

**ORVANA**  
MINERALS CORP.

**ORVANA MINERALS CORP.**

**ANNUAL INFORMATION FORM**

**FOR FISCAL YEAR ENDED SEPTEMBER 30, 2012**

**December 28, 2012**

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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, all aspects of the development of the El Valle-Boinás/Carlés Mine (the “EVBC Mine”) in Spain, the Don Mario Upper Mineralized Zone Mine (the “UMZ Mine”) in Bolivia, and the Copperwood project (the “Copperwood Project”) in Michigan and their potential operations and production; the outcome and timing of decisions with respect to whether and how to proceed with such development and production; the timing and outcome of any such development and production; estimates of future capital expenditures; mineral resource estimates; estimates of permitting time lines; statements and information regarding future feasibility studies and their results; production forecasts; future transactions; future gold, copper and silver prices; the ability to achieve additional growth and geographic diversification; future production costs; future financial performance, including the ability to increase cash flow and profits; future financing requirements; and mine development plans.

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 the EVBC Mine, the UMZ Mine and the Copperwood Project 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; risks generally associated with mineral exploration and development, including the Company’s ability to develop the EVBC and UMZ Mines and the Copperwood Project; the Company’s ability to acquire and develop mineral properties and to successfully integrate such acquisitions; 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; 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 Section 3, “Description of the Business - Risk Factors” of this AIF for a description of additional risk factors.

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.

## EXPLANATORY NOTES

In this AIF, references to “Orvana” or the “Company” include the subsidiaries of Orvana unless the context requires otherwise.

Unless otherwise noted herein, information in this AIF is presented as at September 30, 2012.

Unless otherwise noted herein, all dollar amounts in this AIF are in thousands of US dollars (other than per share or per unit amounts). As at September 28, 2012, the last business day of the Company’s fiscal 2012 year, value of one Canadian dollar was \$1.0166 in US dollars and the value of one Euro was \$1.2930 in US dollars, according to the Bank of Canada and European Central Bank, respectively.

References to gold and silver in ounces mean fine troy ounces and are referred to as “ounces” or “oz” and references in respect of copper are in pounds also referred to as “lb”.

References in the AIF to the “MD&A” are to the Company’s Management’s Discussion and Analysis dated December 20, 2012 in respect of the Company’s fiscal year ended September 30, 2012 filed at [www.sedar.com](http://www.sedar.com).

## METAL PRICES TABLE

The following table sets forth the closing spot prices for gold, silver and copper as at September 28, 2012:

Metal	Price in US Dollars	Price in Euros at 1.2930 <sup>(3)</sup>
Gold per ounce <sup>(1)</sup>	\$1,776.00	€1,373.55
Silver per ounce <sup>(1)</sup>	\$34.65	€26.80
Copper per pound <sup>(2)</sup>	\$3.75	€2.90

(1) For spot prices refer to Kitco on [www.kitco.com](http://www.kitco.com).

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

(3) For exchange rate refer to 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
Kilogram	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.

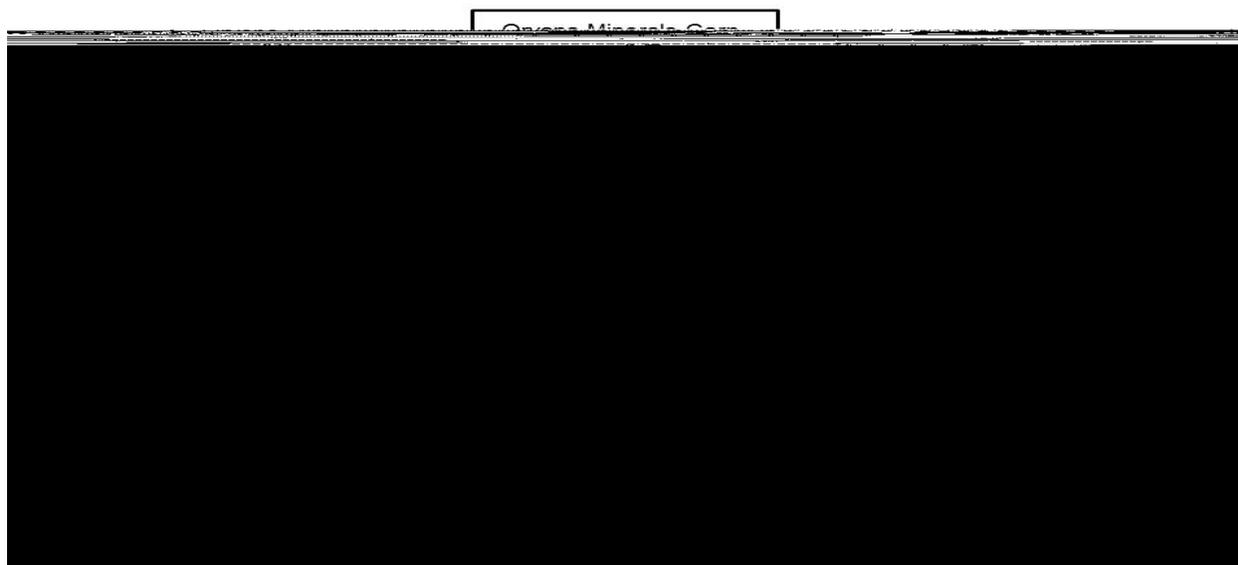
The Company's common shares ("Common Shares") are listed on The Toronto Stock Exchange under the symbol TSX:ORV.

### **Intercorporate Relationships**

Historically, Orvana has conducted its production, development, and exploration 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) Canada: Orvana Minerals Asturias Corp.; (iii) United States: Orvana Resources US Corp. ("Orvana US"); (iv) Spain: Kinbauri España, S.L.U. ("Kinbauri"); (v) Cyprus: Orvana Cyprus Limited; (vi) Sweden: Orvana Sweden International AB; (vii) Bolivia: Empresa Minera Paititi S.A. ("EMIPA"); and (viii) Bolivia: Minera El Alto S.A. ("El Alto").

The Company's inactive subsidiaries all of which are wholly-owned and have no assets or mineral property holdings are as follows: (i) Jamaica: Clarendon Mining Limited; (ii) Mexico: Minera Orvana Mexico S.A. de C.V.; and (iii) Peru: Minera Orvana Peru S.A.

The inter-corporate relationships among Orvana and each of its active and holding subsidiaries are outlined in the diagram below. The diagram below also provides specific information on (i) the percentage of votes attaching to all voting securities of each subsidiary beneficially owned, controlled or directed by Orvana 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).



## **DEVELOPMENT OF THE BUSINESS**

### **Introduction**

Orvana is a Canadian mining and exploration company engaged in the evaluation, development and mining of precious and base metal deposits. Orvana has three principal mineral projects: the gold-copper-silver EVBC Mine in Asturias, Spain; the copper-gold-silver UMZ Mine in Bolivia; and the Copperwood copper project in Michigan, United States. With this portfolio of projects, Orvana is advancing its long-term goal of transforming from a single-mine gold producer into a multi-mine gold and copper producer.

In fiscal 2012, Orvana achieved its first full year of commercial production at the EVBC Mine, nine months of commercial production at the UMZ Mine and major permitting milestones at the Copperwood Project.

Total production in fiscal 2012 was 55,929 ounces of gold, 15.4 million pounds of copper, 716,280 ounces of silver and 636,126 pounds of lead.

### **Three-Year History**

#### ***EVBC Mine***

In September 2009, Orvana acquired the parent company of Kinbauri, whose principal asset was the El Valle-Boinás/Carlés project located in Asturias, Spain, consisting of 14 exploitation concessions comprising 4,298 hectares, a 2,000 tonne-per-day mill, a 3-circuit processing plant, a laboratory, and other auxiliary structures. Since its acquisition of the project, Orvana, among other things, hired essential personnel, rehabilitated the mill and plant, purchased or leased appropriate equipment, improved the stability of the tailings impoundment, and completed the sinking of a 420-meter shaft in order to facilitate underground development and mining at both the Boinás and Carlés ore deposits. The Company commissioned the EVBC Mine in May 2011 and advanced to commercial production in August 2011. Currently, the EVBC Mine has a 10-year mine life. The Company believes that there is sufficient mineralization to extend production beyond 2022.

Fiscal 2012 EVBC Mine production was 42,864 ounces of gold, 3.95 million pounds of copper and 117,113 ounces of silver. Beyond 2012, Orvana will continue to work on improving head grade, increasing gold production and reducing total cash costs (net of by-product revenue) per ounce of gold. The shaft should allow for more efficient ore haulage resulting in improved flexibility and cost optimization. Orvana will also investigate alternatives to maximize the mill throughput and enhance recoveries. Fiscal 2013 guidance for production from the EVBC Mine is 63,000 ounces of gold, 6 million pounds of copper and 200,000 ounces of silver.

More information about the EVBC Mine is provided below under “Description of the Business - Principal Mineral Projects - EVBC Mine” and “Appendix B - Principal Mineral Projects - EVBC Mine”.

#### ***UMZ Mine***

The Company owns and operates the Don Mario open-pit UMZ Mine in southeastern Bolivia through EMIPA. Fiscal 2009 marked the last year of production from the Company’s low-cost Lower Mineralized Zone underground gold mine at Don Mario with some gold production from the lower-grade satellite deposit, Las Tojas, continuing into fiscal 2010 and 2011. After completing various studies on the economic viability of mining the UMZ deposit, in 2009 the Company installed a leach-precipitation-flotation (“LPF”) circuit in order to process the deposit’s complex mineralization. Mine start-up occurred in April 2011 and commercial production was achieved in January 2012. During 2012, the Company decided to process the transition and sulphide ores by conventional froth flotation, and the oxide ores by the LPF process for 15 days every three months. On December 18, 2012, the Company filed a technical report, compliant with *National Instrument 43-101-Standards of Disclosure for Mineral Projects* (“NI 43-101”), titled “Updated Resource and Reserve Estimates for the Don Mario Upper Mineralized Zone Project, Eastern Bolivia” (the “UMZ 43-101 Report”) by Francisco Alcalde Garmendia, a qualified person who is independent of the Company for the purposes of NI 43-101. The revised mine plan discussed in the UMZ 43-101 Report estimates production from the UMZ Mine into 2018.

Fiscal 2012 UMZ Mine production was 13,065 ounces of gold, 11.42 million pounds of copper, 599,167 ounces of silver and 636,126 pounds of lead. During fiscal 2013, the Company’s focus at the UMZ Mine will be on improving recoveries. Fiscal 2013 guidance for production from the UMZ Mine is 12,000 ounces of gold, 12 million pounds of copper and 650,000 ounces of silver.

More information about the UMZ Mine is provided below under “Description of the Business - Principal Mineral Projects - UMZ Mine” and “Appendix B - Principal Mineral Projects - UMZ Mine”.

#### ***Copperwood Project***

The Company indirectly holds the Copperwood Project, which is comprised of long-term mineral leases covering an aggregate of 936 contiguous hectares within the Western Syncline located in the Upper Peninsula of Michigan, United States. In 2012, the Company completed the purchase of approximately 700 hectares of surface rights that secure access and provide space for infrastructure related to the

potential development of a mine. In addition, the Company has options to convert 1,559 hectares into mineral leases on three mineralized zones within the Western Syncline and adjacent to the Copperwood Project mineral leases (the "Satellite Deposits").

Orvana's activity to date at Copperwood includes deposit delineation, metallurgical testing and mine-plan design, among other things, which provided the basis for a NI 43-101-compliant feasibility study, "Feasibility Study of the Copperwood Project, Upper Peninsula, Michigan, USA" (the "Copperwood 43-101 Report"), completed under the supervision of Joseph Keane, P.E., Steve Milne, P.E., and David List, P.E., each of whom is an independent qualified person for the purposes of NI 43-101, as well as environmental baseline studies for various permit applications.

During 2012, the Company received the State of Michigan Part 632 Mining, Air-Quality (Permit to Install), Endangered Species, and the National Pollutant Discharge Elimination System (discharge) permits from the Michigan Department of Environmental Quality ("MDEQ"). The Company's application for the Wetlands permit is currently under review.

More information on the Copperwood Project is provided below under "Description of the Business - Principal Mineral Projects - Copperwood Project" and "Appendix B - Principal Mineral Projects - Copperwood Project".

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

During fiscal 2012, the Company appointed a new Chief Executive Officer in December 2011, a Chief Financial Officer and a Bolivia country manager in June 2012, a Chief Operating Officer in August 2012 and a Spain country manager in September 2012. In addition, the Company had certain changes in its directors during fiscal 2012 as set out under "Directors and Officers".

### ***EVBC Loan***

In October 2010, Kinbauri entered into a \$50,000,000 five-year term corporate credit facility (the "EVBC Loan"). The funds were primarily used to complete the construction of the EVBC Mine. In February 2012, the EVBC Loan was extended by one year to September 30, 2016 and increased by \$13,844,000 (the "EVBC Loan Amendment") including approximately \$6,465,000 to fund an environmental bond that may be required to be posted with governmental authorities in Spain, \$3,000,000 to fund a debt service reserve account to cover one quarter-year's debt service charges and the balance for general corporate purposes. To the extent that the environmental bond is less, these funds may be used for general corporate purposes. The Company is currently negotiating certain operational amendments to the EVBC Loan.

The EVBC Loan contains covenants that, among other things, (i) require the deposit of certain cash flows from operating activities into restricted cash for upcoming EVBC Loan repayments, (ii) restrict Orvana's ability to incur additional indebtedness, (iii) restrict Kinbauri's ability to make cash distributions to Orvana in certain circumstances subject to meeting certain covenants, (iv) require additional repayments under the EVBC Loan in certain circumstances from excess cash flows from operating activities, and (v) restrict Orvana's ability to sell material assets or to carry on business other than one related to the mining business.

