



**ORVANA MINERALS CORP.**

**ANNUAL INFORMATION FORM**

**FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2015**

**December 29, 2015**

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## **FORWARD-LOOKING STATEMENTS DISCLAIMER**

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

Forward-looking statements relate to, among other things, the Company’s ability to achieve improvement in free cash flow, the potential to extend the mine life of El Valle Mine (“El Valle”) in Spain and Don Mario Mine (“Don Mario”) in Bolivia beyond their current life-of-mine estimates; the Company’s ability to optimize its assets to deliver shareholder value; the Company’s ability to optimize productivity at El Valle; 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 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, 2015.

As at September 30, 2015, the last business day of the Company's fiscal 2015 year, the value of one Canadian dollar was 0.7493 in US dollars and the value of one Euro was \$1.1203 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) in respect of 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 18, 2015 in respect of the Company's fiscal year ended September 30, 2015 filed at [www.sedar.com](http://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, 2015:

Metal	Price in US Dollars	Price in Euros at 1.1203 <sup>(3)</sup>
Gold per ounce <sup>(1)</sup>	\$1,114.00	€994.38
Silver per ounce <sup>(1)</sup>	\$14.65	€13.08
Copper per pound <sup>(2)</sup>	\$2.31	€2.06

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

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

(3) For exchange rate, please refer to the European Central Bank on [www.ecb.int](http://www.ecb.int).

## 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

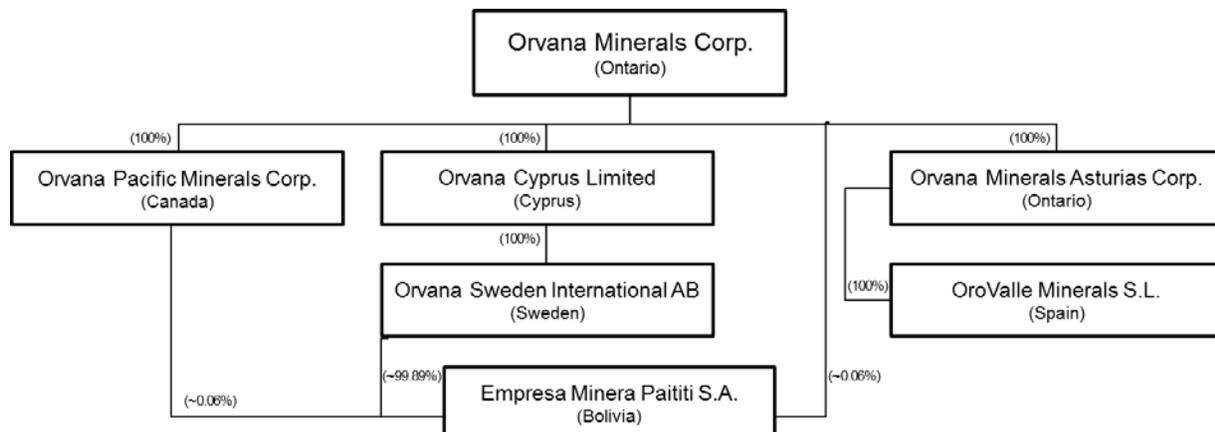
The Company was formed by the amalgamation of Pan Orvana Resources Inc. (“Pan Orvana”) and New Kelore Mines Limited (“New Kelore”) pursuant to articles of amalgamation dated February 24, 1992 under the *Business Corporations Act* (Ontario) and an amalgamation agreement between such parties dated December 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 Suite 1901, 181 University Avenue, Toronto, Ontario, Canada M5H 3M7.

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

## DEVELOPMENT OF THE BUSINESS

### Introduction

Orvana is a gold, copper and silver producer with organic growth opportunities. Orvana has 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 2015, Orvana completed its fourth full year of commercial production at El Valle. The Carlés Mine was put on care and maintenance at the end of February 2015.

Orvana's mine in Bolivia consists of the currently producing Upper Mineralized Zone (the "UMZ") at Don Mario Mine, an open-pit gold-copper-silver mine located in the south-eastern part of Bolivia. Commercial production at UMZ commenced in January 2012 and is expected to continue until mid 2016. Orvana has reported mineral resource estimates on September 30, 2015 at the Lower Mineralized Zone at Don Mario (the "LMZ") and the Cerro Felix deposit located 700 meters from the Don Mario Mine ("Cerro Felix"). Commercial production of the LMZ as an underground gold mine commenced in 2003 and in 2011 production transitioned to UMZ.

Orvana's focus is currently on optimizing operations, reducing operating costs and extending mine life through exploration within and in proximity to its existing operations.

### Three-Year History

Over the past three years, Orvana has streamlined its asset base and reduced debt to deliver shareholder value. In furthering its strategy, the Company achieved the following accomplishments (as more fully described below).

Commercial production at El Valle Mine commenced in August 2011. In fiscal 2014, the Company repaid in full El Valle Loan (as hereinafter defined) associated with these operations two years ahead of schedule. Carlés Mine was placed on care and maintenance to focus on production at El Valle Mine in February 2015. This was followed by a transition from contractor mining to owner/operator mining at El Valle Mine. At El Valle Mine, the Company continues to focus on productivity improvements, infrastructure upgrades and costs reductions into fiscal 2016.

Commercial production commenced at the UMZ in January 2012 and is expected to continue until mid 2016. 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 which have demonstrated that mining of this upper extension is possible. Mining of the new open pit LMZ deposit is expected to commence in the second quarter of fiscal 2016. In fiscal 2015, a metallurgical testing program has been in progress in connection with the potential re-commissioning of the carbon-in-leach ("CIL") circuit in use until 2011. The Company is considering the CIL project in fiscal 2016 subject to obtaining external financing.

Orvana streamlined its asset base with the sale of the Copperwood project (the "Copperwood Project") located in Michigan for up to \$25 million. Orvana received cash on closing of \$13 million and a secured promissory note that was paid on December 15, 2014 for \$7.5 million including interest. The additional consideration of up to \$5 million will be paid in cash or shares of the acquirer, Highland Copper Company Inc. ("Highland"), at Orvana's option, upon the occurrence of certain events. The Copperwood Project was a non-core asset outside of Orvana's current principal jurisdictions.

Capital expenditures decreased by approximately 29% in fiscal 2014 to 14.9 million compared with fiscal 2013 and a further 32% in fiscal 2015 to \$10.1 million compared with fiscal 2014. Asset upgrades during fiscal 2014 included hoisting capacity at El Valle and the gold gravity concentrators at Don Mario Mine. Asset upgrades during fiscal 2015 included tailings dam lifts and underground capital development at El Valle Mine.

The Company's outstanding short-term debt was repaid in June 2014 from the Copperwood Project sale proceeds.

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

	FY2015	FY2014	FY2013
<b>Operating Performance</b>			
<i>Gold</i>			
Grade (g/t)	2.16	2.37	2.18
Recovery (%)	77.9	74.3	78.0
Production (oz)	72,817	84,084	80,541
Sales (oz)	73,304	79,858	74,087
Average realized price / oz	\$1,196	\$1,287	\$1,504
<i>Copper</i>			
Grade (g/t)	1.00	1.03	0.99
Recovery (%)	76.3	62.2	54.1
Production ('000 lbs)	22,601	21,056	17,304
Sales ('000 lbs)	23,956	18,935	16,313
Average realized price / lb	\$2.72	\$3.15	\$3.33
<i>Silver</i>			
Grade (g/t)	20.77	31.03	33.41
Recovery (%)	66.4	60.2	64.3
Production (oz)	598,039	890,339	1,017,811
Sales (oz)	596,405	833,594	1,073,394
Average realized price / oz	\$16.12	\$20.15	\$25.01
<b>Financial Performance (in 000's, except per share amounts)</b>			
Revenue	\$121,425	\$142,407	\$162,199
Mining costs	\$105,384	\$102,231	\$101,063
Gross margin	(\$13,854)	(\$19,960)	\$30,998
Net loss	(\$16,371)	(\$29,743)	\$32,623
Net loss per share (basic/diluted)	(\$0.12)	(\$0.22)	\$0.24
Adjusted net income (loss) <sup>(1)</sup>	(\$16,733)	\$1,779	\$12,499
Adjusted net income (loss) per share (basic/ diluted) <sup>(1)</sup>	(\$0.12)	\$0.01	\$0.09
Operating cash flows before non-cash working capital changes <sup>(1)</sup>	\$8,471	\$37,923	\$38,900
Operating cash flows	\$20,678	\$35,382	\$32,879
Ending cash and cash equivalents	\$17,236	\$16,545	\$13,039
Capital expenditures <sup>(2)</sup>	\$10,118	\$14,925	\$21,157
Cash operating costs (by-product) (\$/oz) gold <sup>(1) (3)</sup>	\$951	\$771	\$631
All-in sustaining costs (by-product) (\$/oz) gold <sup>(1) (3)</sup>	\$1,211	\$1,021	\$950

(1) Adjusted net income (loss), Adjusted net income (loss) per share, operating cash flows before non-cash working capital changes, Cash operating costs ("COC") and all-in sustaining costs ("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, 2015 and related notes thereto (the "2015 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 include 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 of 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. AIC represent AISC plus non-sustaining capital expenditures and non-sustaining exploration. Certain other cash expenditures, including tax payments, dividends and financing costs are also not included. The Company reports these measures on a gold ounces sold basis.

## El Valle Mine

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.

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.

