss
	Los Maneches Granulite Complex		Granulites
~2000 Ma			

Figure 7.1: Regional Geology of Don Mario Property



7.2.2 Property Geology

The property lies within the southeast margin of the Sunsas Mobile Belt of the Bolivian Shield, in a region characterized by highly deformed and metamorphosed Lower Proterozoic rocks of the Aventura Complex. The Property covers a series of northwest trending schist belts (Cristal Sequence), orthognesis (Patuju Domain) and a granite intrusive body within an area of approximately 25 km east west by 25 km north south (previous Figure 7.1).

The schist belts are part of the Cristal Sequence, which is characterized by a mixture of highly metamorphic assemblages of phyllites, psammites and quartzites with relatively minor calc silicate and ferruginous units. All are inferred to be metasediments that were folded and regionally metamorphosed to medium to high grade at about 1,350 Ma during the San Ignacio Orogeny. A large block, or mega boudin, of resistant calc silicate formed Cerro Don Mario. The most common lithologies are varieties of biotite schist, sillimanite schist, quartzite and calc silicate gneiss. The Cristal Sequence may be distinguished from the enclosing Patuju Domain biotite plagioclase gneisses by a characteristic air photo texture and the presence of mica schists and pegmatitic textures.

Four schist belts were mapped on or near the property. The two northern schist belts, the Eastern Schist Belt, also known as the Las Tojas Schist Belt, and the Cristal Schist Belt, are approximately 5 km apart and bounded by Patuju Domain orthogenesis. Both of these belts are part of the Aventura Complex. The 2 southern schist belts are south of the property. They are unnamed and are bounded by paragneiss of the Patuju Domain. The dominant structural trend is northwest.

As shown on Figure 7.1, the northwest trending Cristal Schist Belt is approximately 25 km in length and up to 4 km in width. It is composed of steeply dipping metamorphic strata, and hosts the LMZ and UMZ, as well as the Cerro Felix, Don Mario North and Don Mario South gold prospects. The Eastern Schist Belt, which hosts the Las Tojas deposit, is narrower, generally less than 1 km in width, but more than 40 km long.

The most detailed mapping of Patuju Domain orthogneiss has been in the area that separates the Cristal Schist Belt from the Las Tojas Schist Belt. These rocks are described as dominantly coarse grained K feldspar quartz muscovite biotite gneiss. Mineralogical banding is typified by segregation of phylosilicate minerals into bands of fine grained quartz and feldspar that alternate with coarse grained quartz and feldspar rich layers. K feldspar quartz muscovite biotite gneiss alternates with intervals of muscovite quartz K feldspar biotite schist. An anomalously high airborne radiometric signature of the gneiss is considered to be evidence of an intrusive protolith.

Separating the two southern schist belts and emplaced along the orthogneiss paragneiss contact is the Las Señoritas Granite (Table 7.1). The 994 1,020 Ma intrusive is a medium grained leucocratic mass and is 10 to 15 km in diameter. In contrast to the enclosing rocks, it commonly exhibits weakly developed schistosity. Some workers have observed that it is predominantly composed of quartz, plagioclase, muscovite and biotite. Potassic feldspar is far less abundant than in true granite indicating classification should be in the range of tonalite to granodiorite. Although granite outcrops have been mapped within 400 meters of the Cristal Schist Belt, the Las Senoritas Granite has not been positively identified in drill core from the Property.

The property has been extensively intruded by amphibolite dykes and sills. In addition, a series of intermittent outcrops of Cretaceous silica breccia dykes that follow a well-defined east west trend coincide with the northern termination of the Las Señoritas Granite. These are not represented in Figure 7.1 but commonly form small hills rising above the surrounding area of low topographic relief. Numerous narrow, subvertical amphibolite dykes which crosscut the schist sequence also occur in the area covered by Figure 7.1 but are not individually identified in the figure.

The British Mission mapped the San Diablo Structure, a major regional shear that reaches up to 5 km in width and parallels the Cristal Schist Belt approximately 20 km to the north of Don Mario (Litherland et al., 1986). A segment of this feature that crosses the Don Mario property has subsequently been designated as the Sunsas Shear Zone. This regional structure is interpreted to subdivide into multiple subparallel shear zones and strike slip faults. One of these passes along the length of the Cristal Schist Belt and has been designated as the Don Mario Shear Zone. In the vicinity of the Don Mario deposits, the this shear zone is approximately 700 m wide, strikes northwest, and associated planar fabrics shows near vertical to 80º northeast dips.

Based on geological relationships mapped in the underground and open pit exposures at Don Mario, Orvana staff interprets the age of the mineralization in the Don Mario deposits to be no older than the San Ignacio Orogeny and no younger than the Las Señoritas granite.

7.3 Mineralization

7.3.1 Introduction

Four principal mineral deposits on the Don Mario property have contributed to commercial mining operations to date. The most significant of these are the UMZ and LMZ. The CF deposit is located 500 meters northwest along strike from the LMZ and UMZ and supported a limited amount of open pit mining from 2009 to 2011. All occur within the Cristal Schist Belt and the Don Mario Shear Zone. Orvana also mined LMZ style mineralization from the Las Tojas (LT) deposit during the 2009 to 2011 period. This deposit is located about 12 km northwest of Don Mario mine and is associated with an un-named shear zone within the Eastern Schist Belt that is separate from, but parallels, the Cristal Schist Belt (Figure 7.1). Summary points relating to the main gold-copper-silver deposits of the Don Mario property are highlighted below:

Don Mario Shear Zone (Cristal Schist Belt)

- LMZ gold deposit: mined out predominantly by underground methods in 2009.
- UMZ copper-gold-silver deposit: overlies the LMZ.
- CF gold deposit: 0.5 km north of LMZ and UMZ; saw limited open pit production from 2009 to 2011; CF was a low copper grade and high gold grade deposit amenable for the CIL plant.

Unnamed Shear Zone (Eastern Schist Belt)

- LT gold deposit – mined out in 2011 & 2019
- Oscar gold prospect northwest of LT has not been thoroughly tested by drilling and trenching to date
- In addition to the known deposits, several geophysical and geochemically defined targets for exploration drilling have been identified along the 40 km length of this schist belt

7.3.2 Don Mario UMZ (Modified after Wright et al. (2009)

The UMZ forms a prominent, oval shaped, treeless hill that is oriented at approximately 315º, parallel to the regional shear fabric trend of the Cristal Schist Belt. The mineralized zone plunges northwest at approximately 15º.