The EVBC Loan required gold, copper and US dollars/EUR financial instruments that have already been put in place. Orvana is required to maintain certain financial ratios which calculations exclude the fair value adjustments of the outstanding financial instruments required under the terms of the EVBC Loan. The security for the EVBC Loan includes a fixed and floating charge over the assets of Kinbauri and a pledge by Orvana of all of the shares of Kinbauri. Kinbauri's obligations under the EVBC Loan are guaranteed by Orvana. The cost of the EVBC Loan, including interest and fees but excluding the costs associated with the financial instruments, is expected to average approximately 5% to 6% per annum, based on an interest rate of LIBOR plus 4%. Quarterly principal repayments commenced on July 2, 2012. The total annual principal repayment required in each fiscal year ending September 30, expressed as a percentage of the total amount of the EVBC Loan are: 2012-5.3%; 2013-18.7%; 2014-23.3%; 2015-27.6%; and 2016-25.1%. In fiscal 2012, the Company paid approximately \$5,792,000 in principal and interest payments and an additional approximately \$8,806,000 was included in restricted cash under the

EVBC Loan at September 30, 2012 for two payments, one made on October 2, 2012 and the other due on January 2, 2013.

### **Public Offering of Common Shares**

On August 11, 2011, the Company completed a public offering of 8,500,000 Common Shares at a price of C\$2.00 per Common Share for aggregate gross proceeds of C\$17,000,000. The net proceeds of the offering, after deduction of issuance costs, were \$15,485,000.

### **Transactions with Fabulosa Mines Limited - Related Party Transactions**

As at the date of the AIF, Fabulosa Mines Limited ("Fabulosa") held 70,915,027 Common Shares, representing 51.9% of the outstanding Common Shares.

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 \$15,000,000 bridge loan (the "2011 Bridge Loan"). In exchange, Orvana issued to Fabulosa 1,969,999 Common Shares, increasing Fabulosa's ownership interest from 51.6% to 52.4%, and agreed to issue to Fabulosa 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 cancellation of certain stock options previously outstanding in May 2011, warrants to purchase up to 1,818,335 Common Shares were outstanding as of the date of the AIF of which 400,000 were exercisable. Orvana also agreed to approve the implementation of a normal course issuer bid, at Fabulosa's request and subject to TSX approval, the purpose of which would primarily be to acquire Common Shares 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.

In June 2011, the Company entered into the 2011 Bridge Loan and, upon closing of its 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 to acquire, in the aggregate, the same number of Common Shares as were issued in the public offering and, consequently, purchased an additional 1,180,031 Common Shares by way of a private placement at C\$2.00 per Common Share. As a result, Fabulosa acquired, in the aggregate, 8,500,000 Common Shares at that time.

In January 2012, the Company entered into a \$5,000,000 loan (the "Fabulosa Loan") that is secured by, among other things, a general security assignment over present and future assets of Orvana excluding Kinbauri. The Fabulosa Loan was subsequently amended and increased to \$11,500,000. The Company is using proceeds drawn under the Fabulosa Loan for working capital purposes. Interest on the outstanding principal is calculated at a rate per annum of 12%, is payable monthly and the Company pays withholding taxes imposed by Canadian taxing authorities. Subsequent to the end of fiscal 2012, the repayment terms were amended and the principal amount outstanding under the Fabulosa Loan is required to be repaid in the minimum amount of \$1,000,000 per month commencing in May 2013. The Fabulosa Loan also contains covenants that, among other things, require principal repayment in the event of the sale of EMIPA or all or substantially all of its assets. The Fabulosa Loan is available for draw down until June 30, 2013 and matures on December 31, 2013. In the event that, prior to March 1, 2013, Fabulosa requests that Orvana add an additional Orvana director nominated by Fabulosa and Orvana does not do so within ten business days, the Fabulosa Loan will convert to a demand loan.

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.

As Fabulosa is an insider of Orvana, the Fabulosa Agreement and the 2011 Bridge Loan were negotiated by a special committee of the directors of Orvana comprised of independent directors of Orvana. The special committee retained its own legal counsel and an independent financial advisor to assist it in connection with such negotiations. The Fabulosa Loan and the amendments thereof were approved by the directors of the Company independent of Fabulosa.

## DESCRIPTION OF THE BUSINESS

### Introduction

Orvana is a Canadian mining and exploration company engaged in the evaluation, development and mining of precious and base metal deposits. Orvana has three principal mineral projects: the gold-copper-silver EVBC Mine in Asturias, Spain; the copper-gold-silver UMZ Mine in Bolivia; and the Copperwood copper project in Michigan, United States. With this portfolio of projects, Orvana is advancing its long-term goal of transforming from a single-mine gold producer into a multi-mine gold and copper producer.

In fiscal 2012, Orvana achieved its first full year of commercial production at the EVBC Mine, nine months of commercial production at the UMZ Mine and major permitting milestones at the Copperwood Project. Total production in fiscal 2012 was 55,929 ounces of gold, 15.4 million pounds of copper, 716,280 ounces of silver and 636,126 pounds of lead.

### Principal Mineral Projects

#### *EVBC Mine*

The Company owns and operates the EVBC Mine through Kinbauri. The EVBC Mine is located in the Rio Narcea Gold Belt in northern Spain and consists of 14 exploitation concessions comprising 4,298 hectares and two investigation permits comprising 754 hectares. The EVBC Mine includes the Boinás deposits, which are characterized by both skarn and higher-grade gold epithermal mineralization, and the Carlés deposits, which are skarns. Currently, the deposits are exploited by underground mining methods. Commercial production commenced in August 2011 and fiscal 2012 was the first full year of commercial production.

#### *Production*

During fiscal 2012, the EVBC Mine produced 42,864 ounces of gold, 4.0 million pounds of copper and 117,113 ounces of silver compared to 9,336 ounces of gold, 1.1 million pounds of copper and 28,456 ounces of silver in fiscal 2011, as a result of a full year of production from the EVBC Mine in fiscal 2012 and only two months of commercial production in fiscal 2011.

Total cash costs (net of by-product revenue) of \$854 per ounce of gold sold in fiscal 2012 were 38% or \$516 lower than in 2011 due to increased gold sales, a weaker Euro against the US dollar reducing operating costs, higher realized metals prices on the sale of copper and silver by-products and lower operating costs per milled tonne.

Total production costs (net of by-product revenue), which represent total cash costs (by-product) plus depreciation and amortization costs, of \$1,071 per ounce of gold sold were 40%, or \$707, lower than in fiscal 2011 for the aforementioned reasons, partially off-set by an increase in depreciation of primary mine development costs incurred in fiscal 2011 and 2012.

The following table sets forth the production, sales and cost data for the EVBC Mine in fiscal 2011 and 2012:

**EVBC Mine - Production, Sales and Costs**

	2012	2011
<b>Operating Performance <sup>(1)</sup></b>		
Ore mined (tonnes)	<b>558,583</b>	203,821
Ore milled (tonnes)	<b>519,690</b>	177,926
<i>Gold</i>		
Grade (g/t)	<b>2.77</b>	1.92
Recovery (%)	<b>92.5</b>	87.0
Production (oz)	<b>42,864</b>	9,336
Sales (oz)	<b>42,837</b>	5,520
<i>Copper</i>		
Grade (%)	<b>0.41</b>	0.41
Recovery (%)	<b>84.1</b>	66.1
Production ('000 lbs)	<b>3,951</b>	1,056
Sales ('000 lbs)	<b>3,951</b>	504
<i>Silver</i>		
Grade (g/t)	<b>9.17</b>	8.64
Recovery (%)	<b>76.4</b>	57.8
Production (oz)	<b>117,113</b>	28,456
Sales (oz)	<b>106,199</b>	13,270
Total cash costs (by-product) (\$/oz of gold sold) <sup>(2)</sup>	<b>\$854</b>	\$1,370
Total production costs (by-product) (\$/oz of gold sold) <sup>(2)</sup>	<b>\$1,071</b>	\$1,778
<b>Financial Performance <sup>(1)</sup></b>		
Revenue	<b>\$82,239</b>	\$10,473
Income (loss) before tax <sup>(2)</sup>	<b>(\$6,506)</b>	(\$14,519)
Adjusted income (loss) before tax <sup>(3)</sup>	<b>\$14,487</b>	(\$2,184)

(1) The EVBC Mine commenced commercial production on August 1, 2011. Information relating to production and sales for fiscal 2011 includes production and sales for the start-up and commissioning period of May to July 2011. Sales for May to July 2011 were credited against capitalized commissioning costs and sales for August and September 2011 were recorded as revenue.

(2) Total Cash Costs (net of by-product revenue) include mining, milling, administration, transportation, treatment and selling costs, royalties, including the EVBC Royalty (as hereinafter defined), and are net of by-product credits from the sale of copper and silver and excludes (a) depreciation and amortization, (b) capitalized development costs, and (c) realized and unrealized gains/losses from the Company's financial instruments. Total Production Costs (net of by-product revenue) include Total Cash Costs (by-product) plus depreciation and depletion costs.

(3) Adjusted income before tax includes realized expenses in connection with the Company's outstanding financial instruments settled during the period but does not include the mark-to-market fair value adjustments of the Company's outstanding financial instruments at the end of the period. In respect of fiscal 2012, this also excludes the one-time expense of approximately \$3,132,000 associated with the conversion of an outstanding debenture related to the EVBC Royalty.

During fiscal 2012, the EVBC Mine was ramping up and by May mill throughput exceeded 50,000 tonnes per month at a head grade of 3.27 grams-per-tonne gold, with production of over 5,000 ounces of gold per month. In June, ground instability issues in the Boinás area, coupled with power outages that negatively affected dewatering efforts, resulted in a decrease in throughput and a consequent decrease in gold production. The Company has resolved most of these issues by the implementation of alternative bolting methods and the installation of a new pumping system supported by a separate power supply from the surface, among other things. Further progress was made during the fourth quarter of fiscal 2012 and into the first quarter of fiscal 2013 in primary mine development advancements in both oxide and skarn areas in order to have sufficient stopes available for mining in case of future unforeseen events that could affect production.

The Company constructed a shaft during fiscal 2012 that was commissioned during the fourth quarter of fiscal 2012 and became operational during the first quarter of fiscal 2013. The operation of the shaft was delayed due to modifications of certain designs that were not functionally efficient, work required for certification by regulatory authorities including security and safety inspections by third-party contractors, and regulatory approval of all training documents and training requirements for the Company's personnel. The shaft and its auxiliary infrastructure will facilitate ore haulage.

## Mineral Resource and Reserve Estimates

The Company completed updated mineral resource and reserve estimates with an effective date of July 1, 2012. The updated mineral resource estimate included an additional 115 drill holes for 11,429 metres drilled from September 2011 through June 2012. Based on a 2 gram-per-tonne gold cut-off, measured and indicated mineral resource estimates include 1.3 million ounces of gold and over 1.2 million ounces of gold classified as inferred resources. The table below summarizes the updated mineral resource estimate.

EVBC Mineral Resource Estimates <sup>(1)</sup>

ZONE	MEASURED					INDICATED					INFERRED				
	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t	Gold, '000s oz	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t	Gold, '000s oz	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t	Gold, '000s oz
<i>Oxides (Boinas)</i>						2,332	6.94	0.53	8.4	520	3,877	5.56	0.34	1.7	693
<i>Sulphides (Boinas)</i>	2,181	3.88	0.86	20.6	272	2,136	4.03	0.75	18.5	277	2,408	4.29	0.43	9.7	332
<i>Sulphides (Carles)</i>	802	4.24	0.58	11.0	109	1,018	3.85	0.36	4.8	126	1,498	4.10	0.36	2.6	198
	2,983	3.98	0.78	18.0	382	5,486	5.23	0.58	11.7	923	7,783	4.89	0.37	4.4	1,223
	<b>TOTAL M&amp;I</b>					<b>8,469</b>	<b>4.79</b>	<b>0.65</b>	<b>13.9</b>	<b>1,304</b>					

- (1) The mineral resource estimate has been calculated in accordance with the standards of the Canadian Institute of Mining, Metallurgy, and Petroleum and NI 43-101, and includes the mineral reserve estimate cited below. The cut-off grade applied was 2 grams-per-tonne gold, which is considered the grade at which economic extraction is reasonably expected based on operating experience. This estimate was prepared under the supervision of C. Knievel, a qualified person for the purposes of NI 43-101, who is an employee of Kinbauri and thus not independent of the Company.

Based on this updated mineral resource estimate, the mineral reserve estimate was updated and is summarized in the table below. Proven and probable gold ounces increased by 53,000 to 865,000, after considerations for produced gold, as compared to the previously-reported reserve estimate.

EVBC Mineral Reserve Estimates <sup>(1)</sup>

ZONE	PROVEN					PROBABLE					PROVEN + PROBABLE				
	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t	Gold, '000s oz	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t	Gold, '000s oz	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t	Gold, '000s oz
<i>Oxides (Boinas)</i>						2,761	4.29	0.36	6.0	381	2,761	4.29	0.36	6.0	381
<i>Sulphides (Boinas)</i>	1,675	3.02	0.73	16.5	163	1,884	2.90	0.68	13.6	176	3,559	2.96	0.71	14.98	338
<i>Sulphides (Carles)</i>	389	3.19	0.58	8.6	40	1,190	2.76	0.33	5.0	106	1,579	2.87	0.39	5.91	145
	2,064	3.05	0.71	15.0	203	5,835	3.53	0.46	8.3	662	7,899	3.41	0.52	10.0	865
	<b>TOTAL 2P</b>					<b>7,899</b>	<b>3.41</b>	<b>0.52</b>	<b>10.0</b>	<b>865</b>					

- (1) The mineral reserve estimate has been calculated in accordance with the standards of the Canadian Institute of Mining, Metallurgy, and Petroleum and NI 43-101. The exchange rate applied was \$1.35 per Euro. The price deck applied was \$1,100 per ounce gold, \$2.75 per pound copper, and \$20 per ounce silver, for which a gold-equivalent grade was calculated; the cut-off grade was determined based on mine, mill, administrative, and royalty costs for individual mineralized bodies. This estimate was prepared under the supervision of C. Knievel, a qualified person for the purposes of NI 43-101, who is an employee of Kinbauri and thus not independent of the Company.

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

### UMZ Mine

The Company owns and operates the Don Mario open-pit UMZ Mine in southeastern Bolivia through EMIPA. Fiscal 2009 marked the last year of production from the Company's low-cost Lower Mineralized Zone underground gold mine at Don Mario with some gold production from the lower-grade satellite deposit, Las Tojas, continuing into fiscal 2010 and 2011. The UMZ Mine started-up in April 2011 and commercial production was achieved in January 2012. During 2012, the Company decided to process the transition and sulphide ores by conventional froth flotation, and the oxide ores by the LPF process for 15 days every three months. The revised mine plan discussed in the UMZ 43-101 Report estimates production from the UMZ Mine into 2018.