In fiscal 2014, the Company initiated a review of past performance, including measures taken by previous and current management teams to enhance mine performance. As a result of this review, management deemed it appropriate to further assess the assumptions of previous mine plans, particularly in regard to mineral reserves and resources estimates, and engaged an independent engineering firm, Roscoe Postle Associates Inc. (“RPA”), to complete updated mineral reserves and resources estimates (the “MRMR Update”) and a life-of-mine-plan update (the “LOMP Update”). The MRMR Update and the LOMP Update revised certain assumptions used previously and presented a different methodology in respect to the application of cut-off grades in certain zones of El Valle. The MRMR Update showed a year-over-year decrease in mineral reserves and resources estimates. Orvana conducted a carrying value assessment of El Valle as at June 30, 2014 and updated at September 30, 2014 and determined that El Valle’s net recoverable amount was lower than its carrying amount. As a result, Orvana recognized a non-cash impairment loss in respect of El Valle Mine of \$25.5 million in the third quarter of fiscal 2014.

El Valle achieved production during fiscal 2015 of 53,733 ounces of gold, 6.1 million pounds of copper and 166,744 ounces of silver compared with 62,957 ounces of gold, 5.6 million pounds of copper and 156,977 ounces of silver in fiscal 2014, a decrease of 15% in gold production and an increase of 9% and 6%, respectively, in copper and silver production.

At the end of February 2015, Carlés Mine was placed on care and maintenance. It is anticipated that Carlés Mine would stay on care and maintenance while the Company reviews alternative mining methods or until the price of gold becomes more sustainable for the mine. Carlés Mine represented approximately one-third of the tonnes mined per day at the Company’s operations. In the second half of fiscal 2015, productivity in skarns development meters at El Valle increased by approximately 10% and the average monthly tonnage of skarns mined increased by approximately 14% compared to the first half of fiscal 2015. This increase has replaced approximately 33% of the previous Carlés Mine skarns production.

Production was also impacted by the planned transition from contractor mining to owner/operator mining in the oxides area of El Valle in mid fiscal 2015. From August 2015 onwards, the Company reached previously achieved production and development rates in respect to mining in the oxides area of El Valle. Production at El Valle during fiscal 2015 was also impacted by a number of challenges including dewatering, power and maintenance. The Company has developed solutions to these challenges which are expected to be implemented in fiscal 2016.

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 last 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 economic considerations, the Company suspended the LPF process and is continuing with processing transition and sulphides through gravity and flotation circuits. Oxide material mined since that time have generally been stockpiled.

During fiscal 2015, Don Mario Mine produced 19,084 ounces of gold, 16.5 million pounds of copper and 431,295 ounces of silver compared with 21,127 ounces of gold, 15.4 million pounds of copper and

733,362 ounces of silver in fiscal 2014, a decrease of 10% in gold production, an increase of 7% in copper production and a decrease of 41% in silver production.

As a near term mine life extension opportunity, geotechnical and geological reviews were carried out in fiscal 2015 to investigate the potential of mining the upper extension of the LMZ as an open pit mine. In fiscal 2015, exploration drilling was concentrated around Cerro Felix as a result of known mineralized zones north-west and south-east of the UMZ. The Company completed a drilling program at Cerro Felix consisting of 39 holes approximating 3,600 meters. On November 16, 2015, the Company filed a technical report documenting independent mineral resource and mineral reserve estimates for each of the LMZ, Cerro Felix and UMZ entitled "Don Mario Mine Operation 2015 Technical Report" (the "Don Mario 43-101 Report") prepared under NI 43-101. The updated estimate was prepared by qualified persons within the meaning of NI 43-101 at Mercator Geological Services Limited ("Mercator") and DCGS Exploration and Mining Consulting ("DCGS"), each an independent mining consulting firm. The Company expects to mine the UMZ until mid 2016 and to begin mining the LMZ in the second quarter of fiscal 2016.

Don Mario previously processed ore from the LMZ and Cerro Felix CIL circuit where it achieved an average gold recovery of over 80%. Lycopodium Minerals Canada ("Lycopodium") completed a capital cost estimate (scoping level) to recommission the CIL circuit (the "CIL Project"). For the selected process option, the capital cost estimate is approximately \$6.4 million to an accuracy estimate of +/- 35% including owner's costs and contingency of \$1.5 million. Results of a metallurgical testing program undertaken by the Company indicate that potential gold recovery, higher than historical rates, can be achieved by processing LMZ resource material through a re-commissioned CIL circuit. The Company is considering the CIL Project in fiscal 2016 subject to obtaining necessary external financing.

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. ("Orvana US"), 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 (the "Copperwood Note") 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 Copperwood 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 the \$6.5 million Fabulosa Loan (as defined below), \$2.0 million under El Valle Mine Loan (as defined below) and is using the remainder of the net proceeds for general corporate purposes.

### **Changes in Management and Board of Directors**

On November 4, 2014, Gordon Pridham was appointed as a director of the Company. On November 24, 2015, the Company appointed Sara Magner and Juan Gavidia as directors of the Company, each associated with Minera S.A., an affiliate of Orvana's majority shareholder, Fabulosa Mines Limited.

On March 30 2015, Michael Winship, the Company's President and Chief Executive Officer ("CEO") at that time retired. Also on March 30, 2015, the Company appointed Daniella Dimitrov, who was then Chief Financial Officer ("CFO") of the Company, as the Company's President and CEO. Daniella Dimitrov was also appointed as a director of the Company effective April 1, 2015. On April 8, 2015, the Company appointed Jeffrey Hillis as CFO of the Company. On April 21, 2015, the Company announced that Neil Ringdahl was no longer Chief Operating Officer of the Company. The Company's current directors and officers are set out below under "Directors and Officers".

### **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 and Carlés Mines into commercial production. In February 2012, 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 had to establish a line of credit in the minimum amount of \$6.5 million until the New Maturity Date. See "Transactions with Fabulosa Mines Limited - Related Party Transactions" below.

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 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.

### **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) 3,325,000 Common Share purchase warrants with exercise prices ranging from C\$0.49 to C\$1.90 and the expiry dates ranging from 2016 to 2019 (the "Warrants"). Of the Warrants, 2,175,000 may never be exercised as a result of the forfeiture or expiration of certain options to acquire common shares under the Company's equity incentive plan on May 16, 2011 (the exercise of which were tied to Fabulosa's ability to exercise such warrants). Of the 1,150,000 common share purchase warrants which may be exercised, which together with the Common Shares owned represent 52.7% of the Common Shares outstanding on a fully diluted basis, 1,050,000 are exercisable as of the date of this AIF.

#### ***Fabulosa Agreement and 2011 Bridge Loan***

Prior to May 2011, an agreement between Fabulosa and the Company granted Fabulosa certain rights, including a pre-emptive right to acquire additional Common Shares in certain circumstances. In May 2011, this agreement was terminated and a new agreement was entered into (the "Fabulosa Agreement") under which Fabulosa's existing pre-emptive rights were revised and Fabulosa agreed to provide Orvana with a six-month, secured convertible \$15 million bridge loan (the "2011 Bridge Loan"). In exchange, Orvana issued to Fabulosa 1,969,999 Common Shares and five-year warrants to purchase up to 2,725,000 Common Shares. The warrants are exercisable only upon the issuance of, and in equal

numbers to, Common Shares issuable upon the exercise of Orvana's outstanding stock options as of May 2011. In September 2011, 1,300,000 of such warrants were issued with an exercise price of C\$1.90 per Common Share and in March 2012, 1,425,000 of such warrants were issued with an exercise price of C\$0.97 per Common Share. As a result of the forfeiture or expiration of certain stock options previously outstanding in May 2011 (the exercise of which were tied to Fabulosa's ability to exercise certain warrants), of the 2,725,000 warrants issued, 2,175,000 warrants may never be exercised as of the date of this AIF. 550,000 of such warrants were outstanding as of the date of this AIF of which 450,000 were exercisable. Orvana also agreed to implement a normal course issuer bid, at Fabulosa's request and subject to TSX approval, to acquire Common Shares solely to mitigate the dilutive effect of Common Shares issued upon the exercise of stock options granted under Orvana's stock option plan after May 2011. To date, with consent from Fabulosa, Orvana has not implemented the normal course issuer bid.

Upon closing of a public offering of Common Shares in August 2011, all amounts outstanding under the 2011 Bridge Loan were repaid in full through the issuance of 7,319,969 Common Shares to Fabulosa at the offering price of C\$2.00 per Common Share. Concurrently, Fabulosa exercised its pre-emptive right and purchased an additional 1,180,031 Common Shares at C\$2.00 per Common Share.

### ***Fabulosa Loan and Fabulosa Nominating Agreement***

In January 2012, the Company entered into a \$5 million loan (the "Fabulosa Loan") that was secured by, among other things, a general security assignment over present and future assets of Orvana excluding OroValle. The Fabulosa Loan was subsequently amended and increased to \$11.5 million. The Company used proceeds drawn under the Fabulosa Loan for working capital purposes. Interest on the outstanding principal was calculated at a rate per annum of 12%, was payable monthly along with stand-by fees and the Company paid withholding taxes imposed by applicable taxing authorities. The Fabulosa Loan contained covenants that, among other things, require principal repayment in the event of, among other things, the sale of certain of the Company's assets.

Concurrent with the Fabulosa Loan, the Company entered into an agreement (the "Fabulosa Nominating Agreement") with Fabulosa pursuant to which, for so long as it owns at least 10% of the outstanding Common Shares, Fabulosa has the right to designate, at any shareholders' meeting at which directors are to be elected, that number of management's nominees for election as directors of the Company that is the same proportion as its ownership interest is of the Common Shares.

The Fabulosa Loan was amended subsequent to the end of the third quarter of fiscal 2013. The availability period was extended from August 31, 2013 and the maturity period was extended from December 31, 2013 until September 30, 2014. In connection with such extension and amendment, on August 22, 2013, the Company issued to Fabulosa warrants to purchase 500,000 Common Shares exercisable until August 9, 2018 at an exercise price of C\$0.49.

The Fabulosa Loan was fully repaid in the third quarter of fiscal 2014 and all security has been discharged.

