ORVANA MINERALS CORP.

ANNUAL INFORMATION FORM

FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2017

December 12, 2017

TABLE OF CONTENTS

Page

FORWARD-LOOKING STATEMENTS DISCLAIMER

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

Forward-looking statements relate to, among other things, the Company's ability to achieve improvement in free cash flow, the potential to extend the mine life of El Valle Mine (together with Carlés Mine, "El Valle") in Spain and Don Mario Mine ("Don Mario") in Bolivia beyond their current life-of-mine estimates, including specifically, but not limited to in the case of Don Mario, the completion of the major tailings storage facility expansion, the mining of the Cerro Felix deposit, the processing of the mineral stockpiles and the reprocessing of the tailings material; the Company's ability to optimize its assets to deliver shareholder value; the Company's ability to optimize productivity at El Valle and Don Mario; estimates of future production, operating costs and capital expenditures; mineral resource and reserve estimates; statements and information regarding future feasibility studies and their results; future transactions; future metal prices; the ability to achieve additional growth and geographic diversification; future financial performance, including the ability to increase cash flow and profits; future financing requirements; and mine development plans. Among other places, forward-looking statements are included in the section of this AIF headed "Description of the Business - Outlook".

Forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by the Company as of the date of such statements, are inherently subject to significant business, economic and competitive uncertainties and contingencies. The estimates and assumptions of the Company contained or incorporated by reference in this AIF, which may prove to be incorrect, include, but are not limited to, the various assumptions set forth herein or as otherwise expressly incorporated herein by reference as well as: there being no significant disruptions affecting operations, whether due to labour disruptions, supply disruptions, power disruptions, damage to equipment or otherwise; permitting, development, operations, expansion and acquisitions at El Valle and Don Mario being consistent with the Company's current expectations; political developments in any jurisdiction in which the Company operates being consistent with its current expectations; certain price assumptions for gold, copper and silver; prices for key supplies being approximately consistent with current levels; production and cost of sales forecasts meeting expectations; the accuracy of the Company's current mineral reserve and mineral resource estimates; and labour and materials costs increasing on a basis consistent with Orvana's current expectations.

A variety of inherent risks, uncertainties and factors, many of which are beyond the Company's control, affect the operations, performance and results of the Company and its business, and could cause actual events or results to differ materially from estimated or anticipated events or results expressed or implied by forward-looking statements. Some of these risks, uncertainties and factors include fluctuations in the price of gold, silver and copper; the need to recalculate estimates of resources based on actual production experience; the failure to achieve production estimates; variations in the grade of ore mined; variations in the cost of operations; the availability of qualified personnel; the Company's ability to obtain and maintain all necessary regulatory approvals and licenses; the Company's ability to use cyanide in its mining operations; risks generally associated with mineral exploration and development, including the Company's ability to continue to operate El Valle and/or Don Mario and/or ability to resume long-term operations at Carlés Mine; the Company's ability to acquire and develop mineral properties and to successfully integrate such acquisitions; the Company's ability to execute on its strategy; the Company's ability to obtain financing when required on terms that are acceptable to the Company; challenges to the Company's interests in its property and mineral rights; current, pending and proposed legislative or regulatory developments or changes in political, social or economic conditions, in the countries in which the Company operates; and general economic conditions worldwide. This list is not exhaustive of the

factors that may affect any of the Company's forward-looking statements and reference should also be made to the section of this AIF headed "Risk Factors" for a description of additional risk factors.

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

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

Cautionary Notes to Investors – Reserve and Resource Estimates

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

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

EXPLANATORY NOTES

In this AIF, references to "Orvana" or the "Company" mean Orvana Minerals Corp. and, unless the context requires otherwise, include the subsidiaries of Orvana. Unless otherwise noted herein, information in this AIF is presented as at September 30, 2017.

As at September 29, 2017, the last business day of the Company's fiscal 2017 year, the value of one Canadian dollar was 0.8013 in US dollars and the value of one Euro was 1.1806 in US dollars, according to the Bank of Canada and European Central Bank, respectively.

References in this AIF (i) to gold and silver in ounces mean fine troy ounces and are referred to as "ounces" or "oz", (ii) to copper are in pounds also referred to as "lb", (iii) to the "MD&A" are to the Company's Management's Discussion and Analysis dated December 12, 2017 in respect of the Company's fiscal year ended September 30, 2017 filed at www.sedar.com, and (iv) to NI 43-101 are to *National Instrument 43-101 – Standards of Disclosure for Mineral Projects*.

METAL PRICES TABLE

The following table sets forth the closing spot prices for gold, silver and copper as at September 30, 2017:

Metal	Price in US Dollars	Price in Euros at 1.1806 (3)
Gold per ounce (1)	$1,283.10	€1,086.82
Silver per ounce (1)	$16.86	€14.28
Copper per pound (2)	$2.94	€2.49

(1) For gold and silver spot prices, please refer to the London Bullion Market Association on www.lbma.org.uk.
(2) For copper spot price, please refer to the London Metal Exchange on www.lme.com.
(3) For exchange rate, please refer to the European Central Bank on www.ecb.europa.eu.

UNIT CONVERSION TABLE

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

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

CORPORATE STRUCTURE

Name, Address and Incorporation

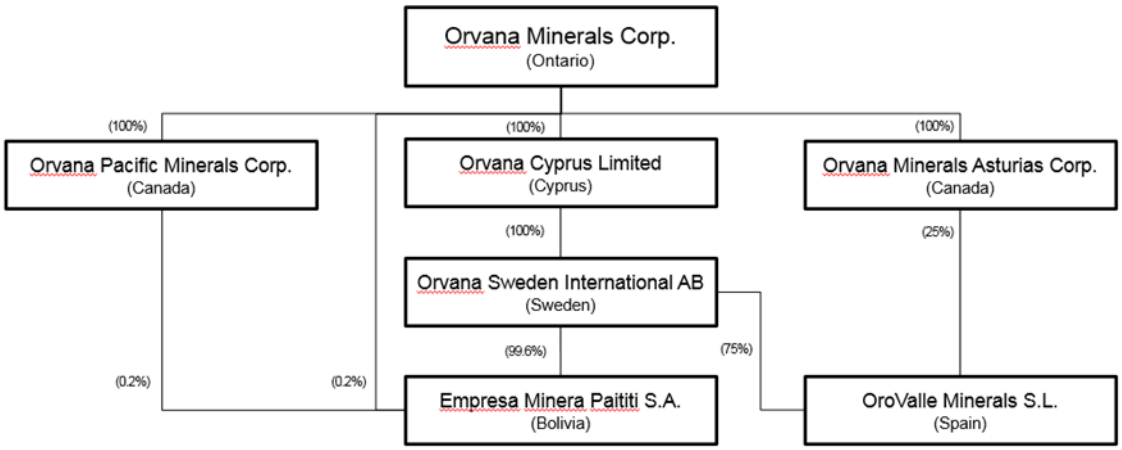
The Company was formed by the amalgamation of Pan Orvana Resources Inc. ("Pan Orvana") and New Kelore Mines Limited ("New Kelore") pursuant to articles of amalgamation dated February 24, 1992 under the *Business Corporations Act* (Ontario) and an amalgamation agreement between such parties dated December 30, 1991. Pan Orvana was incorporated under the laws of the Province of British Columbia on March 27, 1987 under the name Orvana Resources Inc. and changed its name to Pan Orvana Resources Inc. on September 4, 1987. New Kelore was incorporated by Letters Patent pursuant to the laws of the Province of Ontario on May 9, 1945 under the name Kelwren Gold Mines Limited. In 1948, it changed its name by Supplementary Letters Patent to Kelore Mines Limited and on March 27, 1953, it further changed its name to New Kelore Mines Limited. The registered and records office and the head office of the Company are located at 170 University Avenue, Suite 900, Toronto, Ontario, Canada M5H 3B3.

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

Intercorporate Relationships

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

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



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

DEVELOPMENT OF THE BUSINESS

Introduction

Orvana is a gold, copper and silver producer with brownfield and greenfield exploration opportunities within its existing concessions in Spain and Bolivia. Orvana operates mines in Spain and Bolivia.

Orvana's mines in Spain consist of two underground gold-copper-silver mines located in the northern part of the country, El Valle Mine and Carlés Mine. Commercial production commenced in August 2011. In fiscal 2017, Orvana completed its sixth full year of commercial production at El Valle Mine. Carlés Mine ("Carlés") was placed under care and maintenance during the second quarter of fiscal 2015 due to prevailing market conditions. The Company restarted mining activities at Carlés on a short-term project basis in the fourth quarter of fiscal 2016. Planned mining activities at Carlés concluded in the fourth quarter of fiscal 2017 and Carlés was subsequently placed on care and maintenance.

Orvana's mine in Bolivia consists of the Don Mario, located in the south-eastern part of Bolivia and currently producing from gold-copper-silver resources identified as the upper extension of the Lower Mineralized Zone (the "LMZ"), via open-pit mining methods. Commercial production of the LMZ as an underground gold mine commenced in 2003 and in 2011, production transitioned to open-pit mining of the Upper Mineralized Zone (the "UMZ"). Orvana reported mineral resource estimates at September 30, 2015 at the upper extension of the LMZ and the Cerro Felix deposit located 500 meters from the Don Mario Mine ("Cerro Felix"), and at September 30, 2016 the mineral resources at the upper extension of the LMZ were upgraded to mineral reserves. Commercial production of the UMZ ended in the first quarter of fiscal year 2017. Concurrently, production transitioned to the upper extension of the LMZ and is expected to continue until the second quarter of fiscal year 2018. As the remaining ore from the depleting upper extension of the LMZ is phased out, production is expected to be replaced by material mined from the Cerro Felix gold deposit.

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

Three-Year History

Commercial production at El Valle commenced in August 2011. Carlés was placed on care and maintenance primarily due to market conditions in February 2015. As a result of declining operational performance in fiscal 2015 and 2016, the Company established a development and investment strategy for El Valle to optimize the operation, with the objectives to increase gold production and substantially

reduce unitary costs over a two-year period. In late fiscal 2016 and over the course of fiscal 2017, the Company (i) executed significant underground mine development that was deferred from prior years; (ii) re-opened Carlés Mine for a period of approximately one year; (iii) made significant investments in upgrades to the underground mining fleet; and (iv) substantially completed important infrastructure upgrades to water management equipment and the electricity grid within the El Valle Mine. As a result of these activities, the Company achieved its objective of producing sufficient ore-feed to run the processing plant at or above capacity of 2,000 tonnes of ore per day and as a result, the Company increased gold ounces produced in fiscal 2017 by 15%. The primary objectives at El Valle in fiscal 2018 are to (i) increase gold production by increasing the proportion of higher grade oxide ore processed in the plant; (ii) enhance grade control in the mine by minimizing the amount of inferred resources in the mining sequence; (iii) maintain or improve gold recovery in the plant; and (iv) complete capital infrastructure projects. These actions are expected to result in increased gold production and substantial reductions of cash operating costs ("COC") and all-in sustaining costs ("AISC") in fiscal 2018.

During fiscal 2016, the Company focused on increasing development rates, opening additional working faces in the mine and completing planned infrastructure upgrades. In this regard, Orvana obtained a $12.5 million, 30-month copper concentrates and gold doré prepayment financing ("Prepayment Facility") with a trading and investment company in London, United Kingdom (the "Financier"), a subsidiary of a diverse multinational corporation in Seoul, South Korea. The proceeds were used primarily to expedite the aforementioned productivity improvements at the El Valle Mine. The proceeds of the Prepayment Facility also supported the restart of mining activity at Carlés Mine and served to increase production in fiscal 2017 while the Company executed on its objectives at the El Valle Mine. As planned, mining activity at the Carlés Mine concluded late in fiscal 2017 and it is expected that production will be replaced by ore from the El Valle Mine, which is expected to be available as a result of the underground development program carried out in fiscal 2017.

At Don Mario Mine, commercial production commenced at the UMZ in January 2012 and concluded in the first quarter of fiscal year 2017. In fiscal 2015, as a near term mine life extension opportunity, geotechnical and geological reviews were carried out of the old resource block model of the LMZ and the current resource block model of UMZ to investigate the potential of open-pit mining the upper extension of the LMZ. The results of these reviews have demonstrated that mining of this upper extension is feasible. A resource estimate for the LMZ was prepared and a technical report documenting this mineral resource estimate was published on November 16, 2015. The Company began replacing tonnes previously mined at the UMZ with production from the LMZ in the second quarter of fiscal 2016. As of September 30, 2016, LMZ resources were upgraded to mineral reserves.

In the first quarter of fiscal 2016, a metallurgical testing program was completed and the results showed that re-commissioning of the carbon-in-leach ("CIL") circuit in use until 2011 to process the LMZ resource material would maximize the value of the then recently defined Don Mario resource estimates (the "CIL Project"). The Company began construction on the CIL Project in fiscal 2016 and successfully completed re-commissioning in the second quarter of fiscal 2017. To fund the CIL Project, EMIPA used proceeds from a $7.9 million debt financing with a banking and financial services company in La Paz, Bolivia (the "CIL Project Loan"). Gold recoveries from the CIL circuit exceeded the targeted rate of 80%, as compared with previous average gold recoveries from LMZ material of 55% from the flotation process. As a result, in fiscal 2017, gold production improved to its highest levels since fiscal 2009. The Company increased gold production at Don Mario Mine by 84% in fiscal 2017 and decreased COC and AISC by 23% and 30%, respectively in fiscal 2017.

During fiscal 2017, a mine plan for the Company's Cerro Felix deposit was completed. The Company expects to commence pre-stripping activities at Cerro Felix in the first quarter of fiscal 2018, and intends to transition its mine production to this satellite deposit following the depletion of the LMZ, expected in mid-fiscal 2018. Mined ore from Cerro Felix is expected to benefit from the re-commissioning of the CIL circuit due to its higher estimated gold grades and demonstrated amenability to CIL processing. The Company also continued to evaluate opportunities to extend the life of Don Mario Mine beyond the depletion of Cerro Felix. Potential opportunities include (i) processing existing mineral stockpiles; (ii) exploration on the Company's Las Tojas satellite deposit (second phase of a drilling campaign underway); and (iii) reprocessing of gold-bearing tailings.

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

	FY2017	FY2016	FY2015
Operating Performance			
Gold			
Grade (g/t)	**2.41**	2.10	2.16
Recovery (%)	**84.7**	77.4	77.9
Production (oz)	**90,292**	65,785	72,817
Sales (oz)	**88,636**	61,816	73,304
Average realized price / oz	**$1,258**	$1,211	$1,196
Copper			
Grade (g/t)	**0.70**	0.81	1.00
Recovery (%)	**65.4**	65.8	76.3
Production ('000 lbs)	**13,893**	14,735	22,601
Sales ('000 lbs)	**14,686**	13,367	23,956
Average realized price / lb	**$2.50**	$2.16	$2.72
Silver			
Grade (g/t)	**10.02**	17.36	20.77
Recovery (%)	**71.8**	74.9	66.4
Production (oz)	**318,507**	525,934	598,039
Sales (oz)	**362,827**	469,847	596,405
Average realized price / oz	**$17.22**	$16.29	$16.12
Financial Performance *(in 000's, except per share amounts)*			
Revenue	**$137,999**	$93,850	$121,425
Mining costs	**$116,370**	$84,544	$105,384
Gross margin	**($5,480)**	($7,883)	($13,854)
EBITDA (1)	**$16,535**	$4,417	$8,072
Net loss	**($15,655)**	($8,455)	($16,733)
Net loss per share (basic/diluted)	**($0.11)**	($0.06)	($0.12)
Operating cash flows before non-cash working capital changes (1)	**$11,914**	$5,199	$8,471
Operating cash flows	**$20,726**	$3,437	$20,678
Ending cash and cash equivalents	**$23,811**	$18,939	$17,236
Capital expenditures (2)	**$21,332**	$14,977	$10,118
Cash operating costs (by-product) ($/oz) gold (1) (3)	**$1,015**	$1,082	$949
All-in sustaining costs (by-product) ($/oz) gold (1) (3)	**$1,269**	$1,428	$1,210

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

(2) These amounts are presented in the consolidated cash flows in the audited consolidated financial statements of Orvana as at and for the year ended September 30, 2017 and related notes thereto (the "2017 Financials") on a cash basis. Each reported period excludes capital expenditures incurred in the period which will be paid in subsequent periods and includes capital expenditures incurred in prior periods and paid for in the applicable reporting period. The calculation of AISC and all-in costs ("AIC") includes capex incurred (paid and unpaid) during the period.

(3) COC includes total production cash costs incurred. AISC includes COC plus sustaining capital expenditures, corporate administrative expense, exploration and evaluation costs, and reclamation cost accretion. The Company believes that this measure represents the total costs of producing gold from current operations, and provides the Company and other stakeholders of the Company with additional information relating to the Company's operational performance and ability to generate cash flows. As the measure seeks to reflect the full cost of gold production from current operations, new project capital is not included in AISC. The Company reports these measures on a gold ounces sold basis.

El Valle

Through its wholly-owned subsidiary, OroValle, the Company owns and operates its mines located in the Rio Narcea Gold Belt in northern Spain. At El Valle Mine, the Company mines sulphides (referred to hereinafter as "skarns") and oxides underground. At Carlés Mine, the Company mined skarns underground until February 2015 when the mine was placed on care and maintenance primarily due to market conditions. In the fourth quarter of fiscal 2016, mining activities restarted at Carlés Mine on a limited, short-term basis. As planned, mining activity at Carlés Mine concluded late in fiscal 2017 and it has been placed on care and maintenance.

Since acquiring El Valle in 2009, the Company has hired essential personnel, rehabilitated the mill and plant, purchased or leased appropriate equipment, improved the stability of the tailings impoundment, and completed the sinking and subsequent upgrading of a 420-meter shaft to facilitate underground development and mining. The Company commissioned El Valle in May 2011 and advanced to commercial production in August 2011.

At El Valle, the long-term objectives are to increase production and lower unitary costs. In this regard, the objectives in fiscal 2018 are to (i) increase gold production by increasing the proportion of higher grade oxide ore processed in the plant; (ii) enhance grade control in the mine by minimizing the amount of inferred resources in the mining sequence; (iii) maintain or improve gold recovery in the plant; and (iv) complete capital infrastructure projects. These actions are expected to result in increased gold production and substantial reduction of COC and AISC in fiscal 2018.