### Production

The UMZ Mine reached commercial production in January 2012, thus revenue from the UMZ Mine was recorded for the full second, third and fourth quarters of fiscal 2012. During fiscal 2012, the UMZ Mine

produced 13,065 ounces of gold, 11.4 million pounds of copper, 599,167 ounces of silver and 636,126 of lead. The UMZ Mine was not in commercial production in 2011.

Total cash costs (co-product) were \$1,143 per ounce of gold, \$2.39 per pound of copper and \$22 per ounce of silver for fiscal 2012. This does not include the first quarter when the UMZ Mine was not in commercial production.

The following table sets forth the production, sales and cost data for the UMZ Mine during fiscal 2012.

**UMZ Mine - Production, Sales and Costs**

	2012	2011
<b>Operating Performance <sup>(1)</sup></b>		
Ore mined (tonnes)	1,178,809	279,620
Ore milled (tonnes)	594,054	279,620
<i>Gold</i>		
Grade (g/t)	1.75	1.37
Recovery (%)	39.1	80.1
Production (oz)	13,065	9,977
Sales (oz)	12,215	10,659
<i>Copper</i>		
Grade (%)	1.76	-
Recovery (%)	49.4	-
Production ('000 lbs)	11,415	-
Sales ('000 lbs)	10,779	-
<i>Silver</i>		
Grade (g/t)	81.17	-
Recovery (%)	38.6	-
Production (oz)	599,167	2,218
Sales (oz)	563,611	2,418
Total cash costs (co-product) (\$/lb) copper <sup>(2)</sup>	\$2.39	-
Total cash costs (co-product) (\$/oz) gold <sup>(2)</sup>	\$1,143	1,033
Total cash costs (co-product) (\$/oz) silver <sup>(2)</sup>	\$22.00	-
<b>Financial Performance</b>		
Revenue	\$58,678	\$14,612
Income (loss) before tax	\$17,060	(\$253)

(1) The UMZ Mine commenced commercial production on January 1, 2012. Information relating to production and sales for fiscal 2011 includes production and sales from Las Tojas deposit of the Don Mario Mine but does not include production from the UMZ Mine during the start-up and commissioning period. Information relating to production for fiscal 2012 includes production from the UMZ Mine during the start-up and commissioning period in the first quarter of fiscal 2012. Sales for the first quarter of fiscal 2012 from the UMZ Mine were credited against capitalized commissioning costs and sales from January 1, 2012 onwards were recorded as revenue.

(2) Total Cash Costs (co-product) include (i) mining, milling, administration, treatment, transportation and penalties allocated to the Total Cash Costs for each metal based on the percentage of gross revenue that each quantity of metal sold in the period represents of total gross revenue for the period, and (ii) refining charges, metallurgical deductions and the UMZ royalties allocated to the Total Cash Costs (co-product) in respect of each metal based on actual costs related to each quantity of metal sold in the period and excludes (a) depreciation and amortization, and (ii) capitalized development.

After completing various studies on the economic viability of mining the UMZ Mine, in 2009 the Company installed the LPF circuit, which included a conventional froth flotation ("CFF") circuit, to process the oxide and transition ores from the UMZ Mine. As a result of higher than expected acid consumption, it was realized that the LPF process could not be run on a continuous basis as the sulphuric acid plant could not supply the quantities necessary to operate the mill at high availability. In March 2012, the Company commenced processing the transition ore, which includes both copper in oxide minerals and copper in sulphide minerals, by the CFF process as well as oxides through the LPF process. Processing ore through both the LPF and CFF circuits as such allowed the plant to operate at greater than 90% availability.

During the fourth quarter of fiscal 2012, the UMZ Mine produced a copper cement and a talc-rich precious-metals concentrate from the LPF process as well as a high-lead copper concentrate and a lead

concentrate from the CFF process. The copper cement is under contract through fiscal 2014 and a contract renewal for the copper concentrate is being finalized; the other products, when produced, will be sold on a spot basis. For fiscal 2013, the Company plans to process oxide ore through the LPF circuit for approximately 15 days every quarter and transition and sulphide ores through the CFF circuit for approximately 75 days every quarter at throughputs of approximately 1,800 and 2,700 tonnes per day, respectively, and at approximately 90% availability.

#### Mineral Resource and Reserve Estimates

Following the implementation of the processing changes described above, the Company filed the UMZ 43-101 Report on December 18, 2012. A summary of the resource and reserve estimates discussed therein is provided in the tables below.

UMZ Mine Mineral Resource Estimates <sup>(1)</sup>

ORE TYPE	MEASURED				INDICATED				INFERRED			
	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t
<i>Oxides (in situ)</i>	149	1.90	1.74	77	219	1.94	1.88	63	38	1.93	1.80	52
<i>Oxides (stockpile)</i>					757	1.78	1.79	44				
<i>Transition (in situ)</i>	701	1.30	1.23	44	938	1.22	1.18	41	97	0.96	1.10	43
<i>Transition (stockpile)</i>					3	1.40	1.53	72				
<i>Sulphides</i>	874	1.16	1.15	30	1,344	1.03	1.07	31	28	1.02	0.73	17
	1,724	1.28	1.23	39	3,261	1.32	1.32	39	162	1.20	1.20	40
	<b>TOTAL M&amp;I</b>				<b>4,985</b>	<b>1.31</b>	<b>1.29</b>	<b>39</b>				

- (1) The mineral resource estimate has been calculated in accordance with the standards of the Canadian Institute of Mining, Metallurgy, and Petroleum and NI 43-101, and includes the mineral reserve estimate cited below.

UMZ Mine Mineral Resource Estimates <sup>(1)</sup>

ORE TYPE	PROVEN				PROBABLE				PROVEN + PROBABLE			
	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t	tonnes, '000s	Gold, g/t	Copper, %	Silver, g/t
<i>Oxides (in situ)</i>	131	1.85	1.78	83	196	1.86	1.90	67	327	1.85	1.85	73
<i>Oxides (stockpile)</i>					401	1.74	1.81	49	401	1.74	1.81	49
<i>Transition (in situ)</i>	643	1.32	1.22	43	908	1.23	1.17	41	1,551	1.27	1.19	42
<i>Transition (stockpile)</i>					3	1.40	1.53	72	3	1.40	1.53	72
<i>Sulphides</i>	820	1.13	1.16	30	1,231	1.05	1.10	31	2,051	1.08	1.12	31
	1,594	1.26	1.23	40	2,739	1.27	1.28	40	4,333	1.27	1.26	40
	<b>TOTAL 2P</b>				<b>4,333</b>	<b>1.27</b>	<b>1.26</b>	<b>40</b>				

- (1) The mineral reserve estimate has been calculated in accordance with the standards of the Canadian Institute of Mining, Metallurgy, and Petroleum and NI 43-101. The cut-off grade was determined based on mine, mill, administrative, and royalty costs based on operating experience as applicable to the processing of oxide ore by LPF and the transition and sulphide ores by CFF, as well as the marketing costs that are pertinent to each final product. The price deck used was \$1,400 per ounce gold, \$3.00 per pound copper, and \$25 per ounce silver.

Based on this reserve estimate, the UMZ Mine has a mine life of over five years. From fiscal 2013 through 2017, the mine plan calls for the CFF processing of 720,000 tonnes per year of transition and sulphide ores and 100,800 tonnes per year of LPF processing of oxide ore; in 2018, 224,000 tonnes of stockpiled oxide ore will be processed by LPF.

More information on the UMZ Mine is provided below in "Appendix B - Principal Mineral Projects - UMZ Mine".

#### Copperwood Project

The Company entered into long-term mineral lease agreements through Orvana US covering 936 hectares within the Western Syncline, which is located in the Upper Peninsula of Michigan, United States, comprising the Copperwood Project. The Company also completed option agreements that allow conversion to mineral leases on three other mineralized areas within the Western Syncline, which are referred to collectively as the Copperwood Satellites. In addition, the Company purchased the surface

rights on approximately 700 hectares that secured access to the Copperwood Project and additional space for infrastructure.

On March 23, 2012, the Company filed the Copperwood 43-101 Report. The mineral reserve estimate discussed therein is summarized in the table below:

**Copperwood Mineral Reserve Estimates<sup>(1)</sup>**

	Million short tons <sup>(2)</sup>	Cu %	Cu Million lbs	Ag g/t	Ag Million oz
Proven	23.14	1.46	679	3.98	2.96
Probable	7.09	1.21	173	2.44	0.57
Total Proven & Probable	30.23	1.41	852	3.63	3.53

(1) Price deck applied was \$2.50 per pound copper and \$20 per ounce silver

(2) 1 short ton is equal to 0.907 metric tonnes.

The mine plan calls for the development of a ramp and box cut to access the ore bed. All development will be focused on the ore bed and virtually no waste rock will be handled. Production for the 13-year mine life will be about 1.5 million short tons of copper concentrate averaging about 28,000 short tons of copper per year at the 7,500 short tons of ore per day capacity. Copper will be extracted by conventional froth flotation. Life-of-mine cash costs are \$1.26 per pound net of the silver credit. A summary of the key financial parameters is provided in the table below.

	Copper Price (US\$)/ Silver Price (US\$)				
	2.50/17.50	2.75/20.00	3.00/22.50	3.25/25.00	3.50/27.50
NPV(8), (000's)	30,799	104,365	177,587	246,905	313,079
IRR (After Tax)	11.0%	17.2%	22.8%	27.9%	32.6%
Payback, yrs	6.2	5.2	4.6	4.2	3.8

More information on the Copperwood Project is provided below in "Appendix B - Principal Mineral Projects - Copperwood Project".

## Outlook

Orvana's short-term focus is operational optimization at the EVBC Mine and the UMZ Mine to generate increasing operating cash flows in order to pay down debt as well as possibly advance the development of the Copperwood Project. Fiscal 2012 guidance for production was 60,000 ounces of gold, 16.53 million pounds of copper and 700,000 ounces of silver. Mostly due to the delays related to the commissioning of the EVBC shaft and other operational issues at the EVBC Mine, production for fiscal 2012 was 55,929 ounces of gold, 15.4 million pounds of copper and 716,280 ounces of silver. Fiscal 2013 guidance for production is 75,000 ounces of gold, 18 million pounds of copper and 850,000 ounces of silver.

Fiscal 2012 total EVBC Mine production was 42,864 ounces of gold (guidance of 47,500), 3.95 million pounds of copper (guidance of 4.41 million) and 117,113 ounces of silver (guidance of 125,000). Mine life is projected at 10 years. Beyond 2012, Orvana will continue to work on improving head grade, increasing gold production and reducing total cash costs (net of by-product revenue) per ounce of gold. The shaft should allow for more efficient ore haulage resulting in improved flexibility and cost optimization. Orvana will also investigate alternatives to maximize the mill throughput and enhance recoveries. Fiscal 2013 guidance for production from the EVBC Mine is 63,000 ounces of gold, 6 million pounds of copper and 200,000 ounces of silver.

Fiscal 2012 total UMZ Mine production was 13,065 ounces of gold (guidance of 12,500), 11.42 million pounds of copper (guidance of 11.1 million) and 599,167 ounces of silver (guidance of 575,000). During fiscal 2013, the Company's focus at the UMZ Mine will be on improving recoveries. Fiscal 2013 guidance for production from the UMZ Mine is 12,000 ounces of gold, 12 million pounds of copper and 650,000 ounces of silver.

The Copperwood Project permitting process continues into fiscal 2013. Orvana is continuing to investigate a variety of possible options to enhance the value of the Copperwood Project to Orvana's shareholders including financing options such as the sale of an equity interest and debt and equity financing should it determine to proceed to bring the Copperwood Project into production.

Orvana's long-term focus is to utilize future cash flow and mining capabilities to build long-term value for its shareholders specifically through organic growth and possibly through certain strategic acquisitions primarily focused on advanced-stage gold and/or copper properties.

## Revenue

The Company recorded consolidated revenue of \$140,917 for fiscal 2012 from sales of 55,052 ounces of gold, 14.7 million pounds of copper, 669,810 ounces of silver and 636,126 pounds of lead representing the first full year of commercial production at the EVBC Mine and nine months of commercial production at the UMZ Mine compared to \$25,085 for fiscal 2011, an increase of 462% from two-months production and sales from the EVBC Mine and production and sales from the now-depleted Las Tojas deposit in Bolivia.

The Company has the following off-take agreements for the sale of the products produced at the EVBC Mine and the UMZ Mine:

- In March 2011, the Company entered into a contract with MRI Trading AG ("MRI") of Zug, Switzerland for the sale of the gold-copper-silver concentrates produced from the EVBC Mine. The Company also entered into a contract with Auramet Trading LLC ("Auramet") for the sale, at the Company's option, of up to \$7,000,000 (subsequently increased to \$10,000,000 in July 2012) of these gold-copper-silver concentrates in order to manage its working capital as well as price risk, if any, between the date of shipment to port and ultimate exportation of the product. The Company's agreement with Auramet was temporarily suspended subsequent to the end of fiscal 2012. During fiscal 2012, the Company sold all of its concentrates from the EVBC Mine under these arrangements. The Company believes that, due to the availability of alternative purchasers, no material adverse effect would result if MRI was unable to purchase the gold-copper-silver concentrates from the EVBC Mine.
- In July 2011, the Company entered into a doré refining contract with Metalor Technologies S.A. of Marin, Switzerland and a doré sales contract with Auramet for the refining and sale of gold doré from the EVBC Mine. During fiscal 2012, the Company sold all of its gold doré production from the EVBC Mine to Auramet. The Company believes that, due to the availability of alternative purchasers and refiners, no material adverse effect would result if this refiner was unable to process the gold doré from the EVBC Mine.
- In December 2010, the Company entered into a contract with Ocean Partners U.K. Limited ("Ocean Partners") of Maidenhead, United Kingdom for the sale of the copper cement and copper concentrate produced from the UMZ Mine. This contract was amended in March 2012 and the Company made its final sale of product under this contract during the third quarter of fiscal 2012.
- In March 2012, the Company entered into an agreement with Consorcio Minero S.A. ("Cormin") of Lima, Peru for the sale of copper cement and, in April 2012, for the sale of copper concentrate. Subsequently, the Company entered into agreements with CORMIN for the sale of a precious-metal concentrate as well as a lead concentrate. Other than products sold to Ocean Partners, all copper cement and concentrates were sold to Cormin during fiscal 2012. The copper cement is contracted for sale to the end of fiscal 2014 and a contract renewal for the copper concentrate has recently been finalized with Cormin. Any lead or precious-metals concentrates, if produced in the future, will be sold on a spot basis. The Company believes that, due to the availability of alternative purchasers, no material adverse effect would result if Cormin was unable to purchase the concentrates from the UMZ Mine.
- In May 2011, the Company entered into a silver-gold doré refining contract with Johnson Matthey Inc. and a silver-gold doré sales contract with Auramet for the future refining and sale of doré from the UMZ Mine. No sales of UMZ Mine doré were consummated during fiscal 2012 and, at this time, the Company does not expect to produce such products from the UMZ Mine.