### ***Fabulosa Working Capital Line of Credit***

The amendment of El Valle Mine Loan was conditional on the establishment of a \$6.5 million line of credit. Accordingly, the Fabulosa Loan was further amended effective July 11, 2014. The maturity period was extended from September 30, 2014 to December 31, 2014, the amount which may be drawn under the Fabulosa Loan was amended to \$6.5 million and the Company had the ability to draw amounts under the Fabulosa Loan until December 15, 2014. In connection with such amendment, the Company issued warrants to Fabulosa for the purchase of 100,000 Common Shares exercisable at a price of \$0.54 until July 11, 2019. The Company also paid a structuring fee of 2% for a total of \$0.1 million. No amounts were drawn under the Fabulosa Loan prior to the end of its availability period. The Fabulosa Loan has not been renewed.

## **DESCRIPTION OF THE BUSINESS**

### **Principal Mineral Projects**

## El Valle Mine

Through its wholly-owned subsidiary, OroValle, the Company owns and operates 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 and Carlés commenced commercial production in August 2011. At the end of February 2015, Carlés Mine was placed on care and maintenance.

### Production

El Valle achieved production during fiscal 2015 of 53,733 ounces of gold, 6.1 million pounds of copper and 166,744 ounces of silver compared with 62,957 ounces of gold, 5.6 million pounds of copper and 156,977 ounces of silver in fiscal 2014, a decrease of 15% in gold production and an increase of 9% and 6%, respectively in copper and silver production. The following table includes consolidated operating and financial performance data for El Valle Mine for the periods set out below:

	FY2015	FY2014	FY2013
<b>Operating Performance</b>			
Ore mined (tonnes) (wmt)	551,966	671,564	752,572
Ore milled (tonnes) (dmt)	551,213	651,612	685,697
Daily average throughput (dmt)	1,401	1,785	1,879
<i>Gold</i>			
Grade (g/t)	3.53	3.22	3.24
Recovery (%)	92.6	93.3	92.5
Production (oz)	53,733	62,957	65,992
Sales (oz)	51,244	63,464	59,802
<i>Copper</i>			
Grade (%)	0.67	0.48	0.52
Recovery (%)	81.4	82.0	84.4
Production ('000 lbs)	6,128	5,626	6,658
Sales ('000 lbs)	6,058	5,876	6,085
<i>Silver</i>			
Grade (g/t)	13.52	9.38	11.24
Recovery (%)	75.0	79.9	79.8
Production (oz)	166,744	156,977	197,768
Sales (oz)	159,137	163,513	190,843
<b>Financial Performance</b> (in 000's, except per share amounts)			
Revenue	\$69,851	\$93,553	\$102,309
Mining costs	\$64,967	\$72,735	\$62,867
Income (loss) before tax	(\$17,050)	(\$27,549)	\$55,270
Capital expenditures <sup>(1)</sup>	\$6,376	\$12,603	\$13,248
Cash operating costs (by-product) (\$/oz) gold	\$1,080	\$952	\$803
All-in sustaining costs (by-product) (\$/oz) gold	\$1,311	\$1,160	\$1,086
All-in costs (by-product) (\$/oz) gold <sup>(2)</sup>	\$1,311	\$1,228	\$1,086

(1) These amounts are presented 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 reported period.

The 15% decrease in production of gold compared with fiscal 2014 was generally impacted by a decrease of 22% in tonnes milled, offset by a 9% increase in head grade. Copper and silver production increased by 9% and 6%, respectively, compared with fiscal 2014. Copper and silver grades through fiscal 2015 were 39% and 44% higher, respectively, thereby offsetting the decrease in tonnes milled.

Production in fiscal 2015 was impacted by the placement of Carlés Mine on care and maintenance. During fiscal 2015, skarns production was sourced from the San Martin and Black Skarns areas of El Valle as well as the Carlés Mine until February 2015. The Company produced on average approximately 600 tonnes of skarns per day from the Carlés Mine from the beginning of fiscal 2014 until it was placed on

care and maintenance and approximately 1,000 tonnes of skarns per day from El Valle. In March 2015, production crews from Carlés were split up with certain employees assigned within El Valle to the skarn areas and the remainder to the oxide areas. In the second half of fiscal 2015, productivity in skarns development meters at El Valle increased by approximately 10% and the average monthly tonnage of skarns mined increased by approximately 14% compared to the first half of fiscal 2015. This increase has replaced approximately 33% of the previous Carlés Mine skarns production. Skarns are currently being mined only from the Black Skarns area which has restricted stope sequencing options and flexibility. Current development is occurring in the new Boinás East zone and mining is expected in January 2016. Development in the Black Skarns area is scheduled to extend the decline to the new BS40 and BS20 levels by the end of 2016. Development will continue to impact production resulting in gold production guidance of 43,000 to 48,000 ounces for fiscal 2016.

Oxide production at El Valle was impacted primarily by the planned transition from contractor mining to owner/operator mining in the oxides area which was completed at the end of April. The production of oxides on average approximated 300 tonnes per day, or 25% of El Valle production prior to April 2015. The Company's oxides crews, which include 24 employees from the previous contractor and crews from the Carlés Mine, have matched previously achieved production and development rates from August 2015 onwards.

Production at El Valle during fiscal 2015 was also impacted by a number of challenges including dewatering, power and maintenance. The Company has evaluated its current power needs with the assistance of an independent electrical engineering firm. A transition solution is expected to be implemented in the second quarter of fiscal 2016 while a new power line to El Valle is being planned. With the assistance of an independent water management firm, the Company assessed its dewatering needs and is expecting to implement certain solutions in fiscal 2016. In respect of the maintenance function at El Valle, the Company has now restructured the department and is now focused on improving its scheduling and preventative maintenance processes.

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 spans 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*

The updated Mineral Resource estimate for El Valle Mine as at September 30, 2015 were prepared by OroValle under the supervision of Guadalupe Collar Menéndez, European geologist and an employee of OroValle, based on updating resource block models incorporating drilling results from April 1, 2014 to March 31, 2015 and accounting for production depletion from September 30, 2014 to September 30, 2015. Mineral resource estimates are summarized in the tables below.

#### **Summary of Mineral Resources Inclusive of Mineral Reserves El Valle Mine – September 30, 2015**

Zone	Tonnage (000 t)	Grade (g/t Au)	Measured		Contained Metal (000 oz Au)	Contained Metal (000 t Cu)
			Grade (% Cu)	Grade (g/t Ag)		
El Valle Oxides	796	4.28	1.15	23.04	109.6	9.2
El Valle Skarns	1,212	2.73	0.63	14.83	106.5	7.6
Carlés	128	4.08	0.85	11.15	16.7	1.1
<b>Total</b>	<b>2,136</b>	<b>3.39</b>	<b>0.84</b>	<b>17.67</b>	<b>232.9</b>	<b>17.9</b>
<b>Indicated</b>						

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	1,650	6.65	0.68	10.23	352.7	11.2
El Valle Skarns	2,124	2.90	0.53	14.60	197.5	11.3
Carlés	729	4.00	0.50	7.67	93.8	3.7
<b>Total</b>	<b>4,500</b>	<b>4.45</b>	<b>0.58</b>	<b>11.87</b>	<b>644.0</b>	<b>26.2</b>

**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	2,447	5.88	0.83	14.40	462.4	20.4
El Valle Skarns	3,334	2.84	0.57	14.68	304.0	19.0
Carlés	8,56	4.02	0.55	8.19	110.5	4.7
<b>Total</b>	<b>6,636</b>	<b>4.11</b>	<b>0.66</b>	<b>13.74</b>	<b>876.9</b>	<b>44.1</b>

**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	2,330	7.26	0.44	3.66	544.1	10.6
El Valle Skarns	2,787	3.46	0.51	14.53	309.7	14..2
Carlés Skarns	1,033	4.45	0.46	5.93	147.6	4.8
<b>Total</b>	<b>6,149</b>	<b>5.07</b>	<b>0.48</b>	<b>8.97</b>	<b>1,001.4</b>	<b>29.5</b>

Notes:

1. CIM definitions were followed for mineral resources.
2. Mineral resources are estimated at gold equivalent ("AuEq") cut-off grades of 3.6 g/t for El Valle oxides, 2.0 g/t for El Valle skarns and 2.7 g/t for Carlés skarns. AuEq cut-offs are based on recent operating results for recoveries, off-site concentrate costs and on-site operating costs assuming additional costs savings planned in respect of fiscal 2016 and beyond.
3. Mineral resources are estimated using a long-term gold price of US\$1,300 per ounce, copper price of US\$3 per pound and a silver price of US\$18 per ounce. A US\$/Euro exchange rate of 1/1.15 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 25m 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 Andrew Harris, MAusIMM (CP), based on mine designs applied to measured and indicated resources, with dilution and extraction factors applied. Mineral reserves are summarized in the table below.