During fiscal 2017, the Company met its overall objectives, which included accelerating underground mining rates in order to supply the processing plant with sufficient ore feed to operate at its name-plate capacity of 2,000 tonnes of ore per day. In addition, the Company completed a substantial portion of its planned underground mine development and capital infrastructure projects, including the installation of a surface explosives magazine and upgrades to its plant milling circuit. The permanent replacement power line under construction at El Valle is expected to be completed during the first quarter of fiscal 2018.

Carlés Mine was placed on care and maintenance in February 2015, in response to prevailing market conditions. This was followed by a transition from contractor mining to owner/operator mining at El Valle Mine. As a result of the beneficial gold price and foreign exchange environment experienced through fiscal 2016, the Company performed an economic review of Carlés Mine and, based on the results of this review, restarted production on a short-term basis beginning in September 2016, with a local Spanish contractor carrying out mining activities. As planned, mining activity at Carlés Mine concluded late in fiscal 2017 and the mine was again placed on care and maintenance.

During fiscal 2017, El Valle Mine and Carlés Mine produced 51,546 ounces of gold, 5.5 million pounds of copper and 182,635 ounces of silver compared with 44,682 ounces of gold, 4.3 million pounds of copper and 144,411 ounces of silver during fiscal 2016. Gold, copper and silver production increased by 15%, 29% and 26% compared with fiscal 2016 primarily due to an increase in tonnes milled of 56% over the same period, partially offset by decreases in average head grades mined of 25%, 18% and 15%, respectively.

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

Don Mario Mine

Through its wholly-owned subsidiary, EMIPA, the Company owns and operates Don Mario Mine, located in southeastern Bolivia. Fiscal 2009 marked the final year of production from the underground LMZ gold mine with some gold production from a satellite deposit, Las Tojas, continuing into fiscal 2010 and 2011. Mine start-up of the open pit UMZ above the LMZ occurred in April 2011 and commercial production was achieved in January 2012. Until May 2013, the Company processed UMZ oxides ore through a leach-precipitation-flotation ("LPF") process and transition and sulphide ore through a standard flotation circuit. In May 2013, after various technical and economic considerations, the Company suspended the LPF process and is continuing with processing transition and sulphide material through gravity and flotation circuits. Oxide material mined since that time has generally been stockpiled.

EMIPA phased out the remaining ore from the depleted UMZ in the first quarter of fiscal 2017 and replaced it with production from the upper extension of the LMZ. A resource estimate for the LMZ was prepared and a technical report documenting this mineral resource estimate was published on November 16, 2015. The Company began replacing tonnes previously mined at the UMZ with production from the upper extension of the LMZ in the second quarter of fiscal 2016. The Company expects to mine the LMZ until the second quarter of fiscal 2018. As of September 30, 2016, LMZ resources were upgraded to mineral reserves.

During fiscal 2017, Don Mario Mine produced 38,746 ounces of gold, 8.4 million pounds of copper and 135,872 ounces of silver compared with 21,102 ounces of gold, 10.5 million pounds of copper and 381,523 ounces of silver in fiscal 2016, an increase of 84% in gold production, a decrease of 20% in copper production and a decrease of 64% in silver production. During fiscal 2018, the Company will be transitioning its mining activities from the upper extension of the LMZ to the Cerro Felix open pit deposit. Development of Cerro Felix is expected to begin in the first quarter of fiscal 2018 with pre-stripping activities, with production expected by the third quarter of fiscal 2018. As of the date of this AIF, Cerro Felix resources have been upgraded to mineral reserves.

In the first quarter of fiscal 2016, a metallurgical testing program was completed and the results showed that re-commissioning of the previous CIL circuit in use until 2011 to process the LMZ resource material would maximize the value of the then recently defined Don Mario resource estimates. The Company began construction on the CIL Project in fiscal 2016 and successfully completed re-commissioning in the second quarter of fiscal 2017. To fund the CIL Project, EMIPA used proceeds from the CIL Project Loan. Gold recoveries from the CIL circuit exceeded the targeted rate of 80%, up from previous average recoveries of 55% from the flotation process. As a result, in fiscal 2017, gold production improved to its highest levels since fiscal 2009. The Company increased gold production at Don Mario Mine by 84% in fiscal 2017 and decreased COC and AISC by 23% and 30%, respectively in fiscal 2017.

More information about Don Mario Mine, including life of mine extension opportunities, is provided below under “Description of the Business - Principal Mineral Projects - Don Mario Mine” and “Appendix B - Principal Mineral Projects - Don Mario Mine”.

Sale of Copperwood Project

Through its formerly wholly-owned subsidiary, Orvana Resources US Corp., the Company held the Copperwood Project, which was comprised of certain long-term mineral leases, certain surface rights, and options in respect of certain additional mineral leases. The Company had previously completed a feasibility study and obtained all major permits in respect of the development of the Copperwood Project.

In June 2014, the Company sold the Copperwood Project to Highland Copper Company Inc. (“Highland”). The Company received a cash payment of $13.0 million and a secured promissory note in the amount of $7.0 million, which was subsequently paid in full in December 2014 together with $0.5 million in interest. Additional consideration of up to $5.0 million will be paid by Highland in cash or shares of Highland, at Orvana’s option, upon occurrence of the events described below:

- $1.25 million upon the earliest of (i) commencement of commercial production of the Copperwood Project and (ii) the date that is 36 months after closing; and an additional $1.25 million on the first anniversary of this payment; and
- $1.25 million if the average copper price for any 60 calendar day period following the first anniversary and preceding the second anniversary of commencement of commercial production is greater than $4.25/lb; and an additional $1.25 million if the average copper price for any 60 calendar day period following the second anniversary and preceding the third anniversary of the commencement of commercial production is greater than $4.50/lb.

Orvana used the proceeds from the Copperwood Project sale to repay a $6.5 million loan with Fabulosa (as defined below), $2.0 million under El Valle Loan (as defined below) and used the remainder of the net proceeds for general corporate purposes.

In June 2017, Orvana received $1.25 million of the additional consideration (noted above) from Highland, representing the payment that was due 36 months after closing.

Changes in Board of Directors and Management

During fiscal 2017 there have been changes in the board of directors of the Company.

At the Company's annual shareholders' meeting held on February 8, 2017, George Darling was appointed as a director of the Company.

El Valle Loan

In October 2010, OroValle entered into a $50 million five-year term corporate credit facility in connection with El Valle ("El Valle Loan"). The funds were primarily used to put El Valle into commercial production. In February 2012, the El Valle Loan was extended by one year to September 30, 2016 and increased by $13.8 million including approximately $6.5 million (€5.0 million) to fund an environmental bond. On June 30, 2014, the Company announced an amendment of the El Valle Loan, which became effective on July 11, 2014, resulting in a new maturity date of November 30, 2014 (the "New Maturity Date") and required (i) a number of principal repayments to be made from restricted cash, Copperwood Project proceeds and working capital; (ii) quarterly principal repayments; and (iii) the closure of outstanding derivative instruments in July 2014. As a condition to the amendments of El Valle Loan, Orvana was required to establish a line of credit in the minimum amount of $6.5 million, to remain in place until the New Maturity Date. See "Transactions with Fabulosa Mines Limited - Related Party Transactions" below.

The terms of the El Valle Loan required gold, copper and USD/EUR derivative instruments that were previously put in place. The security for El Valle Loan included a fixed and floating charge over the assets of OroValle and a pledge by Orvana of all of the shares of OroValle. OroValle's obligations under El Valle Loan were guaranteed by Orvana. Subsequent to the end of the third quarter of fiscal 2014, all outstanding derivative instruments required by El Valle Loan were closed for net proceeds of $7.1 million with the proceeds applied as a repayment of principal under El Valle Loan.

Orvana completed repayment of the El Valle Loan on November 10, 2014. The associated guarantees have been released and the remaining security has been discharged.

Bolivian Bank Loans

The Company has entered into various loan facility arrangements with a certain Bolivian commercial bank in recent years.

CIL Project Loan

In May 2016, EMIPA closed the $7.9 million CIL Project Loan, the proceeds of which were used for the construction of the CIL Project. Under the terms of the CIL Project Loan, five disbursements of specified amounts were made to EMIPA as expenditures were incurred on the CIL Project. The CIL Project Loan has an interest rate of 6% per annum, with ten monthly principal repayments that begun in late December 2016. The CIL Project Loan was fully repaid by its scheduled maturity date in September 2017. Security included certain assets at Don Mario for the term of the CIL Project Loan and a stand-by letter of credit held by a Canadian bank of $2.0 million, which was replaced with the CIL asset once it became operational.

TSF Loan and Revolving Facility

In June 2017, EMIPA closed $11.3 million of debt facilities comprised of an $8.3 million term facility (the "TSF Loan") and a $3.0 million revolving working capital facility.

The proceeds of the TSF Loan are being used to fund a major tailings storage facility expansion project that will add sufficient capacity to support future operations. Under the terms of the TSF Loan, seven disbursements of specified amounts will be drawn down as expenditures are incurred for the tailings storage facility expansion. The TSF Loan matures in January 2021 and has an interest rate of 5.3% per annum, with twelve quarterly repayments beginning in April 2018.

The revolving working capital facility of up to $3.0 million can be drawn down in the form of cash of up to $2.0 million, bank guarantees of $3.0 million or a combination of the two up to the limit of $3.0 million. The revolving working capital facility is renewable every six months until November 2020 and interest will be determined at the date of drawdown and is dependent on the form of the drawdown.

Security for both the TSF Loan and the revolving working capital facility include certain assets at Don Mario.

Prepayment Facility

In August 2016, the Company entered into the $12.5 million copper concentrates and gold doré Prepayment Facility, the proceeds of which were used at El Valle to fund development activities and infrastructure projects.

Under the terms of the Prepayment Facility, Orvana is selling gold doré from its El Valle Mine in Spain and copper concentrate from its Don Mario Mine in Bolivia to the Financier, on an exclusive basis for a period of thirty months (the "Facility Term"). In exchange, Orvana received $12.5 million in prepayment financing from the Financier in two instalments. The first instalment of $8.0 million was drawn upon closing and the first of eighteen equal monthly repayments began in September 2017. The second instalment of $4.5 million was drawn in February 2017 and will be repaid beginning December 2017 in nine equal monthly payments. The Prepayment Facility bears interest at USD 3M LIBOR plus 4.5%. Interest payments and principal repayments under the terms of the Prepayment Facility are made against Orvana's on-going shipments of copper concentrates and/or gold doré during the Facility Term. The Financier has agreed to pay for copper concentrates and gold doré at a price based on the prevailing metal prices for the gold, silver and copper content around time of shipment, less customary treatment, refining and shipping charges, and pursuant to the terms of the Prepayment Facility.

The Company's obligations to the Financier under the Prepayment Facility are secured by the pledge to the Financier of all of Orvana's shares of OroValle which owns El Valle Mine in Spain.

Transactions with Fabulosa Mines Limited - Related Party Transactions

Current Ownership Interest

As at the date of this AIF, Fabulosa Mines Limited ("Fabulosa") held (i) 70,915,027 Common Shares, representing 51.9% of the currently outstanding Common Shares; and (ii) 600,000 Common Share purchase warrants with exercise prices ranging from C$0.49 to C$0.54 and expiry dates ranging from 2018 to 2019 (the "Warrants"). All of the Warrants are exercisable as of the date of this AIF, with Fabulosa's combined holdings of Common Shares and warrants representing 51.5% of the Common Shares outstanding on a fully diluted basis. If Fabulosa exercises all of its 600,000 Warrants, its ownership would represent 52.1% of the then currently outstanding Common Shares.

Fabulosa Secondment Agreement

In August of 2016, the Company entered into an agreement with Fabulosa for the secondment of James Gilbert as Chairman of the board of directors and Chief Executive Officer of Orvana (the "Fabulosa Secondment Agreement"). Pursuant to the agreement, Orvana pays Fabulosa a monthly amount of management fees representing Mr. Gilbert's salary, benefits and other employee expenses. Said fees total annually $323,000 in base salary ("Base Salary") and approximately $100,000 in benefits and other employee expenses. Pursuant to the Fabulosa Secondment Agreement, Orvana also agreed to pay incentive compensation as follows: (i) 50% of the total incentive compensation in a short-term cash reward with a target of amount of 50% of Base Salary and a maximum of 75% of Base Salary and (ii) 50% of the total incentive compensation in a long-term award in the form of stock options granted directly to Mr. Gilbert, in accordance with the Company's stock option plan, with a target amount of 50% of Base Salary and a maximum of 75% of Base Salary.

Payments are also due from the Company to Fabulosa upon certain termination and change of control events. In the event that the Company terminates the Fabulosa Secondment Agreement without cause or in the event that Fabulosa terminates the Fabulosa Secondment Agreement for good reason the Company is required to pay Fabulosa an amount equal to one month's base salary for every month the services have been provided under the Fabulosa Secondment Agreement, based on the monthly base salary at the time of termination of the Fabulosa Secondment Agreement, with a minimum payment of no less than 12 months' base salary and a maximum payment of no more than 18 months' base salary. Such payments shall be made by the Company to Fabulosa in equal monthly instalments immediately following termination of the Fabulosa Secondment Agreement. In the event of the termination of the Fabulosa

Secondment Agreement within one month of a "change of control," the Company shall make one lump sum payment to Fabulosa in an amount equal to 24 months' base salary, based on the monthly base salary at the time of termination of the Fabulosa Secondment Agreement.

DESCRIPTION OF THE BUSINESS

Principal Mineral Projects

El Valle Mine

Through its wholly-owned subsidiary, OroValle, the Company owns and operates the El Valle Mine and the Carlés Mine located in the Rio Narcea Gold Belt in northern Spain, where skarns and oxides are being mined underground. El Valle Mine and Carlés Mine commenced commercial production in August 2011. At the end of February 2015, Carlés was placed on care and maintenance primarily due to market conditions. The Company restarted mining activities at Carlés on a short-term project basis in the fourth quarter of fiscal 2016. Planned mining activities at Carlés concluded in the fourth quarter of fiscal 2017 and Carlés was subsequently placed on care and maintenance.

Production

El Valle Mine achieved production during fiscal 2017 of 51,546 ounces of gold, 5.5 million pounds of copper and 182,635 ounces of silver compared with 44,682 ounces of gold, 4.3 million pounds of copper and 144,411 ounces of silver in fiscal 2016, an increase of 15%, 29% and 26% respectively in gold, copper and silver production. The following table includes consolidated operating and financial performance data for El Valle Mine for the periods set out below:

	FY2017	FY2016	FY2015
Operating Performance			
Ore mined (tonnes) (wmt)	733,086	479,077	551,966
Ore milled (tonnes) (dmt)	707,362	452,003	511,213
Daily average throughput (dmt)	2,025	1,235	1,401
Gold			
Grade (g/t)	2.46	3.27	3.53
Recovery (%)	92.2	94.0	92.6
Production (oz)	51,546	44,682	53,733
Sales (oz)	49,518	44,009	51,244
Copper			
Grade (%)	0.46	0.56	0.67
Recovery (%)	75.6	76.5	81.4
Production ('000 lbs)	5,506	4,257	6,128
Sales ('000 lbs)	5,590	4,292	6,058
Silver			
Grade (g/t)	10.61	12.47	13.52
Recovery (%)	75.7	79.7	75.0
Production (oz)	182,635	144,411	166,744
Sales (oz)	178,364	145,588	159,137
Financial Performance *(in 000's, except per share amounts)*			
Revenue	$71,556	$59,517	$69,851
Mining costs	$73,268	$57,400	$64,967
Loss before tax	($20,944)	($9,837)	($17,050)
Capital expenditures	$9,702	$9,510	$6,376
Cash operating costs (by-product) ($/oz) gold [(1)]	$1,293	$1,172	$1,077
All-in sustaining costs (by-product) ($/oz) gold [(1)]	$1,574	$1,468	$1,308

	FY2017	FY2016	FY2015
All-in costs (by-product) ($/oz) gold [1]	$1,574	$1,468	$1,308

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

Gold, copper and silver production increased by 15%, 29% and 26% compared with fiscal 2016 primarily due to an increase in tonnes milled of 56% over the same period, partially offset by decreases in average head grades mined of 25%, 18% and 15%, respectively.

During fiscal 2017, supported by capital infrastructure and development investments that commenced in fiscal 2016, the Company achieved its target of a sustained mill throughput rate of 2,000 tonnes per day. Increased access to higher gold grade oxide ore fronts at the El Valle Mine and production from the Carlés Mine allowed El Valle to improve its gold production and lower its unitary cash costs progressively over 2017. Objectives in fiscal 2018 include continuing to improve access to oxide ore fronts in the El Valle Mine in order to bring the proportion of oxide ore processed in the plant up to 50%, an increase from historical levels lower than 20%. Through additional geotechnical work and infill drilling, the Company also expects to significantly lower its reliance on inferred material in its mine planning in fiscal 2018. Infrastructure investments to improve productivity and efficiency will continue to be made through fiscal 2018 as planned. It is anticipated that these actions will also positively impact El Valle's unitary costs in fiscal 2018.

El Valle Mine continued its focus on improving average mine grades and gold production through the gradual increase of mined higher gold grade oxide ore tonnes relative to skarn ore. This is expected to be supported by the gains realized in development and backfill rates, allowing for access to a greater number of oxide faces as was partially realized during the third and fourth quarters of fiscal 2017.

Water management and power infrastructure projects required to improve productivity and de-risk mine planning continued to advance through fiscal 2017. The permanent replacement power line under construction at El Valle is expected to be completed during the first quarter of fiscal 2018.

During fiscal 2015, OroValle and its workers' legal representatives signed a Collective Bargaining Agreement (the "Agreement") which is being applied retroactively from January 1, 2014 and covers the period to December 31, 2017. The Agreement regulates labour conditions and includes regulations related to risk prevention, salaries and working hours. The Agreement also strengthens the position of the mining safety officer present at all mining facilities and also focuses on employee training and diversity as key objectives.

Mineral Resources and Reserves Estimates

In fiscal 2014, the Company engaged an independent engineering firm, Roscoe Postle Associates Inc. ("RPA"), to complete mineral reserves and resources estimates and a life-of-mine-plan update, which were published in the "Technical Report on El Valle Boinás-Carlés Operation, Asturias, Spain" by Mr. Jason J. Cox, P.Eng., who is a qualified person independent of the Company for the purposes of NI 43-101, and filed on September 29, 2014 ("El Valle Mine 43-101 Report").