## Exploration

The Company has four underground drill rigs operating at the EVBC Mine. The primary purpose of this drilling is for stope definition, but also includes infill and delineation drilling, which resulted in an increase of the EVBC Mine reserve estimates (as described above under “- Principal Mineral Projects - EVBC Mine - Mineral Resource and Reserve Estimates”). The Company has concessions adjacent and proximal to the EVBC Mine, as well as an investigation permit that covers 2,500 hectares at the Lidia prospect located approximately 30 kilometers from the EVBC Mine. The Company did basic surface field work on these areas during fiscal 2012. In addition, during fiscal 2012, the Company retained an experienced consultant who reviewed the in-house data base, which included not only all information within the Company’s concessions, but also certain proximal areas as well, and prioritized areas for more detailed exploration work.

The Company drilled two holes targeting geophysical anomalies at the UMZ Mine. One of the holes, which was drilled nearly perpendicular to the dip of the upward projection of the LMZ shear zone thus being a representation of true width, intercepted 23.7 meters of 1.22% copper, 2.75 g/t gold, and 16.5 g/t silver, including 2 metres of 2.49% copper, 18.86 g/t gold, and 73.5 g/t silver. This hole, along with others along strike, helped define resources and reserves not considered in previous estimates and included in the updated estimates discussed under the heading “- Principal Mineral Projects – UMZ Mine – Mineral Resource and Reserve Estimates”. During fiscal 2012, an experienced consultant reviewed the in-house database within the Company’s concessions and prioritized areas for further exploration work, some of which will be performed during fiscal 2013.

The Company, through its wholly-owned subsidiary Minera Alto S.A., holds a 40% joint-venture interest in the Achuchacani (Pederson) property, which covers approximately 5,230 hectares, in the Altiplano region of Bolivia. In 2006, the joint venture entered into an agreement to sell its interest to Castillian Resources Corp. (“Castillian”) subject to certain future payments and exploration spending targets to be met within five years. After making the initial payments, in 2006, Castillian declared *force majeure* due to certain alleged local community circumstances. During fiscal 2012, the joint venture signed a letter of intent to revise the terms of the original agreement. At the date of the AIF, a definitive agreement has yet to be completed and *force majeure* remains in effect.

## Employees

At September 30, 2012, Orvana and its subsidiaries employed a total of 584 full-time employees and 379 contract personnel for a total of 963 as follows: (i) 225 employees and 172 contractors providing mine, camp and support services at the UMZ Mine, and (ii) 346 employees and 189 contractors providing mine support at the EVBC Mine. The Company also had four employees and 17 contractors in the United States in connection with its Copperwood Project and nine employees and one contractor 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. 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 established a Technical, Safety, Health and Environmental Committee. The purpose of this Committee is to provide support for the Company’s safety, health and environmental programs and to assist in reviewing the technical, safety, health and environmental performance of the Company.

### **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 mine and mill operations take place on an ongoing basis.

Regular mine inspections are performed by representatives from the mine operations, planning and safety departments. These inspections review current conditions and implement corrective action on

potential safety issues that arise as mine development progresses. Worker training on mining, mechanical and electrical equipment is included in the programs. The Company has also hired service providers to support the Company's safety department in risk assessment, training, and work environment monitoring. The Company maintains various industry health and safety metrics to track performance over time including all injury frequency rates, lost time injury frequency rates and lost time injury severity rates.

### ***Environment***

Orvana is committed to developing and operating its mines and projects, including reclamation efforts, in full compliance with recognized international and local 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 and other aspects of the ecosystem on a frequent basis at the EVBC Mine and the UMZ Mine. 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 are quickly located and evaluated. The evaluations are presented to the regulatory authorities and remedial actions approved and executed. To date, although certain parameters have not always been in compliance at the Company's operations, explanations have been provided to the respective regulatory authorities and there are no material outstanding matters.

The Company must dispose of the tailings, that part of the crushed rock left after the metals are extracted, in a safe manner. This is typically done in an impoundment area that not only contains this material, but provides a contingency for extraordinary events so that this material remains contained. The EVBC Mine must provide a bond, cash or otherwise, to ensure that the impacted areas are remediated. Total cash deposited with Spanish financial institutions for reclamation bonds in respect of the EVBC Mine amounted to approximately \$9,647,000 at September 30, 2012. In addition, a cash-backed reclamation bond of up to €5,000,000 may have to be deposited by the Company under Spanish mining regulations in respect of the EVBC Mine. The Company is currently challenging this based on technical considerations. Should the Company have to deposit this reclamation bond, the Company has such funds as restricted cash. Should the Company have to deposit a lower amount, the difference will be available to be used for working capital purposes. In addition, the Company has various insurance policies in respect of environmental matters for the UMZ Mine and the EVBC Mine.

The costs incurred by the Company in connection with environmental monitoring and maintenance related to environmental issues are treated as ordinary operating expenses. In fiscal 2012, the Company's capital expenditures at the EVBC Mine relating to environmental matters totalled \$3,119,000 for the high wall push-back and \$2,869,000 relating to the tailings dam lift and other sustaining capital. Total capital expenditures at the UMZ Mine for fiscal 2012 were \$1,969,000 primarily related to the tailings dam lift and the purchase of certain equipment.

The Company has not been sanctioned for environmental non-compliance at any of its sites during fiscal 2012. In the summer of 2012, testing at the EVBC Mine identified the presence of selenium in certain water streams. This was not reported as part of environmental regulatory reporting because it was not believed that this is a regulated element as it does not have maximum limits under regulatory requirements. Subsequently, the environmental regulatory authority completed water-quality testing and identified the presence of selenium in three locations one of which is from an adjacent property. The Company has applied for an amendment to its discharge permit to include selenium and is developing a selenium strategy to deal with current and future issues including a review of source control and water management strategies. The Company may be subject to a small fine for the initial non-reporting.

### ***Social Practices***

In addition, Orvana is committed to the social development and well-being of the communities in which it operates. To this end, Orvana continues to support, financially and otherwise, local community endeavours associated with these objectives.

The Company has supported the communities surrounding the EVBC Mine by donating funds to the local municipality of Belmonte to re-open the historic exhibition of gold mining in the area and supports other

cultural and sporting activities in the communities of Belmonte and Salas. In addition, the Company has funded the re-stocking of fish species into the local rivers surrounding the mines. The Company works with the local communities to train people for jobs at the EVBC Mine in order to keep the local employment at a high level.

In the Chiquitos Province of Bolivia where the UMZ Mine is located, the Company is actively involved in the areas of education, sanitation, purchasing of local goods and services and generally working with communities to contribute to the improvement of their standard of living. In 2011, Orvana renewed its support of \$1,785,000 to 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, community business development initiatives and maintenance of community roads.

In support of the social and economic well-being of the communities surrounding the Copperwood Project in Michigan, Orvana provides four scholarships each year to Gogebic County high school students to further their education at the university level. In addition, Orvana has made contributions to the local fire departments for the purchase of equipment and has sponsored certain local sporting events.

### **Foreign Operations**

The Company's principal mineral projects are located at the EVBC Mine in Spain, the UMZ Mine in Bolivia and the Copperwood Project in the United States. 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 Company's common shares.

### **Financial Risks**

The Company's activities expose it to a variety of financial risks: market risks (including currency risk, commodity price risks and interest-rate risk), credit risk and liquidity and financing risk. Enterprise risk management is carried out by management of the Company under policies approved by the board of directors thereof. Management identifies and evaluates the financial 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 such as foreign exchange risk, interest-rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments and investment of excess cash. The Company's overall risk management program seeks to minimize potential adverse effects on the Company's financial performance.

#### *Market Risks - Currency Risk*

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. Currency risk arises when future recognized assets or liabilities are denominated in a currency that is not the Company's functional currency and may impact the fair values thereof or future cash flows of the Company's financial instruments. Exchange rate fluctuations may also affect the costs that the Company incurs in its operations. The Company does hedge a portion of its foreign currency exposure as a requirement under the EVBC Loan. Certain cash and cash equivalents are held in other foreign currencies, primarily Euros and Canadian dollars. Sensitivities to an increase or decrease in the Euro versus the US dollar on the Company's cash balances and the Company's net loss for fiscal 2012 as a result of the fair value adjustment in the financial instruments loss calculation is set out in the MD&A.

#### *Market Risks - Commodity Price Risks*

The Company is primarily exposed to gold and copper commodity price risk. The Company, in accordance with the requirements of the EVBC Loan, has hedged a portion of its gold and copper

production, which facilitates the management of certain of its price risk. Sensitivities to an increase or decrease in gold prices and copper prices during fiscal 2012 and as at September 30, 2012 on the Company's net loss for fiscal 2012 including the impact of changes in the fair value of the Company's outstanding gold and copper financial instruments are set out in the MD&A.

#### *Market Risks - Interest Rate Risk*

The Company's cash flows interest rate risk arises from short- and long-term borrowings. During fiscal 2012 and 2011, although a significant portion of the Company's borrowings and investments were at variable rates, rates such as LIBOR have not varied materially in the last two years and are not expected to do so in the near future.

#### *Credit Risk*

Credit risk is the risk of loss associated with a counterparty's inability to fulfill its payment obligations. The Company's credit risk is primarily attributable to gold-copper concentrate and gold doré sales, value-added tax receivables and a government subsidy receivable from the Spanish government in connection with the completed development of the EVBC Mine. 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. These institutions are international and most are large with strong credit ratings. Value-added taxes receivables are collectable from the Bolivian and Spanish governments. The Company believes that the credit risks with respect to financial instruments attributable to concentrate and gold doré sales receivables, value-added taxes receivables and cash and cash equivalents are minimal. The government subsidy receivable is collectable by the Company over a three-year period from the Spanish government.

The Company has entered into its outstanding financial instruments pursuant to the EVBC Loan with one counterparty that is a large international financial institution with a strong credit rating.

#### *Liquidity and Financing*

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. Orvana's primary source of liquidity in fiscal 2012 has been operating cash flows, draw-downs under the Fabulosa Loan and an increase in the EVBC Loan.

The Company experienced certain initial start-up difficulties and delays in the production of saleable concentrates from the UMZ Mine in the first and second quarter of fiscal 2012. As a result, the Company's Bolivian subsidiary required additional short-term financing for working capital purposes at that time resulting in a draw-down by the Company under the Fabulosa Loan. Operations at the UMZ Mine were stabilized during the second quarter of fiscal 2012 and the UMZ Mine was self-financing in the third and fourth quarters of fiscal 2012 and this is expected to continue. Bank loans with certain Bolivian banks total approximately \$7,500,000 at the date of the AIF and are short term ranging from 60 to 180 days. Although in the past, EMIPA's lenders have agreed to renew these loans in the ordinary course, new loans replacing those maturing may not be obtained. In the event that certain of these loans are not renewed, cash flows from operating activities from the UMZ Mine will be used for working capital purposes and less cash flows therefrom will be available for distribution to Orvana.

With unanticipated environmental bonding requirements in respect of the EVBC Mine, additional capital costs and lower initial operating cash flows than had been anticipated, the Company obtained a \$13,844,000 increase in the EVBC Loan in the second quarter of fiscal 2012. The EVBC Loan requires the deposit of certain cash generated from operating activities into restricted cash to be used for future EVBC Loan repayments and restricts the distribution of cash in certain circumstances from Kinbauri to Orvana unless certain covenants are met. Therefore, Orvana may report positive cash balances, but may be restricted in its ability to make use of certain of this cash.

The Company experienced certain operational and financing issues at the EVBC Mine during the fourth quarter of fiscal 2012 which required additional short-term financing for working capital purposes. Consequently, the EVBC Mine required and will continue to require financial support from Orvana in order to meet certain working capital obligations resulting from timing delays between production of the product and the sale and receipt of funds for such product. This timing delay is expected to impact the revenue

that Orvana will be able to recognize from the EVBC Mine in the first quarter of fiscal 2013. To date, Orvana has financed and will continue to finance these obligations from revenues generated by the UMZ Mine and by drawing on the Fabulosa Loan. The Company has resolved most of these operational issues including making further progress during the fourth quarter of fiscal 2012 and into the first quarter of fiscal 2013 in primary mine development advancements in both oxide and skarn areas in order to have sufficient stopes available for mining. The Company is working to resolve the financing matters and anticipates that the EVBC Mine will become self-financing again by the end of the second quarter of fiscal 2013.

Orvana is continuing to investigate a variety of possible options to enhance the value of the Copperwood Project for Orvana's shareholders including financing options such as the sale of an equity interest and debt and equity financing should it determine to proceed to bring the Copperwood Project into production.

If unanticipated events occur that adversely impact the operations of the EVBC Mine and the UMZ 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.

## **Other Risks**

### *Mineral Resources and Reserves*

Mineral resource and reserve figures provided by the Company are estimates and no assurances can be given that the indicated amount will be produced. Estimated resources may have to be recalculated based on actual production experience and the prevailing prices of the metals produced.

