MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED SEPTEMBER 30, 2019

Introduction

This management's discussion and analysis ("MD&A") of results of operations and financial condition of Orvana Minerals Corp. and its consolidated subsidiaries ("Orvana" or the "Company") describes the operating and financial results of Orvana for the year ended September 30, 2019.

This MD&A should be read in conjunction with the audited consolidated financial statements of Orvana for the year ended September 30, 2019 and related notes thereto (the "Audited Financials"). The Audited Financials are prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board.

All currency amounts (except per unit amounts) unless otherwise stated, are in United States dollars ("US dollars"). Production and sales in respect of gold and silver are in fine troy ounces referred to as "ounces" or "oz" and in respect of copper are in pounds also referred to as "lbs". The information presented in this MD&A is as of November 26, 2019, unless otherwise stated.

A cautionary note regarding forward-looking statements follows this MD&A.

Company Overview

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

(i) El Valle and Carlés mines with their El Valle processing plant (collectively, "El Valle"), producer of copper concentrates and doré bars; located in Asturias, northern Spain; and, managed by the subsidiary Orovalle Minerals ("OroValle"); and

(ii) The Don Mario Mine Complex ("Don Mario"), a set of assets that includes Cerro Felix satellite open pit, Las Tojas ore body, and the previously mined Lower Mineralized Zone ("LMZ") and Upper Mineralized Zone ("UMZ"), with processing facilities that currently produce doré bars, and previously produced copper concentrates, located in Chiquitos, southeastern Bolivia, managed by the subsidiary Empresa Minera Paitií ("EMIPA"). In the first quarter of fiscal 2020, the Company has made the decision to suspend mining operations at EMIPA effective on or before December 31, 2019.

On May 14, 2019, the Company entered into a purchase agreement with Compañía Minera Taguas S.A. pursuant to which Orvana agreed to acquire the Taguas property ("Taguas") located in the Province of San Juan, Argentina. Taguas consists of 15 mining concessions over an area of 3,273.87 ha. It is located in the Province of San Juan, Argentina, on the eastern flank of the Andes, between 3,500 m to 4,300 m above sea level. On July 9, the Company filed a Preliminary Economic Assessment Report for the Taguas property. Closing of the transaction is subject to the final acceptance of the Toronto Stock Exchange and a number of closing conditions including, without limitation, completion of satisfactory due diligence by Orvana and applicable local mining rights registration.

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

Fiscal 2019 Consolidated Financial and Operating Highlights:

- EBITDA of $18.1 million for the year ended September 30, 2019.
- Operating cash flow of $14.4 million for the year ended September 30, 2019.
- Free cash flow of $7.4 million for the year ended September 30, 2019.
- Net loss of $5.3 million for the year ended September 30, 2019.

- Capital expenditures of $10.9 million for the year ended September 30, 2019.
- In fiscal 2019 the Company, through its wholly-owned subsidiary OroValle, has closed a credit facility with three Spanish Banks for a total amount of €8 million.
- **OroValle:**
    - Production of 64,327 ounces gold was 10% higher than the previous year. Production increase was due to a combination of 6% higher throughput and 4% higher head grade.
    - Gold head grade of 3.26 g/t, compared to 3.13 g/t reported last year.
    - Copper production was 5.0 million pounds, compared to 5.1 million pounds in fiscal 2018, with production exceeding guidance.
    - Primary objectives in fiscal 2020 are to:
        - Increase underground mining fleet reliability by enhancing preventive maintenance programs;
        - Continue reducing unitary costs, based on cost reduction programs in place;
        - Strong conversion of resources into reserves and addition of new resources to the ore bodies extending the current mine life;
        - Greenfield exploration programs execution mainly focused on Ortosa-Godán and Lidia permits.
- **EMIPA:**
    - Production of 32,932 ounces gold was 27% lower than the previous year.
    - Gold head grade of 1.51 g/t, compared to 2.16 g/t reported last year, with the decrease mainly due to lower ore grade on the last benches of Cerro Felix open pit.
    - During the fourth quarter of fiscal 2019, mining activities transitioned from Cerro Félix to open pit operations in Las Tojas. In the first quarter of fiscal 2020, the Company made a decision to suspend mining operations at Las Tojas effective on or before December 31, 2019 because of a higher than expected ore-grade operational mining dilution with more narrow, erratic and discontinued mineralized structures, which is resulting in uneconomic unitary cost per ounce.
    - Primary objectives in fiscal 2020 are to:
        - Orderly suspension of mining and milling operations;
        - Maintenance and care program implementation;
        - Workforce restructuration program;
        - New plant circuit development to allow the processing of the oxidized stockpiles ("Oxides Stockpile Project"). The Company anticipates that, subject to the favourable completion of technical, economic and funding analysis, the sulphidization circuit and ancillary facilities will be in full production by FY2021 to process the oxides stockpile.

Consolidated Results

	Q4 2019	Q3 2019	Q4 2018	FY 2019	FY 2018
Operating Performance					
Gold					
Grade (g/t)	**2.17**	2.08	2.72	**2.34**	**2.61**
Recovery (%)	**89.9**	93.8	92.3	**92.6**	**91.7**
Production (oz)	**21,985**	20,696	28,661	**97,259**	**103,384**
Sales (oz)	**20,987**	22,579	28,044	**96,540**	**102,018**
Average realized price / oz	**$1,444**	$1,277	$1,208	**$1,304**	**$1,273**
Copper					
Grade (%)	**0.40**	0.44	0.51	**0.45**	**0.60**
Recovery (%)	**73.5**	78.1	81.6	**76.3**	**65.9**
Production ('000 lbs)	**1,128**	1,071	1,291	**5,015**	**8,233**
Sales ('000 lbs)	**1,089**	1,052	1,231	**5,073**	**8,687**
Average realized price / lb	**2.65**	2.78	$2.81	**2.77**	**$2.89**
Financial Performance *(in 000's, except per share amounts)*					
Revenue	**$32,382**	$30,831	$36,298	**$135,544**	**$145,836**
Mining costs	**$27,147**	$28,304	$30,632	**$113,558**	**$120,946**
Gross margin	**($3,618)**	($2,561)	$3,019	**($1,384)**	**$3,156**
Net income (loss)	**($3,626)**	($3,914)	($1,231)	**($5,266)**	**($11,097)**
Net income (loss) per share (basic/diluted)	**($0.03)**	($0.03)	($0.01)	**($0.04)**	**($0.08)**
EBITDA (1)	**$4,811**	$540	$1,165	**$18,065**	**$13,750**
Operating cash flows before non-cash working capital changes	**$4,091**	$1,368	$3,049	**$18,312**	**$11,864**
Operating cash flows	**$4,974**	$4,866	$1,129	**$14,444**	**$1,800**
Free Cash Flow (1)	**$1,929**	($3,631)	($2)	**$7,432**	**($8,474)**
Ending cash and cash equivalents	**$12,351**	$11,682	$11,634	**$12,351**	**$11,634**
Capital expenditures (2)	**$2,162**	$4,999	$3,051	**$10,880**	**$20,338**
Cash operating costs (by-product) ($/oz) gold (1)	**$1,206**	$1,213	$1,003	**$1,094**	**$1,021**
All-in sustaining costs (by-product) ($/oz) gold (1)(2)	**$1,358**	$1,432	$1,187	**$1,253**	**$1,259**
All-in costs (by-product) ($/oz) gold (1)(2)	**$1,402**	$1,492	$1,271	**$1,288**	**1,358**

(1) Earnings before interest, taxes, depreciation and amortization ("EBITDA"), free cash flow, cash operating costs, all-in sustaining costs and all-in costs are non-IFRS performance measures. For further information and a detailed reconciliation of these measures not presented elsewhere, please see the "Other Information - Non-IFRS Measures" section of this MD&A.

(2) These amounts are presented in the consolidated cash flows in the Q4 Financials on a cash basis. Each reported period excludes capital expenditures incurred in the period which will be paid in subsequent periods and includes capital expenditures incurred in prior periods and paid for in the applicable reporting period. See the "Cash Flows, Commitments and Liquidity - Capital Expenditures" section of this MD&A. The calculation of all-in sustaining costs and all-in costs includes capex incurred (paid and unpaid) during the period.

Operational Results

- Consolidated annual gold production of 97,259 ounces during fiscal 2019, a decrease of 6% compared to fiscal 2018.
- Production of 110,063 gold equivalent ounces during fiscal 2019, compared with 126,017 during fiscal 2018. [1]
- Production of 5.0 million pounds (2,275 tonnes) of copper, a decrease of 39% compared with fiscal 2018, primarily due to the shutdown of the flotation circuit at Don Mario mine.
- Sales of 96,540 ounces of gold and 5.1 million pounds (2,301 tonnes) of copper during fiscal 2019, a decrease in gold and copper sales of 5% and 42% respectively, compared with fiscal 2018.
- Production of 21,985 ounces of gold and 1.1 million pounds (512 tonnes) of copper during the fourth quarter of fiscal 2019, a decrease in gold and copper production of 23% and 13% respectively, compared with the fourth quarter of fiscal 2018.

(1) Gold equivalent ounces include copper pounds and silver ounces produced and converted to a gold equivalent based on a ratio of the average market price for the commodities for the period discussed.

- Production of 24,504 gold equivalent ounces during the fourth quarter of fiscal 2019, compared with 32,221 during the fourth quarter of fiscal 2018.
- Sales of 20,987 ounces of gold and 1.1 million pounds (494 tonnes) of copper during the fourth quarter of fiscal 2019, a decrease in gold and copper sales of 25% and 12% respectively, compared with the fourth quarter of fiscal 2018.

El Valle

- Fiscal 2019 gold production increased by 10% and copper production decreased by 2%, compared with fiscal 2018. Gold production increased due mainly to 4% higher gold grades and 6% increase in tonnes milled. Copper production decreased 2% due mainly to 4% and 5% lower head grade and recoveries respectively, partially off-set by 6% increase in tonnes milled.
- The ratio of oxides to skarns processed in the mill was at the level of 43% during fiscal 2019, increasing to 282,000 tonnes, compared to 37% and 231,000 tonnes during fiscal 2018. The 6% increase in oxides ore milled resulted in a 10% increase to gold production during fiscal 2019, as compared to fiscal 2018.
- Mechanical advance rates in oxide areas continued to improve, increasing by 17% to 7,998 meters during fiscal 2019, as compared to fiscal 2018.
- Maintenance investment in progress continues to support the reliability on mine equipment.

Don Mario

- Fiscal 2019 gold production decreased by 27% compared to fiscal 2018 with the decrease due mainly to transition from mining LMZ and Cerro Felix satellite deposit during fiscal 2018, to mining Cerro Felix and Las Tojas deposits with lower than expected gold grades during fiscal 2019. Gold production in the fourth quarter was 5,800 ounces, a decrease of 15% compared to 6,842 ounces in the previous quarter.