The UMZ has been divided into 9 main rock types, the most prevalent of which are calc-silicates such as diopside tremolite rock and massive tremolite rock plus dolomite/ophicalcite and talc schist. The logging codes and rock types used by Orvana for the UMZ are presented below in Table 7.2.

Table 7.2: Core Logging Lithocodes Common to UMZ

Deposit Area	Orvana Core Logging Lithocode	Rock Description
UMZ	51	Chlorite serpentine talc schist
UMZ	62	Dolomite/ophicalcite rock
UMZ	64	Diopside tremolite rock
UMZ	65	Massive tremolite rock
UMZ	67	Talc schist
UMZ	71	Amphibolite
UMZ	91	Quartz vein/pervasively silicified zone
UMZ	44	Tremolite magnetite rock (LMZ lithology)
UMZ	16	Quartz muscovite biotite schist (Don Mario intrusive)

The main UMZ calc silicate bearing zone is approximately 500 m long and forms the Cerro Don Mario, which is a ridge approximately 120 m high. This rock package has a maximum horizontal width of approximately 150 m and ranges from 5 m to 100 m thick. Part of the magnesio-silicate alteration and UMZ mineralization is weathered and is divided into four mineralization zones based on mineralogy:

- The Porous zone is characterized by vuggy cavities left by the dissolution of calcite and locally abundant masses of white and orange brown amorphous zinc carbonates and hydroxides, including smithsonite.

- The Oxide zone is characterized by abundant malachite with lesser chrysocolla, azurite, native copper, cuprite, pitch-imonite, and silver sulfosalts

- The Transition zone features traces of pyrite, bornite, sphalerite, and galena with weathered limonite and chalcocite coatings, as well as minor copper oxides

- The Sulphide zone consists of dark green tremolite with bornite, chalcopyrite, and sphalerite. Gold and silver grades are associated with chalcopyrite and bornite mineralization.

For current report purposes, the Porous zone, if not expressly cited otherwise, is included in any general discussions of the Oxide zone.

8.0 Deposit Types

8.1 Introduction

The two main deposits types present on the Don Mario property are exemplified by the copper-dominated UMZ deposit that shows direct association with a large, hosting calc-silicate zone, and the gold-dominated LMZ deposit that occurs beneath the UMZ and shows direct association with shearing focused silicification, calc-silicate, potassic and iron oxide alteration. The LT and CF deposits are similar in style and association to the LMZ but no substantive additional examples of the UMZ style have been identified on the property to date.

Mining and exploration programs to date on the property have shown that the LMZ occurs within 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 anthophylllite-cummingtonite that occur in highly strained, steeply dipping mineralized corridors. The current spatial disposition of the LMZ and UMZ deposits may be of structural derivation, with the calc-silicate dominated and synclinally folded UMZ host sequence representing a shearing-associated “flower structure” located structurally above the sheared LMZ (L. Isla Moreno, personal communication, 2015).

8.2 Other Possible Deposit Models

Original workers on the Don Mario property variously characterized mineralization at the Don Mario deposit as being structurally focused, shear zone related or to be of volcanogenic massive sulphide association. As noted above 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,. The deposit was more recently classified by Arce Burgoa (2009) as being a deformed example of the Iron Ore Copper Gold (IOCG) association.

DGCS notes that original stratigraphic and intrusive relationships on the property have been substantially modified by development of regional deformation and metamorphism imprints, as well as by shearing that occurred along the Don Mario Shear Zone. These factors combine to make the assignment of most applicable deposit models difficult.

9.0 Exploration

9.1 Introduction

A summary of all exploration carried out to date on the Don Mario property was presented earlier in Section 6.0. This included all work carried out prior to acquisition of the property by Orvana in 1996, as well as point form summaries of work completed during the Orvana period. A summary of exploration work carried out by Orvana between 1995 and 2009 was presented by Wright et al. (2009), with this being built on summaries presented in preceding technical reports. Exploration activities carried out subsequent to 2009 was summarily noted in Zandonai et al. (2013) and also in internal Orvana documents. By means of the past NI 43-101 technical reports for the property, descriptions of the majority of past exploration have already been publicly disclosed on SEDAR. Therefore, the reader is directed to Wright et al. (2009) and Zandonai (2013) for original detailed reviews of such activities and results. For current report purposes, the major components of previously reported exploration work programs have been highlighted below in bulleted format. Brief descriptions of exploration programs carried out by Orvana since the last more detailed exploration description in the technical report prepared by Amec, as found in Mercator (2015) have also been included in chronologic sequence.

Exploration throughout the Don Mario concessions between 1995 and 2019 included:

- Regional airborne geophysics
- Prospecting with line cutting and mapping
- Soil, stream-sediment, rock-chip and trench sampling
- Ground geophysical surveys of induced polarization (IP) and magnetometer surveys
- Exploration reverse-circulation (“RC”) diamond drilling.

EMIPA systematically expanded the coverage of prospecting, geochemical and geophysical surveying, trenching, and diamond drilling outward from the core of the Don Mario property to include the LT project, Don Mario North and Don Mario South, Cerro Felix and the La Aventura areas Figure 7.1 and Table 9.1: Work was focused on the northern and southern extensions of the Cristal Schist Belt, as defined by results of the regional airborne magnetometer survey by Orvana. In 2009, over 200 km of dipole-dipole Induced Polarization (IP) surveying was carried out at approximate 250-m line spacing along the length of the Eastern Schist Belt (Figure 7.1). Drill targets were identified in this program as areas of strong chargeability reponse with associated moderate to high appearent resistivity responses. The chargebility component is interpreted as reflecting alteration zone disseminated sulphides, while the high resistivity reponse is attributed to potential silicification and/or massive calc-silicate alteration.