### *Development of Mineral Deposits, Production Costs and Metal Prices*

The economics of developing mineral deposits are affected by many factors including: variations in the grade of ore mined; the recovery of the target metals; availability of supplies; the cost of operations and fluctuations in the sales price of products. The value of the Company's mineral properties is heavily influenced by metal prices, particularly the prices of gold, copper and silver. Metal prices 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, interest rates, global or regional consumption patterns, speculative activities and increased production arising from improved mining and production methods and new discoveries. There can be no assurance that the prices of mineral products will be sufficient to ensure that the Company's properties can be mined profitably. Depending on the price received for minerals produced and other factors such as those listed above, the Company may determine that it is impractical to commence or continue commercial production. The grade of any material ultimately mined from a mineral deposit may differ from that predicted from drilling results, feasibility studies, mine plans or past production. Production volumes and costs can be affected by such factors as permitting regulations and requirements, weather, environmental factors, unforeseen technical difficulties, shortages or interruptions in the supply of natural gas, water or fuel, unusual or unexpected geological formations and work interruptions. Short-term factors relating to ore reserves, if and when established, may include the need for orderly development of ore bodies or the processing of new or different grades, and may have an adverse effect on the results of operations. Moreover, there can be no assurance that because minerals are recovered in small-scale laboratory tests recoveries will be achieved under production scale conditions. Although precautions to minimize risks will be taken, processing operations are subject to hazards such as equipment failure or failure of tailings impoundment facilities, which may result in environmental pollution and consequent liability.

### *Development and Operation of Mines*

Mine development and operations involve considerable financial, technical, legal and permitting risks. Substantial expenditures are usually required to establish ore reserves and resources, to evaluate metallurgical processes and to construct and commission mining and processing facilities at a particular site. Currently, the Company's revenue stream depends on production from the EVBC Mine and the UMZ Mine. These projects have limited operating histories upon which to base estimates of future cash flow. The capital expenditures and time required to develop new mines or other projects are considerable and changes in costs or construction schedules can affect project economics. It is not unusual in the mining industry for new mining operations to experience unexpected problems during the start-up phase and the ramp-up period 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.

### *Production Estimates*

No assurance can be given that production estimates will be achieved. The Company's actual production may vary from estimates for a variety of reasons including: attributes of the material mined varying from those used in estimating of grade, tonnage, dilution and metallurgical and other characteristics; short-term operating factors relating to mineral resources; risks and hazards associated with mining; inclement weather conditions; natural disasters, including floods, drought and earthquakes; and unexpected labour shortages or disruptions. Also, operations may not meet expectations due to unanticipated technical issues or shutdowns.

### *Regulatory Requirements*

The Company is operating the EVBC Mine in Spain and the UMZ Mine in Bolivia and is permitting the Copperwood Project in Michigan, United States. As a result, the Company is subject to the laws and governmental regulations in those countries as well as those in Canada. Changes to such laws or governmental regulations, including with respect to matters such as environmental protection, repatriation of profits, restrictions on production, export controls, expropriation or nationalization of property or limitations on foreign ownership, could have a material adverse effect on the Company's results of operations or financial condition.

### *Political and Related Risks*

Orvana's international assets and operations are subject to various political, economic and other uncertainties, including, among other things, risks of political instability and changing political conditions, labour and civil unrest, acts of terrorism, expropriation, nationalization, renegotiation or nullification of existing concessions, licenses, permits, approvals and contracts; adverse changes in mining, taxation or other laws and policies and foreign exchange and repatriation restrictions; restrictions on foreign investment in or ownership of resources; and 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.

In Bolivia, in view of the Constitution enacted on February 7, 2009, recent and anticipated changes to mining laws and policies and mining taxes, and the composition of the Company's shareholder base,

there could be changes in governmental regulation or governmental actions that adversely affect the Company. The Constitution could have adverse implications for 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. The Transitory Provisions of the Bolivian Constitution provide a process for the migration of mining concessions into mining contracts. According to the Constitution, previously acquired rights under mining concessions will be respected but are subject to this migration process. Although the Government has not yet adopted the new Mining Code, Supreme Decree 0726 dated December 6, 2010 provides in its only article, that since the approval of such Supreme Decree, the mining concessions that were granted before December 6, 2010 are adequate for the constitutional provisions in force, and are transitioned automatically into Special Provisional Authorizations until such migration is executed under the regulation to be issued. The Supreme Decree also provides that “the automatic transformation mentioned in this paragraph, guarantees the acquired rights”.

An official draft of a new Mining Code is expected to be circulated by the Government to the mining sector in the near future. However, legislation has yet to be passed into law and underlying regulations providing the framework for the draft Mining Code have yet to be developed. Thus, its potential effect on future mining activities and the Company’s mineral concessions remains unclear.

As a result of a recent EMIPA tax audit performed by the Bolivia National Tax Service, EMIPA filed a tax lawsuit on January 2011 before the Bolivia Supreme Court, challenging a tax determination for an amount of approximately \$1,260,000. As of the date of the AIF, the matter remains unresolved.

#### *Water Supply*

The amount of ore processed at the UMZ 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, the UMZ Mine may not be able to operate at full capacity or may be able to do so only on an intermittent basis. The EVBC 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.

#### *Reliance on Key Personnel*

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.

#### *Title Matters*

The Company’s interests in mineral tenures grant it exclusive rights to the minerals discovered in the course of exploration. Maintenance of the Company’s property and mineral rights is subject to ongoing compliance with the laws and regulations promulgated with respect to such rights. While the Company believes that its title to each of its properties, mineral claims and concessions is in good standing, the Company’s title to any of such properties, claims and concessions 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.

#### *Competition*

The Company faces considerable competition in acquiring promising mineral properties, 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 may be unable to acquire mineral properties, engage joint venture partners or obtain funding on terms it considers acceptable.

### *Insurance*

There is no assurance 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.

### *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, its directors may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation.

### *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.

### *Controlling Shareholder*

As at the date of the AIF, 2012, Fabulosa owned approximately 51.9% of the Company's 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, 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. There can be no assurance that continued fluctuations in share price 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, 2012, there were 136,573,171 Common Shares outstanding. Based on information provided to the Company by Fabulosa, as at the date of the AIF, Fabulosa held 70,915,027 Common Shares, representing 51.9% of the outstanding Common Shares.

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.

At the date of the AIF, warrants to purchase up to 1,818,335 Common Shares were outstanding and held by Fabulosa of which 400,000 were exercisable. See “Development of the Business - Three Year History - Transactions with Fabulosa Mines Limited - Related Party Transactions”.

Orvana has adopted a Stock Option Plan (the “Option Plan”), a Restricted Share Unit Plan for designated executives (the “RSU Plan”) and a Deferred Share Unit Plan for directors (the “DSU Plan”). Information relating to the Option Plan, the RSU Plan and the DSU Plan and securities outstanding thereunder is set out in Orvana’s 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, 2012:

Trade Date	Symbol	High Price	Low Price	Trade Volume
October 2011	ORV	1.85	1.36	3,341,101
November 2011	ORV	1.85	1.05	3,754,388
December 2011	ORV	1.25	0.96	3,938,517
January 2012	ORV	1.19	1.00	5,092,270
February 2012	ORV	1.31	0.94	4,659,222
March 2012	ORV	0.97	0.81	3,129,101
April 2012	ORV	0.91	0.81	2,305,380
May 2012	ORV	0.93	0.79	1,352,719
June 2012	ORV	1.02	0.84	1,395,513
July 2012	ORV	0.96	0.8	1,706,736
August 2012	ORV	0.97	0.81	1,420,957
September 2012	ORV	0.97	0.85	1,538,165

## DIRECTORS AND OFFICERS

The names and provinces/states of residence of the directors and officers of the Company as at the date of the 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
Mitchell, Robert A., C.A. <sup>(2)(3)</sup> Ontario, Canada	Director since April 2007 and from December 2003 to June 2006	Chairman of the Company since August 2012; corporate director since October 2001; prior to October 2001, Partner, Ernst & Young LLP, an accounting firm.
Szasz, Jorge <sup>(3)(4)</sup> Santiago, Chile	Director since February 2010	Consultant to mining exploration and development companies since September 2009; prior to that Vice President Commercial, Finance and Administration of Sinchi Wayra S.A. (a subsidiary of Glencore International AG).
Walsh, Audra <sup>(3)(4)</sup> New York, U.S.A.	Director since October 2012	President and Chief Executive Officer of Minera S.A. since September 2012; prior to that was President and CEO of A2Z Mining, Inc. since January 2011, a mining consultancy; prior to that was Senior Manager at

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
		Barrick Gold Corporation, a mining company, from November 2007 to January 2011.
Wilson, C. John <sup>(2)</sup> Maryland, U.S.A.	Director since March 2012	Independent project finance and economic development consultant since 2011; prior to that Chief Credit Officer, Credit Review Department, International Finance Corporation, a member of the World Bank Group, since August 2003.
Williams, William C. <sup>(4)</sup> Massachusetts, U.S.A.	President and Chief Executive Officer and director since December 2011	President and Chief Executive Officer of Orvana since December 2011; prior to that, Vice President, Corporate Development of Orvana from March 2008 to December 2011; prior to that Vice President, Freeport McMoRan Exploration Company, a mining company, from September 2003 through March, 2008.
Dimitrov, Daniella Ontario, Canada	Chief Financial Officer since June 2012	Director of Orvana from March 2012 to June 2012; prior to that Executive Vice Chair and Director of Baffinland Iron Mines Inc./ArcelorMittal from April 2010 until May 2011; prior to that and from May 2011 until June 2012, President DDimitrov Advisory Corp., an advisory firm; prior to that Executive Vice President, Raymond James Ltd. From August 2006 to October 2008.
Jacques, James Tennessee, U.S.A.	Chief Operating Officer since August 2012	Vice President Operations of Orvana from December 2011 to August 2012; prior to that Operations Manager, Nyrstar from December 2009 to September 2010; prior to that Deputy General Manager Production and Technical Services from August 2008 to February 2009 and Deputy General Manager Engineering and Technical Services from May 2007 to August 2008, East Tennessee Zinc Company.
Ciglic, Joan Ontario, Canada	Corporate Secretary since May 2006	Corporate Secretary of the Company since May 2006; prior to that was Manager, Administration of the Company, from June 2005.

- (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 such officer resigns or his or her replacement is appointed. At September 30, 2012, Richard Garnett was also a director of the Company. Mr. Garnett resigned effective December 15, 2012. In addition, the following individuals were directors of the Company during fiscal 2012 and subsequently resigned or did not stand for re-election at the Company's annual meeting of its shareholders held on March 1, 2012: Roland Hearst, C. Kent Jespersen, Peter Bradshaw, Jim Gilbert, Robert Logan, Ron Simkus and Brent Cochrane.
- (2) Member of the Audit Committee.
- (3) Member of the Compensation and Nominating Committee.
- (4) Member of the Technical, Safety, Health and Environmental Committee.

As at the date of the 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, less than one per cent of the outstanding Common Shares.

## LEGAL PROCEEDINGS

During the 2012 fiscal year, the Company was not a party to any material legal proceedings. On November 22, 2011, the Company reported that an employee at the EVBC Mine was fatally injured when he was caught between two pieces of equipment at the EVBC Mine. The Company has cooperated fully with the authorities in their investigation of the accident. Currently, certain proceedings are ongoing to determine whether any standards have been breached that may give rise to criminal charges. In addition, the Company has been notified by the applicable mining regulatory authorities that, following the completion of the current proceedings, there will be an administrative investigation pursuant to which the Company may be fined. At this time, the Company cannot predict the outcome of any of these proceedings.

## **INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS**

During fiscal 2012 and 2011, the Company entered into certain transactions with its 51.9% shareholder Fabulosa. 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**

The Company's transfer agent and registrar is Equity Financial Trust Company, 200 University Avenue, Suite 400, Toronto, Ontario, M5H 4H1.

## **MATERIAL CONTRACTS**

Other than contracts described in the AIF, including the EVBC Loan Amendment and the Fabulosa Nominating Agreement, Orvana has not entered into any material contracts during fiscal 2012.

## **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 Robert Mitchell, 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”) and Jorge Szasz, who is “financially literate” but not “independent”, as such terms are defined in MI 52-110. Mr. Szasz was appointed to the Audit Committee on a temporary basis following the resignation of Dr. Richard Garnett from his position as a director of the Company effective December 15, 2012. Dr. Garnett was a member of the Audit Committee who was “financially literate” and “independent”, as such terms are defined in MI 52-110.

Mr. Robert Mitchell is a Chartered Accountant and holds a Bachelor of Commerce degree. In addition to his role as Chairman of the Company's Audit Committee, he is a director of another public company, and is the Chairman of the audit committee for this company. He was a partner with Ernst & Young LLP for 27 years and has extensive experience in the investment and securities industries.

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.

Mr. Jorge Szasz is a Chartered Accountant and holds a Master of Business Administration degree. He is an independent consultant. Mr. Szasz was Vice President Finance, Administration and Commercialization of Sinchi Wayra S.A. He worked with PricewaterhouseCoopers LLP (“PwC”), Chartered Accountants, for ten years in Audit. Mr. Szasz provided certain consulting services to an affiliate of Fabulosa.

During fiscal 2012, the following individuals were also members of the Audit Committee: Peter Bradshaw, Robert Logan, Daniella Dimitrov and Brent Cochrane. Each of these individuals was “independent” and “financially literate” as such terms are defined in MI 52-110.

### **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 billed during fiscal 2012 and fiscal 2011 by PwC, the Company's external auditors, for the services described below provided to Orvana and its subsidiaries:

Year ended September 30 (US\$'000)	2012	2011
Audit fees <sup>(1)</sup>	\$498	\$132
Audit-related fees <sup>(2)</sup>	80	51
Tax fees <sup>(3)</sup>	-	12
All other fees <sup>(4)</sup>	54	268
Total fees	\$632	\$463

- (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 billed during fiscal 2012 includes audit fees incurred with respect to the fiscal 2011 audit but billed during fiscal 2012.
- (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 fees, audit-related fees and tax fees including assistance with due diligence in connection with acquisition activities.

## AUDITORS AND EXPERTS

PwC is the Company's external auditor and prepared the "Auditors' Report to the Shareholders of Orvana Minerals Corp.", dated December 20, 2012 in respect of the Company's financial statements for the fiscal year ended September 30, 2012.

The authors of the 43-101 technical reports on Orvana's mineral projects that are referred to in this AIF are named in the descriptions of those reports provided (see above under the headings "Description of the Business - Principal Mineral Projects - UMZ Mine - Resource and Reserve Estimates" and "Description of the Business - Principal Mineral Projects - EVBC Mine - Resource and Reserve Estimates" and "Description of the Business - Principal Mineral Projects - Copperwood Project - Resource and Reserve Estimates". Bill Williams, the Company's President and Chief Executive Officer and a qualified person who is not independent of the Company for the purposes of NI 43-101, was a co-author of "Technical Report for the El Valle/Boinás-Carlés Gold Deposits: Updated Reserve Estimate and Mine Plan, Rio Narcea Gold Belt, Asturias, Spain", but was not responsible for the sections on resource and reserve estimates or the mine plan. Mr. Williams beneficially owns 240,000 Common Shares and holds options to acquire 400,000 Common Shares and 181,349 restricted share units issued under the Company's Restricted Share Unit Plan for designated executives.