Financial Results

- Consolidated cash and cash equivalents were $12.4 million as at September 30, 2019, an increase of $0.7 million from September 30, 2018.
- Net revenue of $135.5 million for fiscal 2019, or 7% lower, compared with $145.8 million for fiscal 2018, primarily due to lower gold sales volume and lower copper sales volume, partially off-set by higher gold price.
- Mining costs of $113.6 million for fiscal 2019, or 6% lower, compared with $120.9 million for fiscal 2018, primarily due to exchange movements in the EURO to USD rate at El Valle, as well as lower royalties and royalty taxes on lower gold and copper sales volume.
- Net loss for fiscal 2019 of $5.3 million compared with $11.1 million loss for fiscal 2018.
- EBITDA for fiscal 2019 of $18.1 million compared with $13.7 million for fiscal 2018. [2]
- Cash flows provided by operating activities of $14.4 million in fiscal 2019, compared with $1.8 million in fiscal 2018 and cash flows provided by operating activities before changes in non-cash working capital of $18.3 million in fiscal 2019, compared with $11.9 million in fiscal 2018. [2]
- Free cash flow for fiscal 2019 of $7.4 million compared with a deficit of $8.5 million for fiscal 2018. [2]
- Capital expenditures of $10.8 million in fiscal 2019 compared with $20.3 million in fiscal 2018.
- COC and AISC on a by-product basis (net of copper and silver by-product revenue from El Valle and Don Mario) per ounce of gold sold in fiscal 2019 of $1,094 and $1,253, respectively, compared with COC and AISC (by-product) of $1,021 and $1,259, respectively, in fiscal 2018.

[2] EBITDA, cash flows provided by operating activities before non-cash working capital, free cash flow, COC and AISC are non-IFRS performance measures. The Company believes that, in addition to conventional measures prepared in accordance with IFRS, the Company and certain investors use this information to evaluate the Company's performance including the Company's ability to generate cash flows from its mining operations. Accordingly, it is intended to provide additional information and should not be considered in isolation or as substitutes for measures of performance prepared in accordance with IFRS. For further information and detailed reconciliations, please see the "Other Information - Non-IFRS Measures" section of this MD&A.

Negative impact of lower ounces of gold sold and lower copper by-product revenue at Don Mario were partially off-set by lower mining costs at both companies. [(2)]

- Net revenue of $32.4 million for the fourth quarter of fiscal 2019, a 11% decrease, over the $36.3 million recorded in the fourth quarter of fiscal 2018, driven primarily by lower gold and lower copper volumes sold, partially offset by higher realized gold price.
- Mining costs of $27.1 million for the fourth quarter of fiscal 2019, or 11% lower, compared with $30.6 million for the fourth quarter of fiscal 2018 due to lower gold and copper sales volumes as well as exchange movements in the EURO to USD rate at El Valle.
- Net loss for the fourth quarter of fiscal 2019 of $3.6 million compared with $1.2 million for the fourth quarter of fiscal 2018.
- EBITDA for the fourth quarter of fiscal 2019 of $4.8 million compared with $1.2 million for the fourth quarter of fiscal 2018.
- Cash flows provided by operating activities of $5 million in the fourth quarter of fiscal 2019, compared with $1.1 million in the fourth quarter of fiscal 2018 and cash flows provided by operating activities before changes in non-cash working capital of $4.1 million in the fourth quarter of fiscal 2019, compared with $3 million in the fourth quarter of fiscal 2018. [(2)]
- Capital expenditures of $2.2 million in fourth quarter of fiscal 2019 compared with $3.1 million in the fourth quarter of fiscal 2018.
- COC and AISC on a by-product basis (net of copper and silver by-product revenue from El Valle and Don Mario) per ounce of gold sold in the fourth quarter of fiscal 2019 of $1,206 and $1,358, respectively, compared with COC and AISC (by-product) of $1,003 and $1,187, respectively, in the fourth quarter of fiscal 2018. Lower ounces of gold sold and lower copper by-product revenue drove the increase in COC and AISC[(3)].

Growth Initiatives Highlights

<u>OroValle</u>

- Ongoing brownfield and infill drilling in and around the El Valle and Carlés mines is expected to continue strong conversion of resources into reserves and adding new resources to the ore bodies extending the current mine life.
- Orovalle has a robust regional exploration package consisting of 45,164 hectares which includes concessions and investigation permits, some of which are still in progress. Strategic near-term regional targets within our permits include drilling programs in Ortosa-Godán and Lidia permits. The Company anticipates spending approximately $1.7M in regional greenfields targets in 2020 to add new mineral resources to the current portfolio.

<u>EMIPA:</u>

- The Oxides Stockpile Project continues to advance. The oxides stockpile has a mineral resource (Measured) of 2.18 million tonnes with an average gold grade of 1.85 g/t; and contains 386,950 oz of gold equivalent. The stockpile resource was estimated in the 2016 Report (as defined below) on the assumption that the stockpile would be processed by floatation and would not be included in the carbon-in-leach circuit. However, during FY2018 and FY2019, the Company has been evaluating metallurgical alternatives to process the oxides stockpile, concluding that a sulphidization circuit would maximize the value of the stockpile.

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(2) EBITDA, cash flows provided by operating activities before non-cash working capital, free cash flow, COC and AISC are non-IFRS performance measures. The Company believes that, in addition to conventional measures prepared in accordance with IFRS, the Company and certain investors use this information to evaluate the Company's performance including the Company's ability to generate cash flows from its mining operations. Accordingly, it is intended to provide additional information and should not be considered in isolation or as substitutes for measures of performance prepared in accordance with IFRS. For further information and detailed reconciliations, please see the "Other Information - Non-IFRS Measures" section of this MD&A.

(3) COC and AISC are non-IFRS performance measures. The Company believes that, in addition to conventional measures prepared in accordance with IFRS, the Company and certain investors use this information to evaluate the Company's performance including the Company's ability to generate cash flows from its mining operations. Accordingly, it is intended to provide additional information and should not be considered in isolation or as substitutes for measures of performance prepared in accordance with IFRS. For further information and detailed reconciliations, please see the "Other Information - Non-IFRS Measures" section of this MD&A.

- *Cautionary Statement – Mineral resources that are not mineral reserves do not have demonstrated economic viability. The mineral resource for the oxides stockpile was prepared in compliance with National Instrument 43-101 and CIM guidelines, as set out in the Don Mario Mine Operation 2016 Technical Report dated January 27, 2017 and effective as of September 30, 2016 (the "2016 Report"). A copy of the 2016 Report is posted under the Company's profile on www.sedar.com. These mineral resources were estimated using a gold price of US$1,300 per ounce, copper price of US$3.00 per pound and silver price of US$18 per ounce, prices of which were used in the 2016 Report.*
- The Company anticipates that, subject to the favorable completion of technical, economic and funding analysis, the sulphidization circuit and ancillary facilities will be in full production by FY2021 to process the oxides stockpile.
- The Oxides Stockpile Project is expected to provide three full production years for Don Mario starting in FY2021.
- The Company has commenced an evaluation of re-processing tailings to determine the viability of recovering gold from material deposited in the tailings impoundment since the commencement of production at Don Mario.

Outlook

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

At OroValle, the primary objective for fiscal 2020 is to continue lowering unitary costs, while maintaining production stable at the level realized in fiscal 2019. Several productivity initiatives are in progress, including the following: revaluation of the backfill process, reduction of power consumption through different initiatives at the plant and the mine, and fleet use optimization to reduce costs. Ongoing brownfield and infill drilling in and around the El Valle and Carlés mines is expected to continue strong conversion of resources into reserves and adding new resources to the ore bodies extending the current mine life.

At EMIPA, in the first quarter of fiscal 2020, the Company made the decision to suspend mining operations at Las Tojas effective on or before December 31, 2019. Notwithstanding the suspension of mining operations, the development and engineering of the oxides stockpile that has accumulated from past mining activities at Don Mario (the "Oxides Stockpile Project") continues to advance. The Company anticipates that, subject to the favourable completion of technical, economic and funding analysis, the sulphidization circuit and ancillary facilities will be in full production by FY2021 to process the oxides stockpile. During this one-year interim period, contractors will be developing the Oxide Stockpile Project at site, while undertaking care and maintenance of existing facilities.

At Taguas, the primary objective for the first quarter of fiscal 2020 is the completion of the corporate structure to hold the property and closing the acquisition (including the rights transfer registration and the TSX final acceptance). Subject to closing the transaction and securing the required financing, the Company is preparing a drilling program in order to potentially expand the current resources and to support the potential upgrade in Mineral Resource estimates.

The following table sets out Orvana's fiscal 2019 results and guidance as well as its fiscal 2020 production and cost guidance:

	FY 2019 Guidance [1]	FY 2019 Actual	FY 2020 Guidance [2]
El Valle Production			
Gold (oz)	62,000 – 68,000	**64,327**	60,000 – 65,000
Copper (million lbs)	3.2 – 3.6	**5.0**	5.5 – 6.0
Don Mario Production			
Gold (oz)	38,000 – 42,000	**32,932**	2,000 – 3,000
Total Production			
Gold (oz)	100,000 – 110,000	**97,259**	62,000 – 68,000
Copper (million lbs)	3.2 – 3.6	**5.0**	5.5 – 6.0
Capital Expenditures			
El Valle		**$8,333**	$9,000 – $10,000
Consolidated	$12,000 – $13,500	**$11,261**	$9,000 – $10,000
Cash operating costs (by-product) ($/oz) gold [1] [2]			
El Valle		**$1,004**	$900– $1,000
Consolidated	$950 – $1,050	**$1,094**	$1,000– $1,100
All-in sustaining costs (by-product) ($/oz) gold [1] [2]			
El Valle		**$1,185**	$1,100– $1,200
Consolidated	$1,150 – $1,250	**$1,253**	$1,250– $1,350

(1) Fiscal 2019 Guidance assumptions for COC and AISC include by-product commodity prices of $2.75 per pound of copper and an average Euro to US Dollar exchange of 1.16.

(2) Fiscal 2020 guidance assumptions for COC and AISC include by-product commodity prices of $2.60 per pound of copper and an average Euro to US Dollar exchange of 1.12.

Overall Performance

The key factors affecting Orvana's operating and financial performance are tonnages mined and treated, metal grade and recoveries, quantities of metals produced and sold, realized metals prices, costs (including labour, energy and other supplies and material), mine development and other capital expenditures, foreign exchange rates and tax rates.