Table 9.1: Exploration Work on the EMIPA's Property

Work	Don Mario LMZ	Don Mario UMZ	Las Tojas	Cerro Felix	Don Mario North	Don Mario South	Cerro Cristal	La Aventura	Minerva	Oscar	Other 5 Areas
Regional airborne Magnetometer S	X	X	X	X	X	X	X	X	X	X	
Regional Stream Sediment Geoche	X	X	X	X	X	X	X	X	X	X	X
Regional Topography Lidar Survey	X	X	X	X	X	X	X	X	X	X	X
Mapping	X	X	X	X	X	X	X	X	X	X	X
Soil Geochemistry	X	X	X	X	X	X	X	X	X	X	
Rock Chip Geochemistry	X	X	X	X	X	X	X	X	X	X	X
Ground Magnetometer	X	X	X	X	X	X			X	X	
Induced Polarization	X	X	X	X	X	X			X	X	
Trenching	X	X	X	X	X	X	X	X	X	X	
RC Drilling	X	X	X	X	X	X				X	
Diamond Drilling	X	X	X	X	X	X			X	X	
Underground Drifting	X										
Pit for Bulk Sample	X	X	X	X							

In 2012, EMIPA drilled 2 holes that targeted IP anomalies in the LMZ and UMZ. Only one hole, DM 302, intercepted significant mineralization in the upward projection of the LMZ. This body is included in the UMZ mineralized envelope with 90% of that mineralization now considered in the reserve estimate.

In 2014 EMIPA drilled 12 core holes that targeted geophysical and geochemical anomalies in the Don Mario South, Las Tojas & Oscar Concessions. None of these holes returned significant mineralization.

In 2015 EMIPA completed a diamond drilling program consisting of 36 holes at the Cerro Felix deposit, 12 holes in the Don Mario LMZ and 2 holes in the LT deposit. Significant mineralization was intercepted in each area. The CF core drilling program was followed up by estimation of mineral resources for the CF deposit by Mercator in 2015, results of which were disclosed by Orvana by a press release dated September 30, 2015 and are documented in this technical report (originally documented in the Mercator (2015)).

During fiscal year 2016, the Company identified a great outcrop of granite located approximately 500 to 1000 meters west of Don Mario mine, which appears likely to have a gold mineralization in quartz veinlets. Very low soil anomalies and gold values have been identified in soil samples and 1.0 g/t Au in panned concentrate. The Company hopes to find potential in the (señoritas granite) intrusive and in the past has concentrated on the crystal schist same of Don Mario with high grade gold content. Prior to fiscal year 2016, some samples were collected in this area which denote a low anomaly in gold and base metals (Pb & Zn).

During fiscal years 2017 to 2019 EMIPA or the company was concentrate to explore a eastern schist belt with soil geochemical survey, and drilled near to 17,600 meters and identify thin a small ore body was confirmed to near a 1.0 M ton resource. In Las Tojas and Oscar Area.
In first quarter 2020 GEOSENSE carried out a regional remapped using a remote sensing and LIDAR survey in total mining contracts, finding new targets, based in structural and geology pattern.

9.2 Exploration Potential

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.

10.0 Data Verification

10.1 Site Visits by DGCS – September, 2019

10.1.1 September, 2019 Site Visit Summary

A site visit to the Don Mario mine was carried out in September of 2019 by G. Zandonai of DGCS. He was accompanied by L. Isla of EMIPA. The purpose of the visit was to support DGCS's review of the oxide stockpile mineral resource and reserve model, as set out in the original project scope of work and the data verification checks previously performed by Mercator. Mr. Luis Isla, Technical Services Manager of Geology and Planning at the Don Mario operation, provided primary technical and professional guidance during the visit, supported by other EMIPA management, professional and technical staff.

11.0 Mineral Processing and Metallurgical Testing

11.1 Introduction

The most recent information on mineral processing and metallurgical testing at Don Mario was presented in DGCS (2016) NI 43-101 report. The following summary descriptions were taken from that report and updated as required with technical and production information provided by Orvana.

Historically, gold and silver from the LMZ were leached with cyanide in a CIL circuit and a gold doré was produced, due to the higher gold grades and lower copper and silver grades associated with the LMZ as compared to the UMZ. Average historical recoveries achieved from the CIL were over 80%. The CIL circuit was placed on care and maintenance in December 2020 when the Company commenced mining the metallurgically more complex UMZ. EMIPA has been evaluating metallurgical alternatives to process the Oxide Stockpile, involving different international metallurgical consultants, concluded that a sulphidization circuit would maximize the value of the stockpile. Results of a metallurgical testing program undertaken by the Company indicate potential gold recovery

The Company plans to complete 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.

11.2 Mineralization

The predominant copper minerals in stock oxide are Chrysocolla, Malachite, Azurite, Cu-Fe Oxides, with minor bornite, chalcocite, digenite and tetrahedrite. Lead and zinc are present as their sulfides, galena and sphalerite. Non-sulphide gangue is composed of calc-silicate schists, containing clay, mica and complex calcium/magnesium silicate minerals (Diopside, Tremolite, Actinolite etc.)

Gold is present as free gold, electrum and calaverite and is associated with chalcopyrite and pyrite. Silver is present in the sulfosalt tetrahedrite and native silver has also been documented. Galena, pyrite and sphalerite occur in association with tetrahedrite. Bismuth is present as bismuthinite and commonly shows association with galena and sphalerite.

11.3 Mineral Processing and Metallurgical Testing

The Don Mario processing facility processed in the past ores from the UMZ, LMZ, CF and LT mines and can process 708,750 tonnes per annum (tpa) on a run of mine ROM basis, depending on the ore type. The feedstock was comprised of UMZ and LMZ sulphides and transition ores as well as ore from the stockpiles. Ore produced by the mine was transported to the processing plant which is capable of running at a throughput rate of 2,000 tonnes per day (tpd) using CIL-CIC process.

The process plant as is currently configured has been in operation since early 2016 when the CIL-CIC circuits were improved and updated.

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.

12.0 Mineral Resource Estimates

12.1 Introduction

The definition of mineral resource and associated mineral resource categories used in this report are those recognized under National Instrument 43-101 and set out in the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves *Definitions and Guidelines* (the CIM Standards) as well as disclosure requirements of National Instrument 43-101. All the Don Mario deposits LMZ, UMZ and CF have been depleted in 2019.