## 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 Orvana's comparative consolidated audited financial statements and management's discussion and analysis for fiscal 2012, 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

#### Audit Committee Charter

##### **A. Membership**

The Audit Committee of the Board of Directors (the "Board") of Orvana Minerals Corp. (the "Corporation") 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 Audit 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.

##### **B. 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 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.
12. To review and recommend to the Board the appointment of an external auditor and the compensation of such external auditor.
13. 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; and
  - (iii) pre-approval of all non-audit work to be performed by the external auditor and the fees to be paid therefor.

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

15. 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.

16. 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.

17. 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.

18. 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.

19. 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.

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

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

22. 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.

23. 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 to report directly to the Committee.

### **C. Minutes**

Minutes shall be kept of all meetings of the Committee.

### **D. 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, 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.

#### **E. 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.

#### **F. 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.

#### **G. 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.

#### **H. 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: August 9, 2012  
Reconfirmed by the Board of Directors: August 10, 2012

## APPENDIX B

### ORVANA MINERALS CORP. - ANNUAL INFORMATION FORM

#### Material Mineral Projects

##### **EVBC Mine**

###### *Introduction*

Through its wholly-owned subsidiary, Kinbauri, the Company owns and operates the EVBC Mine, which is located in northern Spain's Rio Narcea Gold Belt. The following discussion has been prepared under the supervision of C. Knievel, a qualified person for the purposes of NI 43-101, but who is an employee of Kinbauri and thus is not independent of the Company.

###### *History*

Modern gold exploration commenced at the EVBC Mine area during the 1970s and over the next 20 years companies like Anglo American and Goldfields evaluated the gold potential with drilling and underground exploration drifts.

Rio Narcea Gold Mines ("RNGM") mined gold by open-pit methods from 1997 until 2004, at which time underground mining began. The mine closed in 2006 after producing approximately 950,000 ounces of gold and over 20,000 tonnes of copper. In 2007, RNGM sold the EVBC project to Kinbauri Gold. The Company acquired the EVBC Mine and infrastructure in 2009, excluding certain environmental liabilities, as a result of its acquisition of Kinbauri Gold.

###### *Location, Title, Access and Infrastructure*

The EVBC Mine and properties lie within 14 exploitation concessions covering 4,298 hectares. When issued, the concessions are valid for 30 years and can be renewed for two more 30-year terms. Each of the 14 concessions can be renewed for two more 30-year terms.

The properties, which include the Ortos-Godán prospects as well as the El Valle-Boinás, Carlés, and La Brueva deposits, are within the Oviedo Principality approximately 60 kilometres by road west of the Asturian capital city of Oviedo and about 30 kilometres south of the north coast of Spain. The port cities of Avilés and Gijón are approximately 40 kilometres away. The properties lie within a portion of the Rio Narcea Gold Belt that trends northeast-southwest for 15 kilometres and is four kilometres wide.

The most northerly of the properties, Ortosa-Godán, is located approximately three kilometres south of the village of Salas and 40 kilometres by road from Oviedo. The Carlés deposit, which is located along highway AS-15, is about five kilometres southeast of Salas and 40 kilometres by road from Oviedo; it is 25 kilometres by paved road to the El Valle processing facilities. Both deposits are located in the municipality of Salas.

The La Brueva deposit is located six kilometres northwest of the village of Belmonte and about 50 kilometres by road from Oviedo in the northern part of the municipality of Belmonte de Miranda. The prospect is accessed by a narrow paved road that starts from Selviella and continues west to Boinás.

The El Valle-Boinás ore deposit is located in the west side of the municipality of Belmonte de Miranda and is six kilometres west of the village of Belmonte. It is 15 kilometres by road from Belmonte and 60 kilometres by road from Oviedo. Two paved roads that access the property: an eastern access through the villages of Selviella and Alvariza, and a western access through the village of Tuña. The roads are narrow and curvy and cross through steep, rugged topography. The two small villages of Boinás and Begega are the only population centres near the project area.

The final access to the plant and mine offices is approximately two kilometres of paved and dirt roads from Begega on the north and one kilometre of dirt road from Boinás on the south. Both of these roads are in good condition, although a small portion of the Begega road on the northwest side of the El Valle

open pit is at risk due to slope failures in the pit wall. During the 2010 fiscal year, the Company began stabilization efforts and those efforts continue.

The El Valle mill has a nominal capacity to treat up to 2,000 tonnes per day and includes a primary crusher, SAG and ball mills, pebble crusher, flotation cells, concentrate thickener and filtration, gravity circuit, carbon-in-leach circuit, cyanide destruction, carbon regeneration, elution electro-winning, calcining and smelting, reagent preparation and water recovery facilities. Auxiliary facilities include offices, warehouses, maintenance shops, change houses, and a sample preparation and fire assay laboratory.

Over 10 kilometres of underground workings are in place at the Boinás Mine, over six kilometres of which were prepared by Kinbauri España. Over five kilometres of underground workings are in place at the Carlés mine. The portals and haulage ramps at both locations have been improved in order to facilitate ingress and egress to the ore-bearing faces. The internal infrastructures in both mines have been significantly improved and restructured by the Company. A 420-metre deep, 5.5-metre diameter shaft was commissioned during fiscal 2012. Since the commencement of operations in May 2011, the El Valle open pit has been used as the tailings impoundment; a 6-metre lift was recently completed.

Sufficient non-technical personnel are available from the surrounding areas and well-educated mining engineers are available in Spain. Experienced geological engineering personnel are in place to carry out the Company's development and operation of the EVBC Mine, including a number who have direct experience in the Rio Narcea Gold Belt and the mine. Personnel reside offsite in the surrounding communities. The site of the EVBC Mine has telephone, fax and internet service.

Given that operations are principally underground, surface rights for mining are not required. However, at Carlés, a small resource that can be extracted only by open-pit methods would require the purchase of certain surface parcels.

The Company has adequate water and power sources to operate the mine, mill and plant, although power outages occur on occasion. The Company plans to mitigate these outages during fiscal 2013 by adding a trunk line that would be dedicated to the EVBC Mine.

#### *Topography, Elevation, Vegetation and Climate*

The terrain is hilly to mountainous and has numerous streams and rivers including the Narcea River. The hills are generally grass covered with intermittent wooded areas. Small-scale farming is common throughout the area. Elevations at the El Valle plant and Boinás Mine area range from 380 metres to 700 metres. The elevation at the Carlés Mine varies from 100 metres at the lowest point on the Narcea River to 300 metres at the small village of Carlés, which overlooks the deposit.

The climate is temperate with an average temperature of 12<sup>0</sup>C and about 1,180 millimetres of annual precipitation.

#### *Geology and Mineralization*

The gold mineralization in the central part of the Rio Narcea Gold Belt is principally hosted by a series of Lower Cambrian to Devonian sedimentary rocks. This stratigraphic package was intruded by felsic magmas and thrust and folded into a N20°E-trending, overturned anticline during the Hercynian Orogeny. Later extensional events resulted in the formation of three main sets of normal faults that strike NNE-SSW, NNW-SSE and EW.

The gold-copper-silver mineralization at EVBC is characterized by mesothermal magnesium and calcic-rich skarn deposits at the contacts of late Paleozoic intrusives as well as younger epithermal vein mineralization related to subvertical faults and quartz-feldspar porphyry dykes. The mineral assemblages are chalcopyrite, bornite, (arseno)pyrite, magnetite, and pyrhotite in the skarns, and native gold, electrum, native copper, chalcopyrite, and chalcocite in the epithermal mineralization; the vein mineralization is characterized by hematitic jasperoids. Higher grades are encountered where the epithermal systems crosscut the skarns. Leaching and enrichment are common in the structural zones that host epithermal mineralization.

### *Exploration and Development*

The Company completed certain underground drilling during fiscal 2012. Drilling was primarily focused on stope definition and dewatering, but infill and delineation drilling as well as the discovery of new ore bodies is also part of the program. During the period from September 1, 2011 through June 30, 2012, the Company drilled 115 holes for 11,429 metres.

The Company was awarded an Investigation Permit on the Lidia prospect during fiscal 2012. The area encompasses 2,560 hectares in the Navelgas Gold Belt of northern Spain, 30 kilometres from the EVBC Mine. The Lidia prospect, formerly known as the Linares prospect, is considered prospective for not only skarn-hosted mineralization, but intrusive-related gold mineralization as well.

During fiscal 2012, an experienced consultant reviewed the in-house data base in order to assess the prospectivity within the Company's concessions as well as within the gold belts in the region. Targets were prioritized and certain prospects will be the subject of further exploration in the future.

### *Mineral Resource and Reserve Estimates*

The Company recently completed updated mineral resource and reserve estimates in order to include all drilling through June 30, 2012. The mineral resource and reserve estimates, which are disclosed above under "Description of the Business - Principal Mineral Projects - EVBC Mine", have been calculated in accordance with the standards of the Canadian Institute of Mining, Metallurgy, and Petroleum and NI 43-101. These estimates were prepared under the supervision of C. Knievel, who is a qualified person for the purposes of NI 43-101, but who is an employee of Kinbauri and thus not independent of the Company. Methodologies applied for these estimates are based on those summarized in the NI 43-101-compliant technical report, "Technical Report for the El Valle/Boinás-Carlés Gold Deposits: Updated Reserve Estimate and Mine Plan Rio Narcea Gold Belt, Asturias, Spain", by A.C. Noble, P.E. (Ore Reserves Engineering) and A. Wheeler, C. Eng., both of whom are qualified persons independent of the Company for the purposes of NI 43-101, and W.C. Williams, Ph.D., CPG, who is a qualified person for the purposes of NI 43-101, but who is an employee of the Company and thus is not independent of the Company. The following paragraphs summarize the key parameters used for the estimates.

The mineral resource estimate is based on a 2 gram-per-tonne gold cutoff using a price deck of \$1,100 per ounce gold, \$2.50 per pound copper, and \$20 per ounce silver, and an exchange rate of \$1.35 per Euro. Measured and indicated mineral resource estimates are classified according to a confidence level, which level is determined by statistical methods that define the probability of continuity of metal grades, which in turn provides a basis for concluding that these estimates have the reasonable expectation of economic extraction. Inferred resources have a lower confidence level, but are classified as such since there is the geologic possibility that more information, such as drilling, could confirm a higher confidence level.

Measured and indicated resource estimates are converted to proven and probable reserve estimates, respectively, when after inputting metal recoveries and including mine, mill, administrative, transport, marketing, and royalty costs, among others, as well as including appropriate mine methods, dilution and ore-loss factors, these estimated reserves can be extracted economically. The aforementioned inputs and parameters are applied to Boinás oxide mineralization, Boinás sulphide mineralization and Carlés sulphide mineralization as appropriate in order to calculate a gold-equivalent cut-off in grams-per-tonne, above which cutoff the mineralization is classified as reserve.

The consideration of planned and unplanned dilution resulted in a higher reserve estimate tonnage than resource estimate tonnage for Boinás oxides, but the contained ounces in the reserve estimate are less than the resource estimate. An average of 44% mineralized dilution, that is, material that is below the economic cut-off gold-equivalent grade, and 6% waste dilution were included during the design process. An additional 5% waste dilution and 5% ore loss have been applied post-design. This has the effect of increasing tonnage, but decreasing the grade of the reserve estimate as compared to the corresponding resource estimate.

The measured and indicated mineral resource estimate contains an additional 439,000 ounces that were not converted to the proven and probable mineral reserve estimate. Should future reconciliation work

demonstrate that the planned and unplanned dilution factors can be reduced, and/or should it be demonstrated that the economic cut-off can be lowered, among other things, these resource estimates could be converted to reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Under current operating conditions, the life of the EVBC Mine is 10 years based on the reserve estimate reported herein.

#### *Drilling, Sampling and Security*

Based on the good core recovery and high standards in logging and sampling of the core, the drilling is considered to be very reliable. In the few areas with poor recovery, the deficiency is known and can be accounted for in the resource estimate. Holes are typically surveyed down the hole with a Maxibor Reflex Tool II instrument, which is operated by experienced personnel.

Prior to 1997, Barringer (Inspectorate) of Reno, Nevada analyzed drill samples with a 50-gram fire-assay method for gold. After 1997 until 2007, samples were analyzed with a 30-gram, fire-assay method for gold at a laboratory located near the mine site. Samples were routinely checked at the ITMA laboratory located in Oviedo, Spain. Neither of these laboratories is certified. From 2007 to 2009, samples were sent to the ITMA (90%) and ALS Chemex (10%) laboratories. Ore-grade metals were analyzed using a 4-acid digestion followed by an ICP-AES or ASS finish. Check assays were run every 10 samples for infill and every 20 samples for ore-grade control. Blanks and standards were inserted at acceptable industry standards. Repeat assays, in all cases, were run routinely on pulps. Accuracy and precision were rendered acceptable, except for the copper assays obtained at the ITMA laboratory where copper results were typically 10% underreported.

The primary check on the reliability of the assay data has been the successful reconciliation between ore reserve estimates, mine production, mill production and smelter payments over more than 1,000,000 ounces of gold produced. Check assay studies, sampling studies and routine quality control provide additional confirmation of the reliability of assays.

Core is handled and boxed by Company personnel and delivered to the onsite laboratory in the presence of Company personnel. After delivery to the core shed, all samples are retained in the geological logging facility and sample preparation area until the pulps have been sent by sample preparation personnel to the laboratory. The core shed and sample preparation laboratory are locked when there is nobody working on site.

During fiscal year 2011, the Company re-activated the EVBC laboratory. Samples from drilling and the mine operations are now analyzed at this laboratory. Analyses for Cu, Ag, As, Bi and Sb were done using an aqua-regia extraction with an AAS finish. A 30-gram sample was analyzed by fire-assay method with AAS finish for gold, and copper, silver, arsenic, bismuth (antimony and mercury when needed) were analyzed by ICP-optical emission spectroscopy (ICP-OES) after an aqua-regia digestion. Also, a 30-gram sample is analyzed by fire assay method with AAS finish for gold, and ICP-OES analysis of 35 elements at ALS Chemex. The quality assurance/quality control ("QA/QC") protocols for sample handling, analyses, QA/QC, and check sampling are within industry acceptable standards. ALS Chemex in Seville, Spain is used as the outside laboratory for QA/QC purposes.