<u>Year Ended September 30, 2019 Compared with Year Ended September 30, 2018</u>

The Company recorded a net loss of $5.3 million for fiscal 2019 or $0.04 per share compared with $11.1 million loss for fiscal 2018 or $0.08 per share. The Company's net loss was impacted significantly by the following factors:

- Revenue for fiscal 2019 decreased by $10.3 million or 7% to $135.5 million from sales of 96,540 ounces of gold and 5.0 million pounds of copper, compared with revenue of $145.8 million from sales of 102,018 ounces of gold and 8.7 million pounds of copper. The decrease in revenue was primarily due to lower gold sales volume and lower copper sales volume, partially off-set by higher realized gold price.
- Mining costs were $113.6 million or $7.4 million lower for fiscal 2019 compared with $121 million for fiscal 2018 due to exchange movements in the EURO to USD rate at El Valle, as well as lower royalties and royalty taxes on lower gold and copper sales volume.
- Depreciation expense of $23.4 million in fiscal 2019 remains similar to fiscal 2018.
- Gross margin decreased by $4.6 million from positive $3.2 million for fiscal 2018 to negative $1.4 million for fiscal 2019.
- EBITDA increased by $4.3 million to $18.1 million for fiscal 2019 compared with $13.8 million for fiscal 2018.
- Current income tax expense increased by $0.2 million to $0.6 million for fiscal 2019 compared with $0.4 million for fiscal 2018, due to tax paid in EMIPA in January 2019, in excess over 2018 previous calculations.

Total consolidated COC (by-product) of $1,094 per ounce of gold sold in fiscal 2019 were $73 or 7% higher than in fiscal 2018. Total AISC (by-product) of $1,253 per ounce of gold sold in fiscal 2018 were $6 lower than in fiscal 2018. COC were negatively impacted by lower ounces of gold sold and lower copper by-product revenue.

Fourth Quarter Ended September 30, 2019 Compared with Fourth Quarter Ended September 30, 2018

The Company recorded a net loss of $3.6 million or $0.03 per share for the fourth quarter of fiscal 2019 compared with $1.2 million or $0.01 per share for the fourth quarter of fiscal 2018. The Company's net loss was impacted significantly by the following factors:

- Revenue for the fourth quarter of fiscal 2019 decreased by $3.9 million or 11% to $32.4 million on sales of 20,987 ounces of gold and 1.1 million pounds of copper from El Valle and Don Mario compared with revenue of $36.3 million on sales of 28,044 ounces of gold and 1.2 million pounds of copper.
- Mining costs were $27.1 million or $3.5 million lower for the fourth quarter of fiscal 2019 compared with $30.6 million for the fourth quarter of fiscal 2018, primarily due to lower gold and copper sales volumes and exchange movements in the Euro to USD rate at El Valle.
- Depreciation increased by $4.6 million to $8.9 million for the fourth quarter of fiscal 2019 compared with $4.3 million for the fourth quarter of fiscal 2018.
- Gross margin decreased by $6.6 million to negative $3.6 million for the fourth quarter of fiscal 2019 compared with $3 million for the fourth quarter of fiscal 2018.

Total consolidated COC (by-product) of $1,206 per ounce of gold sold in the fourth quarter of fiscal 2019 were $203 or 20% higher than the fourth quarter of fiscal 2018. Total AISC (by-product) of $1,358 per ounce of gold sold in the fourth quarter of fiscal 2019 were $171 or 14% higher than the fourth quarter of fiscal 2018. Lower gold sales volume and lower copper by-product revenue resulted in higher COC and AISC.

Fourth Quarter Ended Sep 30, 2019 Compared with Third Quarter Ended June 30, 2019

The Company recorded a net loss of $3.6 million or $0.03 per share for the fourth quarter of fiscal 2019 compared with $3.9 million of net loss or $0.03 per share for the third quarter of fiscal 2019. The Company's net loss was impacted significantly by the following factors:

- Revenue for the fourth quarter of fiscal 2019 increased by $1.6 million or 5% to $32.4 million from sales of 20,987 ounces of gold and 1.1 million pounds of copper from El Valle and Don Mario compared with revenue of $30.8 million from sales of 22,579 ounces of gold and 1.1 million pounds of copper in the third quarter of fiscal 2019. The increase in revenue was primarily due to higher realized gold price, partially offset by lower gold sales volume.
- Mining costs were $27.1 million or $1.2 million lower for the fourth quarter of fiscal 2019 compared with $28.3 million for the third quarter of fiscal 2019, primarily due to lower unitary costs of mining at El Valle.
- Depreciation increased by $3.8 million to $8.9 million for the fourth quarter of fiscal 2019 compared with $5.1 million for the third quarter of fiscal 2019.
- Gross margin decreased by $1 million to negative $3.6 million for the fourth quarter of fiscal 2019, compared with negative $2.6 million for the third quarter of fiscal 2019.

Total consolidated COC (by-product) of $1,206 per ounce of gold sold in the fourth quarter of fiscal 2019 were $7 or 1% lower than the third quarter of fiscal 2019. Total AISC (by-product) of $1,358 per ounce of gold sold in the fourth quarter of fiscal 2019 were $74 or 5% lower than the third quarter of fiscal 2019. Lower capital expenditures favorably impacted AISC.

OroValle

Through its wholly-owned subsidiary, OroValle Minerals S.L. ("OroValle"), the Company owns and operates the El Valle and Carlés mines located in the Rio Narcea Gold Belt in northern Spain, where the Company mines skarns and oxides underground.

The following table includes consolidated operating and financial performance data for El Valle for the periods set out below.

	Q4 2019	Q3 2019	Q4 2018	FY 2019	FY 2018
Operating Performance					
Ore mined (tonnes) (wmt)	**197,991**	**150,981**	174,851	**713,818**	647,852
Ore milled (tonnes) (dmt)	**175,966**	**141,246**	170,927	**658,046**	623,137
Daily average throughput (dmt)	**2,013**	**1,634**	1,942	**1,898**	1,830
Gold					
Grade (g/t)	**3.08**	**3.25**	3.06	**3.26**	3.13
Recovery (%)	**93.0**	**94.0**	92.2	**93.2**	92.9
Production (oz)	**16,185**	**13,854**	15,490	**64,327**	58,259
Sales (oz)	**14,970**	**15,256**	15,186	**62,249**	56,136
Copper					
Grade (%)	**0.40**	**0.44**	0.44	**0.45**	0.47
Recovery (%)	**73.5**	**78.1**	77..4	**76.3**	80.1
Production ('000 lbs)	**1,128**	**1,071**	1,291	**5,015**	5,123
Sales ('000 lbs)	**1,089**	**1,052**	1,231	**5,073**	4,901
Financial Performance *(in 000's, except per share amounts)*					
Revenue	**$23,334**	**$21,234**	$20,802	**$90,259**	$80,204
Mining costs	**$17,015**	**$17,908**	$18,638	**$70,006**	$72,722
Income (loss) before tax	**$(954)**	**$(709)**	$(4,194)	**$2,234**	$(9,390)
Capital expenditures	**$2,727**	**$2,496**	$849	**$8,689**	$6,461
Cash operating costs (by-product) ($/oz) gold (1)	**$1,058**	**$1,087**	$1,063	**$1,004**	$1,129
All-in sustaining costs (by-product) ($/oz) gold (1)	**$1.283**	**$1.293**	$1,174	**$1,185**	$1,331
All-in costs (by-product) ($/oz) gold (1)	**$1.282**	**$1.297**	$1,174	**$1,190**	$1,331

(1) For further information and a detailed reconciliation of COC, AISC and AIC, please see the "Other Information - Non-IFRS Measures" section of this MD&A.

OroValle Operating Performance

During fiscal 2019, El Valle produced 64,327 ounces of gold and 5.0 million pounds of copper, compared with 58,259 ounces of gold and 5.1 million pounds of copper during fiscal 2018. Gold production increased by 10%, primarily due to higher grades and tonnes milled. Copper production decreased by 2% primarily due to lower grades and recoveries, partially offset by higher tonnes milled.

Fourth quarter production increased to 16,185 ounces of gold and 1.1 million pounds of copper compared with 15,490 ounces of gold and 1.3 million pounds of copper during the fourth quarter of fiscal 2018. Gold production increased by 4%, primarily due to tonnes milled.

Consistent with the third quarter of fiscal 2019, the Company mined higher gold grade oxide tonnes and blended them with a ratio of 43% together with skarn ore. Historically, the ratio of mined oxide to skarn ore has been approximately 22% until fiscal 2018.

Mechanical advance rates in oxide areas remained stable, decreasing by 2% to 2,020 meters during the fourth quarter of fiscal 2019, as compared to the third quarter of fiscal 2019.

In the fourth quarter of fiscal 2019 a SCADA (supervisory control and data acquisition) system was implemented in El Valle Mine to control the ventilation system, with focus on power cost control and air flow optimization. Evaluation of backfill processes continues in progress, to improve logistic efficiencies and materials blend with focus on cost control. A project is in progress to review mine maintenance programs (processes, workforce, technical services), being the main targets equipment availability increase and maintenance cost reduction.

Plant improvements were developed during fiscal 2018 in order to allow for the processing of a higher ratio of oxide ore. Studies continue in progress to improve copper recoveries in a higher oxide blend, targeting 68% to 72%.

OroValle Financial Performance

Revenue from El Valle for the fiscal 2019 increased by 13% to $90.3 million on sales of 62,249 ounces of gold and 5.1 million pounds of copper from $80.2 million for fiscal 2018 on sales of 56,136 ounces of gold and 4.9 million pounds of copper.

Mining costs decreased by 4% from $72.7 million for the fiscal 2018 to $70 million for the fiscal 2019.

Gain before tax for the fiscal 2019 was $2.2 million compared with loss of $9.4 million for the fiscal 2018.

Total capital expenditures at El Valle during the fiscal 2019 were $8.7 million, compared with $6.5 million for the fiscal 2018. Capital expenditures in fiscal 2019 consisted substantially of primary development, mining infrastructure upgrades and mining equipment.

Total COC (by-product) of $1,004 per ounce of gold sold for the fiscal 2019 were $125 or 11% lower than fiscal 2018. Total AISC (by-product) of $1,185 per ounce of gold sold for the fiscal 2019 were $146 or 11% lower than fiscal 2018. COC and AISC were positively impacted by higher gold sales volume and lower mining costs.

OroValle Growth Exploration

6,207 mts of diamond drilling were completed in El Valle Mine during the fourth quarter, of which 5,139 mts were infill drilling and 1,068 mts brownfield drilling. Almost all this drilling program were carried out in oxides orebodies.

A) Infill drilling program was executed in oxides areas mainly to convert Inferred Resources into Measured & Indicated Resources:

- Area 107 (1,439 mts) to convert the Inferred Resources in the upper part; mineralization with high grade is open upwards (e.g. ddh 19V1743: 19.3 mts @ 10.16g/t Au and ddh 19V1749: 5 mts @ 159.7 g/t Au).
- Area 208 (1,309 mts), infill program was completed between 325 and 400 level to convert the Inferred Resources, two mineralized bands were defined with continuity and some high grade intersections, e.g. ddh 19V1729: 5.50 mts @ 13.65 g/t Au, ddh 19V1730: 8.35 mts @13.79 g/t Au.
- High Angle (1,899 mts), new narrow structures were intersected but with short continuity; some of them disappear at depth although the mineralization intersected has high grade, e.g. ddh 19HA15: 4.20 mts @ 36.88 g7tAu, ddh 19HA17: 1.05 mts @ 41.65 g/t Au.
- Villar zone (185 mts), infill program is ongoing.
- Black Skarn: (308 mts) of all infill drilling were completed in skarn to do stope definition between level 20 and level 40.