Since the Don Mario Mines stopped the mining activities due to the depletion of its mines, the only current mineral resources model is the stockpile ore mined from the UMZ deposit, and this material was estimated or upgraded geostatistical by Mercator and DGCS (2015 and 2016). In the previous NI 43-101 by Amec, Mercator and DGCS all the procedures were explained in details.

Mineral resources are considered to have reasonable expectation for economic development by sulphidization methods based on metallurgical test, resource amounts and metal grades, and current metal pricing.

12.2 Oxide Stockpile Mineral Resource Inventory

The scope of analysis is limited to the Oxide Stockpile Project. Resources outside of the Oxide Stockpile are not reported in this Technical Report. See table 12.1

Table 12.1 Oxide Stockpile Mineral Resources – September 30, 2020

Measured							
Location/Zone	**Tonnage**	**Grade**	**Grade**	**Grade**	**Contained Metal**	**Contained Metal**	**Contained Metal**
	(000 t)	**(g/t Au)**	**(% Cu)**	**(g/t Ag)**	**(000 oz Au)**	**(t Cu)**	**(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
Total	**2184**	**1.84**	**1.89**	**49.3**	**129.0**	**41282.6**	**3461.2**

Notes:

1. *CIM definitions were followed for Mineral Resources 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 Resources are estimated using average long-term prices of $1,700 per ounce, copper price of $3.25 per pound and a silver price of $20.0 per ounce.*
3. *Numbers may not add due to rounding.*

13.0 Mineral Reserve Estimates

13.1 Method of Estimation and Results

Mineral Reserves were estimated by DGCS, in conjunction with EMIPA personnel, for the Project. Mineral Reserve estimates as at September 30, 2020 were based on the updated metal recoveries considering the stockpile processing by Sulphidization. Mineral Reserves are summarized in Table 13.1

Table 13.1: Oxide Stockpile Mineral Reserves - September 30, 2020

Proven							
Location/Zone	**Tonnage**	**Grade**	**Grade**	**Grade**	**Contained Metal**	**Contained Metal**	**Contained Metal**
	(000 t)	**(g/t Au)**	**(% Cu)**	**(g/t Ag)**	**(000 oz Au)**	**(t Cu)**	**(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	**2032**	**1.85**	**1.89**	**49.3**	**120.9**	38,438	3,221.3

Estimated metal recoveries based on processing by sulphidization.

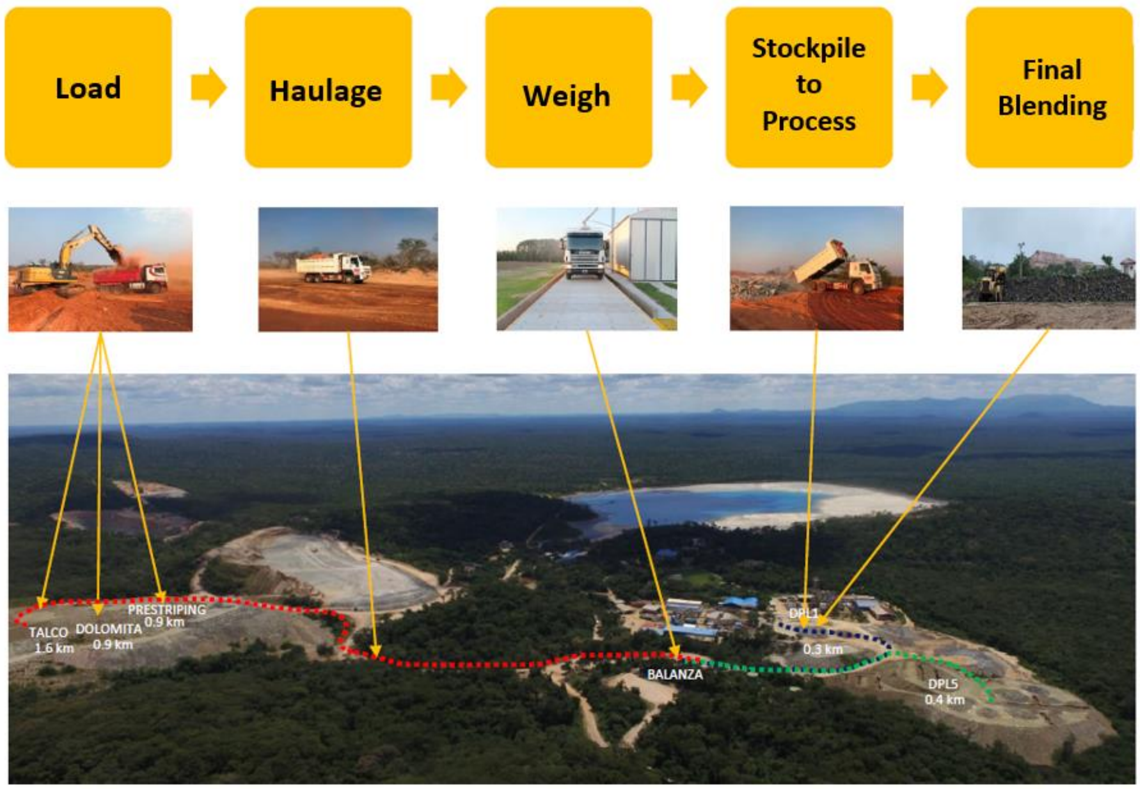
Notes

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.*
3. *Mineral Reserves (exclusive of in situ). Numbers may not add due to rounding.*

14.0 Mining Methods

The method of oxide stock exploitation will be based on the load and haulage the blended of different rock types with average grade for recovery of Au-Cu-Ag.

Figure 14. 1: Proposed flowsheet for Haulage



14.1 Introduction

The Don Mario's operation stopped in first quarter 2020 the exploitation. The mine Las Tojas, unit were mined by open pit method that produced a nominal average of 2,000 tonnes per day of ore of two material types – transitional and sulphides. Oxides ores were stockpiled during the mine life to recover at the end of the mine life the gold, copper and silver contents by another recovery method such as **"Sulphidization"**. The plant is in care being prepared to the modifications for the new processing method. During the implementation of the project, all the facilities that exist in the plant, tailings dam, camp and roads, etc. they have a care and maintenance plan in each area.