**Summary of Mineral Reserves  
El Valle Mine – September 30, 2015**

**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	1,017	2.61	0.64	14.19	85.4	6.5
Probable	2,103	3.43	0.42	9.31	231.8	8.7

<b>Proven and Probable</b>	<b>3,119</b>	<b>3.16</b>	<b>0.49</b>	<b>10.90</b>	<b>317.1</b>	<b>15.3</b>
<b>Proven</b>						
<b>Category</b>	<b>Tonnage (000 t)</b>	<b>Grade (g/t Au)</b>	<b>Grade (% Cu)</b>	<b>Grade (g/t Ag)</b>	<b>Contained Metal (000 oz Au)</b>	<b>Contained Metal (000 t Cu)</b>
El Valle Oxides	289	3.63	1.00	17.99	33.8	2.9
El Valle Skarns	728	2.21	0.50	12.68	51.6	3.7
Carlés Skarns	0	0.00	0.00	0.00	0.0	0.0
<b>Total</b>	<b>1,017</b>	<b>2.61</b>	<b>0.64</b>	<b>14.19</b>	<b>85.4</b>	<b>6.5</b>
<b>Probable</b>						
<b>Category</b>	<b>Tonnage (000 t)</b>	<b>Grade (g/t Au)</b>	<b>Grade (% Cu)</b>	<b>Grade (g/t Ag)</b>	<b>Contained Metal (000 oz Au)</b>	<b>Contained Metal (000 t Cu)</b>
El Valle Oxides	693	5.61	0.43	7.39	124.9	3.0
El Valle Skarns	1,172	2.26	0.43	11.27	85.0	5.0
Carlés Skarns	238	2.85	0.30	5.27	21.8	0.7
<b>Total</b>	<b>2,103</b>	<b>3.43</b>	<b>0.42</b>	<b>9.31</b>	<b>231.8</b>	<b>8.7</b>

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 4.3 g/t AuEq for El Valle oxides, 2.3 g/t AuEq for El Valle skarns, and 2.5 g/t AuEq for Carlés longhole stoping and 3.0 g/t AuEq for cut and fill in skarn. Gold equivalent cut-offs are based on recent operating results for recoveries, off-site concentrate costs and on-site operating costs assuming additional cost savings planned in respect of fiscal 2016 and beyond.
3. Mineral reserves are estimated using average long-term prices of US\$1,100 per ounce gold, US\$2.75 per lb copper, and US\$16.50 per ounce silver. A US\$/Euro exchange rate of 1/1.1 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 of A. Harris, MAusIMM (CP), a qualified person for the purposes of NI 43-101, who is an employee of OroValle and thus not independent of the Company.

A few of the upper levels of Black Skarn zone (contained in El Valle skarns mineral reserve estimates set out above) are encountering geotechnically weaker “transitional” rock types. Approximately 400,000 tonnes containing 39,000 gold ounces in this zone may need to be mined using mining methods other than planned longhole stoping, such as overhand drift and fill. This could reduce a portion of the stated mineral reserve estimates for this area in the future due to changes in the associated break-even AuEq cut-off grades. Geotechnical and mining assessments are ongoing as mining progresses in this area.

*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 2015, infill definition and exploration diamond drilling totaling approximately 19,600 meters was completed.

The Company is pursuing opportunities to define new resources in the areas surrounding El Valle. A diamond drilling program was completed at the La Brueva property, located eight kilometers from El Valle. The Company’s drilling program consisted of 13 holes totaling 2,780 meters and was completed in August 2015. Additionally, a new zone within the El Valle Mine was identified through the exploration drilling conducted recently and mineral resource estimates for this zone and La Brueva are expected to be reported in the second quarter of fiscal 2016.

The Company is also pursuing exploration activities, such as mapping, sampling and geophysics on certain investigation permits concessions in the vicinity of El Valle.

## 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. Fiscal 2009 marked the last year of production from the LMZ underground gold mine at Don Mario with some gold production from satellite deposits continuing into fiscal 2010 and 2011. The Company is now mining the UMZ at Don Mario as an open-pit mine, which achieved commercial production in January 2012.

#### Production

During fiscal 2015, Don Mario Mine produced 19,084 ounces of gold, 16.5 million pounds of copper and 431,295 ounces of silver compared with 21,127 ounces of gold, 15.4 million pounds of copper and 733,362 ounces of silver in fiscal 2014, a decrease of 10% in gold production, an increase of 7% in copper production and a decrease of 41% in silver production. The following table includes operating and financial performance data for Don Mario Mine for the periods set out below:

	FY2015	FY2014	FY2013
<b>Operating Performance</b>			
Ore mined (tonnes) (dmt) <sup>(1)</sup>	938,492	916,961	1,013,646
Ore milled (tonnes) (dmt)	837,722	831,124	788,149
Daily average throughput (dmt)	2,532	2,537	2,510
Gold			
Grade (g/t)	1.32	1.71	1.26
Recovery (%)	53.8	46.3	45.6
Production (oz)	19,084	21,127	14,549
Sales (oz)	22,061	16,394	14,285
Copper			
Grade (%)	1.20	1.47	1.39
Recovery (%)	74.4	56.0	44.2
Production ('000 lbs)	16,473	15,430	10,646
Sales ('000 lbs)	17,899	13,059	10,228
Silver			
Grade (g/t)	25.20	48.01	52.67
Recovery (%)	63.3	57.2	61.5
Production (oz)	431,295	733,362	820,043
Sales (oz)	437,267	670,081	882,551
<b>Financial Performance (in 000's, except per share amounts)</b>			
Revenue	\$51,574	\$48,854	\$59,890
Mining costs	\$40,417	\$29,496	\$38,196
Income (loss) before tax	(\$935)	\$3,699	\$4,545
Capital expenditures <sup>(2)</sup>	\$3,394	\$2,152	\$2,691
Cash operating costs (co-product) (\$/oz) gold <sup>(3)</sup>	\$948	\$862	\$1,050
Cash operating costs (co-product) (\$/lb) copper <sup>(3) (4)</sup>	\$2.22	\$2.28	\$2.31
Cash operating costs (co-product) (\$/oz) silver <sup>(3)</sup>	\$14.41	\$15.87	\$18.04
All-in sustaining costs (co-product) (\$/oz) gold <sup>(3)</sup>	\$1,053	\$955	\$1,159
All-in sustaining costs (co-product) (\$/lb) copper <sup>(3)</sup>	\$2.45	\$2.50	\$2.55
All-in sustaining costs (co-product) (\$/oz) silver <sup>(3)</sup>	\$15.86	\$17.31	\$19.71
All-in costs (co-product) (\$/oz) gold <sup>(3)</sup>	\$1,058	\$964	\$1,161
All-in costs (co-product) (\$/lb) copper <sup>(3)</sup>	\$2.46	\$2.52	\$2.55
All-in costs (co-product) (\$/oz) silver <sup>(3)</sup>	\$15.93	\$17.45	\$19.74

- (1) Ore mined includes oxides mined and stockpiled prior to the oxides impairment recorded in the third quarter of fiscal 2014.
- (2) These amounts are presented 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 reported period.
- (3) Costs are reported per ounce of gold or silver or per pound of copper in the period. As a result of revenue from the sale of silver and copper representing more than 40% of gross total revenue from the Don Mario Mine in a reporting period and for better cost comparison to other mines, the Company is reporting COC, AISC and AIC on a co-product basis per pound of copper and per ounce of gold and silver sold. Total costs for each metal are based on the percentage of gross revenue that each quantity of metal sold in the period represents of total gross revenue for the period. Refining charges, metallurgical deductions and royalties in respect of Don Mario are allocated to each metal based on actual costs related to each quantity of metal sold in the period.
- (4) COC per pound of copper sold represent C1 costs plus royalties.

The 10% decrease in gold production compared with fiscal 2014 is primarily due to lower average head grades mined in fiscal 2015 as a result of mining areas with higher than expected talc and other intrusive materials. Copper production increased by 7% in fiscal 2015 compared with fiscal 2014 primarily due to increases in plant recoveries as a result of processing more sulphides as mining progresses lower in the pit, partially offset by a 19% decrease in average head grade. The decrease in silver production of 41% compared with fiscal 2014 is primarily due to 48% lower average head grades mined offset by 11% higher recoveries.

Annual union negotiations were successfully completed with the workforce at Don Mario in July 2015.

#### *Mineral Resources and Reserves Estimates*

During the fourth quarter of fiscal 2015, Mercator finalized mineral resources estimates for LMZ and Cerro Felix under supervision of Michael Cullen, P. Geo., an independent Qualified Person under NI 43-101, and DCGS finalized mineral resources and reserves estimates for the UMZ under the supervision of Gino Zandonai, an independent Qualified Person under NI 43-101. The effective date of the estimates is September 30, 2015. A technical report documenting the mineral resources and reserves estimates was filed on Sedar on November 16, 2016 in accordance with NI 43-101. The following tables summarize the mineral resources estimates for UMZ, LMZ and Cerro Felix and the mineral reserves estimates for UMZ:

#### **In-situ Mineral Resources Inclusive of Mineral Reserves – September 30, 2015**

##### **Don Mario Mine**

##### **Measured**

<b>Zone</b>	<b>Tonnage (000 t)</b>	<b>Grade (g/t Au)</b>	<b>Grade (% Cu)</b>	<b>Grade (g/t Ag)</b>	<b>Contained Metal (000 oz Au)</b>	<b>Contained Metal (t Cu)</b>
UMZ	434	0.69	0.86	25.81	9.6	3,721
LMZ	0	0.00	0.00	0.00	0.0	0
Cerro Felix	0	0.00	0.00	0.00	0.0	0
<b>Total</b>	<b>434</b>	<b>0.69</b>	<b>0.86</b>	<b>25.81</b>	<b>9.6</b>	<b>3,721</b>

##### **Indicated**

<b>Zone</b>	<b>Tonnage (000 t)</b>	<b>Grade (g/t Au)</b>	<b>Grade (% Cu)</b>	<b>Grade (g/t Ag)</b>	<b>Contained Metal (000 oz Au)</b>	<b>Contained Metal (t Cu)</b>
UMZ	0	0.00	0.00	0.00	0.0	0
LMZ	1,000	2.90	0.73	7.11	93.0	7,298
Cerro Felix	490	3.15	0.09	2.53	50.0	440
<b>Total</b>	<b>1,490</b>	<b>2.98</b>	<b>0.52</b>	<b>5.60</b>	<b>143.0</b>	<b>7,738</b>

##### **Measured + Indicated**

<b>Zone</b>	<b>Tonnage (000 t)</b>	<b>Grade (g/t Au)</b>	<b>Grade (% Cu)</b>	<b>Grade (g/t Ag)</b>	<b>Contained Metal (000 oz Au)</b>	<b>Contained Metal (t Cu)</b>
UMZ	434	0.69	0.86	25.81	9.6	3,721