The reliability of the data base is based on several layers of data checking, not only by those responsible for entering the data and maintaining the database, but by project geologists using the data for interpretation and resource estimation. The Chief Mine Geologist, Mr. Santiago Nistal, a qualified person for the purposes of NI 43-101, has ultimate responsibility for the database. Over the last 15 years, he has supervised the QA/QC for the activities of RNGM, Kinbauri Gold and the Company at the EVBC Mine.

#### *Environment and Permits*

All key permits have been obtained. On June 28, 2011, the Company announced that final approval has been received from the Spanish Ministry of the Environment for commercial production at the EVBC Mine. Such approval was subject to a final inspection and posting of a €5 million cash bond on or about September 5, 2011 and an additional €5 million cash bond by June 28, 2012. The final inspection was completed successfully and a cash bond of €5 million was deposited in a Spanish bank in September

2011. The Company is currently challenging the requirement to deposit an additional €5 million bond and the authorities are reviewing that challenge; a decision is expected within the next few months.

Environmental monitoring is in place to satisfy all current requirements for the two mines. Current water discharges, which are restricted to mine waters, are controlled and regularly monitored. In addition, acid-rock drainage is not an issue at the Boinás or Carlés underground operations. The open-pit mining at Carlés is not in the revised mine plan until later years, at which time appropriate actions will be taken.

#### *Asset Retirement Obligations*

At September 30, 2012, the Company estimated the total undiscounted amount of the cash flows required to settle the Company's asset retirement obligations with respect to the future operation of the EVBC Mine at approximately \$5,918,000. This estimate was prepared by management of the Company with the use of independent third party experts. Accretion expense is recorded using the discount interest rate of 5.7%. It is expected that this amount will be incurred commencing in 2022 and beyond. The discount rate used to measure decommissioning liabilities is based on current interest rates of government bonds of the applicable country and of term that matches the time period to the commencement of the decommissioning liability being incurred. The discounted amount of the estimated cash flows required to settle the Company's current obligations with respect to the EVBC Mine is approximately \$3,691,000.

Prior to its acquisition by Kinbauri Gold, the El Valle Mine had been shut down by its then owner and remediation measures required were completed. On Kinbauri Gold's acquisition of El Valle, a reclamation bond was deposited, as required by Spanish mining regulations. Total cash deposited with Spanish financial institutions for reclamation bonds in respect of the EVBC Mine amounted to approximately \$9,647,000 at September 30, 2012. In addition, a cash-backed reclamation bond of up to €5,000,000 may have to be deposited by the Company under Spanish mining regulations in respect of the EVBC Mine. The Company is currently challenging this based on technical considerations. Should the Company have to deposit this reclamation bond, the Company has such funds available.

It is possible that the Company's estimates of its ultimate asset-retirement obligations 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.

#### *Royalties*

Production from the EVBC Mine is subject to a 3% net smelter return royalty ("NSR"), referred to herein as the "EVBC Royalty", payable quarterly. The EVBC Royalty rate decreases to 2.5% for any quarter in which the average price of gold is below \$1,100 per ounce. The royalty holder's advance of C\$7,500,000 in 2008 is evidenced by a convertible debenture in the same principal amount settled through payments calculated in the same manner as the EVBC Royalty as sales are made.

In the event that the rate of production from the EVBC Mine is less than a specified amount within the 2012 calendar year, the royalty holder may exercise its conversion right under the debenture in respect of the outstanding principal amount, if any, of the debenture at December 31, 2012. The Company expects that the royalty holder will convert the debenture resulting in a debenture conversion amount of approximately \$3,132,000 expensed by the Company in the fourth quarter of fiscal 2012. The Company expects to finance and repay this debenture conversion amount at a rate of 12% over six equal installments commencing on January 31, 2013 and ending on June 30, 2013.

In addition, during the period commencing on December 31, 2012 and ending on January 31, 2013, if the aggregate amount of payments paid as at December 31, 2012 under the EVBC Royalty is less than C\$7,500,000, the royalty holder may require that the remaining outstanding balance of the debenture be paid to it as a pre-payment of future EVBC Royalty payments. The Company expects that this pre-payment right will be financed until January 1, 2014 at a rate of 12%, with all royalty payments made between January 1, 2013 and December 31, 2013 serving to reduce such amount. To the extent that any pre-payment is due and paid on January 1, 2014, it will serve to reduce future royalty payments. The EVBC Royalty expense totaled \$2,471 for fiscal 2012 (2011 - \$440).

## **UMZ Mine**

### *Introduction*

Through its wholly-owned subsidiary, EMIPA, Orvana operates the UMZ Mine in south-eastern Bolivia, which consists of 11 contiguous mineral concessions covering approximately 70,100 hectares. The UMZ Mine commenced commercial production in January 2012. The following discussion is an excerpt from the UMZ 43-101 Report.

### *History*

Production at Don Mario commenced in mid-2003 after the development of the lower mineralized zone deposit (the "LMZ").

Prior to Orvana's acquisition of the project in 1996, the property was explored by four companies following the discovery of gold at the site in 1991. Exploration work included a combined 33,000 metres of drilling, 148 metres of drifting and a small open pit. This work resulted in the discovery and delineation of the LMZ and UMZ, the two principal zones of mineralization, and several prospects along strike and elsewhere in the Don Mario district, including the Las Tojas gold deposit, which is located 14 kilometres from the Don Mario Mine infrastructure.

### *Location, Title, Access and Infrastructure*

The Don Mario property consists of 11 contiguous mineral concessions covering approximately 70,100 hectares and is located within the San Juan Canton of the Province of Chiquitos in Eastern Bolivia. The Don Mario property is located at a geographical position of 59°47' W longitude and 17°15' S latitude, which is 380 kilometres east of the departmental capital of Santa Cruz de la Sierra.

The Superintendent of Mines for the Department of Santa Cruz has granted EMIPA a 100% interest in the Don Mario mineral concessions and, as a result, EMIPA has all the required rights to develop, mine and market the minerals and metals within its boundaries. All mineral substances in Bolivia belong to the state. The mineral concessions convey to the owner 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 granted the concessions conferring the right to explore, exploit, refine, and sell all mineral substances within the concession's borders for an indefinite period. Cancellation of a concession occurs only if the required annual mining patent (approximately \$24 per unit for the first five years and approximately \$48 per unit each additional year) is not paid. Orvana has paid and intends to continue to pay all mineral concession fees for the 11 concessions.

The Bolivian Constitution enacted on February 7, 2009 provides that the Bolivian Government shall grant mining rights by means of mining contracts, in place of the previously established process of granting mining concessions. The Constitution's transitional provisions provide a process for the migration of mining concessions into mining contracts. According to the Constitution, previously acquired rights under mining concessions will be respected but are subject to this migration process. Although the Government has not yet adopted the new Mining Code, a Supreme Decree of the Bolivian Government dated December 6, 2010 provides in its only article that, since the approval of such Supreme Decree, mining concessions granted before December 6, 2010, such as Orvana's, are adequate for the constitutional provisions in force, and are transitioned automatically into Special Provisional Authorizations, until such migration is executed under the regulation to be issued. The Supreme Decree also provides that "the automatic transformation mentioned in this paragraph, guarantees the acquired rights".

The UMZ Mine is accessible from Santa Cruz de la Sierra either by air, a distance of 380 kilometres, or by road, or a combination of rail and road, a distance of 458 kilometres. Santa Cruz de la Sierra is the departmental capital with a population of approximately 1.5 million and is serviced by an international airport. A 1,200 metre gravel airstrip suitable for light twin, and short-takeoff-and-landing aircraft is located six kilometres southwest of the UMZ Mine.

There are no permanent inhabitants on the Don Mario property. The chief commercial activity of the area is logging, under concession to two companies with sawmills based at San Juan and Buenavista. The nearest settlement is the village of San Juan (population 350), 76 kilometres away. The largest settlement in the region is the local administrative center of San Jose de Chiquitos (population 8,000 – 10,000). Local employees are hired from these and other nearby communities, and constitute about half of the permanent work force.

A modern 300-person camp facility houses all staff and general labour while on their rotation at the mine. The site has a direct satellite, telephone, fax, internet and television service. Separate semi-permanent lodgings for up to 200 contractors are integrated with the mine camp.

The UMZ Mine is connected to the Cuiaba-Bolivia Natural Gas Pipeline, which provides fuel for electrical power generation and for the smelting of doré in the process plant. Power and backup is provided by four 875 KVA, 3300 V, 50 Hz Waukesha generators, for a total rated capacity of 3500 KVA, and by three 2220 KVA, 3300 V, 50 Hz Waukesha generators with a total rated capacity of 6660 KVA.

As there are no perennial streams, water is derived from two main sources: bore holes and surface water collected in dams. Water is recycled from the tailings impoundment. Fresh water is captured by a small dam in another catchment area to the southwest of the tailings pond and is pumped to the site. A supplemental source of fresh water is from two boreholes drilled for this purpose.

The tailings pond has been designed with a 1.5 mm HDPE liner to prevent seepage. Measures to secure the tailings from access include erecting fences and using firecrackers to scare off birds. Although cyanide is destroyed naturally by sunlight, Orvana operates a cyanide destruction plant to reduce the cyanide level in solution to levels that comply with legal regulations and to levels that are below those that are hazardous to birds and animals. Moreover, the tailings pond is a zero discharge facility since the water is recycled back into the milling process. During fiscal 2012, the tailings pond berms were raised 2 metres.

When the mining operation is complete, the water will evaporate from the tailings pond with any residual cyanide being naturally destroyed through exposure to sunlight and oxygen. The water in the tailings should not pose a long-term threat. The saturated tailings will be capped, with the remaining cyanide in the tailings precipitating out as stable iron isotopes within the pile, such that within the hundred years plus over which the liner might eventually fail, the tailings should have been rendered harmless to the environment.

The Company is open-pit mining the UMZ Mine copper-gold-silver deposit that lies above the LMZ. The oxide ores are being treated using the LPF process and the transition and sulphide ores using CFF. Certain equipment previously used in the exploitation of the LMZ and Las Tojas deposits is used to process as much as 3,000 tonnes per day at the UMZ Mine through a closed-circuit SAG and ball mills. Mine start-up occurred in April 2011 and commercial production commenced in January 2012.

#### *Topography, Elevation, Vegetation and Climate*

The property is located near the central point of South America, and at the northern limit of the Paragua Platte River drainage basin near the watershed divide with the Amazon River system to the north. The region is characterized by gently undulating terrain at an elevation range of 300 metres to 450 metres above sea level with a few local peaks including Cerro Don Mario, the hill containing the UMZ deposit. With the exception of Cerro Don Mario, the area is thickly forested with deciduous trees. In contrast, Cerro Don Mario (whose official name is Cerro Pelado) is essentially bare of trees and vegetated with only scattered scrub and copper-tolerant grasses.

The climate is sub-humid tropical. Average monthly maximum temperatures range from 29°C in July to 34°C in October. Minimum average temperatures range from 16°C in June to 25°C in November. Annual rainfall is approximately 1,200 millimetres, mostly falling in sharp downpours during the wet season between November and March. Access roads may become impassable in the rainy season.

#### *Geology and Mineralization*

The Don Mario property is located within one of approximately 20 Lower to Middle Proterozoic schist belts in the Bolivian Shield. The Bolivian Shield forms the south-western edge of the Brazilian Precambrian

Shield and has been subdivided into a Middle Proterozoic Paragua Craton, which is up to 270 kilometres wide and is bordered by two parallel orogenic belts of Middle to Upper Proterozoic age: the Sunasas Mobile Belt along its western edge and the Aguapei Mobile Belt along its eastern margin.

The Don Mario property lies within the southeast margin of the Sunasas 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 and Eastern), orthogneiss (Patuju Domain) and a granite intrusive within an area of approximately 25 kilometres by 25 kilometres.

The UMZ copper-gold-silver deposit lies in the hanging wall of the LMZ shear zone within the Cristal Schist Belt. Calc-silicate rockshost copper, gold, silver and zinc in four defined mineralized zones from surface downward: (i) Porous, (ii) Oxide, (iii) Transition and (iv) Sulphide. The uppermost Porous Zone is characterized by vuggy cavities that are locally occupied by masses of amorphous zinc carbonate and hydroxides. Below that, in the Oxide Zone, malachite is the principal constituent with lesser amounts of chrysocolla, azurite, native copper, cuprite, and silver sulfosalts. The Transition Zone is characterized by bornite, sphalerite, galena, and pyrite, commonly coated by chalcocite as well as copper oxides. The lowermost Sulphide Zone is characterized by chalcopyrite and bornite.

#### *Exploration and Development*

Over the years, the Company has actively explored using conventional techniques, such as, stream-sediment and soil sampling, throughout its concessions. A re-evaluation of existing geophysical data, specifically collected by Induced Potential ("IP") methods, led to the identification of drill targets proximal to the UMZ deposit and two targets were drilled at the beginning of fiscal 2012. In 2009, the Company completed a survey consisting of over 200 kilometres of IP lines along most of the length of the Eastern Schist Belt, along which the Las Tojas deposit lies. After evaluating the data obtained, the Company concluded that not only are there drill targets for LMZ-style gold targets, but UMZ-style polymetallic deposits as well. Two holes were drilled in the La Aventura concession during first quarter of fiscal year 2012, with no significant results, and two holes were drilled proximal to the UMZ deposit, of which one encountered interesting mineralization.

#### *Asset Retirement Obligations*

Mining of the LMZ and Las Tojas deposits ceased during the 2009 and 2011 fiscal years, respectively. Management determined that all existing infrastructure including the mills, processing plant, related structures and tailings dam would be required for the UMZ Mine, thus, delaying by approximately ten years the expected timing of performance of asset retirement activities for the LMZ Mine. In addition, exploitation of the UMZ Mine will affect the estimates of the asset retirement obligations.