Table 14.1: Production Schedule

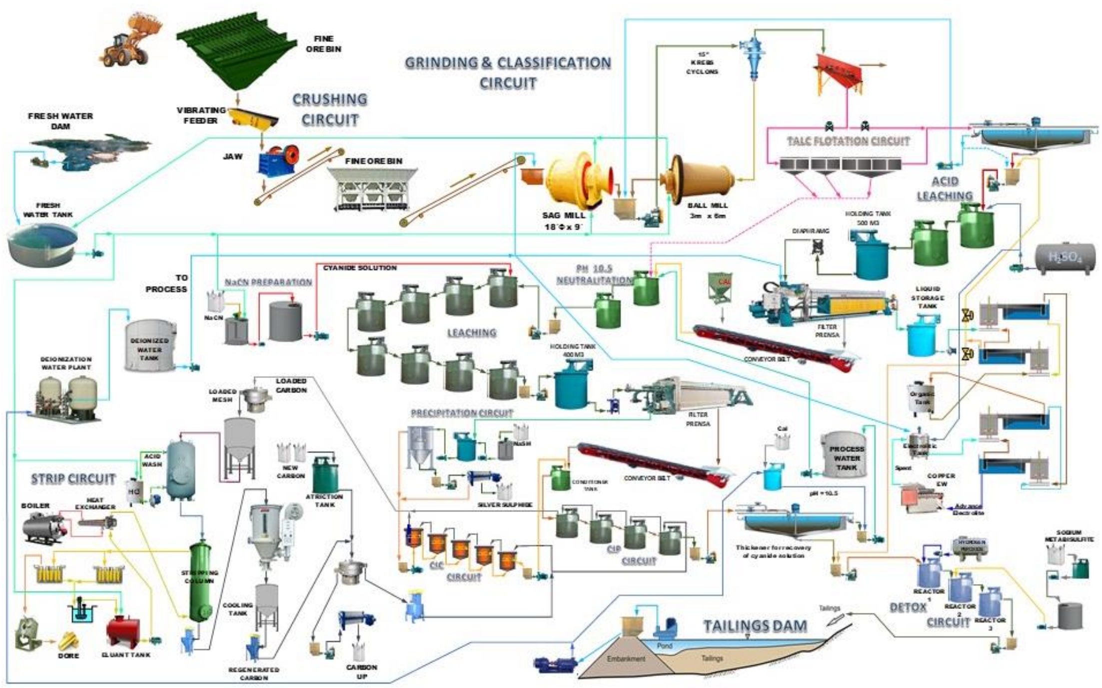
Period	FY-2022	FY-2023	FY-2024	FY-2025	Total
KTonnes	468.30	707.70	709.80	146.20	**2,032**
Au g/t	1.85	1.85	1.85	1.85	**1.85**
Ag g/t	49.32	49.32	49.32	49.32	**49.32**
Cu %	1.89	1.89	1.89	1.89	**1.89**

15.0 Recovery Methods

15.1 Introduction

Since 2018, the Company has been re-evaluating the economic potential of processing 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, from fiscal 2018, the Company has been evaluating metallurgical alternatives to process the Oxide Stockpile, involving different international metallurgical consultants, concluded that a sulphidization circuit would maximize the value of the stockpile. The Company plans to complete 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 start the commercial production. Figure 17.1 shows the proposed changes in the current plant.

Figure 15.1: Proposed Flowsheet of EMIPA's Plant



- 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)

The plant has a zero discharge system and both fresh and recycled water is used. Energy is supplied from the on-site natural gas power plant and is sufficient to maintain operations of all circuits.

15.2 Process Description

15.2.1 Introduction

A description of each unit operation is presented in this section. The process evaluated is the Sulphidization process, and includes the unit operations listed below.

15.2.2 Crushing & Grinding

Oxide mineralization will be ground in the existing mill grinding circuit to a grind size of 90% minus 150 mesh.

15.2.3 Talc Flotation

After the crushing and grinding, the pulp is sent to the Wemco flotation cells type for cleaning the talc contained. The “talc-rich” foam is further filtered and cleaned and bagged for future processing to recover the minerals contained.

15.2.4 Acid Leaching

The pulp from the thickener is mixed in a pump with barren solution until reaching a solids percentage of 33.3% and it is pumped out to two tanks where the pulp will be kept for a residence time of five hours. At this stage, sulfuric acid is added to the pulp up to reach a pH of 1.5 to 2. At this stage, at a doses of 75 kg /t (98% sulfuric acid) is added to dissolve the copper from the rock to produce copper sulfate, Other metals such as Zinc, Iron are also are also dissolved.

15.2.5 Filtering and Organic Solvent Extraction

The leached pulp is pumped into the filter press to obtain the filtered PLS which is pumped to the mixed solution tank. Next, deionized water is injected into the filter press to rinse the cake and the liquid obtained is pumped to the mixed solution tank where it mixes with the filtered PLS forming a mixed solution. The rinsed cake has a humidity of 20%. Before sending the mixed solution to Electrowinning, it must be purified and enriched until reaching a sufficiently high copper concentration that allows obtaining copper cathodes. Basically, the mixed solution goes to solvent extraction reactors where it is mixed with an organic solution in a 1: 1 ratio to selectively extract the copper. Then the organic phase is separated from the aqueous phase leaving the copper in the organic part. The remaining metals are not captured by the organic part, except for a portion of iron. To obtain copper in a rich solution, the charged organic is mixed with an acid solution containing 170 g of sulfuric acid / liter of solution in an organic / aqueous ratio equal to 2.5: 1 to liberate the copper from the organic phase. In this way it is possible to increase the copper concentration and the electrolyte obtained is sent to conventional electroplating cells. The lean mixed solution (refine) with low copper content is recirculated to the acid leaching circuit and a fraction goes to the Detox for disposal.

15.2.6 Electrowinning

The electrolyte obtained in the solvent extraction stage (charged electrolyte) will be fed to an electrolysis circuit to recover the dissolved copper. In this stage, copper is recovered by making cathodes with a purity of between 97 to 99%. The sterile electrolyte solution is sent back to the solvent extraction circuit to further recover the copper from the organic phase.