LMZ	1,000	2.90	0.73	7.11	93.0	7,298
Cerro Felix	490	3.15	0.09	2.53	50.0	440
<b>Total</b>	<b>1,924</b>	<b>2.47</b>	<b>0.60</b>	<b>10.16</b>	<b>152.6</b>	<b>11,460</b>

**Inferred**

<b>Zone</b>	<b>Tonnage (000 t)</b>	<b>Grade (g/t Au)</b>	<b>Grade (% Cu)</b>	<b>Grade (g/t Ag)</b>	<b>Contained Metal (000 oz Au)</b>	<b>Contained Metal (t Cu)</b>
UMZ	1	0.82	1.50	24.51	0.0	14
LMZ	0	0.00	0.00	0.00	0.0	0
Cerro Felix	80	3.14	0.14	3.21	8.0	113
<b>Total</b>	<b>81</b>	<b>3.11</b>	<b>0.16</b>	<b>3.46</b>	<b>8.0</b>	<b>128</b>

Notes applicable to LMZ and Cerro Felix mineral resource estimates by Mercator:

1. Raw gold assays were capped at 20g/t, raw copper assays were capped at 8% and raw silver assays were capped at 80g/t.
2. Metal grades were interpolated within wireframed, three dimensional solids using Geovia-Surpac Ver. 6.7 software and ordinary kriging methods. The Don Mario resource estimate block size is 5m (X) by 5m (Z) by 5m (Y) and historic mine void space was removed from the model prior to reporting of resources. The Cerro Felix resource estimate block size is 2.5m (X) by 5m (Z) by 5m (Y).
3. An average block density factor of 2.89 was applied for both estimates.
4. Mineral resources are considered to have reasonable expectation for economic development by open-pit mining methods based on recent Don Mario open pit mine production history, resource amounts and metal grades, and current metal pricing.
5. Mineral resources that are not mineral reserves do not have demonstrated economic viability. The quantity and grade of reported inferred mineral resources in this estimation are uncertain in nature and there has been insufficient exploration to define these inferred mineral resources as indicated or measured mineral resources; it is uncertain if further exploration will result in upgrading of inferred resources to indicated or measured status.
6. Tonnes are rounded to nearest 10,000.
7. Ounces re rounded to the nearest 1,000 and pounds are rounded to the nearest 10,000. Calculated contained metal sums may not match reported tonnes and grade due to rounding.
8. The resource estimate cut-off value of 0.70 g/t Au is reflective of open-pit mining methods and resource estimate values are bolded.
9. Both resource estimates are based on validated core drilling program results and do not incorporate production sampling data.
10. Contained copper tonnes were calculated from original resource statement pound values by the factor 2204.62lb/tonne.

Notes applicable to UMZ mineral resource estimate by DGCS:

1. CIM definitions were followed for Mineral Resources and were prepared by G. Zandonai, a qualified person for the purposes of NI43-101, who is an employee of DGCS SA and is independent of the Company.
2. Mineral Resources are estimated at a Cu equivalent cut-off grade of 0.85% for the UMZ.
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 are inclusive of Mineral Reserves.
5. Mineral Resources contained in stockpiles are exclusive of In-situ Mineral Resources.
6. The crown pillar between the ultimate pit floor of the UMZ and LMZ underground workings is excluded from the Mineral Resource estimate.
7. Numbers may not add due to rounding.

**In-situ Mineral Reserves – September 30, 2015**  
**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	420	0.65	0.81	24.65	8.8	3,416
Transitional	12	0.82	0.96	22.15	0.3	119
<b>Total</b>	<b>433</b>	<b>0.66</b>	<b>0.82</b>	<b>24.58</b>	<b>9.2</b>	<b>3,535</b>

**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	0	0.00	0.00	0.00	0.0	0
Transitional	0	0.00	0.00	0.00	0.0	0
<b>Total</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>	<b>0</b>

**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	433	0.66	0.82	24.58	9.2	3,535
Probable	0	0.00	0.00	0.00	0.0	0
<b>Proven and Probable</b>	<b>433</b>	<b>0.66</b>	<b>0.82</b>	<b>24.58</b>	<b>9.2</b>	<b>3,535</b>

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 copper equivalent cut-off grade of 1.0% CuEq. Copper equivalent cut-offs were calculated using 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\$1,100 per ounce gold, US\$2.75 per lb copper, and US\$16.5 per ounce silver.
4. Numbers may not add due to rounding.

Certain material mined in fiscal 2015 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, 2015**

**Don Mario**

**Measured**

Location/Zone	Tonnage	Grade	Grade	Grade	Contained Metal	Contained Metal
	(000 t)	(g/t Au)	(% Cu)	(g/t Ag)	(000 oz Au)	(t Cu)
DM1 (Oxide)	520	2.24	1.74	54.44	37.5	9,056
DM2 (Oxide Pre-strip)	268	1.90	1.98	17.94	16.4	5,302
DM3 (Dolomite Oxide)	190	1.89	1.96	21.62	11.6	3,728
Plant Stockpile (Oxide)	637	1.53	1.60	56.81	31.4	10,155
DM4 Stock Talco	618	2.15	1.63	29.91	42.7	10,110
DM5 (Dolomite Oxide)	202	1.86	1.64	48.66	12.1	3,315
DM6 (Tremolite Oxide)	94	1.57	1.78	31.60	4.8	1,675
<b>Total</b>	<b>2,530</b>	<b>1.92</b>	<b>1.71</b>	<b>41.40</b>	<b>156</b>	<b>43,342</b>

Notes to UMZ stockpile mineral resources:

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, 2015**

**Don Mario Mine**

**Proven**

Location/Zone	Tonnage	Grade	Grade	Grade	Contained Metal	Contained Metal
	(000 t)	(g/t Au)	(% Cu)	(g/t Ag)	(000 oz Au)	(t Cu)
DM1 OS (Transition and Sulphide)	147	1.93	1.10	27.63	9.1	1,618
Plant Stockpile	0	0.00	0.00	0.00	0.0	0
<b>Total</b>	<b>147</b>	<b>1.93</b>	<b>1.10</b>	<b>27.63</b>	<b>9.1</b>	<b>1,618</b>

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 copper equivalent cut-off grade of 1.0% CuEq. Copper equivalent cut-offs were calculated using 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\$1,100 per ounce gold, US\$2.75 per lb copper, and US\$16.5 per ounce silver.
4. Numbers may not add due to rounding.

**Exploration and Mine Life Extension**

As described above, historical mining took place in the LMZ underground gold mine until 2009. Current open pit mining is taking place in the UMZ. As a near term mine life extension opportunity, geotechnical and geological reviews have been carried out by two firms of the old resource block model of the LMZ and the current resource block model of UMZ to investigate the potential of mining the upper extension of

the LMZ. The results of this work have demonstrated that a pushback of the pit to allow for the mining of this upper extension of the LMZ is possible.

During the third quarter of fiscal 2015, a drilling program consisting of 12 holes and approximately 900 meters was completed. The objectives were to verify the conditions of the underground workings and identify voids, if any, in order to determine the ultimate mining depth of the pushback and to support and confirm resource estimates. Results have shown that no significant unexpected voids were encountered. Mineral resource estimates for LMZ were reported at the end of fiscal 2015 and are set out above. The Company expects to begin mining the LMZ in the second quarter of fiscal 2016.

In fiscal 2015, exploration drilling was concentrated around Cerro Felix as a result of known mineralized zones north-west and south-east of the UMZ. The Company completed a drilling program at Cerro Felix consisting of 39 holes approximating 3,600 meters.

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.

In the second half of fiscal 2015, the Company engaged Lycopodium to complete a capital cost estimate (scoping level) to recommission the CIL circuit. For the selected process option, the capital cost estimate is approximately \$6.4 million to an accuracy estimate of +/- 35% including owner's costs and contingency of \$1.5 million. Results of a metallurgical testing program undertaken by the Company indicate potential gold recovery of higher than historical rates may be achieved by processing LMZ resource material through a re-commissioned CIL circuit. The Company is considering the CIL Project in fiscal 2016 subject to obtaining external financing.

#### *Other*

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

## **Outlook**

The Company is pursuing a number of initiatives at El Valle and Don Mario 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.

In the current environment of low commodities prices, the Company is currently monitoring its liquidity position closely and assessing its capital needs for the upcoming fiscal year and beyond. The Company is focused on implementing near-term operating cost reduction strategies and optimizing its production and recoveries, with a view to positively impact future COC and AISC performance.

The following table sets out Orvana's fiscal 2015 production results as well as its fiscal 2016 production and cost guidance:

	<b>FY2015 Guidance</b>	<b>FY2015 Actual</b>	<b>FY2016 Guidance</b>
<b>El Valle Mine Production</b>			
Gold (oz)	50,500 - 52,500	<b>53,733</b>	43,000 – 48,000
Copper (million lbs)	6.5 - 7.0	<b>6.1</b>	4.5 – 5.0
Silver (oz)	150,000 - 180,000	<b>166,744</b>	120,000 - 130,000
<b>Don Mario Mine Production</b>			
Gold (oz)	19,500 - 20,500	<b>19,084</b>	24,000 – 27,000
Copper (million lbs)	16.5 - 18.0	<b>16.5</b>	11.0 – 12.0
Silver (oz)	400,000 - 500,000	<b>431,295</b>	330,000 – 370,000
<b>Total Production <sup>(1)</sup></b>			
Gold (oz) <sup>(1)</sup>	70,000 - 73,000	<b>72,817</b>	67,000 – 75,000
Copper (million lbs)	23.0 - 25.0	<b>22.6</b>	15.5 – 17.0

	FY2015 Guidance	FY2015 Actual	FY2016 Guidance
Silver (oz)	550,000 - 680,000	598,039	450,000 - 500,000
Total capital expenditures	\$11,500 - \$12,500	\$10,118	\$17,000 - \$19,000
Cash operating costs (by-product) (\$/oz) gold <sup>(2)</sup>	\$850 - \$950	\$949	\$850 - \$950
All-in sustaining costs (by-product) (\$/oz) gold <sup>(2)</sup>	\$1,150 - \$1,250	\$1,210	\$1,150 - \$1,250

(1) Gold production guidance assumes that the CIL circuit at Don Mario Mine comes on-line in the fourth quarter of fiscal 2016.