Since the El Valle Mine 43-101 Report, the Company has updated the mineral reserves and resources. The updated mineral resource estimates for El Valle as at September 30, 2017 were prepared by OroValle under the supervision of Ms. Guadalupe Collar Menéndez, European geologist and the Chief of Geology of OroValle, based on updating resource block models incorporating drilling results from April 1, 2016 to March 31, 2017 and accounting for production depletion from September 30, 2016 to September 30, 2017. Mineral resource estimates are summarized in the tables below.

Summary of Mineral Resources Inclusive of Mineral Reserves
El Valle Mine – September 30, 2017

Measured

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (000 t Cu)
El Valle Oxides	457.8	4.74	0.72	16.85	69.8	3.3
El Valle Skarns	4,312.8	2.57	0.71	15.94	356.4	30.7
Carlés	210.3	3.88	0.70	11.22	26.3	1.5
Total	**4,980.9**	**2.83**	**0.71**	**15.82**	**452.5**	**35.5**

Indicated

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (000 t Cu)
El Valle Oxides	2,209.7	6.12	0.50	6.59	434.5	11.1
El Valle Skarns	1,221.0	2.76	0.57	16.28	108.3	7.0
Carlés	869.9	3.84	0.48	8.84	107.3	4.1
Total	**4,300.6**	**4.70**	**0.52**	**9.80**	**650.1**	**22.2**

Measured + Indicated

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (000 t Cu)
El Valle Oxides	2,667.5	5.88	0.54	8.35	504.3	14.4
El Valle Skarns	5,533.8	2.61	0.68	16.02	464.7	37.7
Carlés	1,080.2	3.85	0.52	9.30	133.6	5.6
Total	**9,281.5**	**3.69**	**0.62**	**13.03**	**1,102.6**	**57.7**

Inferred

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (000 t Cu)
El Valle Oxides	2,727.8	6.26	0.37	5.46	548.9	10.0
El Valle Skarns	716.9	2.52	0.57	14.44	57.9	4.1
Carlés Skarns	896.5	4.28	0.41	5.26	123.3	3.8
Total	**4,341.2**	**5.23**	**0.41**	**6.90**	**730.1**	**17.9**

Inferred

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (000 t Cu)
La Brueva	137.0	4.35	0.09	18.42	19.2	0.1

Notes:
1. CIM definitions were followed for mineral resources.

2. Mineral resources are estimated at gold equivalent ("AuEq") cut-off grades of 3.1 g/t for El Valle oxides, 2.1 g/t for El Valle skarns and 2.6 g/t for Carlés Mine skarns. AuEq cut-offs are based on recent operating results for recoveries, off-site concentrate costs and on-site operating costs.
3. Mineral resources are estimated using a long-term gold price of US$1,350 per ounce; copper price of US$2.75 per pound; and a silver price of US$19 per ounce. A US$/Euro exchange rate of 1/1.20 was used.
4. Mineral resources are inclusive of mineral reserves.
5. A crown pillar of 50 m is excluded from the mineral resource below El Valle open pit.
6. A crown pillar of 42m is excluded from the mineral resource below El Valle East open pit.
7. Unrecoverable material in exploited mining areas has been excluded from the mineral resource.
8. Numbers may not add due to rounding.
9. El Valle mineral resources estimates were prepared under the supervision G. Collar, European Geologist, a qualified person for the purposes of NI 43-101, who is an employee of OroValle and thus not independent of the Company.

Mineral reserves were estimated by OroValle under the supervision of Mr. David Duncan, a Professional Mining Engineer of Canada and the Director of Operations at OroValle, based on mine designs applied to measured and indicated resources, taking into account appropriate dilution and extraction factors. Mineral reserves are summarized in the table below.

Summary of Mineral Reserves
El Valle Mine – September 30, 2017

Proven and Probable

Category	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (000 t Cu)
Proven	945	2.86	0.73	14.69	87.0	6.9
Probable	1,287	4.53	0.34	8.62	187.0	4.3
Proven and Probable	**2,232**	**3.82**	**0.50**	**11.19**	**274.0**	**11.2**

Proven

Category	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (000 t Cu)
El Valle Oxides	333	3.60	0.95	16.01	39.0	3.2
El Valle Skarns	612	2.46	0.60	13.97	48.0	3.7
Carlés Skarns	0	0.00	0.00	0.00	0.0	0.0
Total	**945**	**2.86**	**0.73**	**13.06**	**87.0**	**6.9**

Probable

Category	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (000 t Cu)
El Valle Oxides	803	5.48	0.33	6.89	141.0	2.7
El Valle Skarns	272	3.18	0.46	16.60	28.0	1.2
Carlés Skarns	212	2.66	0.20	4.98	18.0	0.4
Total	**1,287**	**4.53**	**0.34**	**8.62**	**187.0**	**4.3**

Notes:

1. CIM definitions were followed for mineral reserves.
2. Mineral reserves are estimated using gold equivalent break-even cut-off grades by zone, consisting of 3.7 g/t AuEq for El Valle oxides, 3.2 g/t AuEq for El Valle skarns, and 2.7 g/t AuEq for Carlés Mine longhole stoping. Gold equivalent cut-offs are based on recent operating results for recoveries, off-site concentrate costs and on-site operating costs.
3. Mineral reserves are estimated using average long-term prices of US$1,250 per ounce gold, US$2.50 per lb copper, and US$17.00 per ounce silver. A US$/Euro exchange rate of 1/1.20 was used.
4. A minimum mining width of 4 m was used.
5. Certain incremental material (below break-even cut-off grade) was included in the estimated mineral reserves in order to maintain production levels.
6. Numbers may not add due to rounding.
7. El Valle mineral reserve estimates were prepared under the supervision David Duncan, a qualified person for the purposes of NI 43-101, who is an employee of OroValle and thus not independent of the Company.

Some skarn reserves were changed to oxide reserves due to a different lithology consideration in the geotechnically weaker 'transitional' zone of the upper Black Skarn area. These tonnes cannot be mined with the longhole stoping method and were planned with cut and fill, the principal mining method employed in other oxide areas at El Valle.

Oxide reserves were increased as compared to 2016 due to the higher copper metal price used for the 2017 gold equivalent cut-off grade, which was 3.7 g/t.

Skarn reserves are evaluated at a break-even cut-off grade of 3.2 g/t AuEq. This average factor resulted from a detailed analysis, which started with a factor of 3.9 g/t AuEq (initial cut-off grade factor calculated and based on the planned data), but which was filled with portions of skarn of 3.4 g/t, 2.9 g/t and 2.4 g/t AuEq for the purpose of obtaining the optimal grade of skarn to sustain mill feed of 50% skarn; 50% oxides.

Growth Exploration

The Company is targeting opportunities to extend the current mine life at El Valle, replace depleted reserves, upgrade resources and replace inferred resources at El Valle through various diamond drilling campaigns underway. In fiscal 2017, El Valle completed approximately 25,700 meters of infill definition and exploration diamond drilling over 254 drill holes.

In June 2017, an infill drilling program started in Carlés Mine focusing on area CNW (Carlés Northwest), where 2,700 m were completed until end of fiscal 2017. A core objective of the drilling executed during fiscal 2017 was to generate the information required to substantially de-risk the fiscal 2018 mine plan overall and also to lay the foundation for future in-mine exploration targeting expansion of the mineral resource base.

The Company is also pursuing opportunities to define new resources in the areas surrounding El Valle.

In the area called East Breccia, located in the North of El Valle Mine, 1,854 m were carried out split in seven drill holes, which has enabled us to convert inferred resources into indicated mineral resources.

Additional field work was carried out pursuant to other investigation permits. In fiscal 2016, soil geochemistry and geophysical surveys were completed in "Quintana Investigation Permit". In fiscal 2017, we planned to start a drilling exploration campaign, but due to delays in getting local permits, it will be started in fiscal 2018.

In "Lidia Investigation Permit", geophysical surveys were started in the fourth quarter of fiscal 2017 and we expect this to be completed during the first quarter of fiscal 2018.

The Company is also pursuing grassroots exploration activities, such as mapping, sampling and geophysics, on certain other investigation permits concessions in the vicinity of El Valle. For further information on exploration and drilling, see "Appendix B - Principal Mineral Projects - El Valle Mine - Exploration" and "Appendix B - Principal Mineral Projects - El Valle Mine - Drilling."

Other

Additional information on El Valle Mine is provided below in "Appendix B - Principal Mineral Projects - El Valle Mine".

Don Mario Mine

Through its wholly-owned subsidiary, EMIPA, the Company owns and operates the Don Mario Mine located in south-eastern Bolivia.

EMIPA phased out the remaining ore from the depleted UMZ in the first quarter of fiscal 2017 and replaced it with production from the LMZ upper extension. The Company expects to mine the LMZ until the second quarter of fiscal 2018. As of September 30, 2016, LMZ resources were upgraded to mineral reserves.

During fiscal 2018, the Company will be transitioning its mining activities from the LMZ upper extension to the Cerro Felix open pit deposit. Development of Cerro Felix is expected to begin in the first quarter of fiscal 2018 with pre-stripping activities, with production expected by the third quarter of fiscal 2018. As of the date of this AIF, Cerro Felix resources have been upgraded to mineral reserves.

Production

During fiscal 2017, Don Mario produced 38,746 ounces of gold, 8.4 million pounds of copper and 135,872 ounces of silver compared with 21,102 ounces of gold, 10.5 million pounds of copper and 381,523 ounces of silver in fiscal 2016, an increase of 84% in gold production, a decrease of 20% in copper production and a decrease of 64% in silver production. The following table includes operating and financial performance data for Don Mario Mine for the periods set out below:

	FY2017	**FY2016**	**FY2015**
Operating Performance			
Ore mined (tonnes) (dmt) [(1)]	718,692	679,512	938,492
Ore milled (tonnes) (dmt)	668,376	806,187	837,722
Daily average throughput (dmt)	2,088	2,436	2,532
Gold			
Grade (g/t)	2.36	1.44	1.32
Recovery (%)	74.0	56.3	53.8
Production (oz)	38,746	21,102	19,084
Sales (oz)	38,963	17,807	22,061
Copper			
Grade (%)	0.95	0.95	1.20
Recovery (%)	60.6	62.2	74.4
Production ('000 lbs)	8,387	10,478	16,473
Sales ('000 lbs)	9,091	9,075	17,899
Silver			
Grade (g/t)	9.40	20.10	25.20
Recovery (%)	65.8	73.4	63.3
Production (oz)	135,872	381,523	431,295
Sales (oz)	184,463	324,260	437,267
Financial Performance *(in 000's, except per share amounts)*			
Revenue	$66,443	$34,333	$51,574
Mining costs	$43,102	$27,144	$40,417
Income (loss) before tax	$11,889	$1,480	($935)
Capital expenditures	$12,249	$6,667	$3,394
Cash operating costs (by-product) ($/oz) gold	$663	$863	$651
All-in sustaining costs (by-product) ($/oz) gold	$871	$1,249	$975
All-in costs (by-product) ($/oz) gold	$1,050	$1,378	$992

The 84% increase in gold production compared with fiscal 2016 was due to higher average head grades of 64% and increased recoveries of 31%. The increase in average head grade was due to the transition

to processing of LMZ ore from lower grade UMZ ore. Gold recoveries increased significantly due to the impact from the re-commissioned CIL circuit during fiscal 2017. Copper and silver production for fiscal 2017 decreased by 20% and 64%, respectively, compared to fiscal 2016 primarily due to lower recoveries as the Company's focus was on optimizing gold production from the CIL circuit. Gold average head grades are expected to be higher while copper and silver grades are expected to decrease in fiscal 2018 compared with prior periods, as the Company expects to transition production from the LMZ upper extension to Cerro Felix, which is exclusively a gold mineral deposit. The Company expects to process Cerro Felix material through the CIL circuit only and plans to discontinue copper recovery via flotation once production from LMZ ends.

During the third quarter of fiscal 2016, the Company successfully closed the $7.9 million CIL Project Loan facility, the proceeds of which were used primarily for the construction of the CIL Project. Upon commissioning of the CIL circuit in the second quarter of fiscal 2017, Don Mario shifted to production of gold doré in lieu of the current gold concentrate, and continued to produce copper concentrate.

Mineral Resources and Reserves Estimates

In fiscal 2015 the Company engaged Mercator Geological Services Limited ("Mercator") and DCGS Exploration and Mining Consulting ("DCGS"), each an independent mining consulting firm, to complete mineral reserves and resources estimates, which were published in the "Don Mario Mine Operation 2015 Technical Report" by Mr. Michael Cullen of Mercator and Mr. Gino Zandonai of DCGS, each of whom is a qualified person independent of the Company for the purposes of NI 43-101 and filed on Sedar on November 16, 2015, (the "Don Mario 43-101 Report"). The updated mineral resource and reserve estimates for Don Mario as at September 30, 2017 were prepared by Mr. Zandonai, an independent Qualified Person under NI 43-101. In respect of Cerro Felix, the tonnage reported as indicated resources as at September 30, 2016 was upgraded to probable reserves as at September 30, 2017 and production depletion during fiscal 2017 was accounted for.

The following tables summarize the in-situ mineral resources estimates for UMZ, LMZ and Cerro Felix and the mineral reserves estimates for UMZ, LMZ and Cerro Felix:

In-situ Mineral Reserves – September 30, 2017
Don Mario

Proven

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (t Cu)
Sulphide UMZ	-	-	-	-	-	-
LMZ	-	-	-	-	-	-
Cerro Felix	-	-	-	-	-	-
Total	**-**	**-**	**-**	**-**	**-**	**-**

Probable

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (t Cu)
Sulphide UMZ	-	-	-	-	-	-
LMZ	191	2.23	0.55	5.83	17.2	1,383.7
Cerro Felix	619	2.71	0.04	1.36	54.0	247.8
Total	**811**	**2.60**	**0.16**	**2.41**	**71.2**	**1,631.5**

Total Proven and Probable

Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (t Cu)
Proven	-	-	-	-	-	-
Probable	811	2.60	0.16	2.41	71.2	1,631.5
Proven and Probable	**811**	**2.60**	**0.16**	**2.41**	**71.2**	**1,631.5**

Notes:

1. CIM definitions were followed for Mineral Reserves 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 Reserves are estimated using a gold equivalent cut-off grade of 0.4 Au g/t. Gold equivalent cut-offs were calculated using recent operating results for recoveries and on-site operating costs.
3. Mineral Reserves are estimated using average long-term prices of US$1,250 per ounce gold, US$2.50 per lb copper, and US$17.00per ounce silver.
4. Numbers may not add due to rounding.
5. The mineral reserves at the LMZ have been based on processing by the CIL and flotation methods.
6. The mineral reserves at Cerro Felix have been based on processing by the CIL only.

Certain material mined was transported to the waste dump or various stockpile locations. Certain oxide, transitional and sulphide materials that were above the specified cut-off grades were classified as either stockpile mineral resources or stockpile mineral reserves. A summary of the mineral resources and reserves stockpile estimates completed as part of the Company's annual mineral reserve and resource estimates update process is provided in the tables below.

Stockpile Mineral Resources (exclusive of in-situ) – September 30, 2017

Don Mario

Measured

Location/Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t Ag)	Contained Metal (000 oz Au)	Contained Metal (t Cu)
DM1 (Oxide)	492	2.24	1.74	54.44	35.4	8,559.6
DM2 (Oxide Pre-strip)	278	1.90	1.98	17.94	17.0	5,508.8
DM3 (Dolomite Oxide)	190	1.89	1.96	21.62	11.5	3,724.0
Plant Stockpile (Oxide)	515	1.61	1.57	57.82	26.7	8,108.3
DM4 Stock Talco	506	1.61	2.38	63.51	26.2	12,067.4
DM5 (Dolomite Oxide)	202	1.86	1.64	48.66	12.1	3,314.4
DM6 (Tremolite Oxide)	-	-	-	-	-	-
Total	**2,184**	**1.84**	**1.89**	**49.30**	**129.0**	**41,282.6**

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 contained in stockpiles are estimated at a Cu equivalent cut-off grade of 0.85% CuEq.
3. Mineral resources are estimated using a long-term gold price of US$1,300 per ounce, copper price of US$3.00 per pound and a silver price of US$18 per ounce.
4. Mineral resources contained in stockpiles are exclusive of In-situ Mineral Resources. Mineral Resources that are not mineral reserves do not have demonstrated economic viability. The UMZ Oxide Stockpile resources are currently not economically viable to process through the gravity flotation plant.
5. Numbers may not add due to rounding.

Stockpile Mineral Reserves (exclusive of in-situ) – September 30, 2017
Don Mario Mine

Proven

Location/Zone	Tonnage (000 t)	Grade (g/t Au)	Grade (% Cu)	Grade (g/t) Ag	Contained Metal (000 oz Au)	Contained Metal (t Cu)
DM 1 & DPL1 (Pushback)**	15	2.33	0.89	7.15	1.1	136.5
Plant deposit DPL2*	20	1.01	0.99	10.57	0.7	201.6
Plant Pushback LMZ**	9	1.79	0.73	5.81	0.5	62.5
TOTAL	**44**	**1.62**	**0.91**	**8.46**	**2.3**	**400.6**

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 Reserves are estimated using a gold equivalent cut-off grade of 0.4 Au g/t. Gold equivalent cut-offs were calculated using recent operating results for recoveries and on-site operating costs.
3. Mineral Reserves are estimated using average long-term prices of US$1,250 per ounce gold, US$2.50 per lb copper, and US$17.00 per ounce silver.
4. Numbers may not add due to rounding.
5. * UMZ stock for processing Flotation
6. ** LMZ Stock for processing by CIL

Exploration and Mine Life Extension

In fiscal 2017, exploration drilling was concentrated around Las Tojas. Las Tojas is a satellite deposit located approximately 12 km northwest of the Don Mario Mine. The Company completed the first phase of its drilling program at Las Tojas during fiscal 2017, consisting of 18 diamond drill holes for a total length drilled of 2,371 meters with 1,165 samples collected. Results revealed three zones with significant mineralization along a 2.8 km strike length. The second phase of this drilling program is expected to be completed during fiscal 2018, comprising approximately 2,000 meters. The objective of the second phase is to identify and connect the anomalies, and for future estimation of potential mineral resources.

As at September 30, 2017, EMIPA had stockpile mineral resources of approximately 2.2 million tonnes with an average gold grade of 1.84 g/t. The Company continues to evaluate opportunities to process these stockpiles.