B) Brownfield program was carried out in A208 (1,068 mts), targeting to look for continuity between Villar and Area 208 orebodies, the mineralization intersected is narrow and very discontinued, e.g. ddh 19V1742: 1.35 mts @ 3.02 g/t Au; ddh 19V1745: 0.40 mts @ 8.38 g/t Au.

C) Regarding Greenfield works, OroValle has some very advanced projects and continue working looking for opportunities in other areas.

Ms. Guadalupe Collar (European Geologist), who supervised the explorations programs, is responsible for all aspects of the work, including the quality control/quality assurance program. Ms. Guadalupe Collar, Chief of Geology at OroValle, is a qualified person as defined in NI 43-101 and has approved all of the geological scientific and technical information relating to El Valle disclosed in this MD&A.

EMIPA

Through its wholly-owned subsidiary, Empresa Minera Paititi S.A. (“EMIPA”), the Company owns and operates Don Mario under a number of concessions in the Don Mario district located in south-eastern Bolivia. Fiscal 2009 marked the last year of six years of production from the Company’s LMZ underground gold mine at Don Mario with some gold production from lower-grade open pit satellite deposits and lower grade stockpiles continuing into fiscal 2010 and 2011. From 2012 to the end of 2016, EMIPA mined the UMZ as an open-pit mine. From 2016 to 2018, EMIPA mined new material at the upper extension of the LMZ as an open-pit mine. EMIPA is currently focused on mining at its Cerro Felix property within the Don Mario area.

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

	Q4 2019	Q3 2019	Q4 2018	FY 2019	FY 2018
Operating Performance					
Ore mined (tonnes) (dmt)	**182,339**	170,272	205,978	**745,846**	856,018
Ore milled (tonnes) (dmt)	**174,793**	189,240	184,094	**739,635**	719,328
Daily average throughput (dmt)	**2,083**	2,215	2,194	**2,185**	2,188
Gold					
Grade (g/t)	**1.25**	1.20	2.41	**1.51**	2.16
Recovery (%)	**82.4**	93.7	92.2	**91.2**	90.20
Production (oz)	**5,800**	6,842	13,171	**32,932**	45,125
Sales (oz)	**6,017**	7,323	12,858	**34,291**	48,882
Copper					
Grade (%)	**-**	-	-	**-**	0.72
Recovery (%)	**-**	-	-	**-**	53.7
Production (‘000 lbs)	**-**	-	-	**-**	3,110
Sales (‘000 lbs)	**-**	-	-	**-**	3,786
Financial Performance *(in 000’s, except per share amounts)*					
Revenue	**$9,050**	$9,597	$15,496	**$45,287**	$65,632
Mining costs	**$10,132**	$10,396	$11,994	**$43,552**	$48,224
Income (loss) before tax	**$(2,348)**	$(2,816)	3,282	**$(3,906)**	$6,076
Capital expenditures	**$323**	$1,475	$1,750	**$2,929**	$12,652
Cash operating costs (by-product) ($/oz) gold (1)	**$1,575**	$1,473	$933	**$1,256**	$890
All-in sustaining costs (by-product) ($/oz) gold (1)	**$1,629**	$1,648	$1,019	**$1,361**	$1,087
All-in costs (by-product) ($/oz) gold (1)	**$1,729**	$1,789	$1,170	**$1,429**	$1,287

(1) For further information and a detailed reconciliation of COC, AISC and AIC, please see the “Other Information - Non-IFRS Measures” section of this MD&A.

EMIPA Operating Performance

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

Fourth quarter production decreased to 5,800 ounces of gold compared with 13,171 ounces during the fourth quarter of fiscal 2018. Gold production decreased by 56%, primarily due to lower ore grade on the last benches of Cerro Felix open pit.

EMIPA Financial Performance

Revenue from Don Mario decreased by 31% from $65.6 million in fiscal 2018 to $45.3 million on sales of 34,291 ounces of gold in the fiscal 2019 compared with sales of 48,882 ounces of gold and 3.1 million pounds of copper in the fiscal 2018.

Mining costs of $43.5 million for the fiscal 2019 decreased $4.7 million or 10% compared with $48.2 million for the fiscal 2018 primarily due to lower royalties and royalty taxes on lower gold and copper sales volume.

Loss before tax for the fiscal 2019 was $3.9 million compared with income before tax of $6.1 million for the fiscal 2018.

Total capital expenditures at Don Mario in fiscal 2019 were $2.9 million compared with $12.7 million in the fiscal 2018. Capital expenditures in the fiscal 2019 related primarily to tailings facility expansion, plant improvements and purchases of mining equipment.

Total COC (by-product) of $1,256 per ounce of gold sold for the fiscal 2019 were $366 or 41% higher than fiscal 2018. Total AISC (by-product) of $1,361 per ounce of gold sold for the fiscal 2019 were $274 or 25% higher than fiscal 2018. COC and AISC were negatively impacted by lower gold sales volume and lower copper by-product revenue.

EMIPA Exploration and Mine Life Extension

The Oxides Stockpile Project continues to advance. The Company anticipates that, subject to the favorable completion of technical, economic and funding analysis, the sulphidization circuit and ancillary facilities to treat the oxidized stockpile will be in full production by FY2021, providing three full production years for Don Mario.

An evaluation of re-processing tailings is in progress to determine the viability of recovering gold from material deposited in the tailings impoundment since the commencement of production at Don Mario.

During the fourth quarter of fiscal 2019, 1,480 meters of drilling were carried out in Las Tojas and Oscar areas. Oscar is the adjacent area northwest of Las Tojas. The objective of that drilling program was to test the continuity of the mineralized structures within the belt. Previous geochemical sampling in the area had defined an Au-Cu anomaly, which had been validated with trenches. Drilling has intercepted ore, but with low grades and continuity. The following studies will try to identify new targets within the permits in the following months, to maintain exploratory activity.

Other Projects

The Company spent approximately $0.7 million in exploration of other projects during fiscal 2019, mainly focused on Argentina and Perú. The Company has been actively looking for and evaluating projects that could be aligned with the Company’s strategy, to add a third project to the current portfolio.

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

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

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

The Toronto Stock Exchange (“TSX”) has provided conditional acceptance of Orvana’s notice of the transaction, pursuant to the TSX Company Manual. Closing of the transaction is subject to the final acceptance of the TSX and a number of closing conditions including, without limitation, completion of satisfactory due diligence by Orvana and applicable local mining rights registration.

The Company filed on July 9, 2019 a NI 43-101 preliminary economic assessment report on Taguas, which is available on www.sedar.com.

Subject to closing the acquisition of Taguas and securing the required financing, the Company is preparing a drilling program in order to potentially expand the current resources and to support the potential upgrade in Mineral Resource confidence categories.

Market Review and Trends

Metal Prices

The market prices of gold and copper are primary drivers of Orvana's earnings and ability to generate free cash flows. During fiscal 2019, gold traded in a range from $1,224 to $1,565 per ounce and averaged $1,329 per ounce compared with $1,280 per ounce in fiscal 2018. Orvana's average gold realized price in fiscal 2019 was $1,304 per ounce, as compared to $1,273 per ounce in fiscal 2018. The Company derived approximately 89% of its revenue from sales of gold in fiscal 2019.

Copper prices during fiscal 2019 traded in a range of $2.48 to $3.37 per pound and averaged $2.76 per pound compared with $3.03 per pound in fiscal 2018. Orvana's average copper realized price in fiscal 2019 was $2.77 per pound, as compared to $2.89 per pound in fiscal 2018. The Company derived approximately 10% of its revenue from sales of copper in fiscal 2019.

Currency Exchange Rates

The results of Orvana's operations are affected by US dollar exchange rates. Orvana's largest exposure is to the Euro/US Dollar exchange rate. The Company incurs operating and administration costs at El Valle in Euros, while revenue is denominated in US dollars. Orvana's Euro costs increased year over year, with the Euro to US Dollar exchange rate moving from an average of 1.19 in fiscal 2018 to 1.13 in fiscal 2019. As a result of foreign exchange movements, mining costs at El Valle were lower by approximately $2.1 million in fiscal 2019 compared with fiscal 2018.

Orvana also has a minor exposure to the Canadian dollar and the Swedish krona through corporate administration costs. Orvana's exposure to the US Dollar to Bolivianos exchange rate is limited as this exchange rate has not fluctuated significantly during previous reporting periods.

FINANCIAL CONDITION REVIEW

Balance Sheet Review

The following table provides a comparison of key elements of Orvana's balance sheet at September 30, 2019 and September 30, 2018.

(in 000's)	**September 30, 2019**	**September 30, 2018**
Cash and cash equivalents	**$12,351**	$11,634
Restricted cash (short term)	**$131**	$61
Non-cash working capital (1)	**$(7,485)**	($2,833)
Total assets	**$152,829**	$158,800
Total liabilities	**$80,296**	$81,089
Shareholders' equity	**$72,533**	$77,711

(1) Working capital represents current assets of $38.5 million less cash and cash equivalents and short-term restricted cash totaling $12.5 million and less $33.4 million in current liabilities composed of accounts payable and accrued liabilities, income taxes payable and derivative instruments (not including current debt).

Total assets decreased by $5.9 million from $158.8 million to $152.9 million primarily as a result of the decrease in (i) Property plant and equipment in $12.5 million, (ii) deferred payment on Copperwood in 1 million, (iii) Income tax receivable in 0.4 milllion, (iv) gold and concentrate receivable in $0.6 million, and (v) inventory in $0.6 million, all this offset by increases in (vi) VAT receivables in $5.9 million and (vii) cash and cash equivalents, restricted cash and reclamation bonds in $1 million, (viii) deferred income tax in $2.3 million.

Total liabilities decreased by $0.8 million or 1% to $80.3 million at September 30, 2019 from $81.1 million at September 30, 2018 primarily as a result of a decrease in (i) debt in 2.4 million, (ii) other long term liabilities in 1.3 million, (iii) asset retirement obligations in 0.5 million, (iv) income taxes payable in $0.1 million, (v) lease obligations $0.2 million all this offset with increases in (vi) accounts payable in 3.1 million, (vii) long-term compensation in $0.5 million and (viii) other minor variances deferred revenues, provision for statutory labour obligations and future income tax liability for $0.1 million.

BISA TSF Loan, Heavy equipment Loan and Revolving Facility

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

The proceeds of the BISA TSF Loan were used to fund a major tailings storage facility expansion project that will add sufficient capacity to support future operations. Under the terms of the BISA TSF Loan, seven disbursements of specified amounts will be drawn down as expenditures are incurred for the tailings storage facility expansion, with the first draw down occurring on June 30, 2017. The BISA TSF Loan matures in January 2021 and has an interest rate of 5.3% per annum, with twelve quarterly repayments beginning in April 2018. As at September 30, 2019, $8.3 million were drawn down this facility and $4.1 million of principal were repaid.

The revolving working capital facility of up to $3.0 million can be drawn down in the form of cash of up to $2.0 million, bank guarantees of $3.0 million or a combination of the two up to the limit of $3.0 million. The revolving working capital facility is renewable every six months until November 2020 and interest will be determined at the date of drawdown and is dependent on the form of the drawdown. As at September 30, 2019, $1,972 were drawdown from this facility (September 30, 2018 - $nil). The funds have to be reimbursed jointly with their interests between January and February 2020.

Security for both the BISA TSF Loan and the revolving working capital facility include the CIL asset and other equipment at Don Mario.

In May 2018, EMIPA obtained a new Bolivian loan with BISA of $2.4 million for heavy equipment purchases. This loan matures in April 2021, it has monthly repayments and interest rate of 5.5% per annum. Security for the loan includes heavy equipment purchased. At September 30, 2019, the total amount was drawn from this loan and $1.1 million of principal were paid.

Banco de Crédito Loan

In May 2019, EMIPA entered into a Bs.3,430,000 (approximately $0.49 million) term facility with Banco de Crédito in Bolivia.This loan bears an interest rate of 6% per annum and initially matured in August 2019 with a single repayment installment (jointly with the interests) but EMIPA renegotiated this financing so the new repayment date will be January 2020. As at September 30, 2019 EMIPA received the $0.49 million disbursement.

Revolving Facilities - Orovalle

In July 2019, OroValle renewed a revolving credit facility with Banco Santander S.A. for an increased amount of €1.5 million for a one year term bearing an annual rate of Euribor plus 2.27%. The credit facility is secured by OroValle's VAT receivable from the Spanish government. As at September 30, 2019, the full amount of the facility was drawn (approximately $1.6 million), (September 30, 2018 $1,7 million).

In October 2018, OroValle renewed a revolving credit facility with Bankinter S.A. ("Bankinter") for an increased amount of €1 million for a three month renewable term and bearing no interest. An administration fee is charged for each renewal. Under the terms of the agreement, all or part of the financing received must be used for the remittance of payroll tax, VAT and corporate taxes to the Spanish tax agency with payment being processed through the Bankinter account. No security is required to be posted for this facility. As at September 30, 2019, the full amount of the facility was drawn (approximately $1,1 million), (September 30, 2018 $1,2 million).

Samsung C&T Prepayment Facility & the New Facility - Spanish local banks

In August 2016, the Company entered into a $12.5 million copper concentrates and gold doré prepayment agreement ("Prepayment Facility") with Samsung C&T U.K. Ltd. ("Samsung C&T"), the proceeds of which were invested at El Valle for its ongoing development activities and infrastructure projects.

Under the terms of the Prepayment Facility, Orvana is selling gold doré from its El Valle Mine in Spain and copper concentrate from its Don Mario Mine in Bolivia to Samsung C&T, on an exclusive basis for a period of thirty months. In exchange, Orvana received $12.5 million in prepayment financing from Samsung C&T in two instalments. The first instalment of $8.0 million was drawn on closing and the second instalment of $4.5 million was drawn down in February 2017. Interest payments and principal repayments under the terms of the Prepayment Facility were made against Orvana's on-going shipments of copper concentrates and/or gold doré. Samsung C&T has agreed to pay for copper concentrates and gold doré at a price based on the prevailing metal prices for the gold, silver and copper content around time of shipment, less customary treatment, refining and shipping charges, and pursuant to the terms of the Prepayment Facility.

The Prepayment Facility was amended in March 2018 such that the payments on the remaining principal outstanding at March 2018 was rescheduled and extended by two months, in exchange for a higher interest rate and an extension of gold doré deliveries to April 2020, amongst other terms.

The Company's obligations to Samsung C&T under the Prepayment Facility were secured by the pledge to Samsung C&T of all of Orvana's shares of OroValle, which owns the El Valle and Carlés Mines in Spain.

Throughout fiscal 2018, the Company had been evaluating financing alternatives with the objective to refinance the Samsung Prepayment Facility by extending the repayment period. In January 2019, the Company, through its wholly owned subsidiary OroValle, closed a syndicated credit facility (the "New Facility – Spanish local banks") for a total amount of €6 million. The New Facility is subject to a 2% bank commission fee, bears a fixed interest rate of 2.55%, semi-annual principal repayments and semi-annual interest payments over a term of four years. The Company's obligations to the lenders are secured by: (i) the pledge of all of Orvana's shares of OroValle; (ii) the pledge of OroValle's doré sale proceeds; and (iii) 12.5% restricted cash.

Concurrent with the closing of the New Facility, Orvana has repaid the full Prepayment Facility in the amount of $9.1 million. The Company continues its commercial relationship with Samsung C&T for the sale of copper concentrate from its Don Mario Mine and gold doré from its El Valle Mine.

In May 2019, OroValle increased the New Facility by an additional €2 million, achieving a total aggregated amount of €8 million ($8.7 million approximately). The conditions for this funding are the same to the previous tranche (in terms of interest rate, fees, repayment schedule, security and covenants).

In July 2019 OroValle repaid €996,000 ($1,4 Million approximately) of this facility.

The final amount of deferred bank fees for this financing were $150,000 and the amortization of the financing fees was $19,000 for the year ended September 30, 2019.

The amortized cost expense registered for the period ended September 30, 2019 was $105,000.

Shareholders' Equity

Shareholders' equity at September 30, 2019 decreased by 7% to $72.6 million compared with $77.7 million at September 30, 2018. The table below sets out the number of each class of securities of the Company outstanding at September 30, 2019 and as at the date hereof:

	At September 30, 2019
Common Shares	136,623,171
Warrants (1)	-
Options (2)	771,008

(1) The last warrants that expired in July 11, 2019 were held by Fabulosa Mines Limited, the Company's majority shareholder. Originally warrants were issued in connection with amendments to the Fabulosa Loan in 2013 and 2014 as follows: warrants to purchase 100,000 Common Shares were issued on July 11, 2014 at an exercise price of C$0.54 until July 11, 2019.

(2) The options have a weighted average exercise price of $0.22 and expiry dates ranging from 2019 to 2022.

Derivative Instruments

The Company has no outstanding derivative instruments at September 30, 2019.

The Company paid net cash of $856,000 in settlement of the derivative instruments that matured in the period.

Changes in the fair value of the Company's outstanding derivative instruments are recognized through the Company's income statement as non-cash derivative instrument gains or losses. At maturity of each contract, a cash settlement takes place resulting in a corresponding reduction in the carrying value of the derivative instruments. The mark-to-market fair value of the Company's outstanding derivative instruments is based on independently provided market rates and determined using standard valuation techniques, including the impact of counterparty credit risk. The counterparty for all derivative instruments is Auramet International LLC.

The Company recorded fair value adjustments on its outstanding derivative instruments as follows:

(in 000's)		Fiscal 2019		Fiscal 2018
Change in unrealized fair value	$	**(112)**	$	1,030
Realized loss on cash settlements of derivative instruments (1)		**(856)**		(1,864)
Derivative instruments loss	$	**(968)**	$	(834)

(1) Realized gains and losses on settlement of derivative instruments are recorded in revenue.

Capital Resources

At September 30, 2019, the Company had cash and cash equivalents of $12.4 million and restricted cash of $1.3 million. The Company considers its capital employed to consist of shareholders' equity (including share capital, contributed surplus and retained earnings) and total debt net of cash and cash equivalents as follows:

(in 000's)	September 30, 2019	September 30, 2018
Shareholders' equity	**$72,533**	$77,711
Revolving facilities (Orovalle)	**2,761**	2,894
Revolving facilities TSF (EMIPA)	**1,972**	-
Capital leases	**875**	1,031
BISA Heavy Equipment Loan	**1,298**	2,114
BISA TSF Loan	**4,250**	7,085
Banco de Crédito Loan	**493**	
Prepayment Facility	**-**	8,865
New Facility – Spanish local banks	**7,355**	-
Bankinter Loan (Orovalle)	**380**	-
	$91,917	$99,700
Less: Cash and cash equivalents	**(12,351)**	(11,634)
Capital employed	**$79,566**	$88,066

The Company's financial objective when managing capital is to ensure that it has the cash and debt capacity and financial flexibility to fund its ongoing business objectives including operating activities, investments and growth in order to provide returns for shareholders. In order to maintain or adjust the capital structure, in addition to using cash flows from operating activities for this purpose, the Company may issue new shares or obtain additional debt. In fiscal 2016, the Company closed the $12.5 million Prepayment Facility, and during fiscal 2017 the Company closed the $11.3 million BISA TSF Loan and revolving working capital facility. In fiscal 2019, the Company closed the New Facility with local Spanish banks for €8 million.

The Company monitors its capital structure and makes adjustments according to market conditions in an effort to meet its objectives given the Company's operating and financial performance and current outlook for the business and industry in general. The Company's alternatives to fund future capital needs include cash flows from operating activities, debt or equity financing or adjustments to capital spending. The capital structure and these alternatives are reviewed by management and the board of directors of the Company on a regular basis to ensure the best mix of capital resources to meet the Company's needs.

The Company manages capital through its operating and financial budgeting and forecasting processes. The Company reviews its working capital and forecasts its future cash flows on a periodic basis, based on operating expenditures and other investing and financing activities. The forecast is regularly updated based on the results of El Valle and Don Mario. Information is regularly provided to the board of directors of the Company.

The Company's strategy during fiscal 2019 is to manage its existing capital resources and liquidity in a prudent fashion to sustain ongoing capital projects and exploration programs at EMIPA and OroValle, and to meet all of its existing debt repayment obligations. In connection with this, the Company is currently evaluating possible, near-term financing alternatives with the objective of re-financing the Prepayment Facility and securing access to additional liquidity for advancement of the Company's strategic objectives.

Cash Flows, Commitments, Liquidity and Contingencies

Cash Flows

Total cash and cash equivalents as at September 30, 2019 was $12.4 million, primarily denominated in US dollars, representing $0.7 million higher cash than at September 30, 2018. Short-term restricted cash was $0.1 million at September 30, 2019, which is the same amount as at September 30, 2018. The Company's total debt was $18.5 million at September 30, 2019. This compares with total debt as at September 30, 2018 of $21 million.

The following table summarizes the principal sources and uses of cash for the periods specified below:

(in 000's)	**Q4 2019**	**Q3 2019**	**Q4 2018**	**FY 2019**	**FY 2018**
Cash provided by operating activities before changes in non-cash working capital	**$4,091**	$1,368	$3,049	**$18,312**	$11,864
Cash provided by (used in) operating activities	**4,974**	4,866	1,129	**14,444**	$1,800
Cash used in investing activities [(1)]	**(1,877)**	(4,367)	(3,055)	**(10,779)**	(17,500)
Cash provided by (used in) financing activities	**(2,485)**	1,885	64	**(3,029)**	3,476
Change in cash	**$612**	$2,384	$(1,862)	**$636**	($12,224)

(1) These amounts are presented on a cash basis. Each reported period excludes unpaid capital expenditures incurred in the period which will be paid in subsequent periods and includes capital expenditures incurred in prior periods and paid for in the applicable reported period. See "Cash Flows, Commitments and Liquidity - Capital Expenditures".

Orvana's primary source of liquidity continues to be from operating cash flows. Cash flows provided by operating activities before changes in non-cash working capital were $18.3 million for fiscal 2019 compared with $11.9 million for fiscal 2018. Cash flows provided by operating activities were $14.4 million for fiscal 2019 compared with $1.8 million for fiscal 2018.

Significant drivers of the change in operating cash flow are production and realized gold and copper prices on sales. Future changes in the market price of gold and copper, either favourable or unfavourable, will continue to have a material impact on the Company's cash flows and liquidity. The principal uses of operating cash flows have been working capital and the funding of the Company's planned capital expenditures.

Cash used in investing activities was $10.8 million in fiscal 2019 compared with $17.5 million in fiscal 2018. Capital expenditures and movements in the Company's restricted cash and reclamation bond accounts drive the majority of cash flows used in investing activities.

Cash used in financing activities was $3 million in fiscal 2019 compared with cash provided by $3.5 million in fiscal 2018, and is driven by the timing of drawdowns and repayments by the Company's debt facilities.

Capital Expenditures

The following table sets forth Orvana's capital expenditures for the periods specified below for El Valle and Don Mario:

(in 000's)	**Q4 2019**	**Q3 2019**	**Q4 2018**	**FY 2019**	**FY 2018**
El Valle	**$2,727**	$2,496	$849	**$8,689**	$6,461
Don Mario	**323**	1,475	1,750	**2,929**	12,652
Corporate	**-**	-	2	**-**	22
Sub-total capital expenditures	**$3,050**	$3,971	$2,601	**$11,618**	$19,135
Accounts payable adjustments [(1)]	**($888)**	$1,028	$450	**($738)**	$1,203
Total capital expenditures [(1)]	**$2,162**	$4,999	$3,051	**$10,880**	$20,338

(1) These amounts are presented on a cash basis. Each reported period excludes unpaid capital expenditures incurred in the period which will be paid in subsequent periods and includes capital expenditures incurred in prior periods and paid for in the applicable reported period.

At El Valle, capital expenditures in fiscal 2019 consisted mainly of primary development. Significant capital expenditures at Don Mario included optimization of the CIC/CIL process, and metallurgical and engineering studies to process the oxides stockpile.

The Company expects sustaining capital expenditures for fiscal 2020 to be in the range of $12 million to $13.5 million. Refer to the "Outlook" section of the MD&A.

Other Commitments

The Company's current contractual obligations are summarized in the following table:

As at September 30, 2019		Payment Due by Period			
(in 000's)	**Total**	**Less than 1 Year**	**1-3 Years**	**4-5 Years**	**After 5 Years**
Spanish Local Banks	**$6,012**	$1,770	$4,242	-	-
BISA TSF Loan + Heavy equipment	**$6,481**	$5,035	$1,446	-	-
BISA Heavy Equipment Loan	**$1,356**	$762	$594	-	-
BCP Credit	**$503**	$503	-	-	-
Bankinter Orovalle ST Loan	**$380**	$380	-	-	-
Finance leases	**$875**	$528	$347	-	-
Operating leases	**$1,258**	$853	$284	$116	$5
Decommissioning liabilities (1)	**$23,753**	$50	-	$1,181	$22,522
Reclamation bond (2)	**$5,444**	$5,444	-	-	-
Purchase obligations	**$4,258**	$1,708	$2,550	-	-
Provision for statutory labour obligations (3)	**$4,216**	-	$4,216	-	-
Long-term compensation	**$838**	-	-	-	$838
Total contractual obligations (4)	**$55,374**	**$17,033**	**$13,679**	**$1,297**	**$23,365**

(1) Decommissioning liabilities are undiscounted.

(2) Spanish regulatory authorities have requested that an additional reclamation bond of €5.0 million be deposited by the Company under Spanish mining regulations in respect of El Valle. The Company is challenging the requirement to fund the additional reclamation bond through an administrative appeal process. The Company is also working with the Spanish regulatory authorities to come to an agreement regarding posting this additional bond, including the consideration of alternatives to posting this bond.

(3) Under Bolivian law, EMIPA has an obligation to make payments to employees in the amount of one month's wages for each year of service. The employee can elect to receive payment after five years of service in the amount of five months of wages while continuing employment with EMIPA.

(4) Production from El Valle and Don Mario is subject to certain royalties for which amounts have not been included in total contractual obligations at September 30, 2019. For a description of such royalties and amounts payable, see "Royalties" below.

Royalties

Production from El Valle is subject to a 3% net smelter return royalty ("NSR"), referred to herein as the El Valle Royalty. The El Valle Royalty rate decreases to 2.5% for any quarter in which the average price of gold is below $1,100 per ounce. The El Valle Royalty expense totaled $2.7 million for fiscal 2019, compared with $2.4 million for fiscal 2018.

Production from Don Mario is subject to a 3% NSR. This expense totaled $1.7 million for fiscal 2019, compared with $2.2 million for fiscal 2018. The Bolivian government collects a mining royalty tax on the revenue generated from copper, gold and silver sales from Don Mario at rates of 5%, 7% and 6%, respectively. These amounts totaled $3.1 million for fiscal 2019, compared with $4.8 million for fiscal 2018.

Liquidity

Orvana's primary sources of liquidity in fiscal 2019 were operating cash flows, generating cash of $18.3 million from operating activities before changes in non-cash working capital. During fiscal 2019, Orvana generated cash of $14.4 million from operating activities and used cash for $3 million in financing activities, supporting $10.9 million in investing activities.

As at September 30, 2019, the Company had cash of $12.4 million, and together with forecasted operating cash flow, the renewal of current revolving lines and the executed refinancing of the Prepayment Facility (see Samsung C&T Prepayment Facility & New Facility - Spanish local banks section), expects to cover the Company's commitments due in less than one year of $17 million.

The Company's strategy during fiscal 2019 has been to manage its existing capital resources and liquidity in a prudent fashion to sustain ongoing capital projects and exploration programs at EMIPA and OroValle. Capital expenditures in respect to the Oxides Stockpile Project would only be incurred should financing acceptable to the Company is realized.

The Company has been pursuing a number of initiatives at El Valle and Don Mario in order to meet its objectives of optimizing production, lowering unitary cash costs, maximizing free cash flow, extending the life-of-mine of its operations and growing its operations to deliver shareholder value. The Company is currently evaluating and implementing further cost reductions at its operations.

The Company's cash flow forecasts are developed using best available information at the time of their preparation and rely on certain material assumptions, such as gold and copper market prices and the ability to achieve planned production of gold and copper. There can be no assurances that the Company's cash flow forecasts will not change materially in the future and that the effect of changes to the Company's forecasts, if negative, could result in future financing requirements for the Company.

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

Contingencies

The Company continues to work through one environmental matter involving selenium discharges into the Cauxa River in Asturias, Spain. The Cauxa River flows past the El Valle Mine operated by the Company's Spanish subsidiary, OroValle, as well as other industrial properties owned by third parties. Selenium is a naturally occurring element that is found in rocks, land and water and thus is also naturally found in certain food supplies. The results of recent scientific studies conducted by the Company have confirmed the Company's belief that past and prevailing levels of selenium in waterways impacted by the OroValle operations do not constitute a health or environmental risk.

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

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

In connection with workplace accidents at OroValle in 2015 and 2017, the affected employees filed claims with the Instituto Nacional de la Seguridad Social (INSS) for social security benefit surcharges, to be paid by OroValle. In late June 2018, INSS granted the two affected employees' in the 2015 workplace accident their social security benefits request for an aggregate amount of approximately $0.5 million. In October 2018, OroValle filed claims before the Labour Court in order to dispute the payment of the abovementioned surcharges. Trials were initially scheduled for May to September 2019, however they have been rescheduled by the Labour Court for October, 2019.In respect of the 2017 workplace accident, the affected employee has filed a claim with the INSS for social security benefit surcharges. The INSS has not affirmed this claim yet. If the request of the employee is affirmed by the INSS and the amount is estimated, OroValle will file a claim before the Labour Court.

During the second quarter EMIPA received from the Bolivian Tax Authorities a re-assessment of its past corporate income tax filings. This re-assessment charged an additional corporate income tax of approximately $0.669 million on the basis of different tax criteria for depreciations and the deductibility of certain expenses. In February, EMIPA appealed the re-assessment to the regional court. In May the regional court overturned the Tax Authority's re-assessment. The Tax Authority has appealed the regional court's decision and will be filing appeal materials in the following months. Should any part of this additional corporate tax amount be determined to be the final amount payable at the end of this tax resolution process, such amount shall incur additional interest and penalties, the amount of which cannot be determined with certainty at this stage of the process.

SUMMARY OF QUARTERLY RESULTS

The following two tables include results for the eight quarters ended September 30, 2019:

	Quarters ended			
(in 000's, except per share amounts)	**Q4 2019**	**Q3 2019**	**Q2 2019**	**Q1 2019**
Revenue	**$32,382**	$30,831	$36,013	$36,318
Net income (loss)	**($3,626)**	($3,914)	$3,334	($1,060)
Loss per share (basic and diluted)	**($0.03)**	($0.03)	$0.02	($0.01)
Total assets	**$152,829**	$158,372	$156,653	$154,965
Total financial liabilities (1)	**$19,384**	$22,041	$19,752	$16,880

	Quarters ended			
	Q4 2018	**Q3 2018**	**Q2 2018**	**Q1 2018**
Revenue	$36,298	$38,438	$36,930	$34,170
Net loss	($1,231)	($2,982)	($3,505)	($3,379)
Loss per share (basic and diluted)	($0.01)	($0.02)	($0.03)	($0.02)
Total assets	$158,800	$160,451	$163,542	$171,035
Total financial liabilities (1)	$21,989	$21,748	$19,486	$20,751

(1) Financial liabilities include current and long-term portions of debt, obligations under finance leases and derivative liabilities.

FINANCIAL AND OTHER RISKS AND UNCERTAINTIES

Financial Risks

The Company's activities expose it to a variety of financial market risks (including commodity price risks, currency risk and interest rate risk), credit risks, liquidity risks, financing risks and other risks. 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. The Company's overall risk management program seeks to minimize potential adverse effects on the Company's financial and operating performance.

Other Risks

The Company identified a variety of additional risks and uncertainties in the most recent Annual Information Form ("AIF") including, but not limited to, (i) mineral resources and reserves estimates and replacement of depleted reserves, (ii) production estimates, (iii) development, capital projects and operations of mines, (iv) competition, (v) acquisitions and divestitures, (vi) title matters, (vii) water supply, (viii) regulatory and other risk, (ix) permits, (x) environmental, health and safety regulations, (xi) political and related risks, (xii) insurance, (xiii) reliance on key personnel and labor relations, (xiv) community relations and license to operate, (xv) litigation, (xvi) conflicts of interest, (xvii) controlling shareholder, and (xviii) share trading volatility.

In respect of regulatory and other risks and environmental regulations risks, see "Contingencies" above.

For a more detailed discussion of such financial and other business risks, please see the "Risk Factors" in Orvana's most recent AIF at www.sedar.com.

OTHER INFORMATION

Critical Accounting Estimates

The preparation of financial statements in accordance with IFRS requires management to make estimates and assumptions that affect the reported amounts of certain assets and liabilities at the date of the financial statements and the reported amounts of certain revenues and expenses during the period. Actual results could differ significantly from those estimates. Specific items requiring estimates are mineral reserves, accounts receivable, property, plant and equipment, depreciation and amortization, forward metals prices, decommissioning liabilities, future income taxes, stock-based compensation and other accrued liabilities and contingent liabilities.

Net Realizable Amounts of Property, Plant and Equipment

At September 30, 2019, the net carrying value of the property, plant and equipment in respect of El Valle and Don Mario amounted to $54.5 million and $23.3 million, respectively. Effective from the point that they are ready for their intended use, property, plant and equipment are amortized on a straight-line basis or using the units-of-production method over the shorter of the estimated economic life of the asset or mineral property. The method of depreciation is determined based on that which best represents the use of the assets.

The reserve and resource estimates for each operation are the prime determinants of the life of a mine. In general, a mineralized deposit where the mineralization is reasonably well defined is amortized over its proven and probable mineral reserves. Non-reserve material may be included in the depreciation calculations in limited circumstances where there is a high degree of confidence in economic extraction. The expected economic life of these mines is dependent upon, among other things, the estimated remaining ore; gold, copper and silver prices; cash operating costs and capital expenditures.

The Company assesses each mine development project to determine when a mine is substantially complete and ready for its intended use and has advanced to the production stage. In its assessment, the Company considers relevant criteria based on the nature of each project, including the completion of a reasonable period of testing of mine plant and equipment, the ability to produce materials in saleable form (within specifications) and the ability to sustain ongoing production of minerals. When a mine development project moves into the production stage, the capitalization of certain mine construction costs ceases and costs are either capitalized to inventory or expensed, except for sustaining capital costs and underground mine or reserve development, which are capitalized to property, plant and equipment.

Decommissioning Liabilities

Decommissioning liabilities relate to the dismantling of the mine facilities and environmental reclamation of the areas affected by mining operations. Mine facilities include structures and the tailings dam. Environmental reclamation requirements include mine water treatment, reforestation and dealing with soil contamination. It is possible that the Company's estimates of the ultimate amounts required to decommission its mines could change as a result of changes in regulations, the extent of environmental remediation required, the means of reclamation, cost estimates or the estimated remaining ore reserves. The following table sets out the Company's estimates, prepared by management with the assistance of independent third-party experts, of the undiscounted and discounted cash flows required to settle such decommissioning liabilities in respect of El Valle and Don Mario at September 30, 2019.

As at September 30, 2019	**Undiscounted Cash Flows Estimated to Settle Decommissioning Liabilities**	**Discount Rate**	**Discounted Cash Flows Required to Settle Decommissioning Liabilities**
(in 000's)			
El Valle (1)	$15,437	1.31%	$13,867
Don Mario (1)	$8,316	3.20%	$6,860
Total	**$23,753**		**$20,727**

(1) Accretion expense is recorded using the discount interest rate set out above. It is estimated that these amounts will be incurred beginning in 2020. The discount rate used to measure decommissioning liabilities under IFRS 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.

Stock-based compensation

The Company recorded a stock-based compensation expense of $88 thousand in fiscal 2019, compared with $197 in fiscal 2018. The stock-based compensation expense is based on an estimate of the fair value of stock options issued and expensed over the vesting period. The accounting for stock options requires estimates of interest rates, life of options, stock price volatility and the application of the Black-Scholes option pricing model.

Long-term Compensation

The Company established a Deferred Share Unit ("DSU") plan, effectively a phantom stock plan, for directors, effective October 1, 2008. For grants subsequent to December 1, 2015, the fair value of the units issued is expensed over the fiscal year in which they are issued and is included in long-term compensation expense under general and administrative expenses in the statement of income. The fair value of the DSUs are marked to the quoted market price of Common Shares at each reporting date and changes in their fair value are also recorded under general and administrative expenses. Payouts are settled in cash within a specified period following a director's departure, based on the market price of the Common Shares at exercise.

The Company established a Restricted Share Unit ("RSU") plan, effectively a phantom stock plan, for designated executives, effective October 1, 2008. The initial fair value of units issued is expensed and is included in long-term compensation expense under general and administrative expenses in the statement of income. The fair value of the RSUs are marked to the quoted market price of the Common Shares at each reporting date and changes in their fair value are recorded under general and administrative expenses. Payouts are settled in cash after a specified period of vesting, based on the market price of the Common Shares at vesting.

The Company established a Share Appreciation Rights ("SAR") plan for designated executives, effective in respect of fiscal 2013. Unless otherwise determined by the directors of the Company, designated participants are granted SARs in such number equal to two times the number of RSUs granted to such participant in respect of compensation for a particular fiscal year. The Initial Fair Market Value as defined in the SAR plan is determined based on the closing price of the Common Shares on the date of grant. The fair value of the SARs are measured using an option pricing model at each period end, and to the extent that employees have rendered services over a three year vesting period, an expense is recorded under general and administrative expenses in the statement of net income over such vesting period. Vested SARs may be exercised provided there has been an appreciation in the market price of the Common Shares from the Initial Fair Market Value on the grant date and payouts are settled in cash as vested SARs are exercised.

Impairment

The Company assesses the carrying values of each cash-generating unit ("CGU") at each reporting period end date to determine whether any indication of impairment exists. Where an indicator of impairment exists, a formal estimate of the recoverable amount is made which is considered to be the higher of the fair value less costs to sell ("FVLCS") or value-in-use. These assessments require the use of estimates and assumptions such as long-term commodity prices, discount rates, future capital requirements, the resale market for certain property, plant and equipment of the Company and operating performance. Fair value under FVLCS is determined as the amount that would be obtained from the sale, less costs, of the asset in an arm's length transaction between knowledgeable and willing parties. When observable market prices are not available for the asset, value-in-use for mineral properties is generally determined as the present value of estimated future cash flows arising from the continued use of the asset, which includes estimates such as the cost of future expansion plans and eventual disposal, using assumptions that are specific to the Company's circumstances with respect to each CGU. Cash flows are discounted to their present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

Management of the Company has assessed its CGUs to be its mine sites (El Valle and Don Mario), which are the lowest level for which cash inflows and outflows are expected to be largely independent of those of other assets. Management projected cash flows over the remaining life-of-mine in respect of El Valle and Don Mario using forecasted production and costs per the current life-of-mine plans and the long-term forecasted price of gold, copper and silver to project future revenues. The key assumptions used in making this assessment at September 30, 2019 included commodity prices, operating costs, capital expenditures, foreign exchange rates and discount rates.

Although the total public market capitalization of the Company was below the carrying amount of Orvana's net assets at September 30, 2019 of $73 million, following the completion of an impairment test in respect of each CGU at the end of fiscal 2019, the Company estimated that the net recoverable amounts are greater than the carrying values of such assets based on the Company's current life-of-mine plans and the assumptions set out above at September 30, 2019. As such, there was no impairment of such carrying values as at September 30, 2019.

In light of a continued volatile metal price environment, and notwithstanding that the Company concluded that there was no impairment of carrying values at the end of fiscal 2019, there can be no assurances that an impairment adjustment may not be taken at either or both CGUs in future periods.

Gold prices

The net loss of $5,266 for the 2019 fiscal year would be impacted by changes in average realized gold prices on gold ounces sold. A 10% increase/decrease in average realized gold prices would affect the gross revenue by an increase/decrease of approximately $13,129.

Copper prices.

The net loss of $5,266 for the 2019 fiscal year would be impacted by changes in average realized copper prices. A 10% increase/decrease in average realized copper prices would affect gross revenue by an increase/decrease of approximately $1,424.

Internal Controls over Financial Reporting and Disclosure Controls and Procedures

Management is responsible for the design and effectiveness of disclosure controls and procedures ("DC&P") and the design of internal control over financial reporting ("ICFR") to provide reasonable assurance that material information related to the Company, including its consolidated subsidiaries, is made known to the Company's certifying officers. The Company uses the *Internal Control – Integrated Framework* (COSO Framework) published by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) to design its ICFR. Based on a review of internal control procedures at the end of the period covered by this MD&A, management believes its internal controls and procedures are appropriately designed as at September 30, 2019.

There were no significant changes in the Company's internal controls or in other factors that could significantly affect those controls subsequent to the date the Chief Executive Officer and Chief Financial Officer completed their evaluation, nor were there any significant deficiencies or material weaknesses in the Company's internal controls requiring material corrective actions.

Management of the Company was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. The result of the inherent limitations in all control systems means no evaluation of controls can provide absolute assurance that all control issues, errors and instances of fraud, if any, have been detected and that all of the objectives of the internal controls over financial reporting have been achieved or will be achieved in the future.

Non-IFRS Measures

COC, AISC and AIC

The Company, in conjunction with an initiative undertaken within the gold mining industry, began reporting COC, AISC and AIC non-IFRS performance measures as set out in the guidance note released by the World Gold Council in June 2013. The Company believes that these performance measures more fully define the total costs associated with producing gold, copper and silver, however, these performance measures have no standardized meaning. Accordingly, they are intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS.

COC include total production cash costs incurred at the Company's mining operations, which form the basis of the Company's cash costs. AISC includes COC plus sustaining capital expenditures, corporate administrative expenses, costs of community relations, exploration and evaluation costs and reclamation cost accretion. The Company believes that this measure represents the total costs of producing gold from current operations and provides the Company and other stakeholders of the Company with additional information relating to the Company's operational performance and ability to generate cash flows. As the measure seeks to reflect the full cost of gold production from current operations, new project capital is not included in AISC. AIC represents AISC plus non-sustaining capital expenditures and non-sustaining exploration. Certain other cash expenditures including tax payments, debt payments, dividends and financing costs are also not included in the calculation of AIC. The Company reports these measures on a gold ounces sold basis.

Orvana Consolidated	Q4 2019	Q3 2019	Q4 2018	FY 2019	FY 2018
Cash operating costs, all-in sustaining costs and all-in costs (by-product) (1) *(in 000's)*					
Total mining costs (sales based)	**$26,644**	**$28,807**	**$30,280**	**$113,558**	**$120,595**
Deductions, refining, treatment, penalties, freight & other costs	2,229	1,904	1,864	9,122	12,788
Sub-total - other operating costs	**$2,229**	**$1,904**	**$1,864**	**$9,122**	**$12,788**
Copper sales - gross revenue value	(2,806)	(2,708)	(3,331)	(14,237)	(25,123)
Silver sales - gross revenue value	(754)	(625)	(680)	(2,842)	(4,051)
Other by-product gross revenue value	-	-		-	
Sub-total by-product revenue	**($3,560)**	**($3,333)**	**($4,011)**	**($17,079)**	**($29,174)**
Cash operating costs	**$25,313**	**$27,378**	**$28,133**	**$105,601**	**$104,209**
Corporate general & administrative costs	86	1,120	2,069	2,660	5,572
Community costs related to current operations	88	116	126	445	1,290
Reclamation, accretion & amortization	393	353	268	1,662	1,513
Exploration and study costs (sustaining)	264	344	41	1,109	124
Primary development (sustaining)	1,250	1,085	1,190	4,216	3,853
Other sustaining capital expenditures (2) (3)	1,111	1,944	1,455	5,281	11,837
All-in sustaining costs	**$28,505**	**$32,340**	**$33,282**	**$120,974**	**$128,398**
Exploration and study costs (non-sustaining)	316	422	1,771	1,586	4,642
Capital expenditures (non-sustaining) (3)	594	922	587	1,764	5,534
All-in costs	**$29,415**	**$33,684**	**$35,640**	**$124,324**	**$138,574**
Au/oz sold	20,987	22,579	28,044	96,540	102,017
Cash operating costs ($/oz) gold	**$1,206**	**$1,213**	**$1,003**	**$1,094**	**$1,021**
All-in sustaining costs ($/oz) gold	**$1,358**	**$1,432**	**$1,187**	**$1,253**	**$1,259**
All-in costs ($/oz) gold	**$1,402**	**$1,492**	**$1,271**	**$1,288**	**$1,358**

(1) Costs are reported per ounce of gold sold in the period.

(2) Sustaining capital expenditures are those expenditures which do not increase annual gold ounce production at a mine site and excludes all expenditures at the Company's projects and certain expenditures at the Company's operating sites which are deemed expansionary in nature.

(3) Capital expenditures include unpaid capital expenditures incurred in the period.

The following table provides a reconciliation of COC, AISC and AIC (by-product) per ounce of gold sold for El Valle for the periods set out below:

El Valle	Q4 2019	Q3 2019	Q4 2018	FY 2019	FY 2018
Cash operating costs, all-in sustaining costs and all-in costs (by-product) [(1)] *(in 000's)*					
Total mining costs	**$17,015**	**$17,908**	**$18,286**	**$70,006**	**$72,370**
Deductions, refining, treatment, penalties, freight & other costs	2,220	1,895	1,858	9,083	8,034
Sub-total - other operating costs	**$2,220**	**$1,895**	**$1,858**	**$9,083**	**$8,034**
Copper sales - gross revenue value	(2,806)	(2,708)	(3,418)	(14,237)	(14,066)
Silver sales - gross revenue value	(591)	(506)	(591)	(2,328)	(2,969)
Sub-total by-product revenue	**($3,397)**	**($3,214)**	**($4,009)**	**($16,565)**	**($17,035)**
Cash operating costs	**$15,838**	**$16,589**	**$16,135**	**$62,524**	**$63,369**
Corporate general & administrative costs	375	375	(375)	1,500	1,500
Reclamation, accretion & amortization	359	288	304	1,433	1,146
Exploration and study costs (sustaining)	0	0	41	0	124
Primary development (sustaining)	1,250	1,085	1,190	4,216	3,853
Other sustaining capital expenditures [(2) (3)]	1,390	1,386	531	4,117	4,718
All-in sustaining costs	**$19,212**	**$19,723**	**$17,826**	**$73,790**	**$74,710**
Exploration and study costs (non-sustaining)	**(23)**	**64**	**0**	**276**	**0**
All-in costs	**$19,189**	**$19,787**	$17,826	**$74,066**	$74,710
Au/oz sold	14,970	15,256	15,186	62,249	**56,136**
Cash operating costs ($/oz) gold	**$1,058**	**$1,087**	**$1,063**	**$1,004**	**$1,129**
All-in sustaining costs ($/oz) gold	**$1,283**	**$1,293**	**$1,174**	**$1,185**	**$1,331**
All-in costs ($/oz) gold	**$1,282**	**$1,297**	**$1,174**	**$1,190**	**$1,331**

(1) Costs are reported per ounce of gold sold in the period.

(2) Sustaining capital expenditures are those expenditures which do not increase annual gold ounce production at a mine site and excludes all expenditures at the Company's projects and certain expenditures at the Company's operating sites which are deemed expansionary in nature.

(3) Capital expenditures include unpaid capital expenditures incurred in the period.

The following table provides a reconciliation of COC, AISC and AIC (by-product) per ounce of gold sold for Don Mario for the periods set out below:

Don Mario Mine	Q4 2019	Q3 2019	Q4 2018	FY 2019	FY 2018
Cash operating costs, all-in sustaining costs and all-in costs (by-product) (1) *(in 000's)*					
Total mining costs	**$9,629**	**$10,899**	**$11,994**	**$43,552**	**$48,224**
Deductions, refining, treatment, penalties, freight & other costs	9	9	6	39	4,754
Sub-total - other operating costs	**$9**	**$9**	**$6**	**$39**	**$4,754**
Copper sales – gross revenue value	0	0	87	0	(11,057)
Silver sales – gross revenue value	(163)	(120)	(88)	(513)	(1,081)
Other by-product gross revenue value	-	-	-	-	-
Sub-total by-product revenue	**($163)**	**($120)**	**($1)**	**($513)**	**($12,138)**
Cash Operating Costs	**$9,475**	**$10,788**	**$11,999**	**$43,078**	**$40,840**
Corporate general & administrative costs	220	199	93	644	261
Community costs related to current operations	88	116	126	445	1,290
Reclamation, accretion & amortization	34	65	(36)	228	366
Exploration and study costs (sustaining)	264	344	-	1,110	-
Capital expenditures (sustaining) (2)(3)	(279)	559	923	1,164	7,119
All-in sustaining costs	**$9,802**	**$12,071**	**$13,105**	**$46,669**	**$49,876**
Capital expenditures (non-sustaining)	594	922	1,351	1,764	3,624
Exploration and study costs (non-sustaining)	6	106	587	567	5,534
All-in costs	**$10,402**	**$13,099**	**$15,043**	**$49,000**	**$59,034**
Au/oz sold	6,017	7,323	12,858	34,291	45,882
Cash operating costs ($/oz) gold	**$1,575**	**$1,473**	**$933**	**$1,256**	**$890**
All-in sustaining costs ($/oz) gold	**$1,629**	**$1,648**	**$1,019**	**$1,361**	**$1,087**
All-in costs ($/oz) gold	**$1,729**	**$1,789**	**$1,170**	**$1,429**	**$1,287**

(1) Costs are reported per ounce of gold sold in the period.

(2) Sustaining capital expenditures are those expenditures which do not increase annual gold ounce production at a mine site and excludes all expenditures at the Company's projects and certain expenditures at the Company's operating sites which are deemed expansionary in nature.

(3) Capital expenditures include unpaid capital expenditures incurred in the period.

EBITDA

The Company has included Earnings before Interest, Taxes, Depreciation and Amortization ("EBITDA") as a non-IFRS performance measure in this MD&A. The Company excludes these items from net loss to provide a measure which allows the Company and investors to evaluate the results of the underlying core operations of the Company and its ability to generate cash flows. Accordingly, it is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS.

The following table provides a reconciliation of EBITDA to the Company's consolidated financial statement for their respective periods:

(in 000's)	Q4 2019	Q3 2019	Q4 2018	FY 2019	FY 2018
Net income (loss)	**($3,626)**	($3,914)	($1,231)	**($5,266)**	($11,097)
Less:					
Finance costs	**(283)**	(293)	(399)	**(1,656)**	(1,786)
Income taxes	**699**	927	650	**1,695**	(1,327)
Depreciation and amortization	**(8,853)**	(5,088)	(4,325)	**(23,370)**	(23,412)
Impairment	**-**	-	1,678	**-**	1,678
EBITDA	**$4,811**	$540	$1,165	**$18,065**	$13,750

Other Information

Other operating and financial information with respect to the Company, including the AIF, is available on SEDAR at www.sedar.com and on the Company's website at www.orvana.com.

Cautionary Statements – Forward-Looking Information

Certain statements in this MD&A 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.

The forward-looking statements herein relate to, among other things, Orvana's ability to achieve improvement in free cash flow; the potential to extend the mine life of El Valle and Don Mario beyond their current life-of-mine estimates including specifically, but not limited to in the case of Don Mario, the processing of the mineral stockpiles and the reprocessing of the tailings material; Orvana's ability to optimize its assets to deliver shareholder value; the Company's ability to optimize productivity at Don Mario and El Valle; estimates of future production, operating costs and capital expenditures; mineral resource and reserve estimates; statements and information regarding future feasibility studies and their results; future transactions; future metal prices; the ability to achieve additional growth and geographic diversification, including without limitation, the ability to complete the acquisition of the Taguas Property; future financial performance, including the ability to increase cash flow and profits; and 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 MD&A, which may prove to be incorrect, include, but are not limited to, the various assumptions set forth herein or as otherwise expressly incorporated herein by reference as well as: there being no significant disruptions affecting operations, whether due to labour disruptions, supply disruptions, power disruptions, damage to equipment or otherwise; permitting, development, operations, expansion and acquisitions at El Valle and Don Mario being consistent with the Company's current expectations; political developments in any jurisdiction in which the Company operates being consistent with its current expectations; certain price assumptions for gold, copper and silver; prices for key supplies being approximately consistent with current levels; production and cost of sales forecasts meeting expectations; the accuracy of the Company's current mineral reserve and mineral resource estimates; and labour and materials costs increasing on a basis consistent with Orvana's current expectations.

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

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

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

Cautionary Notes to Investors – Reserve and Resource Estimates

In accordance with applicable Canadian securities regulatory requirements, all mineral reserve and mineral resource estimates of the Company disclosed in this MD&A have been prepared as at September 30, 2018 in accordance with NI 43-101, classified in accordance with Canadian Institute of Mining Metallurgy and Petroleum's "CIM Standards on Mineral Resources and Reserves Definitions and Guidelines" (the "CIM Guidelines").

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