15.2.7 Neutralization

The filter cake is mixed with lime and sent to stirred tanks where the sterile solution from the CIP process is added, which was recovered in the thickener. The alkalinisation of the pulp ends when a pH value between 10.5 and 11 is reached.

15.2.8 Cyanide Leaching

The alkalized pulp is sent to leach tanks where a sodium cyanide solution is added to dissolve the gold, silver and even the residual copper from the acid leach. The pulp remains stirred for 16 hours in the set of tanks.

15.2.9 Filtering and Precipitation

The cyanided pulp is sent to a pressing filter obtaining a cake with a humidity of 20% and a filtered PLS that passes to a reactor where it is mixed with sodium sulphide to precipitate cement rich in silver sulphides which are stored in bags. After this stage, the sterile solution has less silver and is ready for the activated carbon gold recovery process.

15.2.10 CIC

To recover the Au, the sterile solution produced in the precipitation is sent to five columns of activated carbon. Each column, containing one ton of carbon, is arranged in series and with the carbon in countercurrent. The carbon captures the gold and is sent to the circuit strip and the sterile solution is sent to the CIP.

15.2.11 CIP

The cake produced from the press filter after cyanidation is mixed with the sterile CIC solution in stirred tanks (CIP) where a pulp is formed and activated carbon is added to adsorb the remaining metal for 4 hours. The loaded activated carbon is sent to the stripping and the tail to the Detox for cyanide destruction.

15.2.12 Circuit Stripping, Electrowinning and Foundry

The gold and silver loaded carbon from CIC and CIP is screened at # 24 t mesh. The bulk is sent to an acid wash, to get rid of contaminants that affect efficiency of the process such as organic waste, calcium, magnesium, carbonates and other elements. The desorption process is carried out at high temperature and pressure by a heating exchange device connected to a steam boiler. To desorb the carbon, a highly alkaline cyanide solution is needed to obtain a solution rich in Au and Ag. The depleted and remaining carbon is taken to the regeneration furnace for cleaning to recover it and finally to be used again in the circuit.

The rich solution in gold and silver from desorption process is sent to two electrolytic cells to complete the electrowinning process to recover the gold and silver on steel wool cathodes. Once the electrolysis is finished, the sludge deposited in the cells is harvested, filtered and dried and then mixed with fluxes, the mixture is melted in a tilting furnace at temperatures over 1230 [° C], after melting it is ingoted to produce Dore bars.

15.2.13 DETOX

The tailings of the process have high concentrations of Cyanide wad and in order to complain with all the applicable regulations. EMIPA has implemented a standard “detox” process of cyanide.

16.0 Project Infrastructure

16.1 Introduction

The Don Mario Operation 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 modern 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 sulphuric acid plant and a CIL circuit which has been recommissioned.

The Tailings Storage Facility (TSF) is located approximately 1.0 km to the northeast of the plant facility 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.

16.2 Existing Infrastructure

Surface and underground infrastructure at the Don Mario Operation include the following:

- Average 2,000 tpd. processing facility
- A tailings storage facility (TSF) and freshwater dam
- Modern 300 person camp facility, consisting of sleeping accommodation (both single, double and multiple occupancy types), recreation facilities, kitchens and lunch rooms.
- Shops, offices and warehouse facilities
- On site natural gas power plant and substation
- De-commissioned sulphuric acid plant
- Carbon in leach ("CIL") circuit which was recommissioned (the "CIL Project")

Figure 16.1: Aerial view of the Don Mario Infrastructure looking southwest

17.0 Market Studies and Contracts

17.1 Markets

The principal commodities at the Don Mario Oxide Stockpile Project 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 discussed below. EMIPA used metal prices of US$1,600 per ounce gold, US$3.00 per lb copper, and US$18 per ounce silver for defining mineral reserves.

Products include gold doré, copper cathodes and silver concentrate.

17.2 Contracts

EMIPA employs local contractors to assist with mining activities, providing site security and personnel transportation.

18.0 Environmental Studies, Permitting, and Social or Community Impact

18.1 Introduction

EMIPA has an environmental management plan based on regulatory requirements, company policies and procedures, preventive design and identified impacts and associated risks. The Don Mario site is fully permitted for on-going production and EMIPA has established effective relationships with the surrounding communities of San Juan, Buena Vista and Entre Rios. No significant changes have occurred with respect to these categories since reporting provided in Zandonai and DGCS (2016). The following summaries are sourced with minor modification from Zandonai and DGCS (2016).

18.2 Environmental Studies

Based on the Integrated Environmental License (IEL), monitoring at the Don Mario Project is carried out every six months, and includes assessment of the following environmental components: air, underground water, surface water (tailings dam and fresh water), noise, sediments, soils and vegetation. Surface water sampling is carried out at locations specified under the IEL and these are presented in Figure 18.1. Analytical services required in association with this monitoring program are provided by the Envirolab SRL through its Potosi, Bolivia operations. Envirolab SRL is an accredited, independent, commercial laboratory services firm certified to ISO9001 (ITA and ENG) standards.

Monitoring results are presented annually to the environmental authority (Environmental Ministry, Mining Ministry and Autonomous Departmental Government of Santa Cruz). Orvana has advised that to date, results for all monitored elements have consistently fallen within permissible limits, save for iron in some surface water testing points. Anomalous iron in surface water was documented through the Environmental Base Line Audit for the Don Mario operation and continued comparable results have not been considered problematic by Bolivian environmental authorities.

18.3 Project Permitting

The Don Mario operation is fully permitted as required under Bolivian legislation. EMIPA S.A. has obtained all the material permits to operate the mine, processing plant, and tailings storage facility and Table 18.1 lists the applicable permits. Orvana has advised that all permits and authorizations required to carry on mining and processing operations at the Don Mario site were in good standing at the effective date of this report. DGCS has not independently confirmed the status of the Don Mario environmental and operating permits listed in Table 18.1 and both firms have relied upon Orvana with respect to this status statement. However, neither firm has any reason at this time to doubt the permitting assertions made by Orvana.