(2) FY2016 guidance assumptions for COC and AISC include by-product commodity prices of \$2.00 per pound of copper and \$14.00 per ounce of silver and an average Euro to US Dollar exchange of 1.065.

The Company is continuing to implement a cost reduction plan with a target to achieve full benefits in the second half of fiscal 2016.

Total capital expenditure guidance for the Company is between \$17 and \$19 million. At El Valle, total capital expenditure guidance is estimated at \$8.0 million to \$9.0 million and includes primary development, investments in power and water infrastructure and a tailings dam lift. At Don Mario, plans to move forward with the CIL Project in fiscal 2016 are underway subject to financing. An estimate of \$6.4 million is included in the capital expenditure guidance above.

The recommissioning of the CIL circuit is expected to take six to nine months once it is underway. It is expected that the remaining UMZ will be mined out and processed by the end of the third quarter of fiscal 2016. Mining activities are expected to commence at the LMZ by the second quarter of fiscal 2016 so that feed is available for processing thereafter. Until the completed CIL circuit is available, Don Mario could potentially process LMZ material through the existing flotation circuit to produce gold and copper concentrates.

## Revenue

The Company recorded consolidated revenue of \$121.4 million for fiscal 2015 from sales of 73,304 ounces of gold, 24.0 million pounds of copper and 596,405 ounces of silver compared with consolidated revenue of \$142.4 million in fiscal 2014 from sales of 79,858 ounces of gold, 18.9 million pounds of copper and 833,594 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 July 2011, the Company entered into a doré refining contract with a refiner in Marin, Switzerland and a doré sales contract with a metals trader for the refining and sale of gold doré from El Valle Mine. The Company believes that, due to the availability of alternative purchasers and refiners, no material adverse effect would result if this off-taker and this refiner were unable to purchase and process, respectively, the gold doré from El Valle Mine.
- In July 2014, the Company entered into an agreement with a metals trader in White Plains, New York for the sale of copper concentrate. Prior to July 2014, the Company had an agreement with a metals trader in Lima, Peru. The Company believes that, due to the availability of alternative purchasers, no material adverse effect would result if the metals trader was unable to purchase the copper concentrate from Don Mario Mine.
- In September 2014, the Company entered into a precious metals refining contract with a refiner in Brussels, Belgium and a sales contract with a metals trader for the sale of precious metals concentrate from Don Mario Mine. The Company believes that, due to the availability of alternative purchasers and refiners, no material adverse effect would result if such metals trader and such refiner were unable to purchase and process, respectively, the precious metals concentrate from Don Mario Mine.

## **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 Mine, 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**

At September 30, 2015, Orvana and its subsidiaries employed a total of 575 full-time employees and 262 contract personnel for a total of 837 as follows: (i) 195 employees and 142 contractors providing mine, mill, camp and support services at Don Mario Mine, (ii) 370 employees and 118 contractors providing mine, mill and support services at El Valle Mine, (iii) 10 employees and two contractors 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 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 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 Mine and Don Mario Mine 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 preliminary 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 containment 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 at 5 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, by 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 €955,000 (approximately \$1,070,000) 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 a preliminary 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 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 fully comply with local regulations. In addition, OroValle has been seeking to either amend certain of its permits or, alternatively, to receive new permits, and 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 \$8.4 million at September 30, 2015 and is expected to be released after all reclamation work at El Valle Mine has been completed. Spanish regulatory authorities have requested an additional reclamation bond totalling €5 million (approximately \$5,602,000) be deposited in their favour in the near future to satisfy additional reclamation bond commitments in respect of the tailings impoundment area. OroValle is working with certain financial institutions along with the administration, to come to a solution. The Company is challenging this request in courts, but may have to post the further bond as the court proceedings continue.

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 2015, 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 Mine by donating funds to local museums and funding the re-stocking of fish species into local rivers. Additionally, OroValle has continued its commitment to support cultural activities, including the organization of the celebration of Santa Barbara Day in the community of Oviedo

and sponsoring the Belmonte Horse Fair, a local Salmon Fair and a gold panning championship in Navelgas.

In the Chiquitos Province of Bolivia where 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. In fiscal 2015, the Company funded \$0.3 million (compared with \$0.3 million in fiscal 2014) of such commitment for a total of \$1.8 million funded since 2011. In addition, outside of Orvana's committed support, the Company funded an additional \$0.2 million (compared with \$0.2 million in fiscal 2014) to community projects. Projects are jointly monitored by the Company and community boards and funds are paid to contractors or local authorities in accordance with the plan for the five year period. During 2015, EMIPA contracted the services of RMD of Canada, a firm dedicated to developing programs of social responsibility, to work together with EMIPA to improve the effectiveness of these local programs and to seek closer community oversight and programs with sustainability. The Company is meeting with local authorities to develop a new program for ongoing support based on furthering success in local sustainable development programs while maintaining necessary oversight consistent with corporate guidelines.

## **Foreign Operations**

The Company's principal mineral projects are located at El Valle Mine in Spain and 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 further and the prices realized by Orvana on gold, copper or silver sales were to further decrease significantly and remain at such a level for any substantial period, Orvana's profitability and cash flow would be further adversely affected. An increase in worldwide demand for other critical resources such as input commodities, drilling equipment, tires and skilled labor may cause unanticipated cost increases and delays in delivery times, thereby impacting the Company's operating costs, capital

expenditures and production schedules. Delays in delivery times may also occur as a result of lower supplies and materials in stock following the recent downturn in commodities.

Prices of metals and other commodities can and do change significantly over short periods of time and are affected by numerous factors beyond the control of the Company, including changes in the level of supply and demand, international economic and political trends, expectations of inflation, currency exchange fluctuations including the strength of the US dollar, interest rates, global or regional consumption patterns, speculative activities and increased production arising from improved methods and new discoveries. There can be no assurance that prices at which the Company can sell the mineral products it produces will be sufficient to ensure that the Company's properties can be mined profitably. A sustained or significant further decline in the price of gold, copper or silver would have adverse effects on the profitability of the Company and would negatively impact cash flows. Following closure of the derivative instruments which were a requirement of El Valle Mine Loan in the fourth quarter of fiscal 2014, the Company's gold and copper sales are no longer hedged.

### ***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 Mine, Orvana incurs most of its operating costs and capital expenditures in Bolivianos which has not varied materially against the US dollar in recent years with inflation being between 4% to 7% in Bolivia in recent years.

### ***Use of Derivatives***

Orvana may undertake certain hedging activities and use certain derivative products to manage 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. Although Orvana has undertaken hedging activities in recent years, these have been as a result of requirements under El Valle Loan and all outstanding derivatives instruments were closed in fiscal 2014. There can be no assurance that Orvana will undertake any further hedging activities or, if hedging activities are undertaken, that Orvana will continue such hedging activities.

### ***Credit Risk***

The Company's credit risk is primarily attributable to gold-copper 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 concentrate and gold doré are sold under agreements and who provide provisional payments to the Company upon each product shipment. Value-added taxes receivables are collectable from the Bolivian and Spanish governments.

### ***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 Mine and Don Mario Mine 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. 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.

During fiscal 2014, the Company repaid its outstanding El Valle Mine Loan in full and its outstanding Fabulosa Loan in full from, among other things, operating cash flows, proceeds from the sale of the Copperwood Project and the closure of Orvana's outstanding derivative instruments. Accordingly, as at the date of this AIF, Orvana's outstanding cash balances exceed its remaining short term debt. As at September 30, 2015, the Company had an outstanding bank loan with a Bolivian bank totaling \$1.5 million. 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 Mine and Don Mario Mine 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 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 mineral reserves containing relatively lower grade mineralization uneconomic.

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, 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 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 El Valle Mine and Don Mario Mine. 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, recently many companies in the mining industry have seen significant downward pressure on their equity values after announcing significant acquisitions. There is a risk that if Orvana were to announce a significant acquisition, the value of the Common Shares could decrease over the short, medium and/or long term. There can be no assurance that Orvana would be successful in overcoming these risks or any other problems encountered in connection with such acquisitions.

### **Title Matters**

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

### **Water Supply**

The amount of ore processed at Don Mario Mine 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 Mine may not be able to operate at full capacity or may be able to do so only on an intermittent basis. El Valle Mine 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 Mine in Spain and Don Mario Mine 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.

### ***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 preliminary 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 fully comply 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, and 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 million (approximately \$5,602,000). To satisfy this

requirement, OroValle deposited €5 million in September 2011 with a local bank in favour of the Spanish regulatory authorities. As referenced in “Environment” above, Spanish regulatory authorities have indicated a further €5 million may have to be deposited in their favour in the near future to satisfy additional reclamation bond commitments. OroValle is working with certain financial institutions along with the administration, to come to a solution. OroValle is challenging this request in courts, but may have to post the further bond as the court proceedings continue.

### ***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 Mine 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 Mine 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 Mine 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, the Supreme Decree provides that when gross domestic product (GDP) grows more than 4.5%, an extra month 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 2015 the Ministry of Labor issued a Ministry Resolution declaring that the Esfuerzo por Bolivia for 2015. As a result, in December 2015 EMIPA will pay three salaries, the usual monthly salary, the holiday bonus and the Esfuerzo por Bolivia.

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.

The Company has filed a claim with its insurers in connection with the damage to the hoist as a result of a hoisting accident which occurred at El Valle Mine in June 2013. The cost of the basic recovery of the hoist system is approximately \$3.5 million. One insurer has denied coverage and the other insurer may cover only a portion of the claim or may also deny coverage. The Company is disputing the coverage decisions from the insurers. Repair and upgrades to the hoist were completed and the hoist became fully operational in the third quarter of fiscal 2014.