The Company also continues its evaluation of reprocessing of tailings material through the CIL circuit to determine the viability of recovering gold that has been deposited into the tailings facility from the flotation-only process employed between 2011 and 2017.

Other

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

Outlook

The Company continues to pursue its initiatives at El Valle and Don Mario on an accelerated basis in order to meet its objectives of optimizing production, lowering unitary cash costs, maximizing free cash flow, extending the life-of-mine of its operations and growing its operations to deliver shareholder value.

At El Valle, supported by capital infrastructure and development investments, the Company achieved its target of a sustained mill throughput rate of over 2,000 tonnes per day over the second half of fiscal 2017. Increased access to higher gold grade oxide ore fronts at the El Valle Mine and production from the Carlés Mine allowed El Valle to improve its gold production and lower its unitary cash costs progressively over fiscal 2017. Objectives in fiscal 2018 include continuing to improve access to oxide ore fronts in the

El Valle Mine in order to bring the proportion of higher grade oxide ore processed in the plant up to 50%, an increase from historical levels lower than 20%. Through additional geotechnical work and infill drilling, the Company also expects to significantly lower its reliance on inferred material in its mine planning in fiscal 2018. Infrastructure investments to improve productivity and efficiency will continue to be made through fiscal 2018 as planned. It is anticipated that these actions will also positively impact El Valle's unitary costs in fiscal 2018.

At Don Mario, the Company successfully re-commissioned the CIL circuit and completed two full quarters of commercial production of gold doré, increasing gold ounce production to its highest levels since 2009. Gold recoveries exceeded the targeted rate of 80% to reach an average of 87.8% over the second half of fiscal 2017, up from previous average recoveries of 55% from the flotation process. Don Mario is now pursuing realization of a number of known opportunities for mine life extension. In the near term, the Company expects to commence pre-stripping activities at Cerro Felix in the first quarter of fiscal 2018, and intends to transition its mine production to this satellite deposit following the depletion of the LMZ, expected in mid-fiscal 2018. The Company has been evaluating opportunities to extend the life of Don Mario, including processing existing mineral stockpiles, potential mining of the Company's Las Tojas deposit and reprocessing gold bearing tailings.

The following table sets out Orvana's fiscal 2017 results and guidance, as well as its fiscal 2018 production and cost guidance:

	FY2017 Guidance	FY2017 Actual	FY2018 Guidance
El Valle Mine Production			
Gold (oz)	50,000 - 55,000	51,546	65,000 – 72,000
Copper (million lbs)	6.0 – 6.5	5.5	4.1 – 4.5
Don Mario Mine Production			
Gold (oz)	35,000 - 40,000	38,746	45,000 – 48,000
Copper (million lbs)	7.0 – 7.5	8.4	2.0 – 2.3
Total Production			
Gold (oz)	85,000 - 95,000	90,292	110,000 – 120,000
Copper (million lbs)	13.0 - 14.0	13.9	6.1 – 6.8
Total capital expenditures	$27,000 - $30,000	$21,332	$24,000 - $27,000
Cash operating costs (by-product) ($/oz) gold (1)	$1,050 - $1,150	$1,015	$950 - $1,050
All-in sustaining costs (by-product) ($/oz) gold (1)	$1,300 - $1,400	$1,269	$1,150 - $1,250

(1) FY2018 guidance assumptions for COC and AISC include by-product commodity prices of $2.75 per pound of copper and an average Euro to US Dollar exchange of 1.20.

Revenue

The Company recorded consolidated revenue of $138.0 million for fiscal 2017 from sales of 88,636 ounces of gold, 14.7 million pounds of copper and 362,827 ounces of silver compared with consolidated revenue of $93.9 million in fiscal 2016 from sales of 61,816 ounces of gold, 13.4 million pounds of copper and 469,847 ounces of silver.

The Company has the following material off-take agreements for the sale of the products produced at El Valle Mine and Don Mario Mine:

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

- In August 2016, the Company entered into the Prepayment Facility, thereby entering into an agreement with the Financier for the refining and sale of gold doré from El Valle Mine commencing in October 2016. The Company terminated its previous doré refining contract with a refiner in Marin, Switzerland and previous doré sales contract with a metals trader for the refining and sale of gold doré from El Valle Mine, both effective October 2016. The Company believes that, due to the availability of alternative purchasers and refiners, no material adverse effect would result if the Financier was unable to purchase and process, respectively, the gold doré from El Valle Mine.
- In August 2016, the Company entered into the Prepayment Facility, thereby entering into a term agreement with the Financier for the sale of copper concentrates produced from Don Mario. The Company believes that, due to the availability of alternative purchasers, no material adverse effect would result if the Financier was unable to purchase the copper concentrate from Don Mario Mine.
- In March 2017, the Company entered into a gold refining agreement with a refiner in Ottawa, Canada and a sales contract with a metals trader for the sale of gold-silver doré from Don Mario. The Company believes that, due to the availability of alternative purchasers, no material adverse effect would result if such off-taker was unable to purchase the gold-silver doré from Don Mario.

Exploration

For information relating to exploration at El Valle Mine, please see "Description of the Business - Principal Mineral Projects - El Valle Mine - Growth Exploration" and "Appendix B - Principal Mineral Projects - El Valle Mine". For information relating to exploration at Don Mario, please see "Description of the Business - Principal Mineral Projects - Don Mario Mine – Exploration and Mine Life Extension" and "Appendix B - Principal Mineral Projects - Don Mario Mine".

Employees

As of the date hereof, Orvana and its subsidiaries employed a total of 675 full-time employees and 501 contract personnel for a total of 1,176 as follows: (i) 211 employees and 409 contractors providing mine, mill, camp and support services at Don Mario Mine; (ii) 458 employees and 90 contractors providing mine, mill and support services at El Valle Mine; and (iii) six employees and two contractors (including the Chairman of the board of directors and Chief Executive Officer of Orvana pursuant to the Fabulosa Secondment Agreement) at the Company's head office in Toronto, Canada. The Company employs a number of personnel who are experienced in open-pit and underground mining techniques as well as polymetallic mineral processing. The Company has skilled professionals in all the required technical and financial areas but will supplement with specialized consultants as required. Although the Company's business requires personnel with specialized skills, the Company believes that persons having the necessary skills are generally available.

Health, Safety, Environment and Social Practices

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

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

Health and Safety

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

hired service providers to support the Company's safety department in risk assessment, training and work environment monitoring.

Environment

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

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

Spanish regulatory authorities have taken the position that the level of selenium in the river exceeds the levels permitted by applicable regulations as a result of discharges attributed to OroValle, which may not be in compliance with certain of OroValle's permits. In recent years, OroValle has received approximately €1.0 million (approximately $1.1 million) in fines relating to these matters and may face further additional fines or other sanctions, including the revocation or suspension of certain permits, in the future. OroValle is appealing the outstanding fines. A judge of criminal court of Asturias is conducting an investigation into the potential commission by OroValle of a reckless crime under the Spanish penal code relating to these matters. The judge may decide to dismiss the matter, conduct a further investigation and/or charge OroValle and/or certain OroValle individuals. If OroValle is ultimately found responsible, monetary penalties, amongst other sanctions, may be applied. These sanctions could have a material impact on the Company. At this time, OroValle has not been charged. It has cooperated and will continue to cooperate with investigations and is defending itself vigorously.

OroValle has been working to remediate this matter through various activities including the implementation of a reverse osmosis water treatment plant in September 2014 and the development of a long-term water management plan, which is in progress. While it appears that these remediation efforts are addressing these matters, there can be no assurances that OroValle's continuing remediation activities will successfully achieve full compliance with local regulations. In addition, OroValle has been seeking to either amend certain of its permits or, alternatively, to receive new permits, and to receive extensions of deadlines to comply with local requirements. Orvana is committed to developing and operating its mines and projects in full compliance with local environmental regulations and recognized international environmental standards.

The Company must dispose, in a safe manner, of the tailings that part of the crushed rock leaves after the metals are extracted. This is typically done in an impoundment area that not only contains this material and waste water, but provides a contingency for extraordinary seismic and weather events so that this material remains contained. El Valle Mine must provide bonds to ensure that the impacted areas are

remediated. Total cash deposited with Spanish financial institutions for reclamation bonds including in respect of the tailings impoundment area amounted to approximately $8.49 million at September 30, 2017 and these monies are expected to be released after all reclamation work at El Valle has been completed. Spanish regulatory authorities have demanded that an additional reclamation bond of €5.0 million be deposited by the Company under Spanish mining regulations in respect of El Valle. The Company is challenging the requirement to fund the additional reclamation bond through an administrative appeal process. The Company is also working with the Spanish regulatory authorities to come to an agreement regarding posting the bond, including the consideration of alternatives to posting this bond, while preserving the Company's rights during the appeal process. The costs incurred by the Company in connection with environmental monitoring and maintenance related to environmental matters are generally treated as ordinary operating expenses.

Sustainability

Orvana is committed to the social development and well-being of the communities in which it operates. To this end, in addition to the payment of income taxes and other local community taxes such as land moving taxes, Orvana continues to support, financially and otherwise, local community endeavors associated with these objectives. In fiscal 2017, Orvana corporate leaders continued to be active in visiting and participating in sustainability initiatives in Spain and Bolivia. The Company has supported the communities surrounding El Valle by donating funds to local museums and funding the re-stocking of fish species into local rivers. OroValle is also collaborating in the planting of trees in the National Natural Park of Somiedo located 30 miles from the mine. Additionally, OroValle has continued its commitment to support cultural activities, including organizing the celebration of Santa Barbara Day in the community of Oviedo; sponsoring the Belmonte Horse Fair; collaborating with the Beriso Project, an archeological investigation in the Boinás area; supporting the Salas Salmon Fair and championship; supporting the Gold Panning Championship in Navelgas; and, for the first time this year, sponsoring a trail race in Belmonte.

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

Foreign Operations

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

RISK FACTORS

The following discussion summarizes the principal risk factors that apply to the Company's business and that may have a material adverse effect on the Company's business, financial condition and results of operations, or the trading price of the Common Shares. Enterprise risk management is carried out by

management of the Company under policies approved by the board of directors thereof. Management of the Company identifies and evaluates risks in co-operation with the Company's operating units. The board of directors of the Company reviews management's risk management programs and provides oversight on specific areas. The Company's overall risk management program seeks to minimize potential adverse effects on the Company's financial and operating performance.

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

Financial Risks

Commodity Price Risks

The Company's business, its ability to generate positive cash flows and the value of the Company's mineral properties are heavily influenced by metal prices, particularly the prices of gold, copper and silver, as well as the cost and availability of commodities which are consumed or otherwise used in connection with Orvana's operations, including, fuel and electricity. If the world market price of gold, copper or silver were to drop and the prices realized by Orvana on gold, copper or silver sales were to decrease significantly and remain at such a level for any substantial period, Orvana's profitability and cash flow would be further adversely affected. An increase in worldwide demand for other critical resources such as input commodities, drilling equipment, tires and skilled labor may cause unanticipated cost increases and delays in delivery times, thereby impacting the Company's operating costs, capital expenditures and production schedules. Delays in delivery times may also occur as a result of lower supplies and materials in stock following the recent downtown in commodities.

Prices of metals and other commodities can and do change significantly over short periods of time and are affected by numerous factors beyond the control of the Company, including changes in the level of supply and demand, international economic and political trends, expectations of inflation, currency exchange fluctuations including the strength of the US dollar, interest rates, global or regional consumption patterns, speculative activities and increased production arising from improved methods and new discoveries. There can be no assurance that prices at which the Company can sell the mineral products it produces will be sufficient to ensure that the Company's properties can be mined profitably. A sustained or significant further decline in the price of gold, copper or silver would have adverse effects on the profitability of the Company and would negatively impact cash flows. To facilitate the management of certain of its price risk, the Company has hedged a portion of its gold and copper production. The Company's outstanding derivative instruments were recorded as a liability at September 30, 2017 at a fair value of approximately $0.9 million. Derivative losses of approximately $1.6 million were recognized in respect of fiscal 2017.

Currency Risk

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

Use of Derivatives

As described in the section of this AIF headed "Risk Factors - Financial Risks – Commodity Price Risks," Orvana has undertaken certain hedging activities to manage the risks associated with gold or copper price volatility and may undertake additional hedging activities and use certain derivative products solely

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

Credit Risk

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

Liquidity and Financing Risks

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

As at September 30, 2017, the Company's outstanding debt includes the $12.5 million Prepayment Facility and $8.3 million TSF Loan. See "Development of the Business - Bolivian Bank Loans" and "Development of the Business - Prepayment Facility". Orvana may assume additional debt in future periods or reduce its holdings of cash and cash equivalents in connection with funding future acquisitions, existing operations, capital expenditures, dividends or in pursuing other business opportunities.

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

Internal Control Environment

Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Disclosure controls and procedures are designed to ensure that information required to be disclosed by a company in reports filed with securities regulatory agencies is recorded, processed, summarized and reported on a timely basis and is accumulated and communicated to a company's management, including its chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure. Orvana has invested resources to document and analyze its system of disclosure controls and its internal control over financial reporting. A control system, no matter how well designed and operated, can provide only

reasonable, not absolute, assurance with respect to the reliability of financial reporting and financial statement preparation.

Global Economic Issues

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

Operational, Strategic and Regulatory Risks

Mineral Resources and Reserves Estimates and Replacement of Depleted Reserves

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

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

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

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

Production Estimates

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

Development, Capital Projects and Operation of Mines

Mine development and operations involve considerable risks including technical, financial, legal and permitting. Substantial expenditures are usually required to establish mineral reserves and resources estimates, to evaluate metallurgical processes and to construct and commission mining and processing facilities at a particular site. Currently, the Company's revenue stream depends on production from the El Valle Mine and the LMZ at Don Mario. These projects do not have extensive operating histories upon which to base estimates of future cash flow or extensive mine lives. It is not unusual in the mining industry for mining operations to experience unexpected problems following commencement of commercial production, resulting in delays and requiring more capital than anticipated. Actual costs and economic returns may differ materially from the Company's estimates. Risks associated with the operation of mines include: unusual or unexpected geological formations; unstable ground conditions that could result in cave-ins or landslides; floods; power outages; shortages, restrictions or interruptions in supply of natural gas, cyanide, sulphur, iron sponge, lime, water or fuel; labour disruptions; social unrest in adjacent areas; equipment failure; fires; explosions; failure of tailings impoundment facilities; and the inability to obtain suitable or adequate machinery, equipment or labour. Any of these risks could have a material adverse effect on the Company's results of operations or financial condition.

Competition

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

Acquisitions and Divestitures

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

synergies and maximizing the financial and strategic position of the combined enterprise and maintaining uniform standards, policies and controls across the organization; the integration or divestiture may disrupt Orvana's ongoing business and its relationships with employees, customers, suppliers and contractors; and an acquired business or assets may have unknown liabilities which may be significant.

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

Title Matters

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

Water Supply

The amount of ore processed at Don Mario is dependent on the volume of water available in nearby reservoirs, which depends on the amount and timing of seasonal rainfall. If a sufficient amount of water is not accumulated and maintained, Don Mario may not be able to operate at full capacity or may be able to do so only on an intermittent basis. El Valle is a no-discharge facility as process water is discharged into the tailings impoundment and sent back to the plant. If there is a water deficit in this closed system, the Company can use mine water to make up that deficit.

Regulatory and Other Risks

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

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

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

Permits

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

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

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

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

Environmental, Health and Safety Regulations

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

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

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

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

In certain of the countries in which Orvana has operations, it is required to submit, for government approval, a reclamation plan for each of its mining sites that establishes Orvana's obligation to reclaim property after minerals have been mined from the site. In Spain, bonds or other forms of financial assurances are required security for these reclamation activities. Orvana may incur significant costs in connection with these reclamation activities, which may materially exceed the provisions Orvana has made for such reclamation. In addition, the unknown nature of possible future additional regulatory requirements and the potential for additional reclamation activities create further uncertainties related to future reclamation costs, which may have a material adverse effect on Orvana's financial condition, liquidity or results of operations. On June 27, 2011, as a condition of receiving an environmental permit on that date, the Government of the Principality of Asturias, required OroValle to commit to post an additional reclamation bond in the amount of €5.0 million (approximately $5.6 million). To satisfy this requirement, OroValle deposited €5.0 million in September 2011 with a local bank in favour of the Spanish regulatory authorities. As referenced in "Health, Safety, Environment and Social Practices - Environment" above, Spanish regulatory authorities have demanded that an additional reclamation bond of €5.0 million be deposited by the Company under Spanish mining regulations in respect of El Valle. The Company is challenging the requirement to fund the additional reclamation bond through an administrative appeal process. The Company is also working with the Spanish regulatory authorities to come to an agreement regarding posting the bond, including the consideration of alternatives to posting this bond, while preserving the Company's rights during the appeal process. See "Health, Safety, Environment and Social Practices - Environment" above.

Political and Related Risks

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

The Company also may be hindered or prevented from claiming against or enforcing its rights with respect to a government's action because of the doctrine of sovereign immunity. It is not possible for the Company to accurately predict political or social conditions or developments or changes in laws or policy or to what extent, if any, such conditions, developments or changes may have a material adverse effect

on the Company's operations. Moreover, it is possible that deterioration in economic conditions or other factors could result in a change in government policies respecting the presently unrestricted repatriation of capital investments and earnings. These risks may limit or disrupt operating mines or projects, restrict the movement of funds, cause Orvana to have to expend more funds than previously expected or required, or result in the deprivation of contract rights or the taking of property by nationalization or expropriation without fair compensation, and may materially adversely affect Orvana's financial position or results of operations.

In Bolivia, recent changes to mining laws and policies and expected new governmental regulations and changes in governmental regulation or governmental actions may adversely affect the Company. The Bolivian constitution provides that the government shall grant mining rights by means of mining contracts in place of the previously established process of granting mining concessions. A process for the migration of mining concessions into mining contracts is expected under regulations yet to be issued. Accordingly, previously acquired rights under mining concessions such as those of the Company in respect of Don Mario will be respected, but are subject to this migration process.

On May 28, 2014, Law 535 of Mining and Metallurgy (the "New Mining Law") was promulgated in Bolivia. Pursuant to the New Mining Law, the Company must develop its mining activities to comply with the economic and social function, which means observing the sustainability of the mining activities, work creation, respecting the rights of its mining workers, and ensuring the payment of mining patents and the continuity of existing activities. The New Mining Law does not make any substantial changes to the current tax and royalty regimes in relation to mining activities. The Company is required to start the proceeding pursuant to the New Mining Law within six months from the publication of the administrative regulation establishing the initial date for the filing of such requests. However, to this date, such administrative regulation has not yet been issued.