At September 30, 2012, the Company estimated the total undiscounted amount of the cash flows required to settle the Company's asset retirement obligations with respect to the future operation of the UMZ Mine at approximately \$5,556,000. This estimate was prepared by management of the Company with the use of independent third party experts. Accretion expense is recorded using the discount interest rate of 2.8%. It is expected that this amount will be incurred commencing in 2019 and beyond. The discount rate used to measure decommissioning liabilities is based on current interest rates of government bonds of the applicable country and of term that matches the time period to the commencement of the decommissioning liability being incurred. The discounted amount of the estimated cash flows required to settle the Company's current obligations with respect to the EVBC Mine is approximately \$4,160,000.

It is possible that the Company's estimates of its ultimate asset retirement obligations 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.

### *Royalties*

Production from the UMZ Mine is subject to a 3% NSR payable quarterly. This expense totaled approximately \$1,634,000 for fiscal 2012. The Bolivian government collects a mining royalty tax on the revenue generated from copper, gold and silver sales from the UMZ Mine at rates of 5%, 7% and 6%, respectively. These amounts totaled approximately \$4,564,000 for fiscal 2012.

### *Mineral Resource and Reserve Estimates*

A summary of the updated mineral resource and reserve estimates from the UMZ 43-101 Report is found above under the heading "Description of the Business - Principal Mineral Projects - UMZ Mine - Resource and Reserve Estimates". Contained metals in the mineral reserve estimate are 121 million pounds of copper, 177,000 ounces of gold, and 5.54 million ounces of silver.

### *Drilling, Sampling and Security*

The drill hole database for the UMZ resource estimate contains data for 129 drill holes from seven campaigns, including six reverse circulation ("RC") holes drilled prior to Orvana's acquisition of the property. There are no records of recovery or rock chips retained from the six RC drill holes; however, AMEC (Peru) S.A. ("AMEC Peru") has reviewed the logged zone type and copper and gold assay grades for the holes and compared them to diamond drill holes drilled within 10 metres to 20 metres of the RC holes drilled during later campaigns. The geology and assay results of the RC holes appear consistent with nearby drill holes and AMEC Peru concludes they are suitable to be used in support of mineral resource estimation. Many of the drill holes included in the UMZ mineral resource database were drilled targeting LMZ mineralization, but also intersected the UMZ.

The 123 diamond drill holes have an average length of 78 metres and are drilled on section lines oriented N45W and spaced approximately 25 metres 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 angle intercepts with the mineralized body when viewed in section.

The drill hole database contains 6,867 Au assays, 6,851 Ag assays, 6,852 Cu assays, 2,656 acid soluble copper (CuS) assays, 5,205 Zn assays and 957 acid soluble zinc (ZnS) assays. The database has 6,607 intervals coded for the four mineralization types: sulphide, transitional, oxide and porous.

Samples from the beginning of the Orvana drill campaign in 1996 were prepared at the 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 the Don Mario laboratory. Splits of pulps of 30% of the samples were sent to the Alex Stewart laboratory in Mendoza Argentina for referee analyses. The referee analyses showed that the results from the Don Mario laboratory were positively biased for Cu, Au and Ag, and as a result, all sample reject was sent to ALS Chemex in Oruro for preparation and assay by 50 gram fire assay and atomic absorption spectroscopy for Cu, Ag, Pb and Zn. Results from the ALS Chemex laboratory compared well with the Alex Stewart laboratory results and have been retained in the project database used for mineral resource estimation.

Core samples from the 2007 campaign were cut and sampled at the Don Mario Mine site and sent to the Alex Stewart laboratory in Mendoza 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. Orvana carried out a quality control program including the analysis of blanks and a high- and low-grade standard for Au and pulp duplicates.

Currently, all samples are analyzed at the onsite laboratory, which is ISO-9001 certified. Blanks, standards, and duplicates are inserted at acceptable industry standard. Certain samples are sent to outside laboratories for QA/QC checks.

A security contractor patrols the perimeter of the mine and provides office security in Santa Cruz. Orvana staff supervises drilling during daytime hours. Access to the drills is limited to contract drill staff and

Orvana staff. Drill core is transported from the drill to the core shed on the Don Mario property by Orvana and contract drill staff. Orvana staff logs, cuts samples and bags the drill core. Staff or a contract driver delivers the samples to the Orvana Santa Cruz office in a company truck. A private, contracted, trucking firm, ships the samples from the office in Santa Cruz to Oruro. ALS Chemex and Alex Stewart send an electronic confirmation of receipt to Orvana staff upon arrival of the samples at the preparation facility.

Orvana takes reasonable security measures to prevent outside tampering of samples. In addition, 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 Orvana staff and reputable contractors for supervision ensures reasonable control over sample security.

#### *Environment and Permits*

The Company has all permits required to operate the UMZ Mine, including an updated environmental permit and a special permit for the sulphuric acid plant which must be renewed every four months.

Following a 2-metre increase in the height of the berms completed in fiscal 2012, the tailings impoundment can adequately handle UMZ Mine tailings for at least another year. The UMZ Mine waste dump is located south of the UMZ pit and covers an area of approximately 200 metres by 300 metres and a final height of 30 to 40 metres in a single bench with a face slope not exceeding 40 degrees. The waste dump and runoff water treatment facilities are tied in to the existing waste dump pile used for the now closed LMZ Mine.

### **Copperwood Project**

#### *Introduction*

Through its wholly-owned subsidiary, Orvana US, the Company is developing the Copperwood copper project in the Upper Peninsula of Michigan, United States. During fiscal 2012, Orvana's activity at Copperwood included the completion of the Copperwood NI 43-101 Report as well as the receipt of various permits required to construct and operate a mine. The following discussion on Copperwood is an excerpt from the Copperwood 43-101 Report.

#### *History and Exploration*

The 1950s drilling program was conducted by the United States Metal Refining Company ("USMR"), which also sank a shaft and drove drifts on the Copperwood property. Bear Creek Mining Co. Ltd. ("Bear Creek") drilled in the area under the 30-year lease during the 1950s. The 42 holes drilled by USMR and the 23 drilled by Bear Creek were on a nominal 300-metre spacing within the boundaries of Orvana's leased areas; Orvana drilled 146 holes for deposit delineation, metallurgical and geotechnical purposes and the drill spacing is now at a nominal 150 metres. During fiscal year 2010, the Company located most of the 138 holes, previously drilled by third parties, that were outside the leased areas and within the areas under an option-to-lease and sampled 87 of those where core or assay rejects were available in order to assess the viability of classifying any mineralization in these areas as NI 43-101-compliant resources estimates. The Company is in possession of not only the historic drill logs, but the assays from the selected intervals of the aforementioned drill holes. All of the aforementioned drill holes evaluated the stratiform copper mineralization in the Western Syncline.

#### *Title, Location, Access and Infrastructure*

Through its wholly-owned subsidiary, Orvana Resources US Corp., the Company has entered into long-term mineral lease agreements covering 936 hectares within the Western Syncline, which is located in the Upper Peninsula of the State of Michigan, USA. These leased areas are referred to as the Copperwood Project. Of the leased area, 276 hectares are leased from the Keweenaw Land Association of Ironwood, Michigan under a 20-year agreement dated September 10, 2008, 436 hectares are leased from Sage Minerals, Inc. of Delaware under a 20-year agreement dated October 16, 2008, and 226 hectares are leased from A.M. Chesbrough LLC of Michigan under a 30-year agreement dated September 30, 2010. The lessors have retained a net smelter return royalty on copper production. The

royalty will be determined on a quarterly basis and will range from 2% to 4%, based on prevailing copper prices adjusted for inflation.

Concurrent with entering into these leases, Orvana US obtained exclusive 20-year options to enter into 20-year mineral leases nearby with respect to an additional 1,559 hectares within the Western Syncline and known as the Copperwood Satellites. In the event that Orvana US exercises any of its options to enter into additional mineral leases, such leases would be on the same terms as those of the Copperwood Project. Some of the area covered by these options are overlain by surface rights controlled by state agencies and include a state park; permits will be required for any exploration work.

In addition, the Company purchased the surface rights on about 700 hectares that secured access to the Copperwood Project and additional space for infrastructure. The purchase price was \$1,900. The Company has the right to put the purchase back to the vendor on the same terms as the original purchase price up to August 2013 if no mining activity has taken place.

The leased area can be accessed by road from Wakefield, Michigan, which is located approximately 20 kilometres to the southeast. A paved county road comes within approximately three kilometres of Copperwood, after which access is by a private, improved gravel road.

Under the terms of the Keweenaw Mineral Lease, Orvana has the unconditional right to build mine infrastructure and mine on 248 hectares of the leased area as long as reparations equivalent to the market value of the land are paid; although this right is unconditional in this area, other nearby areas are not precluded from mine development. The Company is in negotiations to effect a land swap in order to retain surface control of the area where the main infrastructure is planned to be located.

Electric power can be brought to the leased properties from a location approximately 30 kilometres south of the leased properties. Orvana can rely on a water supply from Lake Superior to support its activities, but during the fiscal year discovered an aquifer approximately 5 kilometres from the project; early testing suggests that it will be adequate to support mining activities as planned. Orvana does not anticipate any problems in satisfying its staffing needs as experienced mining personnel live within reasonable proximity to the area.

#### *Topography, Elevation, Vegetation and Climate*

The topography is essentially flat and is as high as 250 metres above sea level in the south and as low as 200 metres above sea level approximately 1.5 kilometres to the north-northwest. Small, perennial drainages incise the clay overburden. The area is wooded and includes some hardwood trees, pines, and young aspens as well as various low-lying plants.

The annual average temperature is 4°C with a minimum average of -4°C and a maximum average of 10°C. Annual average precipitation is 0.88 metres with an annual average snowfall of 4.6 metres. Annual average snow depth is 0.15 metres with a high of 0.56 metres in February.

#### *Geology and Mineralization*

The leased properties subject to the Copperwood Project and the options-to-lease are located within the Midcontinent rift system. The 1.1 billion year-old rift is filled with basaltic volcanic rocks overlain by clastic sedimentary rocks, which include the Nonesuch Formation lacustrine shales and siltstones. Whereas the volcanic rocks and conglomerates that underlie the Nonesuch Formation host(ed) native copper in the northern end of the Upper Peninsula, the shales and siltstones at the base of the Nonesuch Formation are chalcocite-bearing further south. The basal section of the Nonesuch Formation is the host rock for the mineralization at the Copperwood Project and Satellite Deposits, which host rock is geologically equivalent to that at the White Pine mine, some 30 kilometres to the northeast, where nearly 2 million tonnes of copper were produced between 1953 and 1996. In the leased and optioned areas, the mineralized zone subcrops under less than 30 metres of unconsolidated glacial lacustrine clay sediments and lies at about 337 metres depth approximately 2.5 kilometres to the north.

#### *Resource and Reserve Estimates*

As described above under the heading "Description of the Business - Principal Mineral Projects - Copperwood Project", on March 23, 2012 the Company filed the Copperwood 43-101 Report. In addition,

on January 27, 2011 the Company filed a technical report titled the “Copperwood S6 and Satellite Project, Michigan, USA”, which was prepared by Greg Kulla, P. Geo. and David Thomas, P. Geo of AMEC Americas Limited, Reno, NV, both of whom are qualified persons independent of the Company within the meaning of NI 43-101; this technical report summarizes the resource estimates in the Copperwood Satellites, which estimates are found in the table below.

Satellite Deposits	Mt	Cu, %	Cu, Mlbs
Indicated	25.01	1.40	771
Inferred	36.14	1.30	1,033

(1) Mineral resources that are not mineral reserves do not have demonstrated economic viability.

#### *Drilling, Sampling and Security*

In 2009, Orvana resampled core from six of 42 holes drilled during the 1950s at Copperwood. The resampling confirmed Orvana’s expectation that the results from the 1950s program are reliable. Differences between the historic and new assays were not statistically significant over the population resampled. Weighted averages for the 54 samples were 1.19% copper for the historic assays and 1.24% copper for the new assays.

Based on the historical information in its possession, the Company planned a drill program that was completed in October, 2009. It is believed that this 82-hole 13,000 metre program, along with validated historical drilling as well as the Company’s 2008 drilling, adequately delineated the copper deposit.

Strict security measures were taken to ensure the integrity and validity of the mineralization in the new drill core. The core was sampled based on the lithostratigraphy established by the Copperwood geologic team. Assays were completed by Activation Laboratories Ltd., an ISO/IEC 17025 and CAN-P-1579 registered laboratory. The QA/QC protocol included internal and laboratory standards and blanks. AR-ICP values were determined using an aqua-regia extraction with an ICP/OES finish. Assay values were determined for samples with Cu > 1000 ppm also using an aqua-regia extraction with an ICP/OES finish. The security measures and QA/QC were supervised by Theodore Bornhorst, Ph.D., P. Geo., a qualified person for the purposes of NI 43-101 who is independent of the Company.

Various technical reports, all of which are available on SEDAR, concluded that Orvana US’s handling and sampling protocols were well within industry standards. Orvana estimates that copper production could begin during fiscal 2015, pending regulatory approval. As mentioned previously, Orvana is reviewing various scenarios for project financing and development.

#### *Environment and Permits*

Both the surface and mineral rights of the properties subject to the Copperwood Project are privately held. The underlying bedrock is Precambrian in age and, consequently, Orvana did not require any permits or approvals to conduct exploration work on the properties, including sampling and drilling, although there is a state guideline, regulated by the MDEQ, for plugging and abandoning drill holes. Even though Orvana has a prescriptive right to access the leased areas on private roads, in order to secure unfettered access to the project site, adequate surface rights, within which the roads connect with public-access roads, were recently purchased.

Mine permitting is regulated by the MDEQ. The mine-permit application process includes, but is not limited to, completing and submitting studies with respect to the behaviour of surface and subsurface waters, air quality, mine planning and design, and tailings impoundment. In April 2012, Orvana US was granted a mine permit by the MDEQ in accordance with Part 632 of the Non-Ferrous Metallic Mining regulation of the State of Michigan. A Permit to Install, or Air Quality permit, was granted in July 2012 and waste-water discharge permits, or National Pollutant Discharge Elimination Systems permits, were granted in October 2012. An application for a Wetlands Permit, or Clean Water Act Section 404 Permit, was submitted on October 2011 and, in November 2012, the application was withdrawn and re-submitted soon thereafter. The Company expects to receive a decision with respect to this permit in January 2013.