### ***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 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 - Three Year History - 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, 2015, 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) 1,150,000 potentially exercisable Warrants (out of a total of 3,325,000 outstanding Warrants), representing 52.7% of the Common Shares on a fully diluted basis together with Common

Share holdings. 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 - Three Year History - 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](http://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, 2015:

Trade Date	Symbol	High Price	Low Price	Trade Volume
September 2015	ORV	0.20	0.17	699,000
August 2015	ORV	0.23	0.15	1,775,500
July 2015	ORV	0.30	0.22	1,496,500
June 2015	ORV	0.33	0.28	1,868,900
May 2015	ORV	0.40	0.30	2,078,600
April 2015	ORV	0.39	0.34	691,900
March 2015	ORV	0.42	0.35	1,114,300
February 2015	ORV	0.47	0.36	2,176,800
January 2015	ORV	0.49	0.34	2,595,600
December 2014	ORV	0.38	0.28	2,172,600
November 2014	ORV	0.32	0.27	2,148,300
October 2014	ORV	0.35	0.27	1,199,000

### 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 <sup>(1)</sup>	Position with the Company <sup>(1)</sup>	Principal Occupation For Past Five Years
Bogden, Gordon <sup>(3)</sup> Ontario, Canada	Director since February 2014	Chairman, Black Loon Group Inc. (current) Director of Royal Gold, Inc. (current) President and Chief Executive Officer of Alloycorp Mining Inc. Vice Chairman, Mining and Metals at Standard Chartered Bank Co-founder, President and Managing Partner at Gryphon Partners

Name and Province or State and Country of Residence <sup>(1)</sup>	Position with the Company <sup>(1)</sup>	Principal Occupation For Past Five Years
Dimitrov, Daniella Ontario, Canada	Director since April 2015 and President and Chief Executive Officer since March 2015	Chief Financial Officer of Orvana Minerals Corp. from June 2012 to March 2015 Director of Alloycorp Mining Inc. and Aldridge Minerals Inc. (current) Director of Orvana from March 2012 to June 2012 Executive Vice Chair and Director of Baffinland Iron Mines Inc. President DDimitrov Advisory Corp.
Juan Gavidia <sup>(4)</sup> Florida, U.S.A.	Director since November 2015	Independent business consultant including to Minera S.A., affiliate of Fabulosa (current) Project Manager of Newmont Mining
Guimaraes, Edmundo <sup>(2)</sup> Ontario, Canada	Director since February 2013	Chief Financial Officer of Sierra Metals Inc. (current) Director of Aldridge Minerals Inc. (current) Independent business consultant
Magner, Sara <sup>(3)</sup> Virginia, U.S.A.	Director since November 2015	Corporate Secretary and General Counsel of Minera S.A., affiliate of Fabulosa (current) Associate of Greenberg Traurig LLP
McMullen, Jacques <sup>(4)</sup> Ontario, Canada	Chairman of the board since February 2015 and director since February 2014	Principal, Mines and Metals, Partner and non-executive director of BBA, consulting engineering firm (current) Principal, J.McMullen & Associates (current) Advisory board member of Minera S.A., affiliate of Fabulosa (current) Director of Fire River Gold Corp., IGE Resources AB and Highland Gold Mining Ltd. Senior Vice President, Technical Services and Projects, Barrick Gold Corporation
Pridham, Gordon <sup>(2) (3)</sup> Ontario, Canada	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. and Titanium Corporation (current) Principal of Edgewater Capital (current) Advisory board member of Minera S.A., affiliate of Fabulosa (current) Advisory board member of Enertech Capital (current)
Walsh, Audra <sup>(3) (4)</sup> Virginia, U.S.A.	Director since October 2012	President and Chief Executive Officer of A2Z Mining, Inc. (current) President and Chief Executive Officer of Sierra Metals Inc. President and Chief Executive Officer of Minera S.A., affiliate of Fabulosa Senior Manager at Barrick Gold Corporation

Name and Province or State and Country of Residence <sup>(1)</sup>	Position with the Company <sup>(1)</sup>	Principal Occupation For Past Five Years
Wilson, C. John <sup>(2) (4)</sup> Colorado, U.S.A.	Director since March 2012	Independent project finance and economic development consultant (current) Advisory board member of Minera S.A., affiliate of Fabulosa (current) Chief Credit Officer, Credit Review Department, International Finance Corporation
Hillis, Jeffrey Ontario, Canada	Chief Financial Officer since April 2015	Vice-President, Chief Financial Officer and Corporate Secretary of Potash Ridge Corporation Vice-President and Chief Financial Officer of Iberian Minerals Corp.
Chan, Jeffrey Ontario, Canada	Corporate Controller since August 2013	Financial Controller, Ryan Gold Corp. & Corona Gold Corporation Senior Financial Analyst, Inmet Mining Corporation
Dillon, Joan Ontario, Canada	Corporate Secretary since May 2006	Corporate Secretary of the Company since May 2006

- (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.

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 1.2% 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 a preliminary 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 2014 and 2013, 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 - Three Year History - 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 CST Trust Company, 3<sup>rd</sup> Floor, 320 Bay Street, Toronto, Ontario, M5H 4A6.

## MATERIAL CONTRACTS

Other than contracts described in this AIF, there are no other material contracts entered into before fiscal 2015, but still in effect. Orvana has not entered into any material contracts during fiscal 2015.

## 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 C. John Wilson, 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. C. John Wilson holds a Bachelor of Commerce degree and a Master of Economics degree. He is an independent project finance and economic development consultant. Mr. Wilson was previously a Chief Credit Officer of the Credit Review Department of the International Finance Corporation, a member of the World Bank Group.

### 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 2015 and fiscal 2014 in respect of the services set out below provided by PwC, the Company's external auditors:

<b>Fiscal Year ended September 30, (US\$'000)</b>	<b>2015</b>	<b>2014</b>
Audit fees <sup>(1)</sup>	340	\$407
Audit-related fees <sup>(2)</sup>	57	\$69
Tax fees <sup>(3)</sup>	33	\$35
All other fees <sup>(4)</sup>	27	\$-

Total fees	\$457	\$511
(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 2015 include audit fees incurred with respect to the fiscal 2015 audit but billed during fiscal 2016 and audit fees for 2014 include audit fees incurred with respect to the 2014 fiscal audit but billed during fiscal 2015.	
(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.	

### 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 18, 2015 in respect of the 2015 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: Jason J. Cox 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 Michael Cullen of Mercator and 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 this AIF, unless otherwise indicated).

Mr. Andrew Harris supervised the estimate of El Valle's mineral reserves as at September 30, 2015 and the development of the Life of Mine Plan for El Valle (the "El Valle LOMP"). Mr. Harris, the Technical Services 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, 2015. 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 of the scientific and technical information relating to El Valle Mine disclosed in this AIF. Mr. Shawn Wilson, the Director of Engineering at Orvana, supervised the development of the Life of Mine Plan for Don Mario (the "Don Mario LOMP"). Shawn Wilson 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 Don Mario 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 2015 Financials and management's discussion and analysis for fiscal 2015, the Company's most recently completed financial year. This information and additional information relating to Orvana are available on SEDAR at [www.sedar.com](http://www.sedar.com) and on Orvana's website at [www.orvana.com](http://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 (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.

Confirmed by the Audit Committee: November 24, 2015  
Reconfirmed by the Board of Directors: November 24, 2015

## APPENDIX B

### ORVANA MINERALS CORP. - ANNUAL INFORMATION FORM

#### Principal Mineral Projects

Terms not otherwise defined herein are defined in the Annual Information Form of Orvana dated December 29, 2015.

#### 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 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*

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 three investigation permits comprising 3,330 hectares. 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 for 30 years and is renewable upon application.

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.

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.

#### *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. Sporadic drilling and sampling programs through the 1970s and 1980s gave way to underground exploration in 1990. Further drilling and engineering work by Río 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.

<b>Year</b>	<b>Company</b>	<b>Location</b>	<b>Activity</b>
1971-1972	Gold Fields Española, S.A.	Carlés	Mapped Carlés 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

Year	Company	Location	Activity
			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 Valle Boinás	Mapping of Roman Pits, collected 858 samples, 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		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)
1999, 2001			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)
1999			Boinás West pit backfilled with waste from Boinás East open pit
1999-2003			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

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

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

#### 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 goldcopper 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-asy) 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.

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.

### *Drilling*

Up until fiscal 2015, drilling has totaled approximately 357,200 meters in 2,481 holes of which Orvana drilled approximately 93,281 meters in 711 holes. Of these holes drilled, 57 holes in the database were exploratory in nature, and tested for satellite deposits. In fiscal 2015, infill definition and exploration diamond drilling totaling approximately 19,600 meters has been completed in 180 additional drill holes, of which 14 were exploratory in nature.

Subsequent to El Valle Mine 43-101 Report, the Company continued to pursue opportunities to define new resources in the areas surrounding El Valle. A diamond drilling program was completed at the La Brueva property, located eight kilometers from El Valle. The Company's drilling program consisted of 13 holes totaling 2,780 meters and was completed in August 2015. The Company is completing a resource estimate for this deposit and expects to publish the results in the second quarter of fiscal 2016. Additionally, a new zone within El Valle Mine was identified through the exploration drilling conducted recently and a resource estimate for this zone is also expected to be reported in the second quarter of fiscal 2016.

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, 3,500 samples are assayed per month, consisting of exploration core, underground grade control samples, and mill samples. 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, underground chip 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 zones, the underground chip samples are used for resource estimation.

Density information is collected after logging at a density measurement station within the core logging facility. 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.

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*

El Valle Mine and Carlés 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) circuits to produce copper concentrate and gold dore.