Figure 18.1: Surface Water Monitoring Points at Don Mario operation

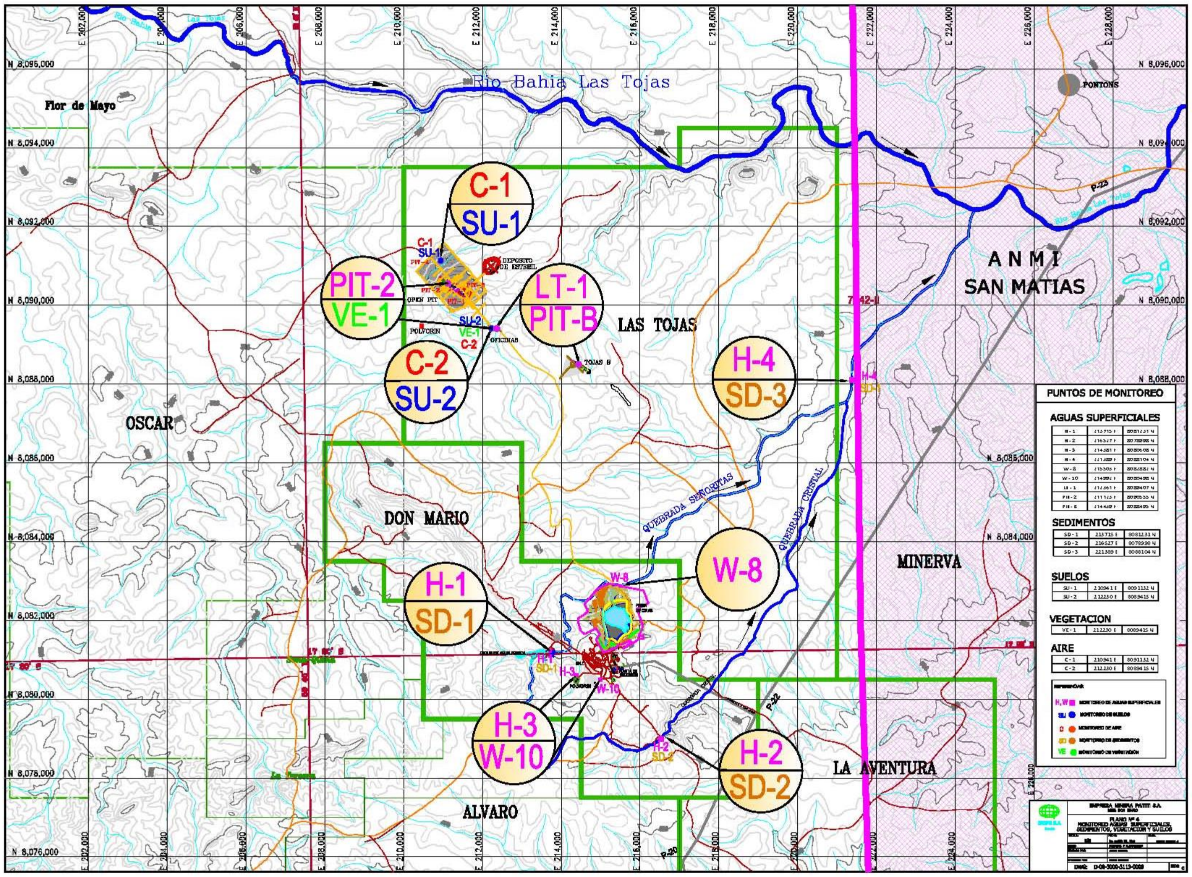


Table 18.1: Existing Permits for Don Mario Operation

Category	Permit Details
General	• Licencia Ambiental Integrada (Don Mario UMZ – Las Tojas) Nº 070501-02-DIA-1091/12. Resolución MMAyA-VMA-DGMACC-EEIA Nº 1091(a)/12. Febrero 2012 (Integrated Environmental License "IEL"). • Licencia Ambiental Proyecto Explotación Minera Cerro Félix Nº 070501/02/DIA/Nº8136/18. Enero 2018.
	• Licencia para la construcción y operación Línea Lateral o ramal de gas natural. Resolución Superintendencia Hidrocarburos SSDH Nº 0252/2002. Junio 2002 (Construction and Operation license for natural gas line).
	• Licencia Desmonte de Áreas. Resolución Superintendencia Forestal RU-ABT-SJC-PDM-na-148-2010. Proyecto UMZ. Agosto 2010 (Forest Removal Area License)
	• Uso de combustible diesel. ANH-Certificado de Gran Consumidor Nº ANH0076/GRACO02-CER01/2018 (Diesel usage permit). Agosto 2019.
Mine	• Certificado de Registro Actividades con Explosivos. Resolución Ministerio de Defensa Nacional, Certificado Nº 0066/2020. Febrero 2020 (Certificate of Registration for Activities using Explosives
Plant	• Licencia instalación medidor de densidad (radiactivo). IBTEN-I-Nº-029-2015 (Radioactive density gauge) • Licencia instalación equipo XRF. IBTEN –I-Nº 08-2015 (License to install X-ray equipment)
Tailings Storage Facility	• TSF is included in the IEL
Water	• Water usage is included in IEL
Chemical/Hazardous Materials	• Licencia Actividades con Sustancias Peligrosas (LASP) actualizada. Resolución MMAyA Nº 070501-02-LASP-0363/13. Diciembre 2013 (Licensed Activities with Hazardous Substances)
	• Certificado de Inscripción Sustancias Controladas. Resolución Dirección General Sustancias Controladas Nº 3000-01239-027. Diciembre 2019 (Controlled Substances Registration Certificate)
Construction	• Included in the IEL Construction permit for works or ditches, around the camp, plant, mine and tailings storage facility

18.4 Social or Community Relations

EMIPA is committed to the social development and wellbeing, has supported the communities surrounding Don Mario Complex, so in the framework of its CSR program, of free will and without any obligation and as an action of good neighborliness, it has signed agreements to finance and support productive project undertakings with the aim of improving the quality of life of these communities.

18.5 Mine Closure Requirements

A study of the closure costs for the Don Mario mine based on historical LMZ underground mining, LT and UMZ, mine process-plant operations and tailings disposal was completed by Andes SAC Peru (Dennis Córdova, Ernesto Najar, Franco Sánchez 2016) and updated in 2018 and Cerro Félix was included. The asset retirement obligations (ARO) include waste-rock remediation, removal of mine-site buildings, mine closure, mine-water treatment, reforestation, tailings-dam rehabilitation, remediation of soil contamination and monitoring for 3 years. EMIPA reviews the ARO on an annual basis.