The potential effect on the Company's future mining activities in Bolivia and the Company's mineral concessions remains unclear and could but may not necessarily include the Company's mineral concessions in respect of Don Mario being converted into a mining contract which could result in the Bolivian government acquiring an interest in the Company's Don Mario Mine, increased government mining royalties, a requirement for products produced by the Company to be sold in Bolivia, and/or partial reversion to the Bolivian government of mining concessions where no mining activities are carried on currently by the Company. The Company has been carrying on mining activities at Don Mario and has certain other mining concessions in respect of which it has or it is planning to conduct certain exploration activities. In the past, the government of Bolivia has nationalized the assets of certain companies in various industries.

In Bolivia, Supreme Decree 1802 provides that when annual gross domestic product (GDP) grows more than 4.5%, an extra month of salary must be paid to all salaried workers in Bolivia, including the private sector, in respect of the month of December (the "Esfuerzo por Bolivia"). In 2017, the GDP did not grow more than 4.5% and, therefore, the Ministry of Labor suspended the Esfuerzo por Bolivia for this year.

In July of 2015 Section 325 of the Spanish penal code, the section under which the preliminary criminal investigation for an alleged crime against the environment referred to in "Environment" above was brought, was expanded to allow for the existence of an offense in the case of potential environmental harm. This amendment does not impact the current matter, however, it may impact future matters.

Insurance

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

The Company has comprehensive insurance coverage in support of its risk management program to cover some of these risks and hazards. The insurance is maintained in amounts that are believed to be reasonable depending on the circumstances surrounding each identified risk. There is no assurance that

all circumstances of loss which may occur will be covered under the Company's insurance program or that, in the event of a claim, the amount of the Company's insurance coverage, if any, will be adequate to cover the full amount of the claim.

Reliance on Key Personnel and Labour Relations

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

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

Community Relations and License to Operate

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

Litigation

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

Conflicts of Interest

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

Controlling Shareholder

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

ability to influence the Company, may have a negative impact on the trading price of the Common Shares.

Share Trading Volatility

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

DIVIDENDS

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

DESCRIPTION OF CAPITAL STRUCTURE

The authorized capital of the Company consists of an unlimited number of Common Shares. As at September 30, 2017, there were 136,623,171 Common Shares outstanding. As at the date of this AIF, Fabulosa held (i) 70,915,027 Common Shares, representing 51.9% of the currently outstanding Common Shares and (ii) 600,000 Warrants, with Fabulosa's combined holding of Common Shares and Warrants representing 51.5% of the Common Shares on a fully diluted basis. If Fabulosa exercises all of the 600,000 Warrants, its ownership would represent 52.1% of the then currently outstanding Common Shares. For additional information on the Warrants, see "Transactions with Fabulosa Mines Limited – Related Party Transactions".

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

Orvana has adopted a Stock Option Plan (the "Option Plan"), a Restricted Share Unit Plan for designated executives (the "RSU Plan"), a Deferred Share Unit Plan for directors (the "DSU Plan") and a Stock Appreciation Plan for designated executives (the "SAR Plan"). Information relating to the Option Plan, the RSU Plan, the DSU Plan and the SAR Plan and securities outstanding thereunder is set out in Orvana's most recent management information circular filed at www.sedar.com.

MARKET FOR SECURITIES

The Common Shares are listed and traded on the Toronto Stock Exchange under the symbol "ORV". The following table provides the historical monthly trading price ranges and volumes for the Common Shares during the fiscal year ended September 30, 2017:

Trade Date	Symbol	High Price	Low Price	Trade Volume
September 2017	ORV	0.28	0.25	1,268,740
August 2017	ORV	0.32	0.27	1,631,880
July 2017	ORV	0.29	0.25	1,028,150
June 2017	ORV	0.31	0.27	2,475,680
May 2017	ORV	0.30	0.22	1,693,170
April 2017	ORV	0.24	0.21	1,239,780
March 2017	ORV	0.22	0.18	1,821,340
February 2017	ORV	0.25	0.20	2,988,220

Trade Date	Symbol	High Price	Low Price	Trade Volume
January 2017	ORV	0.25	0.22	2,252,190
December 2016	ORV	0.25	0.21	1,159,510
November 2016	ORV	0.27	0.20	1,476,780
October 2016	ORV	0.29	0.22	1,593,140

DIRECTORS AND OFFICERS

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

Name and Province or State and Country of Residence	Position with the Company (1)	Principal Occupation For Past Five Years
Edwards, Alan (2) (4) Arizona, USA	Director since May 2016	President of AE Consulting Corp(5) (current) Non-Executive Chairman of the Board of Rise Gold Corp. (current) Non-Executive Chairman of the Board of Mason Resources Corp. (current) Principal of Gladiator Mining Group LLC (current) Director, Chairman of the Technical Committee of Entrée Resources (current) Director, Chairman of the Sustainability and Technical Committee of America's Silver Corporation (current) Non-Executive Chairman of the Board of AQM Copper Inc. Non-Executive Chairman of the Board, Director, Chairman of the Sustainability Committee of AuRico Gold Corporation Non-Executive Chairman of the Board Director, President, Chief Executive Officer, and Director of Oracle Mining Corp. (6)
Gilbert, Jim (4) Virginia, USA	Chief Executive Officer since August 2016 Chairman of the board since May 2016	Chief Investment Officer of Minera S.A.,(7) (8) affiliate of Fabulosa (current) President and Chief Executive Officer, and Director of First Point Minerals Corp. President and Chief Executive Officer, and Director of Minera S.A., affiliate of Fabulosa
Guimaraes, Edmundo (2) Ontario, Canada	Director since February 2013	Chief Financial Officer of Sierra Metals Inc.(9) (current) Director of Aldridge Minerals Inc. Independent business consultant
Magner, Sara (3) Virginia, U.S.A.	Director since November 2015	Corporate Secretary and General Counsel of Minera S.A.(7), affiliate of Fabulosa (current) Associate of Greenberg Traurig LLP
Pridham, Gordon (2) (3) Ontario, Canada	Lead Director since August 2016 Director since November 2014	Director and Chair of Newalta Corporation and director of America Silver Corporation (previously Scorpio Mining Corporation) (current) Director and Chair of the board of CHC Realty Capital Corp. (current)

Name and Province or State and Country of Residence	Position with the Company (1)	Principal Occupation For Past Five Years
		Principal of Edgewater Capital (current) Advisory board member of Enertech Capital (current) Titanium Corporation
Darling, George Ontario, Canada	Director since February 2017	Senior Mine Consultant and Regional Director of Hatch Ltd. Senior Mine Consultant and Regional Director of SNC-Lavalin
Hillis, Jeffrey Ontario, Canada	Chief Financial Officer since April 2015	Vice-President, Chief Financial Officer and Corporate Secretary of Potash Ridge Corporation
Chan, Jeffrey Ontario, Canada	VP Finance since October 2016	Corporate Controller, Orvana Minerals Corp. from August 2013 to October 2016 Financial Controller, Ryan Gold Corp. Financial Controller, Corona Gold Corporation

(1) The term of office of each director expires at the close of the next annual meeting of shareholders of the Company. An officer of the Company serves until such officer resigns or his or her replacement is appointed.
(2) Member of the Audit Committee.
(3) Member of the Compensation, Nominating and Corporate Governance Committee.
(4) Member of the Technical, Safety, Health, Environment and Sustainability Committee.
(5) AE Consulting Corp. provides mining, mineral processing and geological consulting and advisory services.
(6) Mr. Edwards was Chairman of the Board of Oracle Mining Corp. ("Oracle") until his resignation effective February 15, 2015. On December 23, 2015, Oracle announced that the Superior Court of Arizona had granted the application of Oracle's lender to appoint a receiver and manager over the assets, undertaking and property of Oracle Ridge Mining LLC.
(7) Minera S.A. is an international mining holding company.
(8) Mr. Gilbert is on secondment from Fabulosa to the Company to act as Chairman of the board of directors of Orvana and Chief Executive Officer of Orvana. See "Transactions with Fabulosa Mines Limited - Related Party Transactions - Fabulosa Secondment Agreement."
(9) Sierra Metals Inc. is a mid-tier precious and base metals producer in Latin America.

As at the date of this AIF, to the knowledge of the Company, the directors and officers of the Company beneficially owned, or exercised control or direction over, directly or indirectly, approximately 0.2% of the outstanding Common Shares or securities exercisable into Common Shares.

LEGAL PROCEEDINGS

As disclosed in "Health, Safety, Environment and Social Practices - Environment" above, a judge of criminal court of Asturias is conducting an investigation into the potential commission by OroValle of a reckless crime against the environment under the Spanish penal code. The judge may decide to dismiss the matter, conduct a further investigation and/or charge OroValle and/or certain OroValle individuals. If OroValle is ultimately found responsible, monetary penalties, amongst other sanctions, may be applied. These sanctions could have a material impact on the Company. At this time, OroValle has not been charged. It has cooperated and will continue to cooperate with investigations and is defending itself vigorously. The Company may be involved in other legal proceedings from time to time, arising in the ordinary course of its business. The amount of ultimate liability with respect to these actions will not, in the opinion of management, materially affect the Company's financial position, results of operations or cash flows. The Company does not believe that the outcome of any of the matters not recorded in its financial statements, individually or in aggregate, would have a material adverse effect.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

During fiscal 2017, 2016 and 2015, the Company entered into certain transactions with Fabulosa, a 51.9% shareholder of Orvana. For a description of these transactions, see "Development of the Business - Transactions with Fabulosa Mines Limited - Related Party Transactions".

TRANSFER AGENT AND REGISTRAR

As at the date of this AIF, the Company's transfer agent and registrar is AST Trust Company (Canada), 1 Toronto Street, Suite 1200, Toronto, Ontario, M5C 2V6.

MATERIAL CONTRACTS

Other than contracts described in this AIF, there are no other material contracts entered into before fiscal 2017, but still in effect or entered into during fiscal 2017.

AUDIT COMMITTEE DISCLOSURE

The Audit Committee's Charter

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

Composition of the Audit Committee

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

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

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

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

Pre-approval Policies and Procedures

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

External Auditor Service Fees

The following table sets forth the fees incurred by Orvana during fiscal 2017 and fiscal 2016 in respect of the services set out below provided by PwC, the Company's external auditors:

Fiscal Year ended September 30, (US$'000)	**2017**	**2016**
Audit fees [(1)]	266	258
Audit-related fees [(2)]	50	35
Tax fees [(3)]	2	17
All other fees [(4)]	10	0
Total fees[(5)]	**$328**	**$310**

(1) "Audit fees" include the aggregate professional fees billed by PwC for the audit of the annual consolidated financial statements of the Company. Audit fees for 2017 include audit fees incurred with respect to the fiscal 2017 audit, but billed during fiscal 2018 and audit fees for 2016 include audit fees incurred with respect to the 2016 fiscal audit, but billed during fiscal 2017.

(2) "Audit-related fees" include the fees billed by PwC for assurance and related services that are reasonably related to the performance of the audit and are not included in "Audit fees" including guidance in meeting the requirements of Multilateral Instrument 52-109.

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

(4) "All other fees" include the aggregate fees billed by PwC for all other products and services other than those presented in the categories of audit, audit-related fees and tax fees, including due diligence advisory services in respect of fiscal 2015.

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

INTERESTS OF EXPERTS

PwC LLP is Orvana's external auditor and prepared the "Independent Auditors' Report to the Shareholders of Orvana Minerals Corp.", dated December 12, 2017 in respect of the 2017 Financials. PwC has informed Orvana that it is independent with respect to Orvana within the meaning of the Rules of Professional Conduct of the Chartered Professional Accountants of Ontario.

Each of the following individuals is a "qualified person" for the purposes of NI 43-101: Mr. Jason J. Cox, P.Eng., of RPA (such individual being the overall author of El Valle Mine 43-101 Report and having approved of the scientific and technical information from El Valle Mine 43-101 Report disclosed in Appendix B of this AIF, unless otherwise indicated) and Mr. Michael Cullen of Mercator and Mr. Gino Zandonai of DGCS (such individuals being the author of the Don Mario 43-101 Report and having approved of the scientific and technical information from the Don Mario 43-101 Report disclosed in Appendix B of this AIF, unless otherwise indicated).

Mr. David Duncan supervised the estimate of El Valle's mineral reserves as at September 30, 2017 and the development of the Life of Mine Plan for El Valle (the "El Valle LOMP"). Mr. Duncan, the Operations Manager at OroValle, is a qualified person who is not independent of the Company for the purposes of NI 43-101 and has approved of the scientific and technical information relating to El Valle Mine disclosed in this AIF. Ms. Guadalupe Collar Menéndez supervised the estimate of El Valle's mineral resources as at September 30, 2017. Ms. Collar Menéndez, the Chief of Geology at OroValle, is a qualified person who is not independent of the Company for the purposes of NI 43-101 and has approved all of the scientific and technical information relating to El Valle Mine disclosed in this AIF. Mr. Zadonai supervised the estimates of Don Mario's mineral resources and mineral reserves as at September 30, 2017 and the development of the Life of Mine Plan for Don Mario (the Don Mario "LOMP"). Mr. Zadonai is a qualified person who is independent of the Company for the purposes of NI 43-101 and has approved of the scientific and technical information relating to Don Mario Mine disclosed in this AIF.

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

ADDITIONAL INFORMATION

Additional information with respect to Orvana, including directors' and officers' remuneration and indebtedness, principal holders of Orvana's securities and securities authorized for issuance under equity compensation plans, where applicable, is contained in Orvana's management information circular for its most recent annual meeting of shareholders that involved the election of directors. Additional financial information is provided in the 2017 Financials and management's discussion and analysis for fiscal 2017, the Company's most recently completed financial year. This information and additional information relating to Orvana are available on Sedar at www.sedar.com and on Orvana's website at www.orvana.com.

APPENDIX A

ORVANA MINERALS CORP. - ANNUAL INFORMATION FORM

Charter of the Audit Committee

A. Purpose

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

B. Membership

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

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

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

C. Duties and Responsibilities

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

13. To review and recommend to the Board the appointment of an external auditor and the compensation of such external auditor.

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

(i) a review of estimated and actual fees;

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

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

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

15. To ensure that the Corporation complies with the guidelines of the *Chartered Professional*

Accountants of Canada relating to the hiring of current and former partners and employees of the external auditor.

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

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

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

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

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

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

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

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

24. To conduct any investigation considered appropriate by the Committee.

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

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

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

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

D. Review of Internal Audit Function

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

The Committee shall meet in camera with the Internal Auditor as frequently as the Committee determines is appropriate for the Committee to fulfil its responsibilities to discuss any areas of concern to the Committee or to the Internal Auditor to confirm that (i) significant resolved and any unresolved issues between the Internal Auditor and management have been brought to the attention of the Committee; (ii)

the principal risks of the Company's businesses have been identified by management and appropriate policies and systems have been implemented to manage these risks; and (iii) the integrity of the Company's internal control and management information systems are satisfactory.

E. Minutes

Minutes shall be kept of all meetings of the Committee.

F. Meetings

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

1. The quorum for meetings of the Committee shall be two of its members.

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

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

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

G. Reports to the Board

The Committee shall report to the Board as follows:

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

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

3. The Committee may call a meeting of the Board to consider any matter of concern to the Committee.

H. Access to Information

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

I. Independent Advisors

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

J. Board Review of Charter

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

Information Form.

APPENDIX B

ORVANA MINERALS CORP. - ANNUAL INFORMATION FORM

Principal Mineral Projects

Terms not otherwise defined herein are defined in the Annual Information Form of Orvana dated December 12, 2017.

El Valle Mine

Current Technical Report

On September 29, 2014, the Company filed the "Technical Report on El Valle Boinás-Carlés Operation, Asturias, Spain" ("El Valle Mine 43-101 Report") by Jason J. Cox, P.Eng., who is a qualified persons independent of the Company for the purposes of NI 43-101.

Scientific and technical information provided below with respect to El Valle Mine is primarily contained in El Valle Mine 43-101 Report, except where otherwise indicated.

Project Description, Location and Access

Title and Interest in Property

Through its wholly-owned subsidiary, OroValle, the Company owns and operates El Valle Mine, which is located in the Rio Narcea Gold Belt in northern Spain. OroValle has 14 exploitation concessions comprising 4,298 hectares and two investigation permits comprising 3,302 hectares. In addition, OroValle is in the process of attempting to convert another area of land measuring 28 hectares where it previously held an investigation permit to an exploitation concession. The exploitation concessions provide the holder the right to extract minerals from a specified area, subject to approval of an exploitation plan by the applicable mining authorities. The term is generally for 30 years and is renewable upon application. The OroValle's exploitation concessions range in expiration dates from May 2026 to January 2068. As necessary, OroValle has been applying to renew its exploitation concessions.

The investigation permits provide the holder the right to investigate the resources in the permit area, subject to approval of an investigation plan by the applicable mining authorities. The holder has the right to carry out all types of exploration activities including geological studies, soil geochemistry, geophysics, and drilling. If there is any activity on surface that the mining authorities believe may affect the environment, the company may be required to get additional approvals from environmental authorities. The term is for three years and is renewable upon application. OroValle's investigation permits expire in May 2018. As necessary, OroValle has been applying to renew its investigation permits.

Location of the Project and Means of Access

The Río Narcea Gold belt is located in northwestern Spain within Oviedo Province, Asturias Principality approximately 35 km west of the Asturian capital city of Oviedo and about 30 km south of the north coast of Spain. The Asturias airport and the port city of Avilés are located approximately 40 km northeast of the property. The properties are situated in the municipalities of Salas and Belmonte de Miranda.

El Valle Mine area is located in the west side of the municipality of Belmonte de Miranda and is six km west of the village of Belmonte. It is 15 km by road from Belmonte and 55 km by road from Oviedo.

The most northerly of the properties is the Ortosa-Godán area, which is located approximately three km south of the village of Salas and 40 km by road from Oviedo. Carlés Mine is five km southeast of Salas and 40 km by road from Oviedo. The deposit is located in the Municipality of Salas. National road AS-15 and the Río Narcea River both cross over Carlés Mine along the valley floor.

The La Brueva prospect is located six km northwest of the village of Belmonte and about 50 km by road from Oviedo. It is located in the northern part of the Municipality of Belmonte de Miranda. The prospect is accessed by a narrow paved road that starts from Selviella on AS-227 that continues west to El Valle Mine.

Royalties

Production from El Valle is subject to a 3% net smelter return royalty ("NSR"), referred to herein as El Valle Royalty, payable monthly. El Valle Royalty rate decreases to 2.5% for any quarter in which the average price of gold is below $1,100 per ounce. El Valle Royalty expense under this NSR totaled $2.1 million for fiscal 2017.

Other

For significant factors or risks that might affect access or title, or the right or ability to perform work on, the property, including permitting and environmental liabilities to which the project is subject see "Risk Factors" above.

History

Prior to Orvana's involvement at El Valle Mine it was subject to mining activities dating back to the Roman era. In the 1800s and the early 1900s, several small copper mines were in production and mining for arsenopyrite was carried out during World War II.

Modern exploration commenced in the 1970s at Carlés Mine. Sporadic drilling and sampling programs through the 1970s and 1980s gave way to underground exploration in 1990. Further drilling and engineering work by Rio Narcea culminated in the start of production at Boinás West Pit in 1997, followed by Boinás East Pit, and El Valle Pit. Open pit mining occurred from 1997 to 2003 producing approximately 4.9 Mt, containing approximately 916,000 ounces of gold.

Underground production began in 2003 at Carlés Mine and 2004 at El Valle Mine. Underground operations ceased in 2006 due to rising costs, lack of mill feed, and excessive dilution. A summary of historical exploration activities is given in the table below.

Year	Company	Location	Activity
1971 - 1972	Gold Fields Española, S.A.	Carlés	Mapped Carlés Mine skarn, soil and outcrop sampling, geochemical analyses, surface magnetometer survey
1981	Boliden Minerals A.B.	La Ortosa	La Ortosa granodiorite geological mapping, soil geochemical and geophysical surveys on 600 m by 500 m grid, seven drill holes amounting to 1,085 m
1985	Exploraciones Mineras del Cantábrico S.A.	Carlés	Three drill holes totalling to 346 m
1985	Anglo American Company (AAC)	Carlés	1:6,000 and 1:25,000 aerial photography, photo geologic and outcrop mapping (1:1,000) 253 outcrop samples 240 soil samples 1,292 m of RC drilling from 25 holes 13,147 m of core drilling from 58 drill holes assayed Au, Cu, As Geotechnical studies and preliminary bench metallurgical test work
1990	AAC & Hullas del Coto Cortés, S.A. (HCC)	Carlés	910 m of decline, +70, +40, +18 levels, 200 m of ore drives and 80 m of raises 600 underground panel samples, 189 channel samples, 140 muck samples 90 samples weighing a total of 36 tonnes sent to American Research Laboratories in Johannesburg, South Africa for large-scale metallurgical testwork 6,012 m of core drilling in 108 holes
		Godán/El	Mapping of Roman Pits, collected 858 samples,

Year	Company	Location	Activity
		Valle Boinás	magnetometer, soil geochemical surveys
1991	AAC & HCC	Godán/El Valle Boinás Carlés	8,932 m of drilling from 43 holes at Boinás East, El Valle and Godán Feasibility study
1992	AAC, HCC and Concord Joint Venture	La Brueva/El Valle Boinás	Mapping, trenching and drilling of the west breccia over 250 m strike length
1994	Rio Narcea (AAC, HHC and Concord)	La Brueva/El Valle Boinás	9,727 m of drilling in 50 holes at El Valle, Pontigo Prospect, Villaverde Prospect, Antonana and La Brueva
1994 - 1995	Rio Narcea	La Brueva/El Valle Boinás	Delineation and infill at El Valle and target testing at Villaverde, Antoñana, Millara and La Brueva prospects
1996	Rio Narcea	El Valle Boinás Carlés	Infill drilling in the Black Skarn, feasibility study on the Boinás East Zone 16,283 m in 96 drill holes of infill drilling (drilling to 25 m spacing to 100 m below surface and to 50 m spaced drilling 200 m below surface)
1996-1998		Godán	5,656 m in 17 drill holes
1997-1998 1999, 2001 1999 1999 - 2003		El Valle Boinás	Commencement of open pit at Boinás West (870,000 tonnes mined for 115,000 Au ounces at a grade of 4.1 g/t Au by end of 1998) Commencement of open pit at Boinás East (1,215,000 tonnes for 192,450 ounces of gold at a grade of 4.93 g/t Au and 0.52% Cu) Boinás West pit backfilled with waste from Boinás East open pit Mining at El Valle open pit (2,760,000 tonnes for approximately 600,000 ounces of gold). Included mining of Caolinas zones and Charnela zone
2000 - 2002		Carlés	Surface mining at Carlés North (64,000 tonnes produced for 9,320 Au ounces at a grade of 4.54 g/t Au)
2002 - 2003		El Valle Boinás	Feasibility study for underground mining at Boinás East
2003		Carlés	Dewatering of the decline followed by underground drilling
2003 - 2006		Carlés	Underground production (296,000 tonnes for 49,000 Au ounces at grade of 5.22 g/t Au and 0.76% Cu)
2004 - 2006		El Valle Boinás	Underground mining commenced at Boinás East, closed due to rising costs, insufficient mill feed and excessive dilution
2004 - 2006		All properties	38,655 m of drilling

Geological Setting, Mineralization and Deposit Types

The Río Narcea Gold Belt is located in the western portion of the Cantabrian Zone in the northwestern part of the Hercynian-age Iberian Massif. The Cantabrian Zone and the nearby West Asturian-Leonese Zone consist of a stratigraphic section of Paleozoic sedimentary rocks that range in age from Middle

Cambrian to Permian. The lower stratigraphic section of the Cantabrian Zone includes the Láncara Formation (Cambrian limestone), which is underlain by Cambrian feldspathic sandstone. The limestone has a total thickness of approximately 250 m and constitutes the principal host rock for gold and copper mineralization at El Valle Mine.

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

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

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

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

El Valle Mine

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

Carlés Mine

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

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

Skarn-Type Deposits

Gold-copper skarns have developed mainly along the contact between intrusives and carbonate units. Two different types of skarn have been recognized at El Valle Mine. The first is a calcic skarn related to limestone units and the second is a magnesian skarn, called “black skarn”, that is related to dolomite units.

Calcic skarns consist mainly of garnet, pyroxene, and wollastonite. Retrograde calcic skarns consist of epidote, quartz, calcite magnetite, and sulphides (pyrite, arsenopyrite, and chalcopyrite). Gold mineralization in this type of skarn is erratic and mostly uneconomic, although some calcic skarns produced ore in the open pits.

Magnesian skarns consist of diopside with some interbedded forsterite. Retrograde magnesian skarn is altered to tremolite, actinolite, serpentine and magnetite. Commonly it is accompanied by chalcopyrite, bornite, pyrrhotite, pyrite, and arsenopyrite as well as disseminated electrum. The result of this retrogradation is development of a dark magnesian skarn. Geochemistry indicates a Cu-Ag-Au-As-Bi-Te association. Gold mineralization in this type of skarn is significantly higher grade than the calcic skarns

and is generally a good target for underground mining. The magnesian skarns tend to have good continuity at cut-off grades below 2.0 g/t Au, but can be very difficult to predict above 3.0 g/t Au.

The gold-copper-bearing skarns at Carlés Mine are generally calcic skarns. Better grade gold-copper mineralization is associated with high magnetite and bornite content that is localized in generally continuous, relatively thin (four metres thick) layers of retrograde skarn. A different type of skarn is observed at Ortosa where gold is deposited without copper mineralization. These skarns are calcic skarns formed as thin, discontinuous layers interbedded with hornfels and pyroxene hornfels.

Epithermal-Type Deposits

At El Valle Mine deposit, reactivation of fracture zones (along northeast-southwest, east-west and northwest-southeast orientations) produced widespread brecciation and favoured the emplacement of porphyritic dykes. A low-temperature alteration and mineralization event is spatially and genetically associated with the subvolcanic porphyry dykes, which overprint all previous lithologies. Depending on the host rock, there are different styles of hydrothermal alteration and mineralization, such as: sericite-adularia-carbonates (+py-aspy) in granites and skarns; leaching, enrichment, and silicification in skarns (+ native copper and chalcocite), and silicification (+py) in dolomites.

Highest gold grades occur where the low-temperature mineralization overprints previously mineralized gold-copper skarn, forming jasperoid or semi-jasperoids with native copper and minor chalcocite and cuprite. The associated geochemistry is characterized by an increase in As, Sb, and Hg. This low-temperature event is the principal gold-mineralizing episode at El Valle.

Gold, and in some cases, base-metal mineralization, has been found in association with late tectonic breccias related to low-angle thrust faults at El Valle Mine. The origin of the gold mineralization in these structures is thought to be due to remobilization of previous skarn or jasperoid related gold mineralization. Gold associated with low-angle structures is important at El Valle Mine where a significant percentage of the open pit minable gold mineralization extracted from the Boinás East Zone came from this type of structure.

Exploration

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

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

Despite these challenges, the area was sufficiently well mineralized that continued exploration at El Valle Mine found enough new resources to extend Río Narcea Gold Mines' mine life by 24% and to increase the amount of gold mined by 43% over the reserve at the beginning of mining. Key discoveries that extended mine life include the Sienna Zone at the east side of Boinás East, the Charnela Zone on the southern part of El Valle pit and the Caolinas Zone on the west edge of El Valle pit.

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

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

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

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

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

In 2016 and 2017, oxide mineralization with ore grade was intercepted in the upper part of the Black Skarn Northwest Zone, which is included like a new area in the Boinas oxide Resources Estimate. This area has good potential and is a target area for the next drilling campaign.

Drilling

Up to March 30, 2017, drill hole information included in Resources Estimate, drilling has totaled approximately 414,328 meters in 2,938 holes, of which Orvana drilled approximately 150,609 meters in 1,168 holes. Of these holes drilled, 70 holes in the database were exploratory in nature, and tested for satellite deposits. In fiscal 2017, El Valle completed 20,415 meters of infill definition and exploration diamond drilling over 161 drill holes.

Subsequent to El Valle Mine 43-101 Report, the Company continued to pursue opportunities to define new resources. The Company has restarted mining activity at Carlés Mine on a short-term basis. Further mineable resources may exist in the Carlés NW zone that may provide an opportunity to extend or expand the Carlés Mine plan. The Company expects to complete infill drilling on Carlés NW during the first quarter of fiscal 2018.

Additionally, diamond drilling campaigns were completed in the East Breccia oxide zone from surface. This area is located at the North of El Valle Mine Underground. 1,854 mts were completed with seven drill holes in total. The mineralization is intersected around 100 mts from surface, which is in polymictic breccias oxidized and silicified. The drill hole 16EBX1016 intersected 20.50 mts containing 8.92 g/t Au and 0.61% Cu, and included over 1.5 mts with 51.77 g/t Au and 0.77% Cu. East Breccia was drilled in previous years getting Inferred Resources, and with the drilling completed in fiscal 2017, part of these Inferred Resources were converted into Indicate Resources.

More than 5,400 mts were carried out in Black Skarn Northwest, of which, close to 2,500 mts were focused in the upper part (above 100 level) to define oxide mineralization. This program had positive results in gold and cooper, increasing the oxides resources, which were converted in Measured and Indicated directly and in consequence, allowing us to start mine production in this zone. This area is open and drilling will be continued in the next fiscal year to extend the resources. The drill hole 16V1483 intersected 12.00 mts, containing 8.29 g/t Au and 1.92% Cu in an oxidized skarn, the drill hole 17BS120-36001 intersected 11.15 mts with 12.45 g/t Au and 1.4% Cu, including 1.4 mts containing 45.0 g/t Au.

At the Quintana property, soil sampling and geophysical surveys (Induced Polarization -IP and chargeability) were carried out during fiscal 2016. Based on the results, a drilling campaign was defined to be carried out during fiscal 2017. But due to delays in getting local permits, this will be started in fiscal 2018.

In “Lidia Investigation Permit”, geophysical surveys were started in the fourth quarter of fiscal 2017 and we expect to complete this during the first quarter of fiscal 2018. Based on the results, a drilling campaign will be defined to drill the anomalies found.

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

The majority of the holes drilled are HQ diameter with the exception of some NQ core at Carlés Mine and some PQ core for metallurgical purposes. Core boxes are transported daily from underground, delivered to the core shed and laboratory facility in Begega. The core is photographed wet with the name of the

hole and the depth. The core is then laid on core logging benches awaiting both geotechnical and geological logging by the Orvana geologists.

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

Upon completion of the geotechnical logging, geological logging, sampling and density calculation, the hand written logs are transferred to the senior geologist who scans the logs and enters the information into the Recmin database. Collar locations are measured during drilling by underground surveyors. The collar location, azimuth and inclination of the drill hole are measured and are subsequently used to replace pre-entered planned collar locations in the drill hole database. Down hole survey measurements are conducted using a Reflex Maxibor instrument. Data is exported from the instrument and then transferred to the drill hole database.

Sampling, Analysis and Data Verification

On average, 7,366 samples are assayed per month, consisting of exploration core, underground grade control samples, mill samples and environmental samples. OroValle has its own on-site assay laboratory located on the hill side in Begega, above the El Valle open pit, approximately 15 minutes by road from the administration and processing facilities for the mine. Both sample preparation and analysis are performed at the laboratory. The laboratory is ISO 9001 certified which is renewed each year.

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

At El Valle Mine, grade control sampling consists of: underground face channels of 1.5 metres in length over the entire face and the walls unless a litho-structural break can be identified, sampling of muck piles at active headings or remucks and sampling of surface stockpiles with demarcated stockpiles on a round per round and stope by stope basis. El Valle Mine underground channel samples are not used for resource estimation for the following reasons:

- sampling of the oxide faces is problematic due to the timing of ground support/heading availability and only partial exposure of the face due to shotcrete cover; and
- face channel samples represent a different volume support as compared to drill core samples (face channel samples are typically longer than the average drill core sampling length).

At Carlés Mine, underground face channel samples were taken honouring a nominal 1.2 metres interval and litho-structural boundaries. Given the similarity in sample support and the layered nature of the Carlés Mine zones, the underground channel samples are used for resource estimation.

Density information is collected after logging at a density measurement station within the core logging facility. The density sample is returned to the box after density measurement. For highly fractured zones where density measurements cannot be reliably measured using the methodology described, densities were determined based on production results.

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

The sample preparation procedure is as follows:

- The seven kilogram core samples are dried at a temperature of 105ºC.

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

After sample preparation, 30 g samples are analyzed for Au by fire assay with an atomic absorption spectroscopy (AAS) finish and two gram samples for Ag, As, Bi, Cu, Hg, Pb, Sb, Se, and Zn by ICP-optical emission spectroscopy (ICP-OES) after an aqua regia digestion. Assay results are received by the mine site geological personnel via email to be entered into the drill hole database.

The quality assurance/quality control program involves submitting certified reference material, blanks, and duplicate samples into the sample stream. The on-site senior geologist reviews the results prior to acceptance of the assay results.

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

- collar surveys conducted by in-house personnel are entered in a spreadsheet, transformed to UTM coordinates and checked by the project geologist;
- geological logs are entered into a spreadsheet by the geologist responsible for logging the hole, and when complete the database geologist checks and adds the data into the database;
- results received from the labs are subject to quality assurance/quality control which is reviewed by the project geologist;
- data entered into the RecMin database is subject to numerous controls to identify gaps, double-entry, overlaps, duplication, and absent values; and
- The drillhole database is then imported in Datamine software package where it is also checked and validated before use for the resource modelling by the resource geologist.

Mineral Processing and Metallurgical Testing

Historically, El Valle Mine and Carlés Mine mineralized zones can produce 750,000 tpa (ROM) depending on the ore type. The feedstock is comprised of El Valle and Carlés skarn ores and the softer, higher gold grade oxide ore (the oxide ore is approximately 20% of the total ore processed). Ore produced is transported to the processing plant which is capable of running at a throughput rate of 2,280 tpd using a gravity flotation and a carbon-in-leach (CIL) circuit to produce copper concentrate and gold doré.

Currently the El Valle Mine LOM is to sustain a 50/50 blend of oxides/skarn to the processing plant with average annual tonnes of 600,000.

The plant was restarted in May, 2011 after refurbishment. Metallurgical testing of various ores and ore blends was conducted at the plant laboratory and the test results aided in fine tuning the process after the plant was restarted.

Mineral Resources and Reserves Estimates

A summary of the mineral resources and reserves estimates as at September 30, 2017 is found above under the heading “Description of the Business - Principal Mineral Projects - El Valle Mine - Mineral Resources and Reserves Estimates” (the “2017 El Valle MRMR”). The 2017 El Valle MRMR were estimated subsequent to El Valle Mine 43-101 Report and were not estimated by RPA.

Mining Operations

The current mining methods used at El Valle Mine are overhand drift and fill, transverse longhole stoping and longitudinal longhole stoping. Cut and fill mining continues to be used in the oxide areas of the mine and in areas with soft material as dictated by geological and geotechnical constraints. Ore is hauled to surface via ramp and/or skipped via shaft, depending on location and ore type. Backfill is placed by truck and scoop, consisting of cemented rock fill or waste fill, as appropriate to the mining sequence and geotechnical demands.

At Carlés Mine, geotechnical conditions lead to the decision to use longitudinal longhole stoping methods. Ore is hauled to a surface stockpile via underground truck, and transferred to highway-rated surface trucks for transport to El Valle. Backfill is via waste fill, as stopes are separated by rib pillars. From September 2016 to August 2017, a short-term operation was done in Carlés Mine after a period of care and maintenance started in 2015, which reflected good results. Carlés Mine was put on care and maintenance at the end of August 2017.

Processing and Recovery Operations

The processing plant consists of the following sequence of macro unit operations:

- Crushing and Screening
- Grinding and Cycloning
- Gravity Concentration
- Flotation Concentration
- Leaching/Adsorption via CIL process
- Gravity Concentrate Leaching (ILIX) (Intensive Lixiviation)
- Desorption and Elution
- Electrowinning
- Smelting
- Detoxification Plant for CIL Tailings Pulp
- Tailings Storage Facility (TSF)

For information on recoverability see “Description of the Business - El Valle Mine” above.

Infrastructure, Permitting and Compliance Activities

Infrastructure

Surface and underground infrastructure at El Valle Mine include the following:

- a processing facility with a capacity of up to 750,000 tpa;
- a tailings pond located in an old open pit;
- shops, offices, warehouse facilities, and a mine dry*;*
- site power supply to both mines*;*
- a 420 m shaft at El Valle equipped for hoisting;
- a decline and a series of ramp-connected levels at each mine site*;* and
- ventilation raises and escapeways.

El Valle Mine infrastructure was completed in 1997.

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

Permitting

El Valle Mine operation has obtained all the material permits to operate the mines, processing plant, and tailings storage facility subject to the disclosure set out under “Health, Safety, Environment and Social Practices - Environment” in the AIF.

Compliance Activities

In terms of archeological and cultural considerations, heritage sites have been identified in the area and include Roman workings, old Roman pits, channels, ponds and fortifications. Any work carried out in those areas requires archaeological follow up by appropriate technical personnel.

It is highly important that the surrounding municipalities are supportive of mining activity at El Valle Mine. The northern projects (Carlés and La Ortosa-Godán) are part of the municipality of Salas and the southern projects (El Valle Mine and La Brueva) are part of the municipality of Belmonte de Miranda.

Water samples are collected periodically for testing from various water control points for El Valle and the results are reported to authorities. Two types of monitoring are conducted:

- Official monitoring. An ENAC (Entidad Nacional de Acreditacion) accredited company carries out monitoring for water from Carlés Mine, El Valle Mine and El Valle Pit Tailings Impoundment and OroValle presents the results to the authorities.
- In-house monitoring. OroValle’s environmental department monitors the water quality and carries out adjustments in water treatment. Environmental monitoring is in place for the two mines. Current water discharges are controlled and regularly monitored. In addition, acid-rock drainage is not an issue at the El Valle Mine or Carlés Mine underground operations. At El Valle Mine the levels of Selenium in water discharges have potentially exceeded permitted levels. OroValle monitors the levels of Selenium in water discharges and provides evaluation to the appropriate regulatory authorities. For additional information on Selenium in water discharges at OroValle see “Health, Safety, Environment and Social Practices - Environment” in the AIF.

See “Health, Safety, Environment and Social Practices” in the AIF for additional information on environmental, permitting, and social and community factors.

Capital and Operating Cost Estimates

El Valle Mine operation capital costs are based on El Valle LOMP as updated in fiscal 2017 and financial analysis by management of the Company. The development of El Valle LOMP was under the supervision of Mr. David Duncan, Director of Operations at OroValle, a qualified person who is not independent of the Company for the purposes of NI 43-101. The estimated sustaining and non-sustaining capital costs

average $8.7 million per year over the remaining operational years, as summarized in the table below.

Sustaining & Non-Sustaining Capital Costs[(1)]
El Valle Operation

Item	El Valle LOMP annual average ($ millions)
Mine Development	**2.5**
Equipment & Facilities	**4.4**
Exploration	**0.3**
Tailings	**1.0**
Other	**0.5**
Total	**8.7**

(1) Capital costs at El Valle are primarily incurred in Euros. Disclosure in this table assumes an average FX rate of 1.20 EUR to USD.

Mine development costs are based upon El Valle LOMP development schedule. Equipment and facilities costs include mobile equipment rebuilds and replacement, fixed equipment in the mine and electrical costs. Exploration is based on corporate budgeting. Tailings costs relate to all costs associated with the periodic tailings dam lift.

Operating costs at El Valle are based on recent operating history and incremental production planned and average $70.8 million per year over the remaining operational years. Annual average operation costs are summarized in the table below.

Operating Costs [(1)]
El Valle Operation

Item	El Valle LOMP annual average ($ millions)
Mining	**31.1**
Processing	**15.2**
Technical Services	**18.2**
G&A	**6.3**
Total	**70.8**

(1) Operating costs at El Valle are primarily incurred in Euros. Disclosure in this table assumes an average FX rate of 1.20 EUR to USD.

Exploration, Development or Production

Subsequent to the filing of El Valle Mine 43-101 Report, the Company has continued to target opportunities to extend the current mine life at El Valle and is working to replace depleted reserves, upgrade resources and replace inferred resources at El Valle Mine through various diamond drilling campaigns underway. Additionally, the Company is pursuing exploration activities, such as mapping, sampling and geophysics on certain investigation permits concessions in the vicinity of El Valle Mine.

For additional information see “El Valle Mine – Growth Exploration” above.

Markets

The principal commodities at El Valle Mine 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.

Products include doré bars, and copper concentrate with gold and silver credits. The copper concentrate is subject to limitations on certain deleterious elements. As per industry norms, penalty charges are

incurred for the deleterious elements when they are over specified concentrations. Fluorine specifications, however, also include a hard cap, above which the concentrate is not readily saleable.

Asset Retirement Obligations

The Company's asset retirement obligations in respect of El Valle Mine relate to the dismantling of the mine facilities and environmental reclamation of the areas affected by mining operations. Mine facilities include structures and the tailings dam. Environmental reclamation requirements include mine water treatment, reforestation and dealing with soil contamination. It is possible that the Company's estimates of the ultimate amounts required to decommission its mines could change as a result of changes in regulations, the extent of environmental remediation required, the means of reclamation, cost estimates or the estimated remaining ore reserves. The undiscounted cash flows required to settle such decommissioning liabilities in respect of El Valle Mine at September 30, 2017 were estimated at $15.5 million. These estimates were prepared by management with the use of independent third party experts. It is estimated that substantially all of these amounts will be incurred starting in fiscal 2024.

Prior to its acquisition by OroValle in 2009, El Valle Mine and Carlés Mine had been shut down by the owner thereof and remediation measures required to that time were completed. At September 30, 2017, cash backed reclamation bonds held in a Spanish financial institution in support of El Valle's asset retirement obligations as required by Spanish regulatory authorities was approximately $8.49 million and is expected to be released after all reclamation work at El Valle Mine and Carlés Mine has been completed. The Supreme Court of Spain recently ordered a reconsideration of evidence regarding the amount of an additional reclamation bond, currently in the amount of €5.0 million. The Company is working with Spanish regulatory authorities to come to an agreement regarding posting this bond, while preserving the Company's rights in court. Funds to cover this commitment have been allocated outside the Company's operating accounts during this interim period. See "Health, Safety, Environment and Social Practices - Environment" above.

Don Mario Mine

Current Technical Report

On January 27, 2017, the Company filed on Sedar the "Don Mario Mine Operation 2016 Technical Report" (the "Don Mario 43-101 Report") by Gino Zandonai of DCGS, a qualified person independent of the Company for the purposes of NI 43-101.

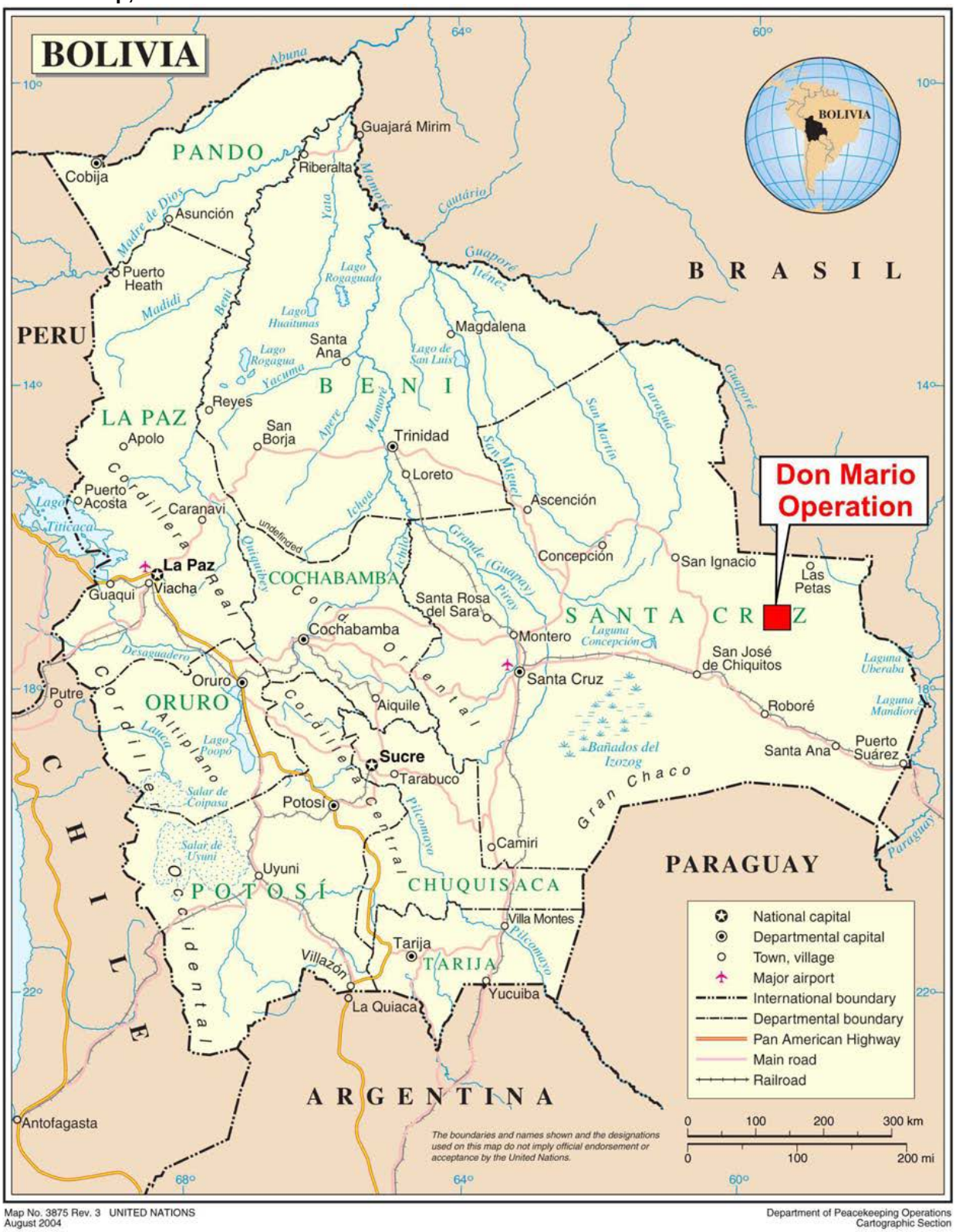
Scientific and technical information provided below with respect to Don Mario Mine is primarily contained in the Don Mario 43-101 Report, except where otherwise indicated.

Project Description, Location and Access

Don Mario Mine is located within the San Juan Canton, Chiquitos Province, Santa Cruz Department in Eastern Bolivia, about 380 km east of the departmental capital of Santa Cruz de la Sierra. The coordinates for the property are at an approximate position of 59º47'W and 17º15' S. Don Mario Mine includes:

- the UMZ deposit, which was depleted in 2017;
- 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, from which production is replacing UMZ production;
- the Cerro Felix deposit, located 500m Northwest of the current UMZ open pit; and
- the Las Tojas deposit, located 12 km from Don Mario Mine infrastructure and mined by open pit methods from 2009 to 2011.

Location map, Don Mario



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. Santa Cruz de la Sierra is the Santa Cruz Department capital and has a population of approximately 1.5 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 Don Mario district consists of 10 contiguous mineral concessions covering approximately 58,325 ha ("Property"). The Bolivian Government granted concessions that were called later ATE (Autorizaciones Transitorias Especiales) conferring the right to explore, exploit, refine, and sell all mineral substances within the concession's borders. EMIPA has a 100% interest in its mineral concessions 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 the State of ATEs 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 ATE fees for the 10 concessions.

All mineral resources 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, transporting and marketing of minerals, metals and nonmetal products. The Bolivian government, through the Political Constitution of the State and 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.

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.

Production from Don Mario Mine is subject to a 3% NSR payable quarterly. This expense totaled $2.2 million for fiscal 2017. 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 $4.9 million for fiscal 2016.

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 sequentially explored by four companies. This resulted in the discovery and/or delineation of the LMZ, Cerro Felix and Las Tojas gold-copper deposits and the UMZ copper-gold deposit, plus several other prospects within 20 km of the mine site. Orvana acquired the property in 1996 from four Bolivian companies that jointly owned the Don Mario concessions in eastern Bolivia and initiated LMZ deposit mining 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 Cerro Felix deposits. A summary of historical exploration activities is given in the table below.

Period	*Operator*	*Phase*

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 drill holes discover the LMZ and exploration focus turns to the LMZ
2002-2004	Comsur	Orvana attracts investment to develop the LMZ
2005-2006	Orvana	Management assumed by Orvana. LMZ in full operation, exploration programs carried out on the UMZ
2007-2015	Orvana	Exploration and initial investment are made to advance the Las Tojas and UMZ projects to production as the LMZ reserves are depleted
2016-present	Orvana	The UMZ deposit was depleted and replaced with production from the LMZ extension. Production will transition to Cerro Felix in 2018.

Geological Setting, Mineralization and Deposit Types

Regional and Local Geology

The Don Mario concessions are located within one of approximately twenty Lower to Middle Proterozoic schist belts in the Bolivian Shield. 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 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. 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.

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.

The schist belts are part of the Cristal Sequence, which is characterized by a mixture of highly metamorphosed 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 two 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.

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.

Mineralization

There are four principal mineral deposits on the Don Mario property that have contributed to commercial mining operations to date. The most significant of these are the UMZ and LMZ, which together support all current mining on the property. The UMZ is currently being phased out as the remaining ore from the UMZ is depleted and replaced with production from the LMZ extension. The Cerro Felix deposit 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 deposit during the 2009 to 2011 period. Summary points relating to the main gold-copper-silver deposits of the Don Mario property are highlighted below:

Don Mario UMZ (copper-gold-silver deposit)

The UMZ has been divided into 9 main rock types, the most prevalent of which are calcsilicates such as diopside tremolite rock and massive tremolite rock plus dolomite/ophicalcite and talc schist. 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- limonite, 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.

Don Mario LMZ (gold-copper deposit)

The predominant quartz-biotite rock is characterized by a dark gray, fine grained, moderately foliated

siliceous character with a compact granular texture. Aligned biotite grains are disseminated throughout a fine grained quartz groundmass and have not been segregated into laminae. Because the rock lacks micaceous bands, cleavage is poor. Muscovite is present only in trace to locally accessory amounts. The absence of muscovite in the quartz-biotite rock, as well as its absence in other subdivisions of the LMZ, is the single most important feature of the LMZ. This is considered to reflect a potassic alteration event in which all original muscovite was replaced by biotite. The contact between quartz-biotite rock and overlying quartz-muscovite-sillimanite schist is defined by a relatively abrupt change in muscovite content from >20% to trace amounts over a distance of 1-3 m. When quartz-biotite rock is present along the basal portion of the LMZ, a similar gradational contact with the footwall schist is present. The LMZ has been divided into 4 main rock types dominated by quartz-biotite-garnet rock and massive magnetite rock.

Don Mario Cerro Felix and Las Tojas Deposits (gold deposits) and Regional Prospects

In the Cerro Felix and Las Tojas deposits gold is the predominant metal of interest and the style of mineralization present closely resembles that seen within the LMZ. This further underlines the unique nature of the UMZ deposit and demonstrates that economically important mineralization characterizes both the Cristal Belt and the Eastern Schist Belt.

Regional exploration work such as soil geochemistry and mapping in the early 1990's defined other areas of exploration significance within the Don Mario property and the Adventura area southeast of the Don Mario UMZ deposit is an example of such. Detailed descriptive information for lesser known prospects along the Cristal and Eastern schist belts is not available, but it is assumed that these prospects and showings represent additional examples of either LMZ or UMZ styles of mineralization. At present, none of the known prospects or showings has been investigated to the degree necessary to define a significant mineral deposit. Completion of such follow-up work, particularly through geophysical, trenching and drilling programs is necessary to better define their economic potential.

Deposit Types

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 calcsilicate 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 Las Tojas and Cerro Felix 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. Each deposit style is summarized below under separate headings.

LMZ, Las Tojas and Cerro Felix Deposits

The LMZ, Las Tojas, and Cerro Felix gold mineralization is spatially associated with shear zones. On a regional scale, these gold deposits occur in the central parts of regional faults, or shears. They are characterized by silicification of the host rocks and a calc silicate mineral assemblage. The LMZ and Cerro Felix deposits are proximal to a granitic intrusion, but no such spatial relationship is noted at Las Tojas. Shear hosted gold deposits are generally found in greenstone terrains that have greenschist grade metamorphism. Despite the higher metamorphic grade characteristic of the host rocks in the Don Mario district, it is not unreasonable to classify the subject deposits as shear hosted gold deposits that are common in Archean greenstones belts throughout the world. Given its tabular nature, the shear hosted model has been applied to the LMZ and Las Tojas for the purposes of exploration and exploitation.

UMZ Deposit

The copper-gold-silver UMZ deposit occurs in the hangingwall of the shear zone that hosts the LMZ. It is characterized by a calc silicate mineral assemblage that includes tremolite, talc (serpentine) and magnetite, which, along with the occurrence of a dolomite unit in the rock package, suggests a metamorphosed carbonate replacement or skarn deposit with chalcopyrite and native gold as the economic minerals. The causative intrusive could be the amphibolite dykes. For purposes of grade modelling and mining, the UMZ deposit is considered to be similar to a metamorphosed massive sulphide zone.

Other Possible Deposit Models

The 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. 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. 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 as being a deformed example of the Iron Ore Copper Gold (IOCG) association.

Exploration

Over the years, the Company has actively explored using conventional techniques, such as, stream-sediment and soil sampling, throughout its concessions. Orvana 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 Las Tojas project, Don Mario North and Don Mario South, Cerro Felix and the La Aventura areas. Work was focused on the northern and southern extensions of the Cristal Schist Belt, as defined by results of a regional airborne magnetometer survey. 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. Drill targets were identified in this program as areas of strong chargeability response with associated moderate to high apparent resistivity responses. The chargeability component is interpreted as reflecting alteration zone disseminated sulphides, while the high resistivity response is attributed to potential silicification and/or massive calc-silicate alteration.

During fiscal 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 2016, some samples were collected in this area which denote a low anomaly in gold and base metals (Pb & Zn).

Drilling

UMZ and LMZ Drilling Program Details

The UMZ has been drilled in seven campaigns since 1991. All programs recovered NQ diameter (47mm) diamond drill core with the exception of six RC holes drilled by La Barca JV in 1991 and La Rosa in 1992. The 123 diamond drill holes have an average length of 78 m and are drilled on section lines oriented 135º and spaced approximately 25 m apart. Approximately 40% of holes are vertical and remaining holes are drilled to the northwest and dip from -80 to -45º. The inclined holes provide high-core angle intercepts with the mineralized body when viewed in section. Thirty-three holes drilled in campaigns targeting the LMZ also intersected UMZ mineralization. These holes have also been used for UMZ mineral resource and reserve estimations.

Drilling programs to define the LMZ were initiated by La Rosa/La Barca Joint Venture in 1991 and were followed up by Billiton through 1995 when the property was purchased by Orvana. All major campaigns recovered NQ size core and were carried out along northeast-southwest oriented section lines that systematically cross the northwest strike of the deposit. Initial drilling was carried out on a more widely spaced basis, but final definition of the deposit prior to mining saw a nominal drill section spacing of 25 m over much of the deposit extent. Most holes are inclined between -45 and -70 degrees and were drilled on-section along southwest azimuths. A few inclined holes were also drilled along northeast azimuths to further test the near-vertical LMZ.

In 2015, a twelve hole program was completed by Orvana on the upper portion of the LMZ, below the UMZ pit, to assess certain areas for void space and to obtain geotechnical information needed for UMZ pit wall pushback scenarios.

Cerro Felix Deposit Drilling Program Details

Drilling assessment of the Cerro Felix deposit was originally carried out by Billiton in 1995 and consisted

of 8 core holes totaling 1,027 m. Drilling was carried out along northeast southwest oriented section lines spaced about 50 m and 100 m apart. In 2006, 25 reverse circulation drill holes were completed totaling 3,471 m and in 2008, Orvana completed a 27 hole core drilling program totaling 3,195 m. In 2015, Orvana completed two additional CF core drilling programs totaling 39 drill holes (3,600 m) at the Cerro Felix deposit and HQ (67 mm) size core was recovered.

Las Tojas Deposit Drilling Program Details

Drilling assessment of the Las Tojas deposit was originally carried out by Orvana 1996 and between that time and 2008, a total of 110 holes totalling 15,080 m of drilling had been completed. Drilling was carried out along northeast-southwest oriented section lines spaced about 50 and 100 m apart. Orvana completed two additional core HQ (67 mm) drill holes at Las Tojas in 2015 and these tested depth extensions of the known mineralized zone. Both holes intersected narrow mineralized zones. The Las Tojas deposit is not included in any of the resource or reserve estimation work covered by the Don Mario 43-101 Report.

Sampling, Analysis and Data Verification

Method

Detailed lithologic logging, geotechnical logging and core sampling area are systematically carried out by site staff and core recovery and geotechnical parameters are calculated for all holes. Clear protocols for core logging and sampling are in place.

Core boxes are brought to an open core logging and storage area and laid out on benches at waist height. Core is washed with water from a gallon paint can and an 8" brush and is marked at metre intervals on the core and on the core box divider. Geotechnical logging for recovery, rock quality (RQD), fracture spacing (AS), fracture frequency (FF), nature of fracture surface (FS), fracture filling (FF), and degree of weathering (DW) is carried out on a metre by metre basis using well defined parameters and standardized scales and entered on a standardized paper template. Measurements of magnetic susceptibility are taken for each metre of core and recorded in the geotechnical log. Geology staff and helpers log approximately 20 m to 30 m of core per day.

Density determinations have been taken since the initial Billiton drill programs for each metre of core having sufficient recovery to permit collection of a 250 g to 500 g sample. For each metre of coherent core, weights are taken for density determination. A 250 g to 500 g piece of core is collected utilizing pre-existing core breaks where possible. The sample is marked with its depth, and delivered to the balance shack in the core area for weighing. The balance shack is a 1.5 m x 2 m x 3 m area covered with plastic sheeting and with a cardboard door to keep out wind. Samples are weighed on a steel table with a 10 cm x 20 cm hole over an open nominal 50 gallon tank filled with water. A 500 g mechanical, three row balance with 0.01 g precision is used. For each sample lot comprising 15 to 20 samples, the scale is manually equilibrated with a hanging, dry balance tray and then with a hanging, wet balance basket. The baskets hang from the balance through a hole in the table and are immersed in water. Small pieces of wire are hung from the basket to equilibrate it with the dry tray. Samples are weighed and recorded one by one in the geotechnical log using the dry sample tray. The tray is switched with the basket, and the 15 to 20 samples are weighed suspended in water, and weights recorded one by one in the geotechnical log. Core samples are returned to the core boxes.

The procedure for density determinations has not changed over time. However, the above method did not accurately reflect the density for the porous zone mineralization. Therefore, samples from this zone were sent to the ALS Laboratory for wax sealed density determinations.

Geological logging is recorded on a standardized paper logging form with fields for basic drilling information, e.g., hole number, depth, diameter, azimuth, dip, logging geologist, logging dates and logging data for rock codes, alteration, mineralization type and intensity, and general comments. A graphic column is used to capture fracture, joint and contact angles. Logging is to scale with approximately 20 m on a page.

Mineralized core was sampled at the EMIPA core shed at Don Mario Mine. The original core facility was located 100 m north of the mine engineering offices immediately below the LMZ hoist. The core

processing facility was not built with the intention to process and store the amount of core being handled by EMIPA in recent years, and in early 2008, EMIPA had established a new core processing facility that included covered racks to better store core and reject materials. Sample intervals were marked by an EMIPA project geologist during geotechnical and geological logging. Intervals were marked at nominal 1.5 m lengths respecting changes in lithology and alteration intensity through the mineralized zone. One to two additional samples were taken above the upper and below the lower margins of the mineralized zone.

Samples were cut following a line marked with a wax pencil such that the dominant foliation is perpendicular to the core axis on the cut surface. One half of the cut core is stored in core boxes now in the new core processing facility at Don Mario Mine; the other half was tagged, put in heavy polyethylene sample bags with two part waterproof sample tags and shipped to the preparation laboratory.

Preparation and Analysis

Independent commercial laboratories were consistently accessed to provide drill core preparation and analytical services. EMIPA will maintain high standards for the core preparation and sampling for future drilling programs.

Samples from the beginning of the Orvana drill campaign in 1996 were prepared at Don Mario preparation facility and sent to the Bondar-Clegg laboratory in Oruro for assay; by the end of the 1996 drill campaign, the Orvana Don Mario laboratory was carrying out fire assays. Assay for acid-soluble copper on selected samples was initiated during the Orvana 1998 drill campaign.

During the 2004 campaign, samples were cut with a rotary diamond carbide saw and prepared and analyzed at Don Mario laboratory. Splits of pulps of 30% of the samples were sent to the Alex Stewart Assayers Argentina laboratory in Mendoza, Argentina for referee analyses.

Core samples from the 2007 campaign were cut and sampled at Don Mario Mine site and sent to the Alex Stewart Assayers Argentina laboratory in Mendoza, Argentina for preparation and analysis. Preparation and analysis processes were similar to those used for the 2004 campaign with the addition of analyses for acid-soluble Zn. A quality control program including the analysis of blanks, a high- and low-grade standard for Au, and pulp duplicates was carried out.

Core samples for the 2015 drill campaign were sent as half core to ALS Global Labs in Oruro for preparation and analysis and were subject to a QAQC program that included analysis of blanks, a high- and low-grade standard for Au, and ¼ core duplicates.

Sample Security

Drilling is supervised by EMIPA staff during daytime hours. Access to the drills is limited to contract drill and EMIPA staff. Drill core is transported from the drill to the core shed on the Don Mario property by EMIPA staff and contract drill staff. Drill core is logged, cut, and sampled and bagged by EMIPA staff. Samples are delivered to the Orvana Santa Cruz office in a company truck with staff or contract driver. Samples are shipped from the office in Santa Cruz to Oruro by a private, contracted, trucking firm. ALS and Alex Stewart Assayers Argentina sent an electronic confirmation of receipt to EMIPA staff upon arrival of the samples at the preparation facility.

The relatively small size of the mine and its remote location in a relatively unpopulated region of Bolivia ensure that mine operations maintain a low profile with little public interaction. The mine receives few visitors and security is relatively easy to maintain. The use of reputable contractors and of EMIPA staff for supervision ensures reasonable control over sample security.

Data Verification

A Qualified Person(s) as defined under NI 43-101 reviewed the associated drilling database and support data and determined that they were acceptable for use in a mineral resource estimates prepared in accordance with the CIM Standards and disclosed in accordance with NI43-101. Reviews of site drilling operations, core sampling and logging procedures and available quality control and quality assurance program results returned similar determinations.

Mercator (2015), carried out independent desktop data verification checks of drilling database records for

the Cerro Felix deposit and also for records pertaining to the near-surface portion of the LMZ deposit that is addressed in the LMZ resource estimate by Mercator (2015). During the 2016 site visits, DGCS checked the work completed by Mercator (2015)'s staff. The work completed by Mercator (2015) was similar to those carried out by earlier resource estimate authors and included detailed review of core and associated sampling and logging records for mineralized drill holes from the Cerro Felix deposit and mineralized drill holes from the LMZ deposit, collection and analysis of a total of 16 quarter core check samples pertaining to the two deposits, field checking of lithologic surface mapping in the deposit areas and field checking of database drill collar coordinates for a combined total of 18 Cerro Felix deposit and LMZ deposit drill holes using a Garmin Model Map 61 hand-held GPS instrument.

Mineral Processing and Metallurgical Testing

The CIL Project

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 April 2011 when the Company commenced mining the metallurgically more complex UMZ. Consultants to the Company completed a capital cost estimate to recommission the CIL circuit. For the selected process option, the capital cost estimate is $6.4 million to accuracy estimate of +/- 15% including owner's costs and 15% contingency. Results of a metallurgical testing program undertaken by the Company indicate potential gold recovery of higher than historical rates can be achieved by processing LMZ resource material through a re-commissioned CIL circuit.

During fiscal 2016, the Company closed the CIL Project Loan and entered into a contract with a third party for the construction of the CIL Project, and re-commissioned the CIL circuit in the second quarter of fiscal 2017. The CIL Project is expected to result in lower unitary cash costs and maximize the value of recently defined Don Mario resource estimates, along with providing the processing capabilities necessary to leverage exploration and potential business opportunities. Upon commissioning of the CIL circuit, Don Mario shifted to production of gold doré in lieu of the previous gold concentrate, and continued to produce copper concentrate through its flotation circuit.

The commissioning of the CIL is also expected to position Don Mario to leverage other potential business opportunities. In recent months, the Company has been re-evaluating the economic potential of processing existing mineral stockpiles, including the oxides previously treated through the leach-precipitation-flotation process, and expects to have the results of this testing in the first quarter of fiscal 2017. As at September 30, 2017, EMIPA had stockpile mineral resources of approximately 2.2 tonnes with an average gold grade of 1.84 g/t. The Company also commenced an evaluation of processing of tailings material through the CIL circuit to determine the viability of recovering gold that has been deposited into the tailings facility as a result of the flotation-only process used since 2011.

Current Processing

During fiscal 2016, the Don Mario processing facility processed transitional and sulphide ore from UMZ, and LMZ deposits. UMZ ore will be processed by flotation and LMZ ore by CIL. Cerro Felix ore is expected to be processed in the near future by CIL.

With respect to the UMZ, the predominant copper minerals in sulphide zones are chalcopyrite, 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.) Transitional ores typically contain higher levels of secondary copper minerals as well as higher content of clay and carbonate gangue.

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.

In the upper extension of the LMZ, predominant minerals in the gold and copper are chalcopyrite and a trace of bornite. Pyrite is not abundant nor are gangue minerals such as quartz, biotite and olivine.

The Don Mario processing facility processes the UMZ and LMZ ores and can process 806,187 tonnes per annum (tpa) on a run of mine ROM basis, depending on the ore type. The feedstock is comprised of UMZ and LMZ sulphides and transition ores as well as ore from the stockpile. Ore produced by the mine is transported to the processing plant which is capable of running at a throughput rate of 2,500 tonnes per day (tpd) using a conventional gravity-flotation process to produce a bulk copper, gold, and silver concentrate and a gravity concentrate.

The plant as currently configured has been in operation since early 2013 when the LPF circuit was shut down due to poor economics associated with processing the oxide material.

Mineral Resources and Reserves Estimates

A summary of the mineral resources and reserves estimates as at September 30, 2017 is found above under the heading "Description of the Business - Principal Mineral Projects – Don Mario Mine - Mineral Resources and Reserves Estimates" (the "2017 Don Mario MRMR").

Mining Operations

The Don Mario Operation consists of an open pit mine for the UMZ deposit, producing a nominal 2,400 tpd ore, UMZ sulphide. The remaining LMZ reserve is currently being mined using open pit mining methods. The Cerro Felix reserve is expected to be mined commencing in 2018 utilizing open pit mining methods.

The current mining methods used at Don Mario are conventional open pit mining. Ore and waste are loaded into 20 to 25 tonne nominal capacity trucks using a 10 tonne nominal capacity front end loader. The ore is hauled directly to the process plant ore stockpile area and waste is hauled directly to the waste dump facility. Any oxide or low grade material is hauled to various surface stockpiles located near the plant and mine.

The current mine design and planning were carried out using the combined UMZ and LMZ block model generated by Mercator for the LMZ and DGCS for the UMZ and includes pit shell design by Deswik and generated by Deswik software.

In order to maximize the ore exposed, several criteria need to be satisfied. These include minimum width of cutbacks, including access for mining for every bench, identification of high grade areas, and minimum number of working faces per period of time, among others. It is considered that applying a truck and excavator mining method for the operation will satisfy these requirements and this method is applied to each cutback plan for the operation.

The current volume of mineralization provides enough exposed ore to continue with the current mine extraction plan until approximately September of 2017.

Processing and Recovery Operations

The processing plant consists of the following sequence of macro unit operations:

- Crushing and Screening
- Grinding and Cycloning
- CIL process
- Flotation Concentration
- Tailings Storage Facility

The processing plant can currently process 668,376 tpa with a daily treatment of 2,089 tpd. From October to December 2016 UMZ ore was treated in the flotation circuit and from January to September 2017 LMZ (Pushback) ore was treated in both circuits CIL and flotation. At the end of fiscal year 2017, the production of dore in CIL plant was 31,781 Oz Au and 10,721 Oz Ag, with recoveries 76% of Au and 12% Ag respectively. The production of the flotation plant was 16,394 tms of copper concentrate with a recovery of Au, Ag and Cu of 33%, 65% and 63% respectively. The total production of fines was 8'366,245 lbs Cu, 38,746 oz Au and 135,872 oz Ag.

In fiscal year 2017, a metallurgical testing program was developed by a consultant to determine the best processing option for the oxide stockpiles via flotation using a fat acid. Metallurgical tests with oxide

samples are currently being carried out in the Don Mario mine laboratory with new selective reagents for oxides. Detailed engineering has also been developed for the rehabilitation of the CIC circuit to increase the recovery of gold in the leaching plant.

Infrastructure, Permitting and Compliance Activities

Infrastructure

Don Mario main infrastructure was completed in 2003 for underground mining of the LMZ deposit. The mill was expanded in 2011 to accommodate higher throughput from mining the UMZ deposit as an open pit.

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 will, upon completion of the CIL Project, include a refurbished CIL Circuit.

Underground facilities in place to service the mined-out portion of the LMZ underground deposit include, but are not limited to, a mine portal, decline and underground accesses, various service and ventilation raises.

The Tailings Storage Facility is located approximately 1 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.

Permitting

Don Mario is fully permitted as required under Bolivian legislation. All material permits to operate the mine, processing plant, and tailings storage facility have been obtained. All permits and authorizations required to carry on mining and processing operations at Don Mario are in good standing. Additional permitting may be required to cover future production from such satellite deposits as Cerro Felix, Las Tojas or any other mineralized zone not located within currently permitted mining limits.

See "Health, Safety, Environment and Social Practices" above for additional information on environmental, permitting, and social and community factors.

Capital and Operating Costs

Don Mario operation capital costs are based Don Mario LOMP as updated in fiscal 2017 and financial analysis by management of the Company. The development of Don Mario LOMP was under the supervision of Mr. Gino Zandonai of DCGS, a qualified person who is independent of the Company for the purposes of NI 43-101. The estimated sustaining capital costs average $5.7 million per year over the remaining operational years, as summarized in the table below.

Sustaining Capital Costs
Don Mario Operation

Item	Don Mario LOMP annual average ($ millions)
Equipment & Facilities (CIL)	3.0
Exploration	1.4
Tailings	1.3
Total	**5.7**

Equipment and facilities costs include mobile equipment rebuilds and fixed equipment in the plant. Exploration is based on corporate budgeting. Tailings costs relate to all costs associated with conclusion of tailings dam lift phase X (from 292 to 292, 4 meters lift).

Operating costs at Don Mario are estimated to average $28.8 million per year over the remaining operational years, as summarized in the table below.

Operating Costs
Don Mario Operation

Item	Don Mario LOMP annual average ($ millions)
Mining	4.3
Processing	14.4
Technical Services and G&A	10.1
Total	**28.8**

Mining and Technical Services and G&A costs are based on recent operating history. Processing costs are based on recent operating history and incremental costs expected to be incurred to operate the CIL circuit.

Exploration, Development and Production

For information relating to Orvana's proposed exploration program, please see "Description of the Business - Principal Mineral Projects - Don Mario Mine - Exploration and Mine Life Extension".

Asset Retirement Obligations

The Company's asset retirement obligations in respect of Don Mario relate to the dismantling of the mine facilities and environmental reclamation of the areas affected by mining operations. Mine facilities include structures and the tailings dam. Environmental reclamation requirements include mine water treatment, reforestation and dealing with soil contamination. It is possible that the Company's estimates of the ultimate amounts required to decommission its mines could change as a result of changes in regulations, the extent of environmental remediation required, the means of reclamation, cost estimates or the estimated remaining ore reserves. The undiscounted cash flows required to settle such decommissioning liabilities in respect of Don Mario Mine at September 30, 2017 were estimated at $8.0 million. These estimates were prepared by management with the use of independent third party experts other than Mercator. It is estimated that substantially all of these amounts will be incurred starting in fiscal 2019.

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 specifications. Products include copper concentrate with gold and silver credits and gold concentrate with silver credit. As per industry norms for copper concentrate, penalty charges are incurred for various deleterious elements when they are over specified concentrations.