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. No recent metallurgical test work was reported since the start of plant operation.

#### *Mineral Resources and Reserves Estimates*

A summary of the mineral resources and reserves estimates as at September 30, 2015 is found above under the heading "Description of the Business - Principal Mineral Projects - El Valle Mine - Mineral Resources and Reserves Estimates" (the "2015 El Valle MRMR"). The 2015 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. Drift and fill mining continues to be used in the oxide areas of the mine. 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.

Carlés Mine used longitudinal longhole stoping methods. Ore was hauled to a surface stockpile via underground truck, and transferred to highway-rated surface trucks for transport to El Valle. Backfill was via waste fill, as stopes are separated by rib pillars. Carlés Mine was placed on care and maintenance at the end of February 2015, pending future increases in metal prices, new results from exploration, or determination of an economic mining method in the current metals price environment.

#### *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 t per year;
- 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, 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 underground operations. At El Valle Mine the levels of Selenium in water discharges potentially exceed 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 2015 and financial analysis by management of the Company. The development of El Valle LOMP was under the supervision of Mr. Andrew Harris, Technical Services Manager 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 \$7.7 million per year over the remaining operational years, as summarized in the table below.

**Sustaining & Non-Sustaining Capital Costs<sup>(1)</sup>**  
**EI Valle Operation**

Item	EI Valle LOMP annual average (\$ millions)
Mine Development	3.5
Equipment & Facilities	2.1
Exploration	0.6
Tailings	0.7
Other	0.8
<b>Total</b>	<b>7.7</b>

(1) Capital costs at EI Valle are primarily incurred in Euros. Disclosure in this table assumes an FX rate of 1.10 EUR to USD.

Mine development costs are based upon EI 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 EI Valle are based on recent operating history and estimated savings from continued operational optimizations being implemented in fiscal 2016 and average \$45.6 million per year over the remaining operational years, including care and maintenance costs for Carlés. After that, costs decline due to lower production forecasts. Annual average operation costs are summarized in the table below.

**Operating Costs<sup>(1)</sup>**  
**EI Valle Operation**

Item	EI Valle LOMP annual average (\$ millions)
Mining	17.6
Processing	10.2
Technical Services	13.2
G&A	4.6
<b>Total</b>	<b>45.6</b>

(1) Operating costs at EI Valle are primarily incurred in Euros. Disclosure in this table assumes an FX rate of 1.10 EUR to USD. Annual operating costs also assume certain costs savings estimated to be realized from mid-fiscal 2016 onward.

*Exploration, Development or Production*

Subsequent to the filing of EI Valle Mine 43-101 Report, the Company has continued to target opportunities to extend the current mine life at EI Valle and is working to replace depleted reserves, upgrade resources and replace inferred resources at EI Valle Mine through various diamond drilling campaigns underway. In fiscal 2015, infill definition and exploration diamond drilling totaling approximately 19,600 meters has been completed. Additionally, the Company is pursuing exploration activities, such as mapping, sampling and geophysics on certain investigation permits concessions in the vicinity of EI Valle Mine.

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

*Markets*

The principal commodities at EI 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, 2015 were estimated at \$15.3 million. These estimates were prepared by management with the use of independent third party experts other than RPA. 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, 2015, 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 \$8.4 million and is expected to be released after all reclamation work at El Valle Mine and Carlés Mine has been completed. Spanish regulatory authorities have requested an additional reclamation bond totaling approximately \$5.6 million be deposited in their favour in the near future to satisfy additional reclamation bond commitments. OroValle is challenging this request in courts, but may have to post the further bond as the court proceedings continue. See "Health, Safety, Environment and Social Practices - Environment" above.

#### *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 2015.

### **Don Mario Mine**

#### *Current Technical Report*

On November 16, 2015, the Company filed on Sedar the "Don Mario Mine Operation 2015 Technical Report" (the "Don Mario 43-101 Report") by Michael Cullen of Mercator and Gino Zandonai of DCGS, each of whom are qualified persons 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 59°47'W and 17°15' S. The property includes:

- the UMZ deposit, which is currently being mined;
- the LMZ deposit, where approximately 420,000 ounces were produced by principally underground mining methods from 2003 to 2009;
- the remaining LMZ deposit of which new resources are contained in this report;
- the Cerro Felix deposit, located 500m Northwest of the current UMZ open pit;
- the Las Tojas deposit, located 12 km from Don Mario Mine infrastructure and mined by open pit methods from 2009 to 2011.





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 grants concessions conferring the right to explore, exploit, refine, and sell all mineral substances within the concession’s borders for an indefinite period. 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 of concessions occurs only if the required annual mining patent is not paid (approximately \$24 per unit for the first five years and approximately \$48 per unit each additional year). All mineral concession fees for the 10 concessions have been paid by EMIPA.

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

In accordance with Articles 34 and 35 of the Mining Code, a concession owner is entitled to erect and construct within or outside his concession all the facilities and means of communication and transportation deemed necessary to carry out the activities permitted under the Mining Code. Within the perimeter of the concession, the concession owner may use the lands under public domain without charge, including extracting construction materials, timber and other materials from such lands.

### *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.

<b><i>Period</i></b>	<b><i>Operator</i></b>	<b><i>Phase</i></b>
Colonial	Republican	Pre-industrial copper mining on Cerro Don Mario by local peoples and Jesuit missionaries
1988		British Mission geological survey

<b>Period</b>	<b>Operator</b>	<b>Phase</b>
		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-present	Orvana	Exploration and initial investment are made to advance the Las Tojas and UMZ projects to production as the LMZ reserves are depleted

## *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 psammities 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"), orthogenesis ("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, psammities 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, the former of which supports all current mining on the property. 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/opicalcite 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-imonite, and silver sulfosalts.
- The Transition zone features traces of pyrite, bornite, sphalerite, and galena with weathered limonite and chalcocite coatings, as well as minor copper oxides.
- The Sulphide zone consists of dark green tremolite with bornite, chalcopyrite, and sphalerite. Gold and silver grades are associated with chalcopyrite and bornite mineralization.

#### 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 Cerro Felix and Las Tojas 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 deposit 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.

## *Drilling*

490 core drill holes, 35 reverse circulation (RC) drill holes and 22 underground core drill holes were completed on the property up to the end of 2013.

A total of 48 additional RC and core holes (2175m) were completed during the 1996 to 1998 period for hydrologic or geotechnical purposes.

### 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 135° 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 -45°. 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 Rossa/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 12 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 being considered by the company.

### 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 (3600 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 that 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 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. This approach has continued to the present with the 2015 Cerro Felix and LMZ 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 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 current LMZ resource estimate by Mercator. During the February and June, 2015 site visits, Mercator staff completed site checks similar to those carried out by earlier resource estimate authors. These include detailed review of core and associated sampling and logging records for mineralized drill holes from the Cerro Felix deposit and 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*

A metallurgical test work program is underway to evaluate both leaching of whole ore and flotation for LMZ and Cerro Felix deposits. In addition, additional metallurgical testing of the oxides stockpile has commenced.

Currently the Don Mario processing facility processes transitional and sulphide ore from UMZ deposit.

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.

The Don Mario processing facility processes the UMZ ore and can process 876,000 tonnes per annum (tpa) on a run of mine ROM basis, depending on the ore type. The feedstock is comprised of UMZ sulphides and transition ore. 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. No recent metallurgical test work has been reported since the start of plant operation in 2011 to process the UMZ ore.

### *Mineral Resources and Reserves Estimates*

The Don Mario 43-101 Report contains mineral resources and reserves estimates for Don Mario. The updated mineral resources and reserves estimates were prepared in accordance with NI 43-101 and appear above in "Description of the Business - Principal Mineral Projects – Don Mario - Mineral Resources and Reserves Estimates".

### *Mining Operations*

The Don Mario Operation consists of an open pit mine for the UMZ deposit, producing a nominal 2,500 tpd ore, of two material types – transition and sulphide. Future mining of the remaining LMZ resource and Cerro Felix resource are expected to utilize open pit mining methods.

The current mining methods used at Don Mario UMZ 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 UMZ mine design and planning were carried out using the current UMZ resource block model generated by DGCS and includes nested pit shells (phases and end of year maps) generated by Gemcom-Whittle™ mine planning and optimization 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 May of 2016.

### 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
- Tailings Storage Facility (TSF)

The processing plant can process 876,000 tpa with a daily throughput of 2,500 tpd. Overall recoveries achieved in recent operation of UMZ for Fiscal Year 2015 are 53.6% for gold, 74.5% copper, and 63.6% for silver. Products include gold concentrate, copper concentrate with gold and silver credits and a very limited amount of lead concentrate. A metallurgical test work program is underway to evaluate both leaching of whole ore and flotation for LMZ and Cerro Felix deposits. In addition, additional metallurgical testing of the oxides stockpile has commenced.

### *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 carbon in leach circuit.

Underground facilities in place to service the mined out 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 (TSF) 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, Los 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 2015 and financial analysis by management of the Company. The development of Don Mario LOMP was under the supervision of Mr. Shawn Wilson, Director of Engineering at Orvana, a qualified person who is not 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	2.2
Exploration	0.9
Tailings	2.6
<b>Total</b>	<b>5.7</b>

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 the annual tailings dam lift.

Estimated non-sustaining costs of approximately \$6.4 million may be incurred in fiscal 2016 in respect of recommissioning the CIL circuit contingent on obtaining external financing. These costs have not been included in the above table.

Operating costs at Don Mario are based on recent operating history, and estimated to average \$23.6 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	6.1
Processing	10.6
Technical Services and G&A	6.9
<b>Total</b>	<b>23.6</b>

*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".

*Royalties*

Production from Don Mario Mine is subject to a 3% NSR payable quarterly. This expense totaled \$1.7 million for fiscal 2015. 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 \$5.0 million for fiscal 2015.

*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, 2015 were estimated at \$6.4 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.