The current plan for the Don Mario district is to continue operating the plant by processing oxide stockpile ores. EMIPA will continue the mine-site reclamation according to the established Closure Plan.

19.0 Capital and Operating Costs Estimates

19.1 Capital Costs

The capital cost estimate for modification of the existing circuit to process the oxide ores with sulphidization process is 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 19.1.

Table 19.1 CAPEX's Breakdown - Oxide Stockpile Project

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

19.2 Operating Costs

The unit operating costs by processing the ores from the stockpiles, is estimated in an average of $93.1 per tonne See Table 19.2.

Table 19.2 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***

20.0 Economic Analysis

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. The calculation considers:

- Recoveries of 90% for gold, 71% for copper and 84% for silver.
- Oxide Stock head grade of 1.85 g Au/t, 1.90% Cu and 49.56 g Ag/t.
- Metal pricing of $ 1,600/oz for gold, $ 3.0/lb for copper and $ 18/oz for silver.
- Capital investment of $25.6 million dollars (without first filling of the circuit and taxes involved) to upgrade the current infrastructure of the plant.
- Unit Operating Cost of $93.1 $ per tonne.

Cash flow analysis of the Oxide Stockpile verified that Oxide Reserves shows positive economics of the Sulphidization proposed process which will extend the life of the operation three years.

21.0 Adjacent Properties

DGCS is not aware of any adjacent properties as defined by NI 43-101 that are pertinent to the content of this technical report.

22.0 Other Relevant Data and Information

DGCS is not aware of any other relevant data or information that is pertinent to the content of this technical report, inclusion of which is necessary to make this technical report understandable and not misleading.

23.0 Conclusions

23.1 Conclusions

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.

The current mineral reserve inventory of the oxide stockpile and the positive technical-metallurgical testing and economic evaluation, whose results provide justification for the application of the Sulphidization circuit process to the stockpiles, thus optimizing the overall metal recovery throughout the life of the stockpiles with low OPEX and CAPEX, (and using the full existing infrastructure of the plant plus some additions).

The overall recoveries supported by all the metallurgical testing are positive and promising, more specifically for the gold, where there is room to increase their recovery and reduce the cyanide consumptions.

Subject to the favorable completion of technical, economic and funding analysis, the OSP is expected to provide three full production years for Don Mario. These modifications request a **capital investment of $25,6 M** approximately (without first filling of the circuit and taxes involved). Cash flow analysis of the Oxide Stockpile verified that Oxide Reserves shows strong economics of the Sulphidization

24.0 Recommendations

DGCS makes the following recommendations based on the work programs described in this report.

24.1 Recommendations

DGCS has prepared the following recommendations with respect to advancement of the ore stockpile project of the Don Mario Operation. EMIPA's personnel has enough experience to achieve the proposed deadline to start up the project in the following months.

(1) Execute the project as suggested in the Gantt chart without lost time accidents and on time.

(2) Good planning, management and commissioning are the key factors to avoid delays. An implementation of a detailed QA/QC to monitor the construction and development of the project is essential.

(3) Supply delays can be an issue and specifically the reagents. Since some of the reagents are imported, permits and any legal issues should be addressed in advanced.

(4) Before the operation starts, implement in advance a sampling methodology to plan and manage the feeding of the ores that will start the processing of the stockpile. It is essential to have a full "mapping and knowledge" of the Stockpile by implementing and training the supervisors in charge of the loading of the ore at the stockpile area as well as at the crushing area.

(5) To 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 to EMIPA.

25.0 Statements of Qualifications

CERTIFICATE of AUTHOR

I, Gino Zandonai, M.Sc. Mining, CP, Mining Engineer, do hereby certify that:

1. I am an independent mining engineer and qualified person, residing at Espoz 5585, Comuna de Vitacura, Santiago, Chile, tel +56 (9) 97915596, email gino.zandonai@dgcs.cl. I am employed as managing director by DGCS SA.

2. I graduated in civil & mining engineering from the University of La Serena, Chile with a degree of Licenciado en Ciencias de la Ingenieria (B.Sc) in 1989, and from the Colorado School of Mines, Golden, Co, USA with a M.Sc. in Mining Engineering in 1999.

3. I am a Competent Person duly qualified in Estimation of Mineral Resources and Reserves (Record No. 0155) from the Examination Board of Competences in Mining Resources and Reserves of Chile, Law 20.235, subscribed to the Committee for Mineral Reserves International Reporting Standards (CRIRSCO #0155). I am a "qualified person" for the purposes of NI 43-101 due to my experience and current affiliation with a professional organization as defined in NI 43-101.

4. I have practiced my profession continuously for more than 25 years. Since 1989, I have continually been involved in minerals projects for precious and base metals and industrial minerals in Australia, Argentina, Chile, Bolivia, Peru, Mali, Botswana, Mauritania, Greenland, Finland, Sweden, Kyrgyzstan, Russia and Mexico. I have been involved directly in the preparation of feasibility studies and resource estimation of gold, copper and silver projects.

5. I have read the definition of "qualified person" set out NI 43-101and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

6. I am the qualified person responsible for preparation of the technical report titled "**Don Mario Oxide Stockpile Project (the "Project" or "OSP")**, Effective Date: September 30th, 2020".

7. I visited the mine on many occasions between years 2003 and 2019 for several days each time.

8. I am responsible for the preparation of all sections of the Technical Report.

9. I have had prior involvement with the property that is the subject of the Technical Report.

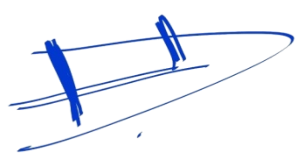
10. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

11. I am independent of EMIPA and Orvana Minerals Corp. as described in section 1.5 of NI 43-101.

12. I have read NI 43-101 and Form 43-101F1, and believe that this Technical Report has been prepared in compliance with that instrument and form.

13. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 29th Day of December, 2020



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DGCS SA - Exploration and Mining Consulting

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Appendix 1

Don Mario Stockpile